

**SOAH DOCKET NO. 582-07-0863  
TCEQ DOCKET NO. 2006-1931-MSW**

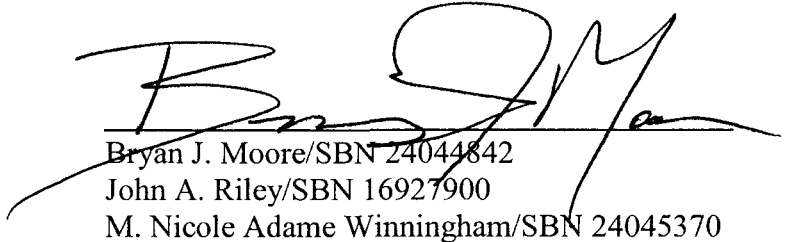
**APPLICATION OF § BEFORE THE STATE OFFICE  
WASTE MANAGEMENT OF TEXAS, INC. §  
FOR A MUNICIPAL SOLID WASTE § OF  
PERMIT AMENDMENT; §  
PERMIT NO. MSW-66B § ADMINISTRATIVE HEARINGS**

**APPLICANT WASTE MANAGEMENT OF TEXAS, INC.'S  
PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW**

Pursuant to the Administrative Law Judge's Order No. 8, Applicant Waste Management of Texas, Inc. files these Proposed Findings of Fact and Conclusions of Law in the above-titled contested case. Applicant presents its Proposed Findings of Fact and Conclusions of Law as a draft Order from the Commissioners of the Texas Commission on Environmental Quality to be attached to the Administrative Law Judge's Proposal for Decision in this matter.

Respectfully submitted,

**VINSON & ELKINS L.L.P.**  
2801 Via Fortuna, Suite 100  
Austin, Texas 78746  
Telephone: 512.542.8729  
Facsimile: 512.236.3257



Bryan J. Moore/SBN 24044842  
John A. Riley/SBN 16927900  
M. Nicole Adame Winningham/SBN 24045370

**COUNSEL FOR APPLICANT  
WASTE MANAGEMENT OF TEXAS, INC.**

**CERTIFICATE OF SERVICE**

I certify that a true and correct copy of the foregoing filing was served on the following via electronic mail, facsimile, hand delivery, and/or overnight or first class mail on this the 18th day of January, 2008:

Anthony C. Tatu  
Amie Dutta Richardson  
Texas Commission on Environmental Quality  
P.O. Box 13087, MC-173  
Austin, Texas 78711-3087  
Phone: (512) 239.0600  
Fax: (512) 239.0606

*Representing the Executive Director of the Texas  
Commission on Environmental Quality*

Garrett Arthur  
Office of Public Interest Counsel  
Texas Commission on Environmental Quality  
P.O. Box 13087, MC-103  
Austin, Texas 78711-3087  
Phone: (512) 239.6363  
Fax: (512) 239.6377

*Representing the Texas Commission on  
Environmental Quality Office of Public Interest  
Counsel*

James Ballowe  
Solid Waste Manager  
424 S. Castell Avenue  
New Braunfels, Texas 78130  
Phone: (830) 221.4044  
Fax: (830) 608.2109

*Representing City of New Braunfels*

Lawrence G. Dunbar  
Dunbar Harder PLLC  
One Riverway, Suite 1850  
Houston, Texas 77056  
Phone: (713) 782.4646  
Fax: (713) 782.5544

*Representing TJFA, L.P.*

Nancy Schwarzlose  
2041 Schwarzlose Road  
New Braunfels, Texas 78130  
Phone: (830) 372.1500  
Fax: (830) 608.0695

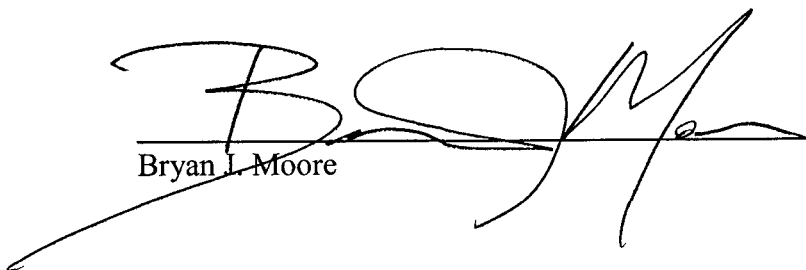
*Representing Concerned Citizens and Landowners*

John Holtman  
1520 Schwarzlose Road  
New Braunfels, Texas 78130  
Phone: (210) 364.4618

*Representing Concerned Citizens and Landowners*

James E. Bradley  
Bradley Law Firm  
5718 Westheimer, Suite 1525  
Houston, Texas 77057  
Phone: (713) 974.4800  
Fax: (713) 781.4186

*Representing TJFA, L.P.*



Bryan L. Moore

**AN ORDER**

Granting the Application for Permit No. MSW-66B to Waste Management of Texas, Inc.; TCEQ Docket No. 2006-1931-MSW; SOAH Docket No. 582-07-0863

On \_\_\_\_\_, the Texas Commission on Environmental Quality (“Commission” or “TCEQ”) considered the application of Waste Management of Texas, Inc. (“WMTX” or “Applicant”) for Permit No. MSW-66B to authorize WMTX to laterally expand the existing Comal County Landfill in Comal County and into Guadalupe County, Texas and to rename the facility the Mesquite Creek Landfill. Sarah G. Ramos, Administrative Law Judge (“ALJ”) with the State Office of Administrative Hearings (“SOAH”), presented a Proposal for Decision (“PFD”), which recommended that the Commission grant WMTX’s Application for Permit No. MSW-66B. After considering the ALJ’s PFD, the Commission adopts the following Findings of Fact and Conclusions of Law:

**I. FINDINGS OF FACT**

**GENERAL FINDINGS/PROCEDURAL ISSUES**

1. The Applicant is Waste Management of Texas, Inc., 9708 Giles Lane, Austin, Texas 78754. (Ex. APP-202 at 113.)
2. The Facility is the Comal County Landfill, to be renamed the Mesquite Creek Landfill (“Mesquite Creek Landfill”), and is owned and operated by WMTX (Ex. APP-202 at 134.)
3. The Facility is located at the southwest intersection of FM 1101 and Kohlenberg Lane, approximately five miles north of the intersection of State Highway 46 and FM 1101 and approximately two miles east of the I-35 Kohlenberg Road exit, north of the City of New Braunfels in Comal County. (Ex. APP-202 at 134.)

4. The Facility is an existing Type I Municipal Solid Waste (“MSW”) landfill consisting of approximately 96 acres and permitted pursuant to Permit No. MSW-66A. (Ex. APP-202 at 134.)
5. Applicant has sufficient property rights in the Facility to ensure right of entry until the end of the post-closure care period. (Ex. APP-202 at 686.)
6. Applicant filed Application No. MSW-66B (“the Application”), which requests an amendment of Permit MSW-66A to laterally expand the existing 96-acre Facility to approximately 244 acres and into Guadalupe County. The Application proposes to expand the actual limit of waste from approximately 79 acres to approximately 164 acres. (Ex. APP-202 at 134, 136.)
7. The Facility is currently authorized to accept municipal solid waste, Class 2 and Class 3 industrial solid waste, special waste as defined by 30 TEX. ADMIN. CODE § 330.2, and Class 1 industrial waste that is Class 1 only because of asbestos content. (Ex. APP-202 at 138-39.)
8. The Application was compiled by GeoSyntec Consultants pursuant to the Notice of Engineer’s Appointment prepared by Applicant. The Application was developed under the direction and supervision of Steve Jacobs, Central Texas Landfill Manager for WMTX. (Ex. APP-202 at 701-702.)
9. The seal of Scott M. Graves, P.E., a professional engineer registered in Texas, was affixed to all engineering plans and drawings and on the Application cover pages. (Ex. APP-202.)
10. The Application was initially submitted to the Texas Commission on Environmental Quality (“TCEQ”) on November 18, 2005. (Ex. APP-200 at 14; Ex. APP-202 at 2.)

11. Notice that the Application was deemed Administratively Complete by the Executive Director (“ED”) of TCEQ was issued on December 13, 2005. Notice of the technically complete determination was issued on August 23, 2006. (Ex. APP-200 at 14; Ex. APP-203; Ex. APP-204.)
12. The Notice of Receipt of Application and Intent to Obtain Municipal Solid Waste Permit Amendment containing the information specified in 30 TEX. ADMIN. CODE § 39.11 was published on December 19, 2005 in the *San Antonio Express News*. (Ex. APP-203.)
13. The Revised Notice of Application and Preliminary Decision for a Municipal Solid Waste Permit Amendment containing the information required by 30 TEX. ADMIN. CODE § 39.11 was published on August 29, 2006 in the *New Braunfels Herald-Zeitung* and the *Seguin Gazette-Enterprise*. (Ex. APP-204.)
14. The Notice of Hearing containing the information specified in 30 TEX. ADMIN. CODE § 39.11 was published on March 12 and 13, 2007 in the *New Braunfels Herald-Zeitung*, the *Seguin Gazette-Enterprise*, and the *San Antonio Express News*. (Ex. APP-A.)
15. A combined noticed including the Notice of Receipt of Application and Intent to Obtain Permit, Notice of Application and Preliminary Decision, Notice of Public Meeting, and Notice of Hearing was issued by TCEQ on March 8, 2007 and published on March 12 and 13, 2007 in the *New Braunfels Herald-Zeitung*, the *Seguin Gazette-Enterprise*, and the *San Antonio Express News*. (Ex. APP-206.)
16. On March 9, 2007, the TCEQ Chief Clerk mailed the Notice of Hearing on the Application to the then-identified participants to the proceeding, to other potentially affected persons identified in the Application, to various state and local agencies and officials, to state legislators for the district in which the Facility is located, and to other

persons specified in 30 TEX. ADMIN. CODE § 39.13. Potentially affected persons receiving notice generally included those landowners whose property is within one mile of the Facility. All persons intending to request party status at the hearing were required to attend the hearing and demonstrate how he or she would be adversely affected by the application in a way not common to members of the general public. (Ex. APP-B.)

17. A preliminary hearing commenced at 10:00 a.m. on April 13, 2007 at the New Braunfels Municipal Court, 1486 South Seguin Avenue, New Braunfels, Texas 78130. (ALJ Order. No. 3.)
18. The following persons were named as parties to the proceeding: WMTX, the Executive Director of TCEQ, the Office of Public Interest Council (“OPIC”), TJFA, L.P. (“TJFA”), the City of New Braunfels, Guadalupe County, and Concerned Citizens and Landowners (“CCL”) (representing Nancy Schwarzlose, the Holtman family, Sandra Elbel Taylor and Lilian Schriewer Elbel, James F. and Vera B. Langford, and the Krueger-Westmeyer families). (ALJ Order Nos. 3, 4.)
19. A contested case hearing on the Application was conducted on October 22-29, 2007 at the offices of the State Office of Administrative Hearings, William Clements Building, 300 West 15th Street, Suite 502, Austin, Texas 78701 and the New Braunfels Municipal Court, 1486 South Seguin Avenue, New Braunfels, Texas 78130. (ALJ Order Nos. 6, 8.)

#### **SUFFICIENCY OF PERMIT APPLICATION AND DRAFT PERMIT**

20. The conditions that exist at and near the site are favorable to the development of a MSW landfill designed, constructed, and operated in a manner considered standard by engineers specializing in the field and embodied in the MSW rules. There are no site-specific conditions that require special design consideration. The site is well-suited to the design, construction, and operation of a MSW landfill. (Ex. APP-202 at 17, 153-56; Ex. ED-6.)

21. The Application is signed by Steve Jacobs, Area Landfill Manager at the time the Application was filed. (Ex. APP-202 at 113-14.)
22. Applicant coordinated with all appropriate agencies, officials, and authorities that may have a jurisdictional interest in the Application. (Ex. APP-202 at 184-297, 305-677; Ex. APP-302; Ex. APP-303, Ex. APP-304.)
23. Applicant has provided complete information concerning permits or construction approvals received or applied for. (Ex. APP-202 at 112, 135, 305-677; Ex. APP-302; Ex. APP-303, Ex. APP-304.)
24. The ED has prepared a draft permit for Permit No. MSW-66B. (Ex. APP-202 at 8-18; ED-6.)

#### **GEOLOGY AND HYDROGEOLOGY INVESTIGATIONS**

25. The Facility is located along the western edge of the Gulf Coastal Plain physiographic province, in the Blackland Prairies subprovince. The Gulf Coastal Plain is located south of the Balcones Fault Zone, which trends northeast-southwest across north central Comal and Guadalupe Counties and separates the Gulf Coastal Plain from the Edwards Plateau. The Blackland Prairies subprovince is the westernmost subprovince within the Gulf Coastal Plain and is characterized by a hilly to rolling prairie surface covering deep clayey soils. (Ex. APP-202 at 149.)
26. The topography of the area surrounding the Facility is composed of two natural hillsides towards the northwest and southeast ends of the site, which are separated by a valley associated with Mesquite Creek in the middle of the site. The highest natural ground elevation on the northern side of the Facility is approximately 665 feet above mean sea level (“MSL”), and 712 feet MSL on the southern side. The lowest natural ground elevation of approximately 585 feet MSL occurs in the middle of the site, along the



northern site boundary, which is the point at which Mesquite Creek leaves the site. There are no topographic features such as floodplains, which, if present, limit the development of the site as a MSW landfill. (Ex. APP-202 at 149, 159.)

27. The regional geology of the Facility's surrounding area consists of Cretaceous, Tertiary, and Quaternary-age limestone, marls, calcareous marine clays, and fluvial deposits. Below the veneer of alluvium and undifferentiated gravel (Uvalde Gravel) is the Cretaceous-age Lower Taylor, the Austin Chalk or Austin Group, the Eagle Ford Group, the Washita Group, the Edwards Group, and the Trinity Group. (Ex. APP-202 at 149, 151-52.)
28. The principal regional aquifer in the vicinity of the Facility and for the entire New Braunfels region is the Edwards Aquifer. The Edwards Aquifer comprises the Edwards Limestone and the overlying Georgetown Limestone. The overlying Gulfian Series formations have a low permeability and are too clayey to be used as aquifer. The overlying Quaternary terrace deposits in the vicinity of the Facility yield insufficient water to be considered an aquifer. The Facility is located south of the freshwater part of the Edwards Aquifer in an area characterized by high sulfate and dissolved solids concentrations. (Ex. APP-202 at 157.)
29. In the vicinity of the Facility, the Lower Taylor Group, Austin Chalk, Eagle Ford Shale, Del Rio Clay, and Buda Limestone serve as an aquitard, separating the ground surface from the top of the Edwards Aquifer. (Ex. App-202 at 151.)
30. The Facility is located in a geologically stable area that is not subject to active geologic faulting, differential subsidence, or seismic movement. (Ex. APP-202 at 153-56.)

31. The Facility is not near an active fault area and no surface expressions or differential subsidence that has had displacement in Holocene time were identified within 200 feet of the Facility. No faults since the Pleistocene or Pliocene Epochs (1.8 to 5 million years ago) are known to have been active in the vicinity of the Facility or along the Balcones Fault Zone. The Facility is underlain by rocks of Upper and Lower Cretaceous age and has not been subject to active faulting since Pleistocene time. No earthquake epicenters were identified within 20 miles of the Facility and no subsidence is expected from withdrawal of water from the Edwards Aquifer. The Facility is not subjected to any natural or man-induced events that could reactive the pre-Holocene inactive faults. (Ex. APP-202 at 154.)
32. One inactive fault was identified on the existing landfill area in 1990 near the northern site boundary in an area excavated for landfill development. Evidence of this fault was not apparent until the base of Stratum II was exposed, approximately 10 feet below ground surface (“bgs”). The vertical displacement of the fault was determined to be approximately 40 to 50 feet and only affected the contact between Strata III and IV. The fault does not displace Stratum I or II and, therefore, the movement of the fault ceased before deposition of Stratum II, indicating that the fault has been inactive during Holocene time. Previous geologic studies of the existing landfill identified two additional potential faults 200 feet and 450 feet southeast of the Facility. The 200-foot potential fault is an inferred fault and geologic studies for this Application concluded that no fault is present in this part of the site due to its lack of evidence of displacement. The 450-foot fault has not experienced movement in Holocene time as indicated by its

consistency with other faults in the Balcones Fault Zone, which is known to be pre-Holocene in age. (Ex. APP-202 at 1037-39; Trial Tr. at 543:12 to 547:1 (Meaux).)

33. The Facility is not located in a seismic impact zone. A seismic impact zone is an area with a 10% or greater probability that the maximum horizontal acceleration in rock, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in 250 years. At the Facility, the maximum horizontal acceleration anticipated to occur at the site with a 10% or greater probability in 250 years is approximately 0.049g, which is less than 0.10g. The Facility is, therefore, not in a seismic impact zone. (Ex. APP-202 at 155.)
34. The Facility is not located in an unstable area. Unstable areas include karst terrain, poor foundation conditions, and areas susceptible to mass movement. The facility is not underlain by a soluble bedrock and therefore, no karst features are evident at the Facility. The stiff clays underlain by claystones that are the predominant soil type encountered at the Facility will continue to provide a stable foundation for cell construction. Due to the relatively low relief of the topography and the stiff, cohesive nature and consistency of the soils, the site is not considered susceptible to mass movement. (Ex. APP-202 at 155.)
35. The Facility's pre-development surface had low relief, with slopes ranging from approximately 3% to 9%. In this setting, excessive erosion due to surface-water processes such as overland flow, channeling, and gullying is not anticipated. The waste disposal limits of the currently permitted landfill and proposed expansion are located outside the 100-year floodplain and therefore, excessive erosion by fluvial processes associated with meandering stream channels should not occur within the waste footprint. (Ex. APP-202 at 1026.)

36. Nineteen (19) wetlands were identified at the Facility, including both the existing and the expansion areas. Eight of the 19 identified wetlands are jurisdictional waters of the United States (“jurisdictional waters”). Of these eight waters, four are also State wetlands regulated by TCEQ. Six of the eight identified jurisdictional waters will be impacted by the proposed expansion and, if so determined by the United States Army Corps of Engineers (“USACE”), before these waters can be disturbed the USACE will require permitting and will likely require mitigation. At present, the USACE has not determined over which jurisdictional waters it will exercise jurisdiction and has also not indicated a time frame for its determination. The Executive Director determined that the Application satisfies TCEQ location restrictions for locating a MSW landfill in wetlands. (Ex. APP-202 at 159-66; Ex. APP-300 at 12-13; Trial Tr. at 399:12 to 400:10 (Castille).)
37. A revised USACE Nationwide Permit 14 Pre-Construction Notification was submitted to the USACE on June 7, 2007 for the unavoidable impact to approximately 0.10 acres of jurisdictional waters due to the expansion of the road crossing over Mesquite Creek. The USACE granted the Nationwide Permit 14 on September 14, 2007. Ex. APP-302; Ex. APP-304; Trial Tr. at 391:18 to 392:16 (Castille).)
38. In the vicinity of the Facility, the upper Edwards Aquifer units are approximately 500 to 600 feet below the ground surface. Three water wells were identified within one mile of the Facility. Two of these wells are 600 and 650 feet deep and are screened in the Edwards Aquifer. The use of the 600-foot well is not specified and the 650-foot well has been plugged. The third well is 36 feet deep and documented as being completed in the Uvalde Gravel and used for domestic purposes. (Ex. APP-202 at 1028, 1030, 1090.)

39. Soil boring plans for the expansion of the Facility were approved by the ED on September 22, 2004. (Ex. APP-202 at 1033.)
40. Subsurface conditions at the Facility were evaluated using existing geologic data generated from past field investigations and from field investigation activities performed in October 2004 through September 2005, in connection with the proposed expansion. A total of 65 soil borings have been drilled at the Facility, 24 of which relate to the expansion area. Completed depths ranged from 28 feet below ground surface (“bgs”) to 185.0 feet bgs. Boring samples were taken at discrete intervals and continuously. (Ex. APP-202 at 1031-34; Ex. APP-208 at 3.)
41. The elevation of the deepest excavation (“EDE”) for the entire Facility is 560 feet MSL and has already occurred at the Facility. It is located at the Unit 1, Phase III, Cell 2 sump. Of the eight previous borings proposed as part of the Application, seven were drilled to a depth at least five feet below the EDE and one was drilled to a depth at least 30 feet below the EDE. All 24 of the expansion area soil borings were advanced to a depth of at least five feet below the EDE, 16 borings were drilled to a depth of at least 30 feet below the EDE, and five were completed to elevations more than 50 feet below the EDE. The Edwards Aquifer is located approximately 500 feet below the EDE. (Ex. APP-202 at 1033, 1035.)
42. These data are adequate to establish subsurface stratigraphy and to determine geotechnical properties of the soils and rocks beneath the Facility. (Ex. APP-202 at 1036; Ex. APP-208 at 3.)
43. Fifteen of the expansion area soil borings were advanced and completed as piezometers. Monthly groundwater level data were collected from March 2005 to September 2005

from existing and newly installed piezometers and groundwater monitor wells. (Ex. APP-202 at 1034.)

44. Based on the historic and recent geologic investigations, four stratigraphic units, Strata I through IV, exist beneath the site down to the maximum depth drilled, approximately 187 feet bgs. Stratum I is generally 0 to 14.5 feet thick, the thickness of Stratum II ranges from 1 to 9 feet, and Stratum III is approximately 15 to 63 feet thick. No soil borings penetrated the entire Stratum IV, but it is approximately 200 feet thick at the Facility. (Ex. APP-202 at 1036-37; Ex. APP-400 at 26-27.)
45. Stratum I corresponds to the uppermost fine-grained Quaternary deposits. Stratum I is mostly continuous in the existing site except where removed by landfill excavation activities. In the expansion area, Stratum I was encountered in 20 of the 24 borings. Stratum I is an unsaturated brown to dark gray, medium to high plasticity clay which is stiff to hard in consistency. In two borings, 0.5 and 1.0 feet of gravelly clay was present between 0.5 and 3.5 feet bgs. (Ex. APP-202 at 1036; Trial Tr. at 466:18-22 (Meaux).)
46. Stratum II corresponds to the Quaternary-Tertiary Uvalde Gravel. In the existing area, Stratum II ranges from olive green, white or gray limestone and/or chert gravel, occasionally in a clay or silty clay matrix, to firm black clayey gravel. In the expansion area, Stratum II can be described as clayey gravel to gravelly clay. A one-foot thick gravel stratum was observed in one soil boring at approximately 1 foot bgs. (Ex. APP-202 at 1036-37; Trial Tr. at 466:24 to 467:11 (Meaux).)
47. Stratum III corresponds to the oxidized clays or claystones of the Lower Taylor Group, which was previously referred to as the Navarro Group. Stratum III ranges in thickness between 18 feet and 58.5 feet at the existing site and between 15 feet and 63 feet at the

expansion area. Stratum III is characterized by a gray or brownish yellow to yellow oxidized, very stiff to hard clay (CL to CH), with thin bedding planes. The base of Stratum III was not encountered in all borings; high angle clay, gypsum filled fractures, and calcite seams are more prevalent near the bottom of Stratum III. Some of the fractures and calcite seams were water-bearing. (Ex. APP-202 at 1037; Trial Tr. at 467:13-24 (Meaux).)

48. Stratum IV corresponds to the primarily unoxidized clay and/or claystone of the Lower Taylor Group. Stratum IV is typically a dry calcareous green gray to dark gray clay or claystone across the entire site. A few borings contain evidence of fracturing and/or weathering; however, vertical and horizontal hydraulic conductivities of Stratum IV in these borings are less than  $1 \times 10^{-7}$  centimeters per second (“cm/sec”). (Ex. APP-202 at 1037; Trial Tr. at 467:25 to 468:1; 473:15 to 474:25 (Meaux).)

49. At the Facility, groundwater is encountered in the lower portion of Stratum III between 578 feet MSL and 665 feet MSL. Of the four units investigated, Stratum III is the uppermost stratum which consistently yielded groundwater and contained the greatest occurrence of fractures and variations in cementation to provide the most likely migration pathway if a release from the landfill were to occur. All 15 piezometers installed for this Application consistently contained sufficient quantities of water for groundwater sampling purposes. Because Stratum III is capable of yielding representative samples of groundwater that could identify a potential release from the landfill, it is considered the uppermost aquifer (as required by 30 TEX. ADMIN. CODE § 33.231(a)). (Ex. APP-202 at 1049-50.)

50. Hydraulic gradients and groundwater flow directions observed at the Facility appear to be controlled by surface topography and the elevation of the Stratum III/IV contact. Groundwater elevations in the existing site and expansion area are lowest adjacent to Mesquite Creek and highest near the site's topographic highs in the northeastern corner (for the existing landfill) and the southern boundary (for the expansion area). Groundwater elevations depict a consistent pattern over time with only slight changes in groundwater flow direction. Recharge to Stratum III likely occurs as infiltration during periods of high precipitation. No noteworthy seasonal changes in the groundwater flow patterns are apparent. (Ex. APP-202 at 1053-55, 1734.)
51. The uppermost aquifer is not hydraulically connected with the underlying Edwards Aquifer. Monitoring wells and piezometers in Stratum IV were dry or contained insufficient quantities of groundwater for sampling purposes and the unit has relatively low permeability. In the vicinity of the Facility, Stratum IV is approximately 200 feet thick and underlain by approximately 200 to 300 feet of low-permeability clays identified as the Austin Chalk, Eagle Ford Shale, Comanche Series Del Rio Clay, and Buda Limestone. Therefore, Stratum IV and the underlying clays are, collectively, the lower aquitard or confining unit for Stratum III. (Ex. APP-202 at 151, 1035-36, 1051, 1734; Trial Tr. 839:8 to 840:19 (Clark).)
52. Applicant has evaluated likely pathways for pollutant migration in the event that the liner system is penetrated. The most likely pathways for pollutant migration from the landfill are within the saturated base of Stratum III and along the Strata III/IV contact. Stratum III is the main stratum intersected by the liner system side slopes and base. Neither the inactive fault in the existing site nor Mesquite Creek appear to be potential pathways for



pollutant migration. In the unlikely event of a release from the landfill, any contamination would move at the same rate and direction as the groundwater beneath the Facility. Because the horizontal and vertical hydraulic conductivities decrease with depth, there is no potential for landfill constituent migration from the Facility to the Edwards Aquifer during the active life, closure, and post-closure care periods. (Ex. APP-202 at 1055-56; Trial Tr. 520:8-15, 520:25 to 521:6, 535:16-20, 541:14 to 543:11, 555:4-17, 669:4-23, 675:11-23 (Meaux); *id.* at 1098:21-22, 1108:21 to 1110:18 (Williamson).)

53. Applicant has characterized the regional and site-specific geology and groundwater conditions. (Ex. APP-202 at 1019-58.)

#### **GROUNDWATER MONITORING**

54. The Facility currently operates a groundwater monitoring system for detection monitoring composed of seven monitoring wells generally screened in Stratum III. Groundwater monitoring has been conducted at the Facility since February 1992 and is currently conducted on a semi-annual basis. (Ex. APP-202 at 1084, 1736.)
55. Historical groundwater quality data indicate that all statistically significant changes over background of the inorganic parameters listed in the Groundwater Sampling and Analysis Plan (“GWSAP”) have been addressed in an alternate source demonstration approved by TCEQ. None of the statistically significant failures were found to be related to the Facility, but were attributed to natural variations in background water quality. No statistically significant changes over background for the organic compounds have triggered assessment monitoring in any well at the Facility nor any corrective action. The unconfirmed detections of 1,1-dichloroethene in monitoring well MW-3 were caused by migration of landfill gas and subsequent contact with groundwater, which was resolved with the installation and operation of a landfill gas collection system. Groundwater

analyses indicate that there is presently no known plume of contamination that has entered the groundwater from the Facility. (Ex. APP-202 at 1737; Ex. APP-801; Ex. APP-802; Ex. APP-803; Trial Tr. 1196:23 to 1198:12 (Kerfoot).)

56. The proposed monitoring well network is designed to be protective of State waters and human health and the environment in the unlikely event that a release occurs. Groundwater and flow directions at the permitted facility and lateral expansion area are consistent with flow mainly toward the Mesquite Creek area, which is centrally located between the existing and proposed waste footprints. Therefore, the proposed groundwater monitoring system for the Facility is comprised of two physically separate groundwater monitoring systems that collectively serve as the groundwater monitoring system for the entire site. All 22 of the monitoring wells in the proposed groundwater monitoring network are or will be completed in Stratum III as it is the uppermost water-bearing zone and would provide the timeliest detection of potential groundwater impacts from the Facility. (Ex. APP-202 at 1738-40; 1750; Ex. APP-400 at 35-36.)
57. The existing facility monitoring network will use a total of eight monitoring wells, one up-gradient and seven down-gradient. Four of the currently permitted monitoring wells will remain, one permitted monitoring well will be moved 500 feet to the southeast to make it a down-gradient well, and three new monitoring wells will be installed to enhance the current down-gradient monitoring well network and further delineate groundwater flow within the currently permitted area. (Exhibit APP-202 at 1739; Trial Tr. 677:25 to 678:24 (Meaux).)
58. The expansion area monitoring network will be composed of 2 up-gradient wells and 12 down-gradient wells for a total of 14 groundwater monitoring wells. Three of the

piezometers installed as part of this Application will be converted to wells and 11 new monitoring wells will be installed along the perimeter of the expansion property. (Ex. APP-202 at 1739-40.)

59. The point of compliance must be established at locations that parallel the surface projection of a vertical plan that intersects the uppermost water-bearing zone at the most immediate down-gradient location from the waste management units. A relevant point of compliance has been established for each portion of the groundwater monitoring system. Both segments of the point of compliance are located down-gradient from the corresponding portion of the Facility and are capable of detecting a release from the protected area, should one occur. The seven down-gradient groundwater monitoring wells in the existing facility monitoring network will form the point-of-compliance boundary for Units 1 and 3. The 12 down-gradient groundwater monitoring wells in the expansion area monitoring network will form the point of compliance boundary for Unit 2. (Ex. APP-202 at 1738, 1739, 1747-50, 1752; Trial Tr. 641:3-25 (Meaux).)
60. The proposed monitoring wells will be activated after the permit amendment is approved to collect intrawell background data. (Ex. APP-202 at 1747-50.)
61. The proposed monitoring wells will be properly screened to monitor the groundwater encountered at the monitored location. (Ex. APP-202 at 1740.)
62. The point of compliance established in the Application is appropriate. The proposed monitoring well system is adequate to detect a release from the Facility. (Ex. APP-202 at 1738, 1740, 1752; Trial Tr. 641:3-25 (Meaux).)
63. The Groundwater Sampling and Analysis Plan (“GWSAP”) contained in the Application provides procedures for collecting representative samples from groundwater monitoring

wells and quality assurance/quality control procedures required to ensure valid analytical results. The GWSAP also includes methodology for establishing background water quality in each well and for comparison of the subsequent results to background values in the same well in order that any statistically significant increase may be detected. (Ex. APP-202 at 771, 1743, 2251-2320.)

### **GROUNDWATER PROTECTION**

64. The proposed expansion of the Facility is designed to be protective of groundwater. The design includes a composite liner system and a leachate collection system. The Application provides for quality control procedures to be employed during the construction and installation of the liner system and requires submission of a Soil and Liner Evaluation Report (“SLER”) and/or a Geomembrane Liner Evaluation Report (“GLER”) to TCEQ detailing the final construction and lining of a new disposal cell prior to the placement of any waste in that cell. (Ex. APP-202 at 769-71, 2172-82, 2189-2202.)
65. The composite liner system for Unit 2 will consist of at least a two-foot layer of compacted soil liner with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  cm/sec overlain by a minimum 60-mil high-density polyethylene (“HDPE”) geomembrane, a leachate drainage layer of either geocomposite (geonet bonded to geotextiles) or geotextile, and a minimum 2-foot thick protective soil layer. No changes are proposed to the un-built, permitted Unit 3 liner system, which is proposed to use either the same standard liner system proposed for Unit 2 or an equivalent alternate that uses a geosynthetic clay liner (“GCL”) instead of the compacted soil layer. (Ex. APP-202 at 770.)

66. For Units 2 and 3, leachate percolating through the waste will be collected in a drainage layer constructed above the liner and will flow by gravity to a leachate collection corridor or sideslope chimney drain. The proposed leachate drainage layer on the cell floor and sideslope consists of a geosynthetic. The leachate drainage layer on the floor consists of a single-sided or double-sided geocomposite; the leachate drainage layer on the sideslope consists of either a double-sided geocomposite or geotextile. The selected leachate collection system materials are expected to be chemically resistant to the anticipated leachate and of sufficient strength to prevent collapse of the leachate collection drainage layers due to the pressures exerted by overlying materials. These components are designed and will function through the active life, scheduled closure, and post-closure care period. (Ex. APP-202 at 770, 2203, 2547.)
67. The proposed leachate collection corridors collect leachate from the floor drainage layer and convey it to the leachate collection sumps. A leachate collection corridor is centrally located within each phase of Unit 2 and within Unit 3. The leachate collection corridor will consist of either granular drainage media encased within a geotextile filter or a perforated six-inch diameter HDPE SDR-11 pipe embedded within a granular drainage media encased within a geotextile filter. (Ex. APP-202 at 2548.)
68. The proposed sideslope chimney drains collect leachate from the sideslope drainage layer and convey it to the leachate collection corridors or the leachate collection sumps. The sideslope chimney drains are located along the toe of slope of sideslopes around the perimeter of the waste footprint of Units 2 and 3. The proposed sideslope chimney drains consist of granular drainage material encased within a geotextile filter, which can be constructed with or without a perforated six-inch diameter HDPE SDR-11 pipe. The

proposed sideslope chimney drains extend vertically through the protective cover layer to create a chimney drain. (Ex. APP-202 at 2548.)

69. The leachate collection corridors and sideslope chimney drains are designed to convey the peak daily volumetric flow rates of leachate they are expected to collect. Collected leachate within each phase will be carried to the leachate collection sump located at the low point of the phase. The leachate collection system for Units 2 and 3 is designed to maintain a head of less than 30 cm (12 inches) over the liner system. (Ex. APP-202 at 2546, 2548-49.)
70. Leachate recovered from pre-subtitle D and subtitle D sumps will be pumped directly into a tanker truck, recirculated, and/or pumped through a force main system to leachate evaporation ponds or other on-site storage or treatment facilities. Leachate pumped into tanker trucks will be disposed of off-site at a TCEQ-approved treatment facility. (Ex. APP-202 at 2550-53.)
71. The Soil Liner & Quality Control Plan (“SLQCP”) specifies materials, equipment, and construction methods for the construction of compacted soil liners. The SLQCP details installation methods and quality control testing and reporting for the flexible membrane liners, provides guidance necessary for testing and reporting evaluation procedures for the person preparing the SLER and/or the GLER, and describes implementation procedures. It specifies materials and locations for sidewall dewatering and ballasting and guidance for preparation and submission of the Ballast Evaluation Report (“BER”). (Ex. APP-202 at 2228-34.)
72. Liner excavations will extend into Stratum III and portions of the liner may be constructed below the seasonal high water table. Stratum III, however, is of such low

permeability that groundwater cannot move sufficiently to exert a force that would damage the liner. Should localized sweeps or wet areas occur during excavation, the affected areas will be over-excavated and backfilled/compacted with competent material. In the unexpected event that fracture water is observed in the clay and claystones during construction which could exert an uplift force on the liner, an evaluation will be made regarding the magnitude of groundwater present and, if needed, the construction of liner systems will incorporate short-term groundwater control and ballasting as described in the SLQCP. If short-term liner stability is needed, long-term liner stability will be accomplished by the presence of soil and/or waste ballast. After construction of the liner and placement of ballast, the pressure relief/dewatering system will be terminated. (Ex. APP-202 at 2229-33.)

#### **DRAINAGE AND FLOODPLAIN ANALYSES**

73. The Facility as designed in the Application will comply with all applicable TCEQ drainage requirements. The Facility was designed and will be constructed to prevent the discharge of any solid wastes or pollutants adjacent to or into waters of the State of Texas or the United States, non-point source pollution of the waters of the United States, and discharge of dredged or fill material into waters of the State of Texas or the United States in violation of Section 404 of the Clean Water Act. Surface water controls at the proposed expansion will also be designed to prevent rainfall run-off from coming in contact with leachate or refuse, maintain natural drainage patterns, and minimize erosion. (Ex. APP-202 at 772-73, 1811, 1825.)
74. The Groundwater and Surface Water Protection Plan and Drainage Plan contained in the Application shows the locations, details, and typical sections of the surface drainage controls at the Facility consisting of drainage benches and terraces, channels, detention

ponds, culverts, berms, and other facilities. Drainage from the developed landfill is designed to maintain the natural drainage patterns and to prevent significant drainage impacts. (Ex. APP-202 at 774-75, 1811, 1815-16.)

75. Applicant has received Texas Pollutant Discharge Elimination System (“TPDES”) Multi-Sector Permit No. TXR05K953 in compliance with the federal Clean Water Act § 402, as amended, and the National Pollution Discharge Elimination System (“NPDES”). No contaminated water will be discharged without authorization by TCEQ and in accordance with the TPDES permit. (Ex. APP-202 at 112, 772, 2875.)
76. The Facility is not located in the 100-year floodplain. The waste disposal limits of the Facility are located outside the 100-year floodplain according to the Federal Emergency Management Agency (“FEMA”) Flood Insurance Rate Map Community Panel Number 4854630130C (1986). The expansion area and majority of the permitted area are located in an area of minimal flooding. The central portion of the site associated with Mesquite Creek is within the flood pool of the downstream Freedom Lake. The permitted waste disposal limits and the expansion area’s waste disposal areas, perimeter roads/berms, and leachate evaporation pond areas do not extend into the Freedom Lake flood pool. Two storm water ponds are partially within the upper elevations of this flood pool, but are designed to allow backflow into the ponds during a flood event through their principal spillway pipes so as not to change the flood storage capacity of Freedom Lake. The landfill will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. Flood protection levees or other



improvement to provide protection from the 100-year flood are not necessary. (Ex. APP-202 at 159, 776, 1813-14.)

77. Applicant communicated with the TCEQ Watershed Management Team to confirm that the Facility, if constructed and operated in accordance with TCEQ rules and guidelines, will comply with the requirements of Section 208 of the federal Clean Water Act, i.e. that there will be no nonpoint source of pollution that will violate any requirement of any areawide or statewide water quality management plan that has been approved under the federal Clean Water Act, as amended. (Ex. APP-202 at 286, 773.)
78. Design and operational procedures will minimize the contact between waste and rainfall runoff. The primary method of contaminated water control is to manage rainfall runoff to prevent uncontaminated water from becoming contaminated through contact with waste or daily cover soil at the active working face. Working face berms, drainage benches, or a combination of the two will be used to control and minimize any contact between surface waters and solid waste. Rainfall run-off that does become contaminated will be managed and disposed of in accordance with applicable regulations. (Ex. APP-202 at 775, 1816, 1829-30.)
79. Run-off from undeveloped, closed, or final or intermediate covered portions of the site will be controlled using berms, channels, and storage pond areas to prevent flow onto the active portion of the landfill during the peak discharge from the 24-hour, 25-year storm.. Uncontaminated water may be used for site operations, evaporated naturally, or discharged offsite as authorized under TCEQ and TPDES permits. A Storm Water Pollution Prevention Plan has been developed and implemented for the construction and operation of the Facility. (Ex. APP-202 at 775, 1829-30.)

80. The entire site is part of the Mesquite Creek Watershed. The Natural Site condition consists of 5 drainage basins. The Pre-Development watershed condition incorporates the currently permitted surface water management system within the 96-acre permit area and the remainder of the watershed area is the same as the Natural Site condition, including offsite areas and the proposed expansion area. The Post-Development condition will maintain similar drainage patterns to the Natural Site and Pre-Development conditions. For all three conditions, five locations were identified to represent the points of concentrated discharge of storm water from the site. (Ex. APP-202 at 774, 1819, 1850-51.)
81. The goal of the Groundwater and Surface Water Protection Plan and Drainage Plan is to minimize the impact of the storm water run-off on the natural drainage patterns. The surface water management system is designed and will be operated and maintained to control rainfall from a 25-year, 24-hour storm. The natural drainage patterns will not be significantly altered as a result of the landfill development. Modeling results indicate that post-development peak discharges from the Facility are less than the pre-development peak discharge rates. An increase in run-off volume occurs for three discharge points, but the post-development discharge rate is less than the pre-development discharge rate and, therefore, the development should not significantly alter the natural drainage patterns in the vicinity of the Facility. (Ex. APP-202 at 1810-24, 1848-65.)
82. Applicant used the USACE Hydraulic Engineering Center Hydraulic Modeling System (“HEC-HMS”) to calculate storm water discharges for all three conditions. HEC-HMS is the successor to and replacement for the HEC-1 program. HEC-HMS is considered an

acceptable storm water discharge modeling program within the hydrology industry and by TCEQ. (Ex. APP-202 at 1849, Trial Tr. 936:12 to 937:6 (Prompungorn).)

83. The surface water management system design minimizes soil erosion losses by utilizing drainage terraces and benches, downchute channels, perimeter drainage channels, culverts, and storm water ponds, which provide for positive, non-erosive drainage of runoff from the final cap and surrounding site areas. The perimeter drainage channels, storm water ponds, and diversion berms will be used during development and operation of the Facility and will ultimately transport sediments from the final cap or interim cover slopes to storm water ponds. Best management practices will be used to further minimize soil erosion and sedimentation during the development and operation period. (Ex. APP-202 at 1825-28.)
84. Applicant has developed a drainage facility maintenance plan to ensure the continued operation of the collection, drainage, and storage facilities as designed, in addition to the plan for restoration and repair in the event of a washout or failure. The plan consists of periodic inspections of surface water facilities and repair of those which have been impacted by erosion or other causes. Provisions of the Erosion and Sediment Control Plan will be incorporated with the drainage facility maintenance plan as appropriate. (Ex. APP-202 at 1825-30.)

#### **GEOTECHNICAL INVESTIGATION**

85. Geotechnical test results of the soils beneath the expansion property are consistent with previous geotechnical investigations of the soils beneath the permitted landfill area. The Stratum I soils are typified by a medium to high plasticity clay that is stiff to hard in consistency. The Stratum II soils are clayey gravel to gravelly clay. Stratum III is a very stiff to hard oxidized clay or claystone. Stratum IV is a very hard primarily unoxidized

clay to claystone. The clay in Strata I through III is primarily classified as CL to CH in accordance with the Unified Soil Classification System. (Ex. APP-202 at 1044.)

86. Stratum I soil is suitable for soil liner and infiltration layer material, as demonstrated by the successful construction over a portion of the existing facility of a cover system infiltration layer having a hydraulic conductivity less than  $1 \times 10^{-7}$  cm/sec. Strata III and IV soils will be suitable for use in liner system and final cover system construction. The hydraulic conductivities for these Strata ranged from  $2.8 \times 10^{-8}$  to  $3.5 \times 10^{-8}$  cm/sec. (Ex. APP-202 at 329-30.)
87. Applicant performed a slope stability analysis to verify the stability of the permitted and constructed landfill area in Unit 1 and the proposed expansion area (Unit 2). The liner system and final cover system proposed for Unit 3 are the same as those proposed for Unit 1 or 2, and Units 1 and 2 have more critical cross-sections for slope stability (e.g., taller waste slopes and shorter liner system slopes). The target factor of safety for short-term interim conditions such as foundation slopes prior to liner system construction, liner system slopes prior to waste placement, and interim landfill slopes during operation is 1.25. The target factor of safety for long-term conditions such as final landfill slopes at the end of operation and final cover system slopes is 1.5 except for Unit 1's final landfill slopes, which was 1.25. For the shear surfaces that pass along a liner or final cover system interface, the target minimum calculated factor of safety using large displacement strengths is 1.0 for short-term conditions and 1.15 for long-term conditions. For all conditions evaluated, the calculated factor of safety is greater than or equal to the minimum target factor of safety. Therefore, the Facility will be stable if designed and

constructed as proposed in the Application. (Ex. APP-202 at 1045-47, 1621-1701; Ex. APP-500 at 13).

88. Applicant performed foundation settlement analysis to evaluate the effect of compression of the foundation materials on the post-settlement grades of the leachate collection system in Units 1, 2, and 3 to ensure that the leachate collection system will maintain positive drainage. The highest differential settlements along the leachate collection corridor will occur where the corridor is underlain by the thickets, most compressible materials, i.e., the Stratum III clays, and the differential loads along the corridor are the greatest. The minimum calculated post-settlement slope for the evaluated sections in Units 1, 2, and 3 is 0.4%. Therefore, since positive drainage is maintained, calculated foundation settlements beneath the landfill are considered acceptable. (Ex. APP-202 at 1047, 1703-08; Ex. APP-500 at 13-14.)

#### **SITE OPERATING PLAN**

89. The entire Application, including the site development plan, Site Operating Plan (“SOP”), final closure plan, post-closure care plan, landfill gas management plan, and any other required plan, will be placed into the site operating record of the Facility and will become operational requirements for the Facility. All information placed in the operating record of the Facility will be retained for the life of the Facility, including the post-closure care period. (Ex. APP-202 at 2817.)
90. The Application requests authorization to operate 24 hours per day, seven days per week, but Applicant will likely operate less than 24 hours per day, 7 days per week. Actual facility operating hours in effect at any given time will be posted at the entrance. (Ex. APP-202 at 2847; Trial Tr. at 35:20 to 36:20 (Smith).)

91. In accordance with 30 TEX. ADMIN. CODE § 330.115, the SOP fire protection plan includes fire protection standards and site personnel training requirements. The main potential fire hazard at the Facility is operations associated with waste disposal, which is the main operational activity that handles combustible materials. The fire protection plan provides guidelines for landfill personnel to minimize the potential for fires and instructions for controlling small fires. The fire protection measures in the SOP specifically address potential fires at the working face, incoming hot loads, vehicles or equipment, and on-site structures. (Ex. APP-202 at 2837-42; Trial Tr. at 250:24 to 251:8 (Graves), 1032:20 to 1033:9 (Prompungorn).)
92. Special waste will be received at the Facility in accordance with the Special Waste Acceptance Plan and the permit. The SOP's Special Waste Acceptance Plan ensures that special waste, as that term is defined in 30 TEX. ADMIN. CODE § 330.2, will not be accepted or disposed of without the prior written authorization from TCEQ, except with respect to certain special wastes the acceptance of which is previously authorized. (Ex. APP-202 at 2835, 2872, 2877-92.)
93. Class I regulated asbestos-containing material will be accepted for disposal within the fill area and is specifically approved for this Facility. Procedures regarding acceptance and handling of asbestos are outlined in the Asbestos Management Plan. Wastes specifically prohibited from landfill disposal will not be accepted for disposal. The SOP contains procedures to ensure that regulated hazardous and PCB wastes will not be accepted at the Facility. (Ex. APP-202 at 2834-35, 2873, 2894-2910.)
94. To prevent the disposal of unauthorized waste at the Facility, the SOP provides that the Applicant will post signs regarding hazardous and other unacceptable wastes, screen

wastes, provide personnel training, reject haulers carrying unauthorized wastes, and perform random sampling in accordance with the random inspection procedures for the Facility. Waste screenings and random inspections of incoming waste will be conducted at the gate or offsite before disposal. (Ex. APP-202 at 2833-36, 2848.)

95. Access to the Facility will be controlled using artificial barriers. Access to the Facility is controlled using a perimeter fence and a gated entrance. The gated entrance completely restricts access when the Facility is not open, but allows sufficient access for vehicles to maneuver through the gate when the Facility is open. In order to prevent the entry of livestock and discourage unauthorized entry to the landfill, the perimeter fence consists of chain-link fence at least five feet in height. (Ex. APP-202 at 2843-44.)
96. The SOP provides that the unloading of waste will be restricted to the active working face and that the working face will be confined to as small an area as practical. There may be more than one working face in operation each day and each will generally have a maximum size of 200 feet by 400 feet. A trained employee will be present at the entrance at all times during operating hours to monitor all incoming loads of waste and will direct traffic to the appropriate unloading area. (Ex. APP-202 at 2845-46.)
97. The SOP provides that the working face will be maintained and operated in a manner to control windblown solid waste. Daily cover or the approved equivalent, litter fences, and litter collection will be employed to protect the working face from prolonged exposure. A minimum of six inches of daily cover will be used in order to prevent disease vectors, control windblown debris and odors, reduce the possibility of fire, prevent scavenging, and improve the operation of the Facility. (Ex. APP-202 at 2849, 2866.)

98. The SOP specifically prohibits solid waste unloading, storage, disposal or processing operations from occurring within any easement that crosses the site or within any buffer zone. (Ex. APP-202 at 2850.)
99. The SOP provides that the landfill operator will take the necessary steps to ensure that vehicles hauling waste to the site properly secure the load in order to prevent the escape of any part of the load by blowing or spilling. The operator will, as necessary, post signs at the landfill entrance requiring loads to be covered or enclosed and the potential consequences for non-compliance including assessing litter control surcharges. On a daily basis during daylight hours when the Facility is in operation, all public roads and rights-of-way serving the Facility will be inspected and cleaned of spilled materials and wind blown waste for a distance of two miles in either direction from any entrances used for the delivery of waste to the site. This litter pick-up area extends along Kohlenberg Lane, FM 1101, and Schwarzlose Lane. (Ex. APP-202 at 2853.)
100. The SOP specifically provides that the landfill manager will ensure that no unit of the landfill violates any applicable requirements of the approved state implementation plan under the federal Clean Air Act. The Facility has applied for a TCEQ Title V General Operating Permit and is operated in accordance with a TCEQ Air Permit by Rule Registration O. 50924 for the landfill gas flare. No open burning of waste will be permitted on-site. (Ex. APP-202 at 2855.)
101. The SOP includes an odor management plan that uses a combination of identifying the sources of odor and methods to minimize or eliminate those odors. Methods to achieve these objectives include waste and leachate handling procedures, timely placement of



cover materials, the elimination of ponded water, and gas control. (Ex. APP-202 at 2855-56.)

102. The SOP provides that vector control will be achieved through application of daily cover, eliminating ponded water, minimizing the working face, and if necessary, application of appropriate chemicals using appropriate health and safety practices. Non-lethal bird control measures such as pyrotechnics, baiting, decoys, etc. may be used to discourage birds at the site. (Ex. APP-202 at 2857, Trial Tr. 441:21 to 442:14 (Castille).)
103. The SOP specifies procedures to minimize the tracking of any mud and trash by vehicles entering or exiting the Facility onto public roadways. Vehicles will traverse all-weather site access roads and paved site entrance roads allowing for mud to be removed from the vehicle. Additionally, the Facility will minimize the amount of mud at the site entrance and on access roads. (Ex. APP-202 at 2858-59.)
104. The SOP prohibits scavenging, the uncontrolled and unauthorized removal of material at any point in the solid waste management system. Salvaging, the controlled removal of waste materials for recycling, reuse, or sale, will be allowed with specific authorization from the landfill manager in accordance with the SOP, but will not be allowed to interfere with prompt sanitary disposal of solid waste or to create a public health nuisance. (Ex. APP-202 at 2860.)
105. The SOP specifies procedures for landfill gas monitoring and control in accordance with the Landfill Gas Management Plan, Attachment 14 to Part III of the Application. (Ex. APP-202 at 2493-2541, 2862.)
106. The SOP specifies that ponding of water over waste areas will be minimized and eliminated. Ponding in the active portion of the Facility or on a closed portion of the

Facility must be eliminated and the area in which the ponding occurred will be filled in and regraded within seven days of the occurrence. Pondered water from an area with at least 12 inches of intermediate cover will be pumped or otherwise removed to the Facility's drainage system. The ponding prevention plan will use high density compaction during placement of the wastes along with constructing and maintaining proper cover and slope on all areas to prevent ponding over waste areas. (Ex. APP-202 at 2867-70.)

107. The SOP prohibits discharge of contaminated water without specific written authorization from TCEQ. Water that has become contaminated by contact with the working face or with leachate shall be segregated from uncontaminated surface and groundwater and properly managed. (Ex. APP-202 at 2870, 2875.)

#### **TRANSPORTATION**

108. Access to the Facility is provided via FM 1101 to Kohlenberg Lane. FM 1101 is primarily accessed from the south via Highway 46, from the west via I-35 to Kohlenberg Road, or from the north via Highway 123. FM 1101 is a 24-foot wide, two lane undivided, asphalt-paved road. Kohlenberg Lane is an approximately 22-foot wide, two lane undivided, asphalt-paved road. Applicant conducted a traffic analysis to evaluate the impact of the landfill expansion on traffic in the vicinity of the Facility. Based on this evaluation, the roadways in the vicinity of the Facility are operating well under their maximum design capacity and are adequate to handle the existing and projected future traffic. (Ex. APP-202 at 147.)
109. Applicant notified the Texas Department of Transportation ("TxDOT") regarding the proposed expansion and the agency has determined that the impact on the surrounding

- area roadways as a result of the proposed expansion will be minimal. (Ex. APP-202 at 147, 289.)
110. The U.S. Department of Transportation Federal Aviation Administration issued a Determination of No Hazard to Air Navigation for the lateral expansion and for the currently permitted landfill. (Ex. APP-202 at 148, 256-84.)
111. The precise location of the proposed site entrance will be determined at the time of construction. When constructed, the site entrance to the Facility will be required to meet the sight distance requirements in the American Association of State and Highway Transportation Offices (“AASHTO”) standards. (Ex. APP-214; Trial Tr. 1159:17 to 1166:2, 1176:18 to 1177:7 (Graves).)

#### **LAND USE**

112. The land use information provided in the Application contains the technical information specified in 30 TEX. ADMIN. CODE § 330.53(b). (Ex. APP-202 at 141-146.)
113. The development and operation of the proposed expansion of the Facility will not result in the destruction or adverse modification of critical habitat or cause or contribute to the taking or harming of any endangered species. The United States Department of the Interior Fish and Wildlife Service and the Texas Parks and Wildlife Department (“TPWD”) were contacted to assess the effects of the proposed expansion on threatened and endangered species and those proposed for listing as threatened and endangered. The Fish and Wildlife Service has confirmed that the Facility is not located within designated critical habitat of any federally listed threatened or endangered species. TPWD also does not anticipate adverse impacts to any threatened or endangered species from the proposed project activities. A biological assessment of the Facility was conducted and revealed the presence of no federal or state-listed endangered or threatened species or their critical

habitat within the subject property or any potential critical or essential habitat. Therefore, the expansion will have no effect on any federal or state listed species, or critical habitats. (Ex. APP-202 at 167, 559, 603-77; APP-303; Trial Tr. 436:13-19, 444:16-19 (Castille).)

#### **REPORTING AND TRANSCRIPTION COSTS**

114. The costs for recording and transcribing the pre-hearing conference and the hearing on the merits by a court reporter total \$15,192.00. This includes all transcription costs for the original and two copies of the transcript and all costs associated with expedited transcription, production of condensed versions, and other usual costs associated with recording and transcribing hearings.
115. The cost for regular, un-expedited delivery of the transcripts would be \$6,192.95.
116. Applicant, WMTX, was represented by counsel and has demonstrated that it has the financial ability to pay the reporting and transcription costs.
117. Protestant TJFA was the primary protesting party and the only party to request a contested case hearing.
118. Bobby Gregory, President of Texas Disposal Systems Landfill, Inc. (“TDSL”), a competitor to WMTX within the Central Texas landfill market, is also the limited partner in TFJA. Mr. Gregory benefits financially if TDSL has less competition, or no competition, from the Mesquite Creek Landfill, or if TDSL’s competitor has to incur the significant expense of contested case proceedings in order to expand its facility and continue its operations.
119. TJFA is an entity designed for the purpose of competing with other landfill operators in Central Texas. (ALJ Order No. 3 at 2, n.3.)
120. Both TJFA and Applicant ordered expedited copies of the transcript for every day of the hearing as well as copies of the exhibits from the hearing.

121. The availability of the transcript helped Applicant and TJFA equally in preparing closing arguments and replies.
122. OPIC is a statutory party that cannot be assessed reporting or transcription costs. 30 TEX. ADMIN. CODE § 80.23(d)(2); TEX. WATER CODE § 5.273(a).
123. The Executive Director's participation in the hearing was not mandated by statute, but was limited to providing information to complete the administrative record. 30 TEX. ADMIN. CODE § 80.108(d); TEX. WATER CODE § 5.228(c).
124. Protestant Concerned Citizens and Landowners is comprised of individual landowners whose financial means are, presumably, limited as compared to WMTX and TJFA.

#### **OTHER REMAINING ISSUES**

125. With respect to all other contested issues and all unrefuted issues, the Application and the remainder of the evidentiary record contain sufficient factual information regarding the landfill's design and operation to satisfy all applicable statutory and regulatory requirements.

## **II. CONCLUSIONS OF LAW**

1. The Commission has jurisdiction over the disposal of municipal solid waste and the authority to issue this permit under TEX. HEALTH & SAFETY CODE ANN. § 361.061.
2. Notice was provided in accordance with TEX. HEALTH & SAFETY CODE ANN. § 361.0665, 30 TEX. ADMIN. CODE §§ 39.5 and 39.101, and TEX. GOV. CODE §§ 2003.051 and 2003.052.
3. SOAH ALJs have jurisdiction to conduct a hearing and to prepare a Proposal for Decision on contested cases referred by TCEQ. TEX. GOV. CODE § 2003.47.
4. Applicant submitted a complete permit amendment application, as required by TEX. HEALTH & SAFETY CODE ANN. §§ 361.066 and 361.068, that demonstrates that Applicant

will comply with all relevant aspects of the Application and design requirements as provided in 30 TEX. ADMIN. CODE §§ 33.4(m) and 330.51(b)(1).

5. The Application was processed and the proceedings described in this Order were conducted in accordance with applicable law and rules of the TCEQ, specifically 30 TEX. ADMIN. CODE § 80.1 *et seq.*, and the State Office of Administrative Hearings, specifically 1 TEX. ADMIN. CODE § 155.1 *et seq.*, and Subchapter C of the TEX. HEALTH & SAFETY CODE ANN. Chapter 361.
6. The evidence in the record is sufficient to meet the requirements of applicable law for issuance of such permit, including the Solid Waste Disposal Act, TEX. HEALTH & SAFETY CODE ANN. Chapter 361, and 30 TEX. ADMIN. CODE Chapter 330.
7. The expansion of the proposed Mesquite Creek Landfill, if constructed and operated in accordance with the Solid Waste Disposal Act, 30 TEX. ADMIN. CODE Chapter 330, and the Draft Permit, will not adversely affect public health or the environment.
8. The Draft Permit No. MSW-66B, as prepared by the TCEQ staff, includes all matters required by law.
9. No site-specific conditions exist at the site that will require special consideration as provided in 30 TEX. ADMIN. CODE §§ 330.51(b)(3) and 330.53(b)(4).
10. If the Facility is operated in compliance with applicable law, issuance of the Draft Permit will not adversely affect the environment nor will it adversely affect the public health or welfare.
11. The approval of the Application and issuance of Permit No. MSW-66B, will not violate the policies of the State of Texas, as set forth in § 361.002(a) of the Solid Waste Disposal

Act, to safeguard the health, welfare, and physical property of the people of Texas, and to protect the environment by controlling the management of solid waste.

12. The contents of the permit to be issued to the Facility meet the requirements of the Texas Solid Waste Disposal Act, TEX. HEALTH & SAFETY CODE ANN. §§ 361.086(b) and 361.087.
13. The Texas Health and Safety Code and TCEQ rules do not require Applicant to analyze the impact to on-site drainage from off-site structures that are not within the 100-year floodplain.
14. The TCEQ is not prohibited by TEX. HEALTH & SAFETY CODE ANN. § 361.122 from issuing Permit No. MSW-66B.
15. Applicant has not proposed to construct the expansion in a floodplain, and, therefore, Applicant is not required to submit the information specified in 30 TEX. ADMIN. CODE § 330.51(b)(4)(A)-(D).
16. Applicant has submitted documentation of compliance with the NPDES program under the federal Clean Water Act Section 402, as amended, as required by 30 TEX. ADMIN. CODE § 330.51(b)(5).
17. As required by 30 TEX. ADMIN. CODE § 330.51(b)(6), Applicant has submitted documentation of coordination with
  - A. TCEQ for compliance with the federal Clean Water Act Section 208,
  - B. the Federal Aviation Administration for compliance with airport location restricts, and
  - C. the Texas Department of Transportation for traffic and location restrictions.

18. Applicant has submitted wetland determinations required by applicable federal, state, and local laws as required by 30 TEX. ADMIN. CODE §§ 330.51(b)(7) and 330.53(b)(12).
19. Applicant has submitted Endangered Species Act compliance demonstrations under state and federal laws as required by 30 TEX. ADMIN. CODE §§ 330.51(b)(8), 330.53(b)(13), and 330.55(b)(9).
20. Applicant has submitted a review letter from the Texas Historical Commission as required by 30 TEX. ADMIN. CODE §§ 330.51(b)(9).
21. The Application conforms to the applicable requirements of the Engineering Practice Act, TEX. REV. CIV. STAT. ANN. art. § 3271a, as provided in 30 TEX. ADMIN. CODE § 330.51(d) and 22 TEX. ADMIN. CODE § 131.166.
22. Part I of the Application meets the technical requirements of 30 TEX. ADMIN. CODE §§ 305.45 and 330.52.
23. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE § 330.53.
24. The Site Development Plan, which supports Parts I and II of the Application, meets the requirements of 30 TEX. ADMIN. CODE §§ 330.54, 330.55, and 330.56.
25. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE §§ 330.54-.56.
26. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE §§ 330.57 and 330.114.
27. Applicant has shown that it will comply with the operational prohibitions and requirements in 30 TEX. ADMIN. CODE §§ 330.5, 330.111-.139.



28. Applicant has thoroughly investigated whether geologic faults are present at the site, both active (as required by 30 TEX. ADMIN. CODE § 330.56(d)(3)(A)), and inactive faults, which is not required by TCEQ's rules.
29. Applicant submitted a subsurface investigation report that complies with 30 TEX. ADMIN. CODE § 330.56(d)(5).
30. The Application contains the required information regarding the effect of site construction on groundwater flow required by 30 TEX. ADMIN. CODE § 330.231(e)(1).
31. The Application meets the requirements of 30 TEX. ADMIN. CODE §§ 330.55 and 330.200-.206, concerning groundwater protection.
32. The groundwater sampling and analysis plan meets the requirements set forth in 30 TEX. ADMIN. CODE §§ 330.56(k) and 330.230-.234.
33. Applicant has demonstrated that natural drainage patterns will not be significantly altered as a result of the proposed landfill development, as required by 30 TEX. ADMIN. CODE § 330.56(f)(4)(A)(iv).
34. The landfill gas monitoring system complies with 30 TEX. ADMIN. CODE § 330.130.
35. Applicant has demonstrated compliance with the location restrictions set forth in 30 TEX. ADMIN. CODE §§ 330.300-.305.
36. Applicant has submitted information regarding closure and post-closure that demonstrates compliance with the requirements of 30 TEX. ADMIN. CODE §§ 330.56(l), (m), 330.253, and 330.254(b).
37. Applicant has submitted information regarding financial assurance that complies with 30 TEX. ADMIN. CODE §§ 330.52(b)(11) and 330.280-.286.

38. Applicant has listed all permits or construction approvals received or applied for under any program listed in 30 TEX. ADMIN. CODE § 305.45(a)(7).
39. The SLQCP complies with 30 TEX. ADMIN. CODE §§ 330.56(j) and 330.205.
40. Applicant has provided sufficient information concerning its acceptance or disposal of “special waste,” as defined by 30 TEX. ADMIN. CODE § 330.2.
41. Applicant has demonstrated compliance with 30 TEX. ADMIN. CODE § 330.136 regarding disposal of special wastes.
42. Applicant has provided information concerning the disposal of industrial wastes and demonstrated compliance under 30 TEX. ADMIN. CODE § 330.137.
43. Operation of a MSW landfill in accordance with the applicable law and regulations is a proper land use of the property described in the Application for Permit No. MSW-66B.
44. Applicant is not proposing to site a new MSW landfill or lateral expansion within five miles of an airport serving turbojet or piston-type aircraft, as confirmed in correspondence with the Federal Aviation Administration and in compliance with 30 TEX. ADMIN. CODE §§ 330.51(b)(6) and 330.300.
45. As required by TEX. HEALTH & SAFETY CODE § 361.069, the Facility is compatible with surrounding land uses.
46. The buffer zones established by Applicant between the edge of fill and the site boundary are compliant with the MSW rules, including 30 TEX. ADMIN. CODE §§ 330.121(b).
47. Applicant has provided sufficiently detailed information regarding the operational methods to be utilized at the site when using daily cover and its preventative effect on vectors, fires, odors, and windblown waste and litter, as required by 30 TEX. ADMIN. CODE § 330.133(a).

48. The methods specified in the SOP for the control of windblown waste and litter comply with the MSW rules, including 30 TEX. ADMIN. CODE §§ 330.114(3) and 330.120.
49. Pursuant to the authority of, and in accordance with, applicable laws and regulations, the requested permit should be granted.
50. Pursuant to 30 TEX. ADMIN. CODE §§ 80.23(d)(2), OPIC may not be assessed any portion of the transcript and reporting costs.
51. For the reasons set out in the Findings of Fact, the court reporting and transcript costs should be apportioned equally between Applicant and Protestant TJFA.

**NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW THAT:**

1. Permit No. MSW-66B for a Type I MSW landfill in Comal County and Guadalupe County, Texas, is hereby issued to Waste Management of Texas, Inc.
2. All other motions, requests for specific Findings of Fact or Conclusions of Law, and other requests for general and specific relief, if not expressly granted herein, are hereby denied for want of merit.
3. The effective date of this Order is the date the Order is final, as provided by 30 TEX. ADMIN. CODE § 80.273 and § 2001.144 of the Texas Administrative Procedure Act, TEX. GOV'T CODE ANN.
4. The Chief Clerk of the Commission shall forward a copy of this Order to all parties.
5. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this Order.

Issued:

TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

---

Buddy Garcia, Chairman