State Office of Administrative Hearings

Cathleen Parsley
Chief Administrative Law Judge
July 21, 2009

Les Trobman, General Counsel
Texas Commission on Environmental Quality
PO Box 13087
Austin Texas 78711-3087

Re: SOAH Docket No. 582-08-2186; TCEQ Docket No. 2006-0912-MSW; In Re: In the Matter of the Application of Waste Management of Texas, Inc., for a Municipal Solid Waste Permit Amendment Permit No. MSW 249D

Dear Mr. Trobman:

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Enclosed are copies of the Proposal for Decision and Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the original documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than August 20, 2009. Any replies to exceptions or briefs must be filed in the same manner no later than August 31, 2009.

This matter has been designated **TCEQ Docket No. 2006-0912-MSW; SOAH Docket No. 582-08-2186**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at http://www10.tceq.state.tx.us/epic/efilings/ or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Sincerely,

Roy G. Scudday
Administrative Law Judge

RGS/sb
Enclosures
cc: Mailing List

STATE OFFICE OF ADMINISTRATIVE HEARINGS

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AGENCY: **Environmental Quality, Texas Commission on (TCEQ)**

STYLE/CASE: **WASTE MANAGMENT OF TX, INC**

SOAH DOCKET NUMBER: **582-08-2186**

REFERRING AGENCY CASE: **2006-0612-MSW**

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xc: Docket Clerk, State Office of Administrative Hearings

SOAH DOCKET NO. 582-08-2186
TCEQ DOCKET NO. 2006-0612-MSW

IN THE MATTER OF THE	§	**BEFORE THE STATE OFFICE**
APPLICATION OF WASTE MANAGEMENT	§	
OF TEXAS, INC., FOR A MUNICIPAL	§	**OF**
SOLID WASTE PERMIT AMENDMENT	§	
PERMIT NO. MSW 249D	§	**ADMINISTRATIVE HEARINGS**

PROPOSAL FOR DECISION

SOAH DOCKET NO. 582-08-2186
TCEQ DOCKET NO. 2006-0612-MSW

IN THE MATTER OF THE APPLICATION OF WASTE MANAGEMENT OF TEXAS, INC., FOR A MUNICIPAL SOLID WASTE PERMIT AMENDMENT PERMIT NO. MSW 249D	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

PROPOSAL FOR DECISION

I. INTRODUCTION

Waste Management of Texas, Inc. (WMTX or Applicant) has applied to the Texas Commission on Environmental Quality (TCEQ or Commission) for an amended Permit No. MSW 942D to authorize an expansion of its Type I Municipal Solid Waste Management Facility, located at 9900 Giles Rd., Austin, Texas 78754.

The Administrative Law Judge (ALJ) recommends that the Commission issue a revised permit with additional conditions as set forth herein.

II. PARTIES

The following are the Parties in this case:

PARTIES	REPRESENTATIVES
WMTX	John Riley, Bryan J. Moore, and Rachel B. Chester
ED	Amie Dutta Richardson, Timothy Reidy, and Daniel Ingersoll
Office of Public Interest Counsel (OPIC)	Amy Swanholm
Travis County (County)	Annalynn Cox and Shannon Talley
City of Austin (City)	Meitra Farhadi and Holly Noelke
TJFA, LP (TJFA)	Erich M. Birch
Northeast Neighbors Coalition and Harris Branch Residential Property Owners Association	James B. Blackburn, Jr. and Adam M. Friedman
Mark and Melanie McAfee	Self
Janet L. Smith	Self

Cecil and Evelyn Remmert and Alfred Wendland	Self
Giles Holdings	Paul Terrill
Jean Brezeale	Self
John Wilkins	Self
George K. Edwards	Self
John P. Murphy	Self
Alto S. and Rosemary M. Nauert	Self
Williams, Ltd., a general Texas partnership	Evan Williams

Northeast Neighbors Coalition, Harris Branch Residential Property Owners Association, Williams Ltd., Mark and Melanie McAfee, Cecil and Evelyn Remmert and Alfred Wendland, Janet L. Smith, Jean Brezeale, John Wilkins, George K. Edwards, John P. Murphy, and Alto S. and Rosemary M. Nauert are aligned for all purposes except settlement. They are collectively referred to as NNC, and their alignment's representative is Jim Blackburn. Although designated as a party to the proceeding, Giles Holdings did not participate in the hearing.

III. JURISDICTION

No party disputes either the Commission's or the State Office of Administrative Hearings' (SOAH) jurisdiction. The attached Proposed Order contains the necessary findings and conclusions concerning jurisdiction.

IV. PROCEDURAL HISTORY

The application seeks an expansion to Applicant's Austin Community Recycling and Disposal Facility (ACRD Facility, Facility, also sometimes referred to as the ACL) and was first filed on August 26, 2005. The ED determined the application to be administratively complete on September 15, 2005. While the application was undergoing the technical review, the

Commission revised its rules regarding municipal solid waste (MSW) facilities, effective March 27, 2006.[1] Although not required to do so, Applicant revised its application to comply with the revised rules and submitted the revised application on October 10, 2006. The ED declared the revised application technically complete on January 4, 2008, recommended issuance of the permit, and published the requisite notices. In February and April 2008, Applicant made certain specific revisions to its application. After securing additional information from Applicant, the ED accepted the revisions in May 2008.

On February 15, 2008, Applicant requested that the matter be directly referred to SOAH for a contested case hearing. On March 11, 2008, the Commission referred the case for a contested case hearing.

A preliminary hearing was conducted on April 16, 2008, at which time parties were designated and a schedule was adopted. The hearing on the merits was conducted in Austin, Texas, on March 30 – April 13, 2009, by ALJ Roy G. Scudday. The record closed on May 29, 2009, upon filing of a transcript and the parties' briefs.

V. BACKGROUND FACTS

A. The Existing Facility

The ACRD Facility is located in east-central Travis County, approximately 250 feet north of the intersection of Giles Road and U.S. 290. The facility is bounded by Giles Road to the east, the BFI Sunset Farms Landfill (BFI) and open land to the north, open land and Springdale Rd. to the west, and the closed Travis County Landfill to the south. The currently permitted waste disposal area of the ACRD Facility is approximately 288.6 acres in size. The maximum elevation of waste allowed under the existing permit is 740 feet above mean sea level (MSL).

[1] 30 TEX ADMIN. CODE (TAC) ch. 330.

The currently permitted landfill has a total disposal capacity of approximately 26.7 million cubic yards.

Applicant owns and operates the ACRD Facility and is the sole permittee under the existing permit. The ACRD Facility is situated in the impermeable clays of the Taylor formation and is located in an area of Travis County that has been used for waste disposal since the 1950s or earlier.[2] These waste disposal facilities include the closed Travis County Landfill, BFI, and the ACRD Facility.

On December 20, 1970, a permit was issued to Universal Disposal, Inc. by the Texas Department of Health (TDH) to dispose of municipal solid waste at the ACRD Facility Phase I site. In May 1971, Industrial Waste Materials Management, Inc. assumed ownership of the facility and began to dispose of industrial solid waste on a portion of the site (IWU) under an emergency order issued by the Texas Water Quality Board. Disposal of industrial solid waste at the IWU was discontinued in June 1972. Closure operations, including the construction of a 5-foot clay cap over the IWU, continued until early 1973.

Later in 1973, Industrial Waste Materials Management, Inc. sold the ACRD Facility to Longhorn Disposal Service, which continued to dispose of both municipal and industrial wastes in the Phase I Unit of the facility. In approximately 1979, the Phase I Unit was closed and a 1.5 foot to 12.5 foot clay cap was constructed over it.

On September 26, 1977, the TDH issued Permit No. MSW-249 to Longhorn Disposal Service to operate the Facility as a Type 1 MSW landfill. On July 31, 1981, the TDH issued Permit No. MSW-249A to the Austin Community Disposal Company to reflect the new owner and operator of the Facility and to expand the Facility to 216 acres. On January 24, 1983, this permit was transferred to Texas Waste Systems, now WMTX, a wholly-owned subsidiary of Waste Management of North America, Inc. On July 15, 1988, the TDH issued Permit No. MSW-249B to authorize the installation of a gas recovery system at the Facility. On July 22,

[2] Tr. v. 4, p. 653, lns. 3-6.

1991, the TDH issued Permit No. MSW-249C to authorize a 74-acre expansion to the site for a total permitted area of approximately 290 acres. Sales of separate tracts of land to Travis County for road improvements have reduced the permitted Facility to its current acreage.

The Travis County Landfill, which ceased operating in 1982, is located south of the ACRD Facility at the northwest corner of the intersection of U.S. 290 East and Giles Lane. Waste disposed in the County facility and waste disposed in the Phase I Unit of the ACRD Facility are adjacent to and indistinguishable from one another.

B. The Expansion Project

The permitted area of the existing ACRD Facility includes the IWU, the Phase I Unit, and the East Hill and West Hill disposal areas. The permitted area is in the shape of a rectangle on the east with the proposed expansion on the western boundary of the rectangle. The East Hill is on the east side of the rectangle, the West Hill is on the west side of the rectangle, and the two areas are bisected by a drainage way that flows across the site from its northern permit boundary to its southern permit boundary. Between the two disposal areas is the central area of the rectangle with the north-south drainage way on its western side. The IWU is located in the northern part of the central area and the Phase I Unit is located on the southern side of the central area, and these two areas are bisected by a drainage way that flows from the west side of the East Hill westward until it merges with the north-south drainage way. Both the IWU and the Phase I Unit are hydraulically downgradient of the East Hill and West Hill areas.

No disposal operations are ongoing in the central area. The East Hill Disposal Area has been completely filled to final grades and final cover has been installed. Current disposal operations are ongoing on the western side of West Hill and in the 74-acre expansion authorized under Permit No. MSW-249C.

Applicant proposes to add 71.11 acres to the permitted boundary of the ACRD Facility, for a total permitted area of 359.71 acres. The current maximum elevation of 740 feet MSL will be maintained. With the additional acreage, the landfill's capacity will be expanded to approximately 39.1 million cubic yards, which would extend the remaining life of the facility to the year 2025.[3] Enhanced drainage features and expansion of the groundwater monitoring system--by the plugging of six monitoring wells and nine piezometers, the conversion of four piezometers to monitoring wells, and the installation of 17 new monitoring wells--are also proposed.[4]

City, County, and NNC primarily oppose the expansion based on their contention that its land use is incompatible with the surrounding areas. TJFA opposes the expansion on several technical bases.

VI. ISSUES

A. Whether the Application Includes Adequate Provisions for the Protection of Human Health and Welfare, and the Environment in General.

The Commission's rules at 30 TEX. ADMIN. CODE (TAC) §§ 330.57-330.65 set forth the permit application requirements for an MSW facility. The rule regarding applications at 30 TAC § 330.63(a) requires an applicant for an MSW permit to include in its site development plan criteria that "will provide for the safeguarding of the health, welfare, and physical property of the people and the environment." There are many specifics, but generally the plan must include the following:

- A general facility design that includes location and engineering designs details of all containment dikes or walls enclosing all storage and

[3] WMTX Ex. 202-1, p. 6.

[4] WMTX Ex. 202-1, p. 8.

processing components and all loading and unloading areas, plans for the storage of grease, oil, and sludge on site, the proposed disposition of effluent resulting from all processing operations, and water pollution control;

- a facility surface water drainage report that includes flood control and analyses, surface impoundments, and landfill-unit cross sections, and a liner quality control plan;
- a geology report;
- a groundwater sampling and analysis plan;
- a landfill gas management plan; and
- a closure plan.

1. Whether the Application Includes Adequate Protection of Ground Water and Surface Water, in Compliance with Agency Rules, Particularly in Relation to the Effects of the IWU and Phase I on the Groundwater and Surface Water.

The rule at 30 TAC § 330.207(a) provides that "all liquids resulting from the operation of solid waste facilities shall be disposed of in a manner that will not cause surface or groundwater pollution." In addressing the evidence regarding that requirement, the parties have basically divided the facility into two areas of concern: (1) the IWU and Phase I Unit areas and (2) the area of the proposed expansion. A substantial amount of the testimony and arguments concern the first of these.

a. Migration of Contaminants from the IWU and Phase I Unit Area.

The primary question regarding the IWU and Phase I Unit areas is whether they have or could have an adverse effect on the groundwater and surface water. City, County, TJFA and NNC, and OPIC all argue that the application does not include adequate protection of

groundwater and surface water in relation to the effects of these areas. Applicant and the ED disagree.

As Applicant notes, other than making improvements to the existing groundwater monitoring system to add wells in order to make it more protective, no substantive design changes are proposed to this area of the existing facility, nor, for that matter, to any portion of the ACRD Facility east of the eastern portion of the West Hill. However, the major concern of the Protestants is the adverse effects, existing and/or potential, that the IWU and Phase I Unit areas pose to the groundwater and surface water.

In July 2000, Applicant submitted a Human Health Risk Evaluation Report prepared by JD Consulting, L.P. (JDC Report) and a Site Investigation Report prepared by ThermoRetec Consulting Corporation (TRCC Report) to the Texas Natural Resource Conservation Commission (TNRCC), the predecessor of the TCEQ. The JDC Report concluded that the "IWU does not pose a potential threat to human health and that corrective action is not required."[5] On October 12, 2000, the TNRCC notified Applicant that, based on the JDC Report, the ACRD Facility had "eliminated exposure pathways to soil and groundwater beneath the [IWU] since the landfill prevents exposure to soil and to the groundwater directly below the landfill." The TNRCC additionally found, based on the JDC Report, that reported chemical concentrations were well below Protective Concentration Levels (PCL), "making any cumulative effects unlikely to occur."[6]

In 2002, Applicant constructed an additional five-foot thick clay soil layer "over the north and south disposal areas of the IWU and additional soil was placed over the remaining cap area to provide a minimum two percent slope for drainage. A six-inch topsoil layer was placed over

[5] WMTX Ex. 1, p. iii.

[6] WMTX Ex. 2.

the clay soil layer and the area seeded. Existing drainage ditches were cleaned and widened around the north and south sides of the IWU area to improve storm water drainage."[7]

Applicant asserts that, as shown by the JDC and TRCC Reports and the 2002 clay cap addition, the number of safeguards it has added to the IWU and Phase I Unit areas protect the groundwater and surface water.

Jay Winters is a geologist and groundwater scientist employed by Golder Associates, Inc. Mr. Winters holds an M. S. in Environmental Science and an M. S. in geology, both from the University of Oklahoma, is licensed as a professional geoscientist in Texas, and has been certified as a professional geologist by the American Institute of Professional Geologists. Mr. Winters has over 15 years of professional experience with solid waste facility projects, including MSW and hazardous waste facilities. He has conducted or otherwise managed geologic, hydrogeologic, and geotechnical investigations and related work at approximately 10 proposed or operational Texas solid waste facilities.[8]

Mr. Winters served as the managing geologist and qualified groundwater scientist-of-record for the permit Application. As such he was responsible for the subsurface investigations of the existing facility and proposed expansion area set forth in the Geology Report of the Application that was used to prepare the General Geology and Soils Statement in Section 3.3 and the Groundwater and Surface Water Statement in Section 3.4 of Parts I/II of the Application. He was also responsible for the Groundwater Characterization and Monitoring Report, except for the Groundwater Characterization and Analysis Plan in Appendix B of the Report, which was prepared by Tetra Tech.[9]

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[7] WMTX Ex. 3.

[8] WMTX Ex. 800, pp. 4-5 and Ex. 801.

[9] WMTX Ex. 800, pp. 6-7.

The Geology Report states that the ACRD Facility is underlain by the Upper Cretaceous age Taylor Group, which consists of massive beds of shale and marl with clayey chalk, clay, sand, and some modular and phosphatic (containing phosphates) zones. The upper portion of the Taylor is comprised of a weathered montmorillonitic (hydrous aluminum silicate) clay with high shrink/swell potential. Underlying the weathered material is the unweathered Taylor Group consisting of calcareous claystone, the top of which is most often encountered between 20 and 50 feet below ground surface (BGS). Below the claystone is an unweathered marl layer. The base of the Taylor Group is at a depth of approximately 700 feet BGS.[10]

There are four strata existing beneath the ACRD Facility.

- Stratum IA is a stiff to hard, light brown to orange with occasional gray mottling, high plasticity clay. Small shells and calcareous nodules are frequent and crystallized gypsum seams of up to ½ inch thick are occasionally found. The stratum thickness ranges from 6 ft. to 58 ft.
- Stratum IB is a hard, dark gray, high plasticity clay with traces of shells and occasional cracks infilled with gypsum and exhibiting mineralization as indicated by the brown colorization along cracks. The stratum thickness ranges between 0 and 60 ft.
- Stratum II is fresh to slightly weathered, dark gray, calcareous claystone. Fossilized shells and pyrite nodules were identified in some samples. The top of the stratum is found between approximately 525 ft. and 607 ft. MSL with a thickness ranging between 39 and 116 feet. The average top of the layer is approximately at elevation 545 ft. MSL.
- Stratum III is fresh to slightly weathered, light gray to white, marl. The top of the stratum is found between approximately elevation 453 ft. and 497 ft. MSL. The average top of the stratum is approximately 485 ft. MSL.[11]

The Taylor Group produces only a small amount of the total groundwater used in Travis County. In the area of the ACRD Facility, groundwater occurs primarily within the weathered

[10] WMTX Ex. 202, v. III, p. 1373.

[11] WMTX Ex. 202, v. III, pp. 1392-1395.

portions of the clay unit, sometimes perched on top of the unweathered claystone. There is a preferential flow pathway for groundwater at the interface of Stratum I and Stratum II at an average elevation of 545 ft. MSL. This interface is the uppermost aquifer beneath the site. Groundwater flows vertically through dessication/stress-relaxation cracks within the Stratum IB clay until it reaches the interface with Stratum II where the cracks are absent. The groundwater in these cracks, where present, flows in various directions depending on the part of the site under consideration, but normally flows in subdued conformity to topography following the weathered/unweathered interface.[12]

The first significant aquifer underlying the ACRD Facility is the Edwards and associated limestones. This confined aquifer lies approximately 1,300 feet below the site and the groundwater within the aquifer is not considered potable because of high concentrations of dissolved solids. The thickness and permeability characteristics of the aquifer's overlying strata indicate that there is no reasonable concern for groundwater infiltrating through the site and into any aquifers underlying the site that may be used for human consumption.[13]

On the western portion of the site, the portion on which the expansion is proposed, the groundwater flow is generally to the west, towards a tributary of Walnut Creek. On the central portion of the site between the East and West Hills, where the IWU and Phase I Unit are located, groundwater flow is generally to the south and southwest from West Hill, and to the southeast from East Hill. Both flow systems have groundwater movement towards a low point at the southern perimeter. On the eastern portion of the site, groundwater flow is generally toward the northeast.[14] The hydraulic conductivity of the clays in the IWU and Phase I areas is such that water moves through those clays at a rate of only 4.24 feet per year, according to the TRCC Report.[15]

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[12] WMTX Ex. 202, v. III, p. 1396-1399; Ex. 800, p. 21.

[13] WMTX Ex. 202, v. III, p. 1377.

[14] WMTX Ex. 202, v. III, pp 1400-1401.

[15] TJFA Ex. 204, p. 42.

Mr. Winters concluded from his geotechnical investigations and a review of the data set forth in the Geology Report that the ACRD Facility was suitable for its continued use as an MSW facility.[16]

A substantial part of the expert testimony presented by the Protestants in this case was offered by TJFA. TJFA also protested the application for the expansion of the BFI Sunset Farms facility in SOAH Docket No. 582-08-2178. In his Proposal for Decision (PFD) in that case, ALJ Newchurch found that TJFA was affiliated with Texas Disposal Systems, Inc. (TDS) and Texas Disposal Systems Landfill, Inc. (TDSL); that "Bob Gregory, the CEO, president, and principal owner of TDS and TDSL is the sole limited partner and the 100% owner of TJFA's managing general partner, Garra de Aguila, Inc.", and that neither "TJFA nor Garra de Aguila has any employees, and both entities share a common business location, telephone number, and fax number with TDS and TDSL, both competitors of Applicant." TJFA purchased a property near the ACRD Facility in December 2004. TJFA has purchased properties next to four Central Texas landfills (BFI and three facilities operated by Waste Management) and participated as a party-protestant in four separate MSW permitting proceedings in the past four years. ALJ Newchurch also concluded that "TJFA's witnesses have long-standing and on-going professional relationships as retained consultants to TDSL for another landfill in Travis County."[17]

Applicant's expert witnesses included: Charles G. Dominguez, the project engineer; Mr. Winters; John Worrall, land use expert; John Michael McInturff, transportation expert; C. Lee Sherrod, wetlands specialist; Barbara L. Castille, wetlands specialist; John R. Hultman, Jr., groundwater monitoring, sampling, and analysis expert; and Diana Rader, geoscientist.

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[16] WMTX Ex. 202, v. III, p. 1404.

[17] *Application of BFI Waste Systems of North America, LLC, for Type I MSW Permit No. 1447A,* SOAH Docket No. 582-08-2178, TCEQ Docket No. 2007-1774-MSW, PFD (May 8, 2009), pp. 8-9.

Dr. Robert Kier, TJFA's expert on groundwater issues holds a Ph.D. in geology from the University of Texas, is licensed as a professional geoscientist in Texas and Arkansas, and has been certified as a professional geological scientist by the American Institute of Geologists. Dr. Kier has over 35 years of professional experience in the fields of geology, hydrogeology, engineering geology, municipal solid waste regulations and requirements, water resource development, and the investigation of cleanup of contaminated sites. He has participated in approximately 30 municipal solid waste applications, including the TDSL landfill near Creedmore. Dr. Kier estimates that he has equally split his work between municipal solid waste permit applicants and protestants.[18]

Dr. Kier testified that in 1990 or 1991 he conducted a review of information about the ACRD Facility for an attorney representing neighbors of the Facility, and that in 1996 or 1997 he was retained by Mr. Gregory to review all the available information on the ACRD Facility.[19] As a result of these reviews, over the years Dr. Kier has developed a good working knowledge of the available information regarding the Facility.

Dr. Kier testified that, based on his review of the records, "there is a history of disposal of industrial wastes in unlined trenches, pits, and in the pre-Subtitle D portion of the site of the ACL facility," and that "spent acids, solvents, industrial process waters, and other industrial and potentially hazardous wastes were disposed at the site of the ACL facility as bulk liquids and in drums in unlined pits and trenches." Dr. Kier stated that these types of wastes "have been individually shown to alter the structure of clays to increase hydraulic conductivity easing the escape and passage of contaminants placed in the trenches and pits," that "strong acids are known to dessicate clay minerals, also increasing the hydraulic conductivity," and that industrial process wash water is commonly saline and would cause "clays to flocculate, again increasing hydraulic conductivity."[20]

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[18] TJFA Ex. 200, pp. 2-8, and Ex. 201.

[19] Tr. v. 6, p. 1278, ln. 16- p. 1279, ln. 21.

[20] TJFA Ex. 200, pp. 54-55.

Dr. Kier testified that "contamination from the wastes disposed at the ACL has adversely impacted the ground water beneath and surrounding the ACL facility."[21] He based this opinion on several items. On June 27, 1980, a Texas Department of Water Resources (TDWR) Interoffice Memorandum opined that there was "seepage and/or percolation of industrial wastes from the landfill," as evidenced by the presence in two monitoring wells located at the disposal site of "Xylene, Benzene, and Napthalene, all three of which are listed as hazardous wastes," as well as the presence of Decahydronapthalene and hydrocarbons.[22] Dr. Kier stated that water quality data from six monitoring wells installed in 1982 "indicated ground water contamination," but TCEQ allowed Applicant to stop monitoring those wells after September 1995, in effect leaving no "monitoring wells to monitor migration from the IWU."[23]

Dr. Kier further testified that he has "hypothesized that contamination from the ACL has spread onto the BFI Sunset Farms Landfill and all the way across Applied Materials' property, and was moving towards Lake Walter E. Long." He based this hypothesis on analytical data from six monitoring wells Applied Materials installed on its properties that showed the presence of chlorinated hydrocarbons, chloride concentrations and total organic carbon (TOC).[24] (The Applied Materials' property is located between U.S. 290 and Giles Road to the east of BFI and the ACRD Facility.) He stated that his hypothesis was further supported by a study conducted by PBS&J in July 2002 that "discovered semi-volatile organic compounds (SVOC) in some of the ground water samples taken from the monitoring wells at the Applied Materials facility," which SVOC Dr. Kier concluded had migrated from the IWU. Dr. Kier asserted that the findings of the PBS&J report support his concern that the wastes disposed at the IWU "have so

[21] TJFA Ex. 200, p. 55.

[22] TJFA Ex. 203, p. 49.

[23] TJFA Ex. 200, p. 56.

[24] TJFA Ex. 200, p. 57.

altered the properties of the weathered, and perhaps unweathered, Taylor as to render the material much more permeable than it is normally considered to be."[25]

On cross examination, Dr. Kier conceded that PBS&J did not conclude that the SVOCs, also referred to as tentatively identified compounds (TIC), were definitely present in the groundwater collected from the Applied Materials site.[26] Dr. Kier also admitted that he couldn't rule out either the BFI Sunset Farms Landfill or the closed Travis County landfill as the source of the SVOCs. He did testify that he did not think the SVOCs could have come from the Applied Materials site even though it had had prior industrial uses as a former gasoline station with underground storage tanks and a former automobile body repair shop.[27]

Dr. Kier also reviewed ground water level maps prepared by Kevin Carel, and determined that the maps "present a picture of ground water flow moving from the IWU area eastward onto the Applied Materials property directly, or after having passed through the BFI Sunset Farms Landfill, as well as moving southwestward into an unnamed tributary to Walnut Creek that flows from the BFI Sunset Farms Landfill across the ACL and onto the closed Travis County Landfill."[28] However, on cross-examination Dr. Kier admitted that the Carel maps were prepared using groundwater level measurements that were not obtained on the same day, but, rather, six months apart. He conceded that a groundwater map that is contoured using groundwater level data that were not obtained on the same day can be misleading. In addition, he agreed that the groundwater contours were drawn using only groundwater elevations from wells around the perimeter of the ACRD Facility rather than from the interior of the Facility near the IWU.[29]

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[25] TJFA Ex. 200, p. 61.

[26] Tr. v. 7, p.1320, lns. 6-10.

[27] Tr. v. 7, p.1505, lns. 8-19.

[28] TJFA Ex. 200, pp. 65-66, Ex. 210.

[29] Tr. v. 7, p.1324, ln. 2 – p.1325, ln. 2.

TJFA expert Dr. Matthew M. Uliana, holds a Ph.D. in Geological Sciences (Hydrology) from the University of Texas at Austin and is licensed as a professional geoscientist in Texas. Dr. Uliana has over 17 years of professional experience in the fields of hydrogeology, water resources, and general geology, specializing in ground water-related projects, including resource assessments, water quality studies, contamination assessment, and ground water modeling. His general specialty is physical hydrogeology, the study and characterization of the movement of fluids in the subsurface. His specific expertise is in analytical calculations and computer modeling related to ground water flow systems, characterization of the movement of contaminants and naturally-occurring chemicals in ground water, computer modeling of geochemical reactions, ground water availability studies, and fluid flow in fractured systems. He participated in the review of the BFI Sunset Farms Landfill permit application as well as that of Applicant.

Dr. Uliana testified that he reviewed the ground water chemistry of the ACRD Facility based on ground water samples from 1985 through 2006. He reviewed the ion chemistry, *i.e.*, the concentrations of dissolved elements such as calcium, chloride, iron, magnesium, manganese, potassium, fluoride, the carbonate and bicarbonate ions, and the sulfate ion. In addition, he reviewed data on trace metal concentrations and on concentrations of TOC, total organic halogens (TOX), and dissolved organic chemicals that may potentially represent contamination from the ACRD Facility.[30] Based on those reviews, Dr. Uliana concluded that the Application had "failed to address evidence that contaminants have been released from the ACL and that the ground water has been impacted by those releases."[31]

On cross-examination, Dr. Uliana admitted that he had never before used the analyses he used in his review of the Application to determine whether there had been a release from a solid waste facility. He admitted that, other than his review of the BFI application and this Application, he had no experience analyzing the results of groundwater sampling and analysis

[30] TJFA Ex. 300, p. 13.

[31] TJFA Ex. 300, p. 39.

conducted at solid waste facilities, assessing potential releases from solid waste facilities, assessing whether a solid waste facility is a potential source of groundwater contamination, and had no geochemical experience pertaining to solid waste facilities. He conceded that the BFI application and this Application were the only MSW landfill permit applications he had ever reviewed and that the extent of his professional experience with respect to the Taylor formation was limited to whatever experience he gained from working on the BFI case and this case.[32]

Dr. Uliana further admitted that he did not use any of the statistical methods listed in 30 TAC § 330.405(e) to evaluate groundwater monitoring data from the ACRD, did not conduct any statistical analysis of Applicant's groundwater data, evaluated constituents that are not on the list of constituents that MSW facilities are required by TCEQ to analyze in their groundwater detection monitoring program, and did not follow any method that TCEQ or EPA have accepted for the detection of release from solid waste facilities.[33] Dr. Uliana testified that if Applicant were to submit to TCEQ an analysis of its semi-annual groundwater monitoring data using solely the methodologies that he used, such analysis would not be accepted. In fact, he agreed that TCEQ had never relied solely upon major ion chemistry to determine whether there had been a release of contaminants from a solid waste facility.[34]

Dr. Uliana further testified that his review of Applicant's data did not indicate a release of trace metal concentrations and that he didn't review any analytical data characterizing the leachate from the ACRD Facility.[35] He admitted that a high TOC reading and a high TOX reading may be wholly unrelated to a release of contaminants, and that he couldn't assign a health risk to any given TOC or TOX concentration.[36]

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[32] Tr, v. 8, p. 1578, ln. 24 – p. 1581, ln. 6.

[33] Tr, v. 8, pp. 1584, ln. 5 – p. 1587, ln. 10.

[34] Tr, v. 8, p. 1587, ln. 20 - p. 1588, ln. 13.

[35] Tr, v. 8, p. 1598, ln. 13 – p. 1599, ln. 14.

[36] Tr, v. 8, p. 1622, ln. 19 – p. 1623, ln. 24.

The opinions of Dr. Uliana are not supported by the evidence. Neither Dr. Uliana nor any other TJFA witnesses presented any supporting literature or other data supporting the use of ion chemistry to show that contaminants have been released from a solid waste facility and that the ground water has been impacted by those releases. As noted by Applicant, the EPA specifically decided against requiring the use of geochemical parameters in detection monitoring for solid waste disposal facilities because "the natural variability (both temporal and spatial) of the geochemical parameters is extremely difficult to characterize, especially in heterogeneous hydrogeologic settings. This could lead to an excessive number of false positives and false negatives during detection monitoring."[37] As a result, the ALJ concludes that Dr. Uliana had no reasonable basis for concluding that contaminants have been released from the ACRD Facility and that the ground water has been impacted by those releases.

As pointed out by Applicant, the groundwater moves within the weathered clay under the site up to 4 feet per year.[38] According to the Application, the easternmost corner of the IWU is approximately 1,875 feet from the due east boundary of the ACRD Facility.[39] As a result, it would take over 468 years for contaminants to reach the easternmost boundary of the Facility and then cross to the Applied Materials properties. Although Dr. Kier has opined that contaminants could have moved southward through the drainage tributary to the Applied Materials Properties, there is no evidence as to the length of time such movement would have occurred if it had. In the absence of specific contradictory evidence, the ALJ concludes that any contamination in the Applied Materials wells could not have come from the ACRD Facility.

Dr. Kier further testified, based on his review of the records, particularly a cross-section map from the TRCC Report, that the drainage tributary between Phase I and the IWU and the drainage tributary to the west of both have been partially filled with MSW, thereby linking the two units and also linking the units to surface water drainage courses on the ACRD Facility site.

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[37] TJFA Ex. 104, p 99.

[38] WMTX Ex. 1, Att. A, pp. 3-7.

[39] WMTX Ex. 202, v. 1, p. 124.

Dr. Kier stated that this linkage will provide a preferred flow path along which contaminants, including leachate from the Phase I Unit, will tend to move.[40] However, this opinion is directly contradicted by the finding of the TRCC Report that "groundwater does not appear to be discharging into the drainage features located adjacent to the south and west of the IWU," *i.e.* the drainage tributary.[41]

Charles Lesniak, Environmental Policy Program Manager for the City, was the lead negotiator in developing the City's voluntary groundwater monitoring agreement with Applicant to address concerns about the possibility of releases from the IWU.[42] As part of this agreement, Applicant agreed to place an additional five-feet thick cap over the IWU, as well as provide to the City results of biannual monitoring of the groundwater composition, chemical composition, and water levels around the IWU:[43] Specifically, Applicant agreed to incorporate two existing wells (MW-29A and PZ-26) as downgradient groundwater sampling points. MW-29A is between the IWU and the drainage tributary to the west of the IWU and PZ-26 is between the southwest corner of the IWU and the drainage tributary to the south of the IWU. Applicant also agreed to install a monitoring well (MW-32) along the trace of the drainage tributary downgradient from PZ 26.[44] Applicant also agreed to place a piezometer (PZ-31) between the south boundary of the IWU and the south drainage tributary to monitor water levels.[45]

Dr. Kier also reviewed a "Work Plan for Evaluation of Subsurface Conditions at the Austin Community Landfill Phase I and Old Wet Weather Areas" prepared by Rust Environment & Infrastructure (Rust Plan) on June 19, 1995. That plan addressed issues of concern, including the fact that seeps were observed at the base of the Phase I Unit mound, the southwest edge of

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[40] Tr. v. 7, p. 1397, ln. 4 – pp. 1399, ln. 5.

[41] WMTX Ex. 1, Att. A, p. 3-9.

[42] Tr. v. 10, p. 2131, ln. 23 – p. 2133, ln. 22.

[43] Tr. v. 10, pp. 2135.

[44] COA Ex. 6, p. 14 and Ex. 9.

[45] Tr. v. 10, p. 2137, ln. 25 – p. 2138, ln. 3; COA Ex. 9.

the old wet weather area, and the east and west ends of the Phase I Unit. In discussing similar seeps in both mounds of the Travis County landfill, the Rust Plan cited a Site Investigation Report for the Travis County Landfill prepared by Engineering-Science (ES Report) in 1991 that reported: "Leachate escapes as seeps through the sideslopes and as shallow ground water flow through the disturbed soils along the watercourses. The leachate may blend with surface flow or mix with shallow ground water in the watercourse."[46] In addition, Mr. Lesniak testified that reports in 2004 from PZ-31 "consistently showed groundwater well above the tributary level, so we were starting to become concerned about the possibility of surface discharges."[47]

The ES Report also indicated that "leachate from neighboring facilities may be entering the (Travis County landfill) site through the soils underlying the creek bed" and "through the buried trash under the northern property line." It also stated that chemical analysis of the leachate "reveals no contaminants which may pose a threat to human health; however, there may be some biological agents that could cause illness were the leachate to be consumed."[48] However, it should be noted that the Phase I Unit is actually downgradient from the Travis County landfill site, indicating that leachate would be migrating from that site toward the Phase I Unit rather than in the other direction.[49]

The Application includes four soil borings that were made in 1990 and 1994 along the southern boundary of the Facility where the central drainage way exits the site (PZ-18, PZ-1, PZ-9, and PZ-2). The boring logs indicate that each of the piezometer borings were advanced through the weathered clay and into the unweathered claystone, and none of the logs for the borings indicate that waste was found.[50] The cross-section from the TRCC Report is also

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[46] TJFA Ex. 5, pp. 5-6.

[47] Tr. v. 10, p. 2140, lns. 9-16.

[48] WMTX Ex. 11, p. 22.

[49] WMTX Ex. 202, v. V, p. 3023.

[50] WMTX Ex. 202, v. III, pp. 1473, 1589-90, 1604-05.

included in the Application.[51] That cross-section is a south-to-north cross-section of the east-west drainage way between the IWU and the Phase I Unit, drawn perpendicular to the drainage way depicting a single point in the drainage way.[52] The cross-section shows an approximately three foot thick level of MSW between the cap/fill and the weathered clay at that point of the drainage way. However, the TRCC Report only included boring logs from two monitoring wells on the IWU side of the drainage way, and none on the Phase I Unit side of the drainage way. In addition, there is no boring log information for any point in the drainage way itself along that cross-section nor is there boring log information downstream from that cross-section to support the presence of MSW anywhere in the drainage way.

A follow-up to the Rust Plan, the "Phase I Subsurface Evaluation of the Austin Community Landfill" was prepared by Rust Environment & Infrastructure in March 1996 (Rust Report). That report states that the drainage tributary, described as either "natural or backfilled," "acts as a wall or dam enhancing the natural tendency of the liquid to flow to the lower elevations to the north or west." As pointed out in the Rust Report, the leachate from the Phase I Unit flows from the highest elevations in the eastern and central portions to the northwest "toe of the cell," which is the lowest elevation of the Unit, where it is retained by the wall or dam created by the drainage tributary.[53]

Based on all the evidence, the ALJ concludes that there is no migration of leachate from the IWU to the drainage tributary or to the Phase I Unit, and no migration of leachate from the Phase I Unit to the perimeter of the ACRD Facility.

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[51] WMTX Ex. 202, v. III, p. 1481.

[52] WMTX Ex. 1, Att. A, fig. 3-1.

[53] TJFA Ex. 12, pp. 2-3.

b. Proposed Liner System for Expansion

The rule at 30 TAC § 330.339(a) provides that the landfill must have "an approved liner quality control plan prepared under the direction of a licensed professional engineer" and that liner quality control plan is to be included in the site development plan. Subsection (e) of the rule requires that "all constructed soil liners shall be keyed into an underlying formation of sufficient strength to ensure stability of the constructed lining."

Charles G. Dominguez is a licensed professional engineer employed by Golder Associates, Inc. Mr. Dominguez holds a M. Eng. in Civil Engineering from the University of Houston, and is licensed as a professional engineer in Texas, Louisiana, Kansas, and Virginia. Mr. Dominguez has over 15 years of professional experience with permitting, designing, and constructing solid waste landfill sites. He has worked on over 60 landfill projects.[54]

Mr. Dominguez testified that Section 4.0 of Attachment 3 to Part III of the Application is the Geotechnical Analysis prepared under his supervision.[55] That analysis "discusses the subsurface investigations, subsurface testing and sampling procedures, laboratory testing, and geotechnical results in order to characterize the subsurface of the ACRD Facility in terms of soil water content, unit weight, classification, gradation, moisture/density relationship, permeability, consistency, shear strength, and compressibility." Among other purposes, this analysis is to determine the "suitability of the area subsoils to support the foundation of the landfill expansion and to be utilized in the construction of the compacted soil liner that will underly the expanded facility and the infiltration layer component of the final cover system."[56] Based on that analysis, Mr. Dominguez is of the opinion that "the soils beneath the ACRD Facility expansion area are suitable for the proposed landfill expansion," as well as for "the construction of the compacted soil liner and the facility's final cover system." He further testified that the analysis "verified the

[54] WMTX Ex. 200, pp. 4-5 and Ex. 201.

[55] WMTX Ex. 202, pp. 906-916.

[56] WMTX Ex. 200, p. 72.

adequacy of the calculated stability of the existing landfill and the proposed expansion excavations, interim slopes, and final slopes."[57]

Specifically, in regard to the liner systems, Mr. Dominguez testified that the design and construction of the facility's liner systems are provided in Section 5.0 of Attachment 3 to Part III of the Application.[58] He stated that the Application proposes the construction of two liner systems: "(1) a composite liner system will be constructed in all remaining, permitted disposal cells that have yet to be constructed and in the disposal cells proposed for the expansion area; and (2) a composite liner system will be installed over the existing waste, and under the new waste proposed to be deposited, in an existing disposal area of the West Hill."[59]

As Applicant notes, in 1993 Texas adopted regulations implementing the federal criteria for MSW landfills under Subtitle D of the Resource Conservation and Recovery Act (Subtitle D). The rule at 30 TAC § 330.331(a)(2) and (b) provides that lateral expansions and vertical expansions of Type I landfills over MSW landfills that do not meet the Subtitle D design criteria must be constructed to include a composite liner consisting of an upper component of "a minimum 30-mil geomembrane liner" and a lower component of "at least a two-foot layer of recompacted soil."

Mr. Dominguez explained that disposal cells "that were constructed prior to the promulgation of liner requirements and standards are commonly referred to as pre-Subtitle D cells, since today's lining requirements are derived from Subtitle D," while cells "that were constructed after the promulgation of Subtitle D standards, and that are lined in accordance with those standards, are commonly referred to as Subtitle D cells."[60]

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[57] WMTX Ex. 200, p. 77.

[58] WMTX Ex. 202, V. II, pp. 917-920.

[59] WMTX Ex. 200, pp. 77-78.

[60] WMTX Ex. 200, pp. 77-78.

Mr. Dominguez testified that, even though the proposed expansion would not be a vertical expansion above the permitted maximum height of the Facility, Applicant proposes to "merge the expansion area with the existing West Hill disposal area so as to maximize the expanded facility's disposal capacity. Because the portion of the West Hill where the expansion area will tie in is a pre-Subtitle D disposal area, the piggyback liner detailed in the Application is proposed to meet the letter and intent of § 330.331(a)."[61]

Mr. Dominguez stated that various engineering analyses were performed to analyze the proposed piggyback liner design. Based on those analyses, Mr. Dominguez concluded that the "proposed piggyback liner and associated waste slopes and fill area will be stable. While waste settlement will occur beneath the piggyback liner, the estimated maximum settlement of the liner will not compromise the integrity of the piggyback liner. Additionally, the final grade of the piggyback liner post-settlement will ensure positive leachate drainage and proper performance of the leachate collection and removal system for the piggyback liner area."[62]

In summary, Mr. Dominguez concluded that "if constructed in accordance with the Application, the liner system will effectively contain the wastes placed in the landfill, prevent groundwater contamination, and protect human health and the environment."[63]

Pierce L. Chandler, Jr., TJFA's expert on liners and slope stability is a hydrogeologist who holds an M. S. in Civil Engineering from Texas A&M University, is licensed as a professional engineer in Texas, and has been recognized as a qualified groundwater scientist by both the EPA and the TCEQ. Mr. Chandler has over 30 years of professional experience in siting, investigating, designing, permitting, constructing, operating, and remediating municipal and hazardous solid waste management facilities. He has worked as both a hydrologist and an engineer on over 100 municipal solid waste management facilities, including the TDSL landfill

[61] WMTX Ex. 200, p. 79.

[62] WMTX Ex. 200, p. 80.

[63] WMTX Ex. 200, p. 83.

near Creedmore. Mr. Chandler has split his work between both solid waste permit applicants and protestants.[64]

Mr. Chandler expressed several areas of concern regarding the Application, including the "piggyback" liner, the Liner Quality Control Plan (LQCP), and the hydrostatic uplift of the liner system.[65] His concern about the "piggyback" liner was regarding the stability of the proposed liner and the landfill settlement calculations, which will be discussed under Issue No. 6. In regard to the LQCP, he was of the opinion that

- it did not include a discussion of the suitability of the soils and strata for soil liner and protective cover,
- it did not show that compacted soil liners could be constructed from on-site soils,
- it did not show that compacted soil liners could be constructed in accordance with TCEQ guidelines,
- it did not ensure that maximum clod size in the soil liner will be one inch in diameter, and
- it did not limit the liner soil material to contain no rocks or stones larger than one inch in diameter or that total more than 10% by weight, both of which are required by TCEQ rules.

The requirements regarding clod and stone sizes are included in the Soil Liner Evaluation section of the LQCP contained in the Application.[66] As for the soil suitability concern raised by Mr. Chandler, that is addressed in the Waste Management Design Report contained in the Application.[67] Regarding the issue of hydrostatic uplift of the liner system, Mr. Chandler expressed concern that the design described in the Application includes an "underdrain system" below the liner that fails to meet the requirements of 30 TAC § 330.337, specifically by failing to

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[64] TJFA Ex. 400, pp. 2-7 and Ex.401.

[65] TJFA Ex. 400, p. 27.

[66] WMTX Ex. 202, v. III, pp. 1092-1097.

[67] WMTX Ex. 202, v. III, pp. 912-913.

"describe how the underdrain system will be operated, monitored, and maintained in order to ensure the stability of the ACL against hydrostatic uplift as well protect human health and the environment."[68] However, on cross-examination Mr. Chandler conceded that he was not aware of the weathered Taylor formation having "sufficient water such that it presents a problem in terms of hydrostatic uplift."[69]

In summary, the evidence establishes that the liner design system and LQCP in the Application meet the requirements of 30 TAC 330, Subchapter H by describing the liner design and construction details, by providing details showing that the proposed liner system incorporates short-term and long-term hydrostatic uplift pressure relief systems, by providing for leachate and contaminated water management systems,[70] and by explaining the groundwater flow path, including the most likely pathways for pollutant migration.[71] The ALJ finds that the Application sufficiently addresses the required issues and that the evidence and the Application demonstrate that there are adequate provisions to protect ground water and surface water in compliance with the Commission's rules.

2. Whether the Application Includes Adequate Provisions for Groundwater Monitoring, in Compliance with Agency Rules, Particularly the Sufficiency of the Groundwater Monitoring Plan and the Point of Compliance to Assess Effects of the IWU and Phase I on the Groundwater.

The rule at 30 TAC § 330.403(a) provides that a "groundwater monitoring system must be installed that consists of a sufficient number of monitoring wells, installed at appropriate locations and depths, to yield representative groundwater samples from the uppermost aquifer." 30 TAC § 330.403(a)(2) provides that a groundwater monitoring system must be installed at the point of compliance, defined in 30 TAC § 303.3(106) as a "vertical surface located no more than

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[68] TJFA Ex. 400, p. 146.

[69] Tr. v. 8, p. 1647, lns. 13-16.

[70] ED Ex. 1, pp. 34, 38.

[71] ED Ex. 6, p. 13.

500 feet from the hydraulically downgradient limit of the waste management unit boundary, extending down through the uppermost aquifer underlying the regulated units, and located on land owned by the owner of the facility." According to section 330.403(a)(2), when "physical obstacles preclude installation of the groundwater monitoring wells at existing units, the wells may be installed at the closest practicable distance to the point of compliance . . . that will ensure detection of groundwater contamination of the uppermost aquifer." The rule further provides that the point of compliance monitoring system "must include monitoring wells installed to allow determination of the quality of groundwater passing the point of compliance." The monitoring well spacing for a landfill unit "shall not exceed 600 feet without an applicable site-specific technical demonstration that may be supplemented with a multi-dimensional fate and transport numerical flow model." 30 TAC § 330.403(b) provides that a multi-unit groundwater monitoring system may be approved "provided the multi-unit system meets the requirement of subsection (a) of this section and will be as protective of human health and the environment as individual monitoring systems for each unit."

Protestants assert that the multi-unit groundwater monitoring system proposed by the Application, particularly as it concerns the location of the point of compliance, fails to ensure the detection of groundwater contamination of the uppermost aquifer by contaminants emanating from the IWU and Phase I Unit.

Although the rule at 30 TAC § 330.401(a) provides that the facilities such as the IWU and Phase I Unit that stopped receiving wastes prior to October 9, 1991, "may continue to monitor groundwater using the well location requirements contained in the previously issued authorizations," the Application proposes to increase the number of groundwater monitoring wells at the Facility that will serve to detect a potential release of contaminants from either the IWU or the Phase I Unit.

MW-11, a part of the current certified groundwater monitoring network under Permit No. 249-C, is located on the west side of the drainage tributary along the Facility's southern permit

boundary adjacent to the Travis County landfill to the south and to the west of the Phase I Unit's westernmost extent. MW-12 is also a part of the current groundwater monitoring network and is located along the Facility's southern permit boundary adjacent to the Travis County landfill to the south and to the east of the Phase I Unit's easternmost extent.[72] The point of compliance (POC) under the current permit does not extend between MW-11 and MW-12.[73]

The Application proposes to extend the Facility's POC north and east from MW-11 along the eastern boundary of the West Hill, over the northern limits of the IWU, and south along the western boundary of the East Hill to MW-12. Six new monitoring wells are proposed to be added along this new segment of the POC. Two of those new wells, MW-44 and MW-30 will monitor the IWU and a third new well, MW-51 will monitor the Phase I Unit.[74] MW-51 will be located upgradient from MW-12, MW-30 will be located between the northwest corner of the IWU and MW 29A, and MW-44 will be located west and downgradient from PZ-26.[75]

Protestants vigorously argue that the proposed POC will be located so as to exclude the IWU and Phase I Unit. They basically insist that the proper POC should be along the southern permit boundary, between MW-11 and MW-51. However, as Mr. Winters pointed out, the area between MW-11 and MW-51 is the upgradient portion of the Phase I Unit, and, as a result, by definition, cannot be a part of the POC.[76] In addition, Mr. Winters testified that it was not accepted practice to install monitoring wells through refuse.[77] This makes it impractical to place monitoring wells through the waste continuum between the Phase I Unit and the Travis County Landfill, particularly when 30 TAC § 330.421 requires that a monitoring well be installed so as "not to introduce contaminants into the borehole or casing."

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[72] WMTX Ex. 202, v. V, p. 3023.

[73] Tr. v. 2, p. 299, lns. 5-10.

[74] Tr. v. 5, p. 1017, lns. 1-4; p. 1043, lns. 12-20.

[75] WMTX Ex. 202, v. V, p. 3023, COA Ex. 9.

[76] Tr. v. 5, p. 926, ln. 10 – p. 928, ln. 9.

[77] Tr. v. 5, p. 1047, lns. 7-9.

The County suggests that the POC should be moved between the IWU and the Phase I Unit areas and that additional monitoring wells be placed along this portion of the POC. The basis for this suggestion is Protestants' concern that MW-11 may not be able to monitor all potential releases of contaminants from the IWU and the Phase I Unit.

Dr. Kier testified that because of the location of MW-11 on the west side of the drainage tributary it is called upon to monitor the flowpaths from both the East Hill and West Hill areas as well as from the IWU and the Phase I Unit area. His concern that MW-11 would not monitor all potential releases of contaminants from the IWU and the Phase I Unit was based on his assumption that waste was used to fill the drainage tributary, thereby limiting the dispersion of the flow to allow MW-11 to catch everything.[78] However, as discussed above, there is no evidence to indicate the presence of MSW anywhere in the drainage way. In addition, Mr. Winters testified that it was highly unlikely that potential contaminants from the IWU would not reach MW-11 because there is very slow groundwater movement at the Facility site, meaning that any plumes that would emanate from the IWU would tend to be quite wide rather than narrow, thereby facilitating the detection of those plumes by the monitoring well.[79]

The ED had preliminarily determined that the POC proposed by the Application was consistent with the Commission rules.[80] In his closing argument, the ED stated that he would not be opposed to consolidating the wells covered by the voluntary agreement with the City of Austin into the permit if the Commission so desired.

None of the Protestants have questioned the sufficiency of the proposed groundwater monitoring system for the proposed landfill expansion. Based on the ongoing concern about the nature of the wastes disposed in the IWU and the potential threat to human health and the

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[78] Tr. v. 7, p. 1348, lns. 5-25.

[79] Tr. v. 5, p. 966, lns. 3-14, and p. 1051, lns. 4-20.

[80] ED Ex. 3, pp. 27-28.

environment should contaminants from those wastes migrate from the boundaries of the facility, the ALJ proposes that the wells covered by the voluntary agreement--MW-29A, MW-32, PZ-26, and PZ-3--be incorporated into the groundwater monitoring system covered by the permit. In addition, the ALJ proposes that the POC be reconfigured to include those four wells. With these revisions to the permit, the ALJ finds that the groundwater monitoring system will comply with Subchapter J of the agency rules regarding such systems.

3. Whether the Groundwater Monitoring System Proposed in the Application Should Sample and Analyze for Any Constituents in Addition to Those Required to be Tested by Agency Rules.

The rule at 30 TAC § 330.419(a) provides that the landfill operator shall "sample and analyze the groundwater monitoring system for the constituents listed in 40 Code of Federal Regulations (CFR) Part 258, Appendix I." Pursuant to Subsection (c) of the rule, the Commission may "add inorganic or organic constituents to those to be tested if they are reasonably expected to be in or derived from the waste contained in the unit or if they are likely to provide a useful indication of releases from the municipal solid waste management unit to the groundwater."

As part of the voluntary agreement between the City and Applicant, samples taken from PZ-31 and PZ-26 in 2004 detected 1,4-Dioxane, a constituent that is not listed on Appendix I.[81] The ED indicated in his Closing Argument that he would not oppose a requirement to sample constituents such as dioxane, which the City urges be added to the Permit, as long as the addition of that constituent to the monitoring plan did not significantly alter the design of the landfill or the proposed Groundwater Sampling and Analysis Plan (GWSAP) set forth in the Application. Applicant opposes the addition of another constituent sampling requirement because it is not required of pre-Subtitle D units such as the IWU. In the event that there is a basis for requiring the sampling of additional constituents, Applicant argues that only the wells that would monitor flows from the IWU--MW-11, MW-44, and MW-30--should be required to submit such samples.

[81] Tr. v. 10, p. 2141, ln. 5 – p. 2142, ln. 11.

The ALJ finds that the Commission has the authority to add a requirement to sample dioxane if it determines that such is necessary, and that the addition of such sampling could be beneficial to the groundwater monitoring system. However, although the ALJ agrees that such an addition may be advisable, there is insufficient evidence regarding the factors set forth in subsection (c) of the rule at § 330.419[82] in order to make such a determination. Accordingly, the addition of a sampling requirement for dioxane to the groundwater monitoring system is not recommended.

4. Whether the Application Includes Sufficient Information Demonstrating How the MSW Facility Will Comply with Applicable TPDES Storm Water Permitting Requirements.

The rule at 30 TAC § 30.61(k)(3) provides that the Application shall include information demonstrating how the MSW facility will comply with applicable Texas Pollutant Discharge Elimination System (TPDES) storm water permitting requirements and the Clean Water Act, § 402, as amended. The information may include a certification statement indicating that the owner/operator will obtain the appropriate TPDES permit coverage when required.

The Application contains a certification that Applicant has filed a Notice of Intent to comply with TPDES Multi-Sector General Permit Number TXR 05N925, as required by § 402 of the Clean Water Act and that Applicant will "modify and/or obtain the appropriate TPDES

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[82] In determining alternative or additional constituents, the executive director shall consider the following factors:

(1) the types, concentrations, quantities, and persistence of waste constituents in wastes at the municipal solid waste management unit;
(2) the mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated and saturated zones adjacent to or beneath the municipal solid waste management unit;
(3) the detectability of indicator constituents, waste constituents, and reaction products in the groundwater; and
(4) the concentrations and coefficients of variation of monitoring parameters or constituents in the groundwater background. 30 TAC § 330.419(c).

permit coverage as required for this permit expansion upon receipt of the permit or when otherwise required."[83]

The City argues that Applicant has failed to demonstrate that it will be able to meet the TPDES Multi-Sector General Permit benchmark value of 100 mg/L for total suspended solids (TSS), thereby failing to comply with the rule. Mr. Lesniak testified that "it would be illogical to design a plan for your MSW permit that did not also meet the requirements under TPDES" and that not only did the erosion control plan in the Application not meet the TPDES permit requirements, it did not meet the requirements of the MSW rules.[84]

Matthew Udenenwu has a B. Eng. in Civil Engineering from the University of Nigeria, and is an Engineer in Training in Texas. He is an Engineering Specialist in the MSW Permits Section of the Waste Permits Division of the TCEQ, where he has been employed for eight years. In that capacity he was the project manager and engineer for the Application. He performed the technical review of materials in the Application that pertain to the engineering, the site operating plan, and the portions of the Application other than those reviewed by the TCEQ project geologist, Mr. Arten Avakian.[85]

In response to the issues raised by the City, Mr. Udenenwu testified that the MSW rules do not require that the Application demonstrate how the Applicant would meet the benchmark values under the TPDES permit. He pointed out that the MSW permit and the TPDES permit are two separate matters that are reviewed by separate divisions of the agency. The MSW permit regulates the quantity of a discharge while the TPDES permit regulates the quality of the discharge.[86]

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[83] WMTX Ex. 202, v. I, p. 105.

[84] Tr. v. 10, p. 2159, ln. 14 – p. 2160, ln. 19.

[85] ED Ex. 1, pp. 1 and 5 and Ex. 2

[86] Tr. v. 11, p. 2400, ln. 25 – p. 2401, ln. 4.

The evidence in the record is that the Application complies with the MSW rule's requirements for demonstrating that the Facility will comply with TPDES storm water permitting requirements, as shown by the above-cited certification. The questions regarding the quality of storm water discharges are part of the TPDES process and not the subject of this proceeding.

5. Whether the Application Includes Adequate Provisions for Erosion Control, in Compliance with Agency Rules.

The rule at 30 TAC § 330.63(c) requires an application to include "a statement that the facility design complies with the requirements of § 330.303 of this title (relating to Surface Water Drainage for Municipal Solid Waste Facilities)" as well as "a surface water drainage report to satisfy the requirements of Subchapter G of this chapter (relating to Surface Water Drainage)." These items must include drainage analyses and flood control analyses.

The Facility Surface Water Drainage Report (FSWDR) in the Application addresses the requirement that the Facility expansion will not adversely alter existing drainage conditions.[87] The FSWDR also includes the Erosion and Sedimentation Control Plan (ESCP) that will be used to control erosion during all phases of the Facility's operation, closure, and post-closure care.[88]

Mr. Udenenwu testified that the Facility's current surface water management plan "consists of interceptor berms on the cover of the landfill routing storm water into downslope channels which feed into perimeter channels located at the base of the landfill." According to the Application, these channels "route the storm water into the central and/or southwestern natural drainage ways," and exit the Facility site where these drainage ways intersect the perimeter boundary. For the proposed expansion, the portion of the existing system that drains into the central drainage way from East Hill and the eastern portion of West Hill will not be modified. Storm water from the western portion of West Hill and the new expansion area will be

[87] WMTX Ex. 202, v. II, pp. 598-601.

[88] WMTX Ex. 202, v. II, pp. 602-607.

routed through a detention pond to be built along the west-central portion of the expanded Facility permit boundary, from which it will discharge into a tributary of Walnut Creek. Mr. Udenenwu testified that the Application met the technical requirements of the rules.[89]

Lawrence G. Dunbar, TJFA's expert on drainage and detention pond issues, holds an M. S. in Environmental Engineering from the Illinois Institute of Technology and is a licensed professional engineer in Texas. Mr. Dunbar has over 30 years of professional experience in drainage and/or detention pond analysis, including those associated with the design of landfills. He has evaluated approximately 25 municipal solid waste applications.[90]

Mr. Dunbar testified that in its 1996 permit modification, Applicant represented that no significant changes to the drainage patterns at the permit boundary would occur as a result of the modification. According to Mr. Dunbar, however, a substantial increase in the runoff rate to the south could be expected because of the improved and enhanced drainage system added to the ACRD's final cover, which Mr. Dunbar stated would remove the storm water more quickly from the landfill surface. He further stated that, although the Application does propose a new detention pond for the proposed expansion area, there are no new detention ponds proposed for the remainder of the site, which will result in increased flooding and erosion problems off-site.[91]

On cross-examination, Mr. Dunbar explained that his calculations regarding the 1996 modifications used the rational method. The rule at 30 TAC § 330.305(f)(1) authorizes that method for calculating drainage from areas of 200 acres or less, but 30 TAC § 330.305(f)(2) requires another method for drainage areas greater than 200 acres. As a result, the rational method is not authorized for use in this Application. Mr. Dunbar conceded that the method used in the Application of comparing the authorized drainage conditions under Permit No. MSW 249-C and the proposed drainage conditions for the expansion was correct.[92] As a result,

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[89] ED Ex. 1, pp. 21-22.

[90] TJFA Ex. 500, pp. 2-3 and Ex. 501.

[91] TJFA Ex. 500, pp. 12-13.

[92] TJFA Ex. 500, pp. 1539-1541.

although the calculations for the 1996 modifications may have been erroneous, the calculations shown in the Application for the 1996 permit modifications and for the proposed expansion are correct.

TJFA argues that because the 100-year peak flow runoff was incorrectly calculated to be 977 cfs. for the 1966 modifications when, in fact, based on Mr. Dunbar's testimony, it should have been calculated to be 1,931 cfs, the drainage conditions of the Facility were adversely altered as a result of the 1996 modifications. According to TJFA that error, somehow, makes the Application figures suspect. On the contrary, despite the incorrect calculations in the 1996 modification application, the current Application uses the correct method of calculation and shows that the current peak flow at the southern boundary (CP-7) is 1,239 cfs, not 1,931 as asserted by TJFA, and the projected peak flow after the expansion will be 1,310 cfs. This indicates that any significant change in drainage conditions occurred as a result of the 1996 modifications, which change is correctly reflected in the current Application. Because this Application accurately reflects the current drainage conditions, it does not propose any new alterations that would be adverse to the existing drainage patterns in violation of 30 TAC § 330.305(a).

The issue then becomes whether the Application adequately addresses soil and erosion problems. The rule at 30 TAC § 330.305(d) provides that the landfill design "must provide effective erosional stability to top dome surfaces and external embankment side slopes during all phases of landfill operation, closure, and post-closure." Additionally, subsection (e) of the rule provides that the "slopes of the sides and toe will be graded in such a manner as to minimize the potential for erosion" and that "surface water protection and erosion control practices must maintain low non-erodible velocities, minimize soil erosion losses below permissible levels, and provide long-term, low maintenance geotechnical stability to the final cover."

Mr. Udenenwu testified that the ESCP, the Interim Erosion and Soil Control Analysis, and the Soil Loss Due to Erosion calculations included in the Application comply with the rule

requirements.[93] Mr. Lesniak, on the other hand, testified that the Facility site "has had historically poor erosion and sedimentation control and, in particular, poor revegetation of intermediate cover and problems with other source control methodologies such as silt fencing, mulching, or limiting areal coverage of disturbed soil."[94] Basically, Mr. Lesniak was concerned, based on the history of the Facility, that compliance with the rule was not sufficient and that the there needed to be more "specificity about how (the erosion and sedimentation controls) would be implemented and where and when they would be implemented."[95]

Mr. Lesniak asserted that, without "a very robust erosion prevention and sediment capture system from the source areas to the property boundaries, it is highly unlikely, if not impossible, that Applicant can comply with or come close to complying with the (TPDES) discharge limit" of 100 mg/L TSS.[96] It should be noted that Mr. Lesniak agreed on cross-examination that the 100 mg/L TSS is not a discharge limit but, rather, a benchmark guideline that "would be a target for design of the erosion and sedimentation control of the facility."[97]

The Application provides the following information as part of the ESCP:

- Storm water falling on the top dome and external embankment side slopes of the landfill will be routed to temporary and permanent downchutes using soil berms sloped towards these features.
- The downchutes will discharge into perimeter drainage ditches and channels and then into sedimentation ponds located throughout the facility (except for the currently permitted Ditch 7, which is permitted to discharge directly into the tributary of Walnut Creek that crosses the southwestern portion of the existing facility).

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[93] ED Ex. 1, p. 30.

[94] COA Ex. CL-1, p 4.

[95] Tr. v. 10, p. 111, ln. 20 – p. 2112, ln. 3.

[96] COA Ex. CL-1, p 8.

[97] Tr. v. 10, p. 110, lns. 18-22.

- The sedimentation ponds will then discharge storm water into the tributary of Walnut Creek or to a natural drainage way that separates the East and West Hills (the "central drainage way").
- Storm water from the East Hill and the western portion of the West Hill will discharge into the central drainage way and into two sedimentation ponds that have been constructed within the central drainage way.
- These sedimentation ponds will allow for sediment to fall out of suspension and minimize sedimentation-laden runoff from this portion of the site.
- The remaining portion of West Hill and the new portion of the West Hill to be created by the proposed expansion will be routed to a sedimentation/detention pond located along the west-central portion of the permit boundary.
- The proposed detention pond will be equipped with an outlet structure that will allow sediment to fall out of suspension prior to leaving the site in this location.
- The proposed detention pond will be designed with a biofiltration system consisting of 1.5 feet of gravel, overlain by a filter geotextile, overlain by a 0.5 feet of soil capable of supporting vegetation, all completed to satisfy the City's Site Development Permit requirements and to further decrease the amount of sediment-laden runoff exiting the site.

The erosion and sedimentation controls for the intermediate cover areas will include:

- The top surfaces are to be sloped either at 3% with a maximum length of 410 feet, or at 5% with a maximum length of 360 feet, while the external embankment side slopes will be four feet horizontal to one foot vertical (4H/1V) slopes with a maximum length of 710 feet.
- The storm water velocity on the top surfaces will not exceed the permissible non-erodible velocity, while the 4YH/1V slopes will require diversion structures at least every 100 feet apart along the slope to limit the velocity below the permissible non-erodible velocity.
- Results of the soil erosion analyses demonstrate that the top surfaces can achieve effective erosional stability with 60% groundcover and a diversion berm near the crest of the slope to divert runoff to temporary and permanent downchutes.

- The erosion and sediment controls for the external embankment side slopes require both stabilized soil surfaces and storm water diversion structures, and the length between such structures shall not exceed 100 feet as measured along the slope to maintain sheet flow conditions and keep flow velocities below 5 feet per second.
- The expected soil loss for the 60% groundcover is approximately 10.8 tons/acre/year, well below the permissible soil loss of 50 tons per acre per year.
- Types of soil surface stabilization best management practices (BMP) to be used on the intermediate cover will include vegetation, mulch, and geosynthetics.
- Types of storm water diversion structures will include soil diversion berms, biodegradable logs or organic berms.

The erosion and sedimentation controls for the final cover areas will include:

- Storm water diversion berms.
- Lined diversion channels and perimeter channels, downchutes, detention and sedimentation ponds, and discharge control structures.
- Seeding of native vegetation on a 6-inch thick top soil layer to ensure a minimum 90% ground cover. [98]

As Mr. Udenenwu testified, the erosion control measures set forth in the Application, if followed, will comply with the requirements of 30 TAC § 330.305. As a result, the ALJ concludes that the Application includes adequate provisions for erosion control, in compliance with agency rules.

[98] WMTX Ex. 202, v. II, pp. 602-60.

6. Whether the Application Includes Adequate Provisions for Proper Slope Stability, in Compliance with Agency Rules, Particularly in Relation to the Proposed "Piggyback" Liner System.

The Application includes a discussion regarding Stability Analyses and the Piggyback Liner System Design as well as detailed slope stability analyses data for each of the different configurations (excavation, liner system, waste, final filled configuration, piggy-back liner system, and final cover.)[99]

Mr. Chandler expressed several areas of concern regarding the Application, including the "unstable area" location restriction, stability analyses contained in the Application, the "piggyback" liner, and the landfill settlement calculations.[100]

a. Unstable Area

First, Mr. Chandler opined that the ACRD Facility is in an "unstable" area, as defined by 30 TAC §§ 330.3(167) and 330.559 as being a

> location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of a landfill's structural components responsible for preventing releases from the landfill; unstable areas can include poor foundation conditions, areas susceptible to mass movement, and karst terrains.

"Poor foundation conditions" are defined by 30 TAC § 330.3(112) as

> areas where features exist, indicating that a natural or man-induced event may result in inadequate foundation support for the structural components of a municipal solid waste landfill unit.

Liners are considered to be structural components.

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[99] WMTX Ex. 202, v. II, pp. 913-919, 977-1078.

[100] TJFA Ex. 400, p. 27.

The bases for Mr. Chandler's opinion that the Facility is in an "unstable" area are:

1) Excavation at other landfills in the same and similar geologic conditions have experienced slope failures "(*i.e.*, instability)";

2) The design described in the Application includes a significant number of geosynthetic liner/leachate collection system interfaces, which are "notorious for low strength and instability."

3) The ACDR had a slope failure in 1999;

4) The design described in the Application includes a potentially unstable "piggyback" liner to separate new waste from older pre-Subtitle D waste;

5) The foundation of a portion of the expansion area may be unstable because the underlying waste in the existing landfill has not undergone complete settlement;

6) The design described in the Application also has a potentially unstable composite cover with geosynthetic components;

7) The BFI Sunset Farms Landfill has had intermediate cover slope failures; and

8) The design described in the Application includes an "underdrain" below the liner, which is also problematic for stability.[101]

On cross-examination, Mr. Chandler agreed that, with the exception of the concerns regarding the piggyback liner, the instances of slope failures that he pointed to for support of his conclusion were operational rather than design failures.[102] He admitted he had designed geosynthetic liner/leachate collection system interfaces.[103] He agreed that his concern with an "underdrain" system used during the construction phase would only come into play "if construction was delayed unnecessarily."[104] As for the stability of the geosynthetic materials, the Application states that, prior to the beginning of construction activities, Applicant will conduct confirmatory testing of those materials used in the leachate collection system to ensure that the

[101] TJFA Ex. 400, pp. 43-44.

[102] Tr. v. 8, p. 1663, ln. 9 – p. 1670, ln. 9.

[103] Tr. v. 8, p. 1665, lns.20-23.

[104] Tr. v. 8, p. 1647, lns. 17-25.

strengths of the materials assumed in the stability calculations are available.[105] Clearly, Mr. Chandler's concerns have been answered.

Mr. Chandler also criticized the unstable area restriction demonstration in the Application for not including a slope stability analysis, even though he conceded that TCEQ has never interpreted the unstable area restriction in its regulations to require such an analysis. In fact, Mr. Chandler admitted that he had never conducted such an analysis for his clients as part of the unstable area restriction demonstration, nor was he aware of anyone else agreeing with his position that such an analysis was required.[106]

b. Stability Analyses

Mr. Chandler questioned the stability analysis that is contained in the Application, particularly as it related to the soil shear strength values used by Mr. Dominguez. Mr. Chandler stated that residual soil shear strengths are much lower than peak shear strengths and that the lower strengths should have been used in the stability calculations. However, Mr. Chandler conceded that the clay shear strengths used in the Application were determined through site-specific testing, and that, if such testing is representative of the materials to be used at the site, it is better than relying on assumed values based on empirical correlations.[107]

Mr. Dominguez testified that, in response to Mr. Chandler's comments, he revised the shear strength calculations from the peak shear strengths used in the original Application to the lowest values achieved in the site-specific testing. As a result of that revision, the factor of safety fell from 2.9 to 2, which Mr. Dominguez testified was still an acceptable factor of safety.

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[105] WMTX Ex. 202, v. II, p. 1109.

[106] Tr. v. 8, p. 1656, lns. 7-24.

[107] Tr. v. 8, p. 1680, ln. 2 – p. 1681, ln. 8.

He concluded that, even with that revision in the slope analysis calculations, the design of the excavation slopes would not change.[108]

The rule at 30 TAC § 330.337(e) provides that "prior to excavating any unit below the seasonal high water table, the owner or operator shall perform a preliminary foundation evaluation satisfactory to the executive director. The foundation evaluation shall consider stability, settlement, and constructability." Mr. Chandler asserts that the piggyback liner and the foundation of the expansion area adjacent to the West Hill may be unstable.

Mr. Chandler testified that the existing MSW landfill is an unstable area to the extent that it serves as a foundation for the new portion of the landfill.[109] In support of his argument, Mr. Chandler referred to a few scholarly sources, especially one by Xuede Qian and others, which he testified are relied upon by professional engineers in designing MSW landfills.[110] The key concerns are summarized by the Qian Study as follows:

> The additional waste fill from a vertical expansion will cause settlement of the existing landfill and result in liner system and slope stability problems for both the existing and expanded landfills. A gas collection system in the existing landfill may also be of concern due to the large deformation of solid waste surrounding gas collection pipes. A liner and leachate collection system constructed on an existing landfill may experience large differential settlements. The long-term performance of these systems is thus a major design consideration.[111]

Mr. Chandler also cites an EPA technical manual concerning solid waste disposal criteria. At one point the manual states: "A closed landfill used as foundation for a new landfill ("piggy-backing") may be unstable unless the closed landfill has undergone complete settlement of the

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[108] Tr. v. 12, p. 2511, ln. 4 – p. 2514, ln. 17.

[109] TJFA Ex. 400, p. 113.

[110] TJFA Ex. 400, p. 115 *et seq.*; TJFA Ex. 438.

[111] TJFA Ex. 438, p. 545.

underlying waste."[112] However, the ACRD facility is not a closed landfill, and even if it were closed, the EPA manual only states that a closed landfill "may be" unstable, not that it will be. Something more is needed to prove that Applicant's existing waste mass in the West Hill is unstable, yet there is no proof.

Mr. Chandler made a similar argument in the hearing regarding the BFI Sunset Farms Landfill. In that case, ALJ Newchurch noted the following:

> Further, there is no evidence that the Commission has ever considered an existing waste mass to be an unstable area. Mr. Chandler could not cite a single occasion when the TCEQ took the position that waste inside an existing landfill should be considered as an unstable area and evaluated under section 330.305. Nor could he point to any TCEQ technical guidance documents that took that position.[113]

c. Settlement Calculations

Mr. Chandler asserts that Mr. Dominguez' settlement calculations fail to demonstrate that the foundation in the piggyback area will be stable or protective of human health and the environment. Mr. Chandler pointed to the fact that Mr. Dominguez excluded some data from West Hill locations to support his argument that the calculations are flawed.[114] However, as Mr. Dominguez testified, the data that were excluded were taken from locations where soil stockpiles had been placed, and, therefore, were not representative.[115]

Mr. Chandler also questioned the calculated rates of settlement used by Mr. Dominguez in the Application, contending that the rates used were non-representative and unconservatively low.[116] He argued that the "modified secondary compression index" used in the Application, a

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[112] TJFA Ex. 405, p. 48.

[113] 582-08-2178 PFD at p. 57.

[114] TJFA Ex. 400, pp. 147-150.

[115] Tr. v. 12, p. 2543, lns. 11-24.

[116] TJFA Ex. 400, p. 155.

value of 0.032, is at the low end of the range in the Qian treatise of 0.03 to 0.1, and the lower bound of Qian's range for the primary compression index was likewise used, all of which would "significantly under-predict settlement."[117] Mr. Chandler stated that greater settlement rates "would impair the integrity of the compacted soil liner component of the piggyback liner" in violation of the requirements of 30 TAC §§ 330.61(j)(4) and 330.559 (again referring to unstable areas).[118]

> Mr. Dominguez explained that primary compression
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> would be mainly the mechanical compression that's a result of the waste, the new waste or the soil or whatever it is that you load it up and it squeezes it down. The secondary compression is longer term. There's some small part of compression that still goes on, but it's mainly attributable to the decomposition of the waste.[119]

He pointed out that the waste beneath the piggyback liner started being filled in 1988, and the filling was completed in 1996, so that "assuming a median age of waste in 1992, it would be about 18 years old." Mr. Dominguez testified that in 2010, the waste will have a median age of 20 years and "much of the settlement would have occurred at that point."[120]

Mr. Udenenwu agreed with Mr. Dominguez' conclusions, specifically that most of the settlement in the West Hill would have already occurred. He testified that the Application included adequate provisions for proper slope stability of the proposed landfill expansion, including the piggyback liner system, and that the Application met the technical requirements for slope stability evaluation as required by 30 TAC § 330.337(e).[121] The ALJ agrees with that conclusion.

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[117] TJFA Ex. 400, pp. 149-150.

[118] TJFA Ex. 400, p. 156.

[119] Tr. v. 12, p. 2549, lns. 4-11.

[120] Tr. v. 12, p 2549, ln. 22 – p. 2552, ln. 17.

[121] ED Ex. 1, p. 40.

7. Whether the Application Includes Adequate Provisions to Manage Landfill Gas, in Compliance with Agency Rules.

The rule at 30 TAC § 330.371(a) provides that the operator shall ensure that:

> "(1) the concentration of methane gas generated by the facility does not exceed 1.25% by volume in facility structures (excluding gas control or recovery system components); and (2) the concentration of methane gas does not exceed 5% by volume in monitoring points, probes, subsurface soils, or other matrices at the facility boundary defined by the legal description in the permit or permit by rule."

Subsection (b) provides that the operator shall implement a routine methane monitoring program to ensure that the standards of subsection (a) of this section are met."

The Application includes a Landfill Gas Management Plan (LGMP) that includes a Landfill Gas Control Plan.[122] Mr. Chandler testified that the Application has a gap in coverage of approximately 3,000 feet along the south side of the perimeter boundary between gas monitoring probes P-9 west of the Phase I Unit and P-10 east of the Phase I Unit. He states that this gap fails to comply with the requirements of section 330.371(a).[123]

The Application states that the absence of permanent probes between P-9 and P-10 is due to the following;

1) a considerable decrease in topography and geologic conditions on the west end of East Hill which provide a preferential flow path which daylights in the topographic low, and
2) the presence in this area of the closed Travis County Landfill (MSW-684) and the absence of off-site receptors in this area.

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[122] WMTX Ex. 202, v. V, pp. 3140-3265.

[123] TJFA Ex. 400, pp. 161-163.

The Application further states that the elevation in the drainage way that runs along the west boundary of the Phase I Unit and then south of the permit boundary along the west side of the closed Travis County Landfill "becomes lower than the lowest disposal cell bottoms of the East and West Hills approximately 400 feet south of the permit boundary, providing a natural vent to atmosphere for any gas that may migrate southward" from the Facility. As for the interface between the Phase I Unit and the Travis County Landfill, the Application states that it is "not feasible or advisable to install wells through the waste of the closed landfill."[124]

Applicant responds to Mr. Chandler's argument by asserting that the rule in question applies to landfill units, not the facility within which the units are located. However, this is an incorrect reading of the rule, and Mr. Chandler is correct that the rule applies to the entire Facility. The problem is that, as Mr. Dominguez points out and the ED apparently agrees, a probe cannot be put through waste in order to determine if there is methane gas at the location because the waste itself may produce methane gas so that the probe results would be meaningless.

The ALJ agrees with Applicant and the ED that there is no feasible method for Applicant to place probes in the waste continuum along the southern boundary of the Facility. He also agrees that the methods suggested by TJFA such as the removal of the waste or the building of a slurry wall are not required by the applicable rules. The ALJ concludes that the Application includes adequate provisions to manage landfill gas, in compliance with agency rules.

[124] WMTX Ex. 202, v. V, pp. 3149-3150.

8. Whether the Application Includes Adequate Provisions to Prevent the Ponding of Water Over Waste on the Landfill, in Compliance with Agency Rules.

The rule at 30 TAC § 330.167 provides that the

> ponding of water over waste on a landfill, regardless of its origin, must be prevented. Ponded water that occurs in the active portion of a landfill or on a closed landfill must be eliminated and the area in which the ponding occurred must be filled in and regraded within seven days of the occurrence. A ponding prevention plan must be provided in the site operating plan that identifies techniques to be used at the landfill to prevent the ponding of water over waste, an inspection schedule to identify potential ponding sites, corrective actions to remove ponded water, and general instructions to manage water that has been in contact with waste.

The Site Operating Plan contained in the Application includes a Ponded Water Prevention Plan that indicates the different methods that will be utilized to prevent ponded water over waste-filled areas.[125]

Mr. Chandler testified that the presence of wetland plants in the upper part of the drainage way that separates the IWU from the Phase I Unit could be "an indication of a location on the facility where water tends to pond on the site."[126] As Applicant points out, the presence of wetland plants in the drainage way could as accurately be explained by the fact that it is a drainage way that carries water. In addition, as discussed above, the TRCC report did not establish the presence of MSW anywhere in the drainage way.

TJFA asserts that the south pond structure located near CP-7 on the south perimeter boundary is sitting over MSW in direct violation of the rule. Applicant responds that borings made along and just above the southern boundary in close proximity to the pond (from west to

[125] WMTX Ex. 202, v. II, p. 1109.

[126] Tr. v. 8, p. 1750, lns. 19-24.

east being PZ-18, PZ-1, PZ 19, and PZ-2) do not indicate the presence of waste.[127] In addition, Mr. Udenenwu testified that he had reviewed cross-sections through the south pond and did not see any indications of waste in those drawings.[128] If there is no waste at that location, then there is no obligation for Applicant to prevent ponding there.

The ALJ concludes that the Application includes adequate provisions to prevent the ponding of water over waste on the landfill, in compliance with agency rules.

9. Whether the Application Includes Adequate Provisions for Cover, in Compliance with Agency Rules.

The rule at 30 TAC § 330.165 sets forth the requirements for daily cover, intermediate cover, and final cover. The Site Operating Plan (SOP) contained in the Application addresses the landfill cover systems that will be utilized in the operation of the Facility, in addition to a Final Cover Quality Control Plan as part of the Closure Plan.[129]

The City asserts that the Application does not include adequate provisions for daily or intermediate cover and is lacking in enforceable daily cover specifications, similar to the argument it made regarding the lack of specificity in the erosion and sedimentation controls.

As Mr. Udenenwu testified, the measures set forth in the Application, if followed, will comply with the requirements of 30 TAC § 330.165. As a result, the ALJ concludes that the Application includes adequate provisions for cover, in compliance with agency rules.

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[127] WMTX Ex. 202, v. VI, pp. 3407-8.

[128] Tr. v. 11, p. 2388, lns. 2-11.

[129] WMTX Ex. 202, v. VI, pp. 3294-3320; 3405-7.

10. Whether the Application Provides Adequate Information Related to Transportation, in Compliance with Agency Rules.

The rule at 30 TAC § 330.61(i) specifies the data and documentation an application must include regarding the status of the roads near the facility. The Application includes a traffic study of the roads near the facility as well as correspondence from the Texas Department of Transportation indicating that it had no objections to the study.[130]

The City asserts that the Application has not demonstrated that the roadways are capable of withstanding the significant number of heavy trucks that landfill traffic will generate. As pointed out by Applicant, those concerns are not within the scope of the applicable rules. However, Mr. John Michael McInturff, who directed and managed the transportation study for the Applicant, testified that the access roadways have a maximum limit level of 80,000 pounds and that his determination that the roads were adequate took those weight limits into account.

As Mr. Udenenwu testified, the traffic study set forth in the Application complies with the requirements of 30 TAC § 330.61(i). As a result, the ALJ concludes that the Application includes adequate information related to transportation, in compliance with agency rules.

11. Whether the Application Includes Adequate Provisions for Closure and Post-Closure, in Compliance with Agency Rules.

The rules at 30 TAC § 330.63(h) and Subchapter K set forth the requirements for the closure and post-closure plans. The Application addresses those requirements. Mr. Udenenwu testified that the closure and post-closure plans in the Application comply with the applicable rules. However, the County asserts that compliance with the rules is insufficient because they do not address the incompatibility of the landfill with the surrounding land use. This issue is discussed below.

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[130] WMTX Ex. 202, v. I, pp. 261-345.

TJFA asserts that the Application cannot comply with the applicable rules because there is no closure or post-closure plan that addresses the IWU and the Phase I Unit. However, as discussed above, the IWU and Phase I Unit are pre-Subtitle D landfill units. As such, those units are only subject to the rule at 30 TAC § 330.463 requiring a final cover of no less than 2 feet of topsoil, the final six inches of which shall be capable of sustaining native plant growth, and final slopes not exceeding a 25% (4H/1V) grade. The Application complies on all those points.

Applicant points out that there is an error in the Final Cover Quality Control Plan regarding the specification for the soils to be used in the final cover, and it provided the corrected specification.

12. Whether the Application Includes Adequate Provisions to Show that the MSW Facility Shall Not Cause or Contribute to Significant Degradation of Wetlands in Compliance with Agency Rules.

TJFA asserts that Applicant failed to delineate all wetlands as evidenced by the presence of wetland plants in the drainage way. However, C. Lee Sherrod, a botanist and wetlands ecologist with 29 years experience testified that he surveyed the entire Facility, including the drainage way, and determined that it was not a wetland. TJFA produced no evidence to contest this conclusion.

Mr. Udenenwu testified that the Application demonstrated that the wetlands determination met the federal, state, and local requirements and met the technical requirements for wetlands protection. The ALJ concludes that the Application includes adequate provisions to show that the MSW facility will not cause or contribute to significant degradation of wetlands in compliance with agency rules.

B. Whether the Application Provides Assurance that Operation of the Site Will Pose No Reasonable Probability of Adverse Effects on the Health, Welfare, Environment, or Physical Property of Nearby Residents or Property Owners.

1. Whether the Application Includes Adequate Information Regarding the Compatibility of Land Use to Show that the MSW Facility Will Not Adversely Impact Human Health or the Environment.

The rule at 30 TAC § 330.63(g) requires the operator to submit a

> constructed map of the facility showing the boundary of the facility and any existing zoning on or surrounding the property and actual uses (*e.g.*, agricultural, industrial, residential, etc.) both within the facility and within one mile of the facility. The owner or operator shall make every effort to show the location of residences, commercial establishments, schools, licensed day-care facilities, churches, cemeteries, ponds or lakes, and recreational areas within one mile of the facility boundary. Drainage, pipeline, and utility easements within the facility shall be shown. Access roads serving the facility shall also be shown.

Subsection (h) of the rule further provides that the

> owner or operator shall provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest.

The rule further requires the operator to provide certain information, including the following:

1) if available, a published zoning map for the facility and within two miles of the facility for the county or counties in which the facility is or will be located. If the site requires approval as a nonconforming use or a special permit from the local government having jurisdiction, a copy of such approval shall be submitted;

2) information about the character of surrounding land uses within one mile of the proposed facility;

3) information about growth trends within five miles of the facility with directions of major development;

4) 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 owner or operator shall provide 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. Population density and proximity to residences and other uses described in this paragraph may be considered for assessment of compatibility.

The Application includes a land use map,[131] an existing conditions survey,[132] and a land use analysis.[133] John A. Worrall has been involved in land use and planning since 1977, and prepared the land use analysis report in the Application.[134] His report contains a zoning analysis that showed that nearly all of the existing permitted ACRD Facility and all of the proposed expansion area are located outside the City of Austin and are not zoned. A 200-foot strip along the easternmost side of the existing permitted site is within the City and is zoned DR-Development Reserve and P-CO-Public, with Conditional Overlay. Mr. Worrall determined that no part of the proposed expansion will conflict with zoning requirements.[135]

Mr. Worrall's report (as revised on December 5, 2008), indicates that the predominant land use (67.5%) within one mile of the permit boundary is "open," a category that includes agricultural property, vacant property, and rights-of-way. The next largest land use within one mile (15.9%) is industrial, which includes two active landfills (BFI and ACRD) as well as the Applied Materials industrial facility and various other warehouse/distribution facilities. Residential land use is the third largest land use in the area (10%). All other land uses, including

[131] WMTX Ex. 202, v. I, p. 148.

[132] WMTX Ex. 202, v. I, pp. 18-23.

[133] WMTX Ex. 202, v. I, pp. 170-230, and Ex. 302.

[134] WMTX Ex. 300, pp. 4, 6-8.

[135] WMTX Ex. 300, p. 11.

commercial, recreational, water, and institutional, comprise no more than (6.6%) of the land area within one mile of the permit boundary. collectively.[136]

As indicated by the report, the majority of the residential units are single family housing, most of which are concentrated in the Harris Branch Subdivision to the northeast, the Pioneer Crossing Subdivision to the northwest, and the Springdale Road/US 290 area subdivisions to the southwest. As of July 2008, there were approximately 1,477 residential units located within one mile of the permit boundary. The nearest existing residence is approximately 305 feet southwest of the permit boundary in the Colonial Place subdivision. An estimated 57 business establishments, including the BFI Sunset Farms Landfill, are within one mile of the permit boundary. One school is located 4,850 feet northwest of the permit boundary, one daycare center is located approximately 3,440 feet from the permit boundary, and one historic site, the Barr Mansion, is located within a mile of the permit boundary.[137]

Mr. Worrall's updated report further states that the five-mile radius around the Facility "has continued and will continue to experience substantial residential growth," citing the fact that the number of households within that radius increased from 50,078 to 57,913. The report also points out that "planned single-family lots (17,963) and planned multi-family units (8,530) within five miles represent a considerable supply of yet-to-be-built potential."[138]

Mr. Worrall determined that the proposed expansion "does not represent a significant change in existing and historical land use patterns and relationships within one mile of the site.[139] As for proximity to residences and other uses, Mr. Worrall found that the proposed expansion "will not cause the landfill to be any closer to the most proximate existing residence or business establishment, or to any existing school, daycare center, or historic site within one mile of the

[136] WMTX Ex. 300, p. 12.

[137] WMTX Ex. 302, pp. 4-9.

[138] WMTX Ex. 302, p. 7.

[139] WMTX Ex. 300, pp. 12-13.

facility." On cross-examination, Mr. Worrall agreed that while the permit boundary would not change, the expansion would place the landfill operations closer to the homes in the Pioneer Crossing Subdivision. He pointed out that the ACRD Facility predates the school, daycare facility, and a majority of the homes currently located near the Facility.[140] Mr. Worrall concluded that the proposed expansion is compatible with surrounding land uses, pointing out that there is no indication that the Facility's past operations have deterred, or that its future operations will deter, growth in the area of the Facility.[141]

Both the County and City argue that, because the use of the surrounding land has changed to urban and residential since the beginning of landfill operations in the area, the continued operation of the Facility is incompatible with existing and future land use in the area. Jon A. White is the Environmental Officer and Director of the Natural Resources and Environmental Quality Division of Travis County's Transportation and Natural Resources Department. He testified that the County

> believes WMTX's current location is a poor site for continued or expanded landfill operations because of incompatible land uses and nuisances to neighbors and communities. . . . The long term, cumulative visual, auditory, olfactory and other negative impacts of the expansion will impair private property owners' use and enjoyment of their property and adversely affect the general public as well.

He further stated that the County's goal is to end all landfill operations in the area by November 1, 2015.[142]

Greg Guernsey is the Director of the Neighborhood Planning and Zoning Department of the City of Austin. Mr Guernsey stated that the landfill and adjacent property are located with the City of Austin's Desired Development Zone, an area that the City has designated for future

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[140] WMTX Ex. 300, pp. 13-14.

[141] WMTX Ex. 300, p. 19.

[142] Trv. Co. Ex. JW-1, pp. 15-16.

growth and development. He testified that "even if the landfill operations are in compliance with minimum standards established by TCEQ, those minimum standards as set forth in the application are not sufficient to mitigate the multitude of negative impacts created by an active landfill located adjacent to a residential area."[143]

Joe D. Word is a former Assistant Director for the Solid Waste Services Department of the City of Austin and is currently a part-time employee of the Department. Mr. Word testified that planning for the area near the ACRD Facility

> assumed the eventual closure of this landfill upon reaching its capacity (in 2015). . . . The development community needs to be able to rely on closure once permit capacity is reached. Granting a substantial increase in capacity, particularly with no time-certain closure date in the near future, will adversely affect development in this vicinity for decades.[144]

As can be seen from the testimony of the witnesses for the City and County, they primarily question the compatibility of the Facility on the basis that it will adversely affect development in the area. However, Mr. Guernsey also stated that additional residential units will be built within the two planned unit developments (PUD) north of the Facility over the next five to ten years.[145] Mr. Word testified that the City "anticipates that nearby land that is still undeveloped may be developed in the near future."[146] Neither of the City witnesses stated that these developments would not occur unless the Facility closed, but they did imply that the development would be slower.

NNC points out that the TCEQ can deny a permit for a solid waste disposal facility for good cause for reasons pertaining to land use pursuant to 30 TAC § 305.66(c), and argues that

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[143] COA Ex. GG-1, p. 6.

[144] COA Ex. JW-1, p. 10.

[145] COA Ex. GG-1, p. 6.

[146] COA Ex. JW-1, p. 5.

this permit expansion should be denied on that basis. NNC alleges that there are several flaws in Mr. Worrall's land use analysis:

- it is based on the assumption that the Facility will operate in compliance with the rules and statutes;
- it does not include contacts with the neighbors to ascertain their concerns about nuisance conditions;
- it does not consider the impact of the IWU on human health and the environment;
- it does not consider the Capital Area Council of Government's (CAPCOG) determination that the expansion of the Facility was incompatible with surrounding land use in the area.

The TCEQ rules do not specifically state that the TCEQ shall determine if the land use of an MSW facility is compatible with surrounding areas. However, TEX. HEALTH AND SAFETY CODE § 361.069 provides that the Commission "may, in processing a permit application, make a separate determination on the question of land use compatibility." The TCEQ rules regarding the requirements of the land use analysis are clearly meant to provide the Commission with the information to make such a determination of compatibility.

Applicant argues that because TEX. HEALTH AND SAFETY CODE § 361.089 distinguishes between land use and compliance history as individual bases for denial of a solid waste permit, compliance history cannot be considered as an element regarding land use compatibility. The ALJ disagrees. He sees no bar to considering the compliance history of an MSW disposal facility as a factor in determining its compatibility with other land uses in the area. In that regard, as will be discussed in detail below, the ACRD Facility was the subject of an Agreed Order from the TCEQ concerning multiple alleged violations, including "the discharge of one or more air contaminants in such concentrations and for such duration so as to interfere with the normal use and enjoyment of property, as documented during an investigation conducted on

April 4, 2002."[147] Both Mr. White and Mr. Word testified that this violation referred to a serious odor nuisance at the landfill.

The County also submitted copies of numerous citizen complaints filed with it in 2004. Mr. White testified that most of the complaints were letters in general opposition to continued operation of the BFI Sunset Farms Landfill and the ACRD Facility, but that some of them specifically cited nuisance odors.[148] However, there is no evidence of odor complaints filed with any governmental entity since the entry of the TCEQ Agreed Order on June 23, 2004, which order cited a substantial number of corrective measures taken by Applicant at the Facility prior to its issuance.

Delmer Rogers, who lives in the Harris Branch Subdivision, testified that odors from the landfills were at their peak during the summer months of 2007 and 2008, but he could not tell from which landfills the odors came. Mr. Rogers is also concerned about birds, windblown trash and truck traffic.[149]

Evan Williams owns a 23-acre tract of land on Springdale Rd. south of the west side of the West Hill of the Facility. In his prefiled testimony he stated that there was an "overpowering stench that smells of rotting garbage . . . that interferes with my enjoyment of the property and my guests' enjoyment of the property and negates any reasonable development scenario."[150] However, in his deposition testimony, Mr. Williams testified that he doesn't use the property for anything and he has no odor issues, although he is concerned about buzzards and wind-blown trash.[151] As for the development of the property, Mr. Williams stated that it hasn't been developed, not only because of its proximity to the landfill, but also due to limited access and the

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[147] Trv. Co. Ex. JW-6, p. 8.

[148] Trv. Co. Ex. 6; Tr. v. 9, p. 1942, ln. 16 – p. 1944, ln. 15.

[149] NNC Ex. DR-1, pp. 2-4; NNC Ex. 2, p. 21.

[150] NNC Ex. EW-1, p. 2.

[151] NNC Ex.4, pp. 19, 26.

existence of a "draw that runs through the middle of the property and makes it hard to work with."[152]

Mark McAfee owns the Barr Mansion and Artisan Ballroom located on Sprinkle Road northwest of the ACRD Facility. The Mansion is used for weddings, parties, and social functions. Mr. McAfee expressed concerns about odors, noise, and birds.[153] On cross-examination, Mr. McAfee admitted that his business was growing and that he did not know to what extent the presence of the landfills may have affected that growth.[154]

The testimony of the NNC witnesses is that they have concerns about continuing nuisance situations even after the corrective measures taken in 2004. Those specific nuisance conditions will be discussed below, but the testimony does not show that, if operated in compliance with TCEQ rules, the use of the Facility would be incompatible with the surrounding area.

The concern about the IWU has been addressed previously in this PFD. The lack of proof of migrations of contaminants from that unit together with the current monitoring requirements as well as those recommended as part of this permit amendment render that issue moot as far as compatibility is concerned.

NNC argues that the Commission has previously determined, in TNRCC Docket No. 96-1634-MSW, that a proposed solid waste landfill (the Spring/Cypress landfill) would be incompatible with surrounding land uses similar to those in this case. However, the Spring/Cypress landfill case concerned placing a new solid waste landfill within a primarily residential area. It did not involve the expansion of an already existing landfill, so the concerns

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[152] NNC Ex 4, p. 23.

[153] NNC Ex MM-1, pp. 1-4.

[154] Tr. v. 10, p. 2267, lns. 19-24.

that led the Commission to its decision in that case are not necessarily the same ones that will control its decision in this case.

The CAPCOG determination will also be discussed below, but certain aspects of that determination need to be discussed here. On November 9, 2005, the Solid Waste Advisory Council (SWAC) of the CAPCOG determined that the proposed expansion of the Facility would not conform with current and future land use in that area. The CAPCOG Executive Committee indicated its agreement with SWAC's determination in a letter to TCEQ dated January 31, 2006. The CAPCOG Executive Committee reaffirmed the determination of non-conformance in a letter to this ALJ dated April 10, 2008.[155] The bases for the finding of non-compatibility of land use are the same as that offered by Protestant witnesses, together with the fact that the facility is within the Desired Development Zone and that it is adjacent to numerous homes, schools, historic sites, and other sensitive receptors.

Included in the Findings of Fact in the Spring/Cypress landfill case are findings that the findings of a Council of Governments (COG) are advisory in nature and not binding on the Commission. Inasmuch as the CAPCOG determination is based on the same factors that have already been discussed, the fact of such determination carries no additional weight in this proceeding.

In his PFD regarding the BFI Sunset Farms Landfill, ALJ Newchurch made the following observations regarding the compatibility issue:

> The BFI landfill and the surrounding land uses are clearly capable of existing together. The Facility is not prohibited by any zoning, so it is legally capable of existing with the other uses in the area. Nor is it out of character in the area. Waste disposal facilities have existed in the area for almost 60 years, and BFI's landfill has been there for 27 years. Another landfill is the largest adjacent land use, and 18 percent of the land within a one-mile radius is used for landfills. Within that radius, the majority of the land is open, and the next largest category

[155] COA Ex. 2 .

> of use is industrial. There is no evidence or even argument that open or industrial uses are incompatible with the Landfill. The area is developing more rapidly then any other part of Austin and has a wide variety of uses. To the extent that some land is not being developed, other factors, including poor topography and lack of infrastructure, account for at least a portion of that.
>
> There is also no doubt that land in the area can be used for both residences and the Landfill. That is because the vast majority of the residences in the area were built and occupied eight or more years after the BFI began operating its Landfill and nearly 40 years after waste disposal began in the area. Moreover, the rate of residential development has been high, and that is projected to continue.
>
> That does not mean that the Landfill goes together perfectly with residences in the area or the Barr Mansion. As Mr. Guernsey and Mr. Word testified, offensive noise, odor, *etc.* cannot be completely eliminated. The ALJ cannot conclude, however, that a landfill is incompatible with a nearby residential area or business if it will ever be heard, smelled, seen, or noticed. If that were the standard, the Legislature or the Commission surely would have been clearer on the point. Moreover, as found elsewhere in the PFD, BFI has provided for reasonable control of each of the undesirable characteristics that the Commission has chosen to specifically regulate by rule, including odor, wind blown trash, visibility through buffering and screening, *etc.*[156]

That analysis is equally applicable to the ACRD Facility expansion. The desires of the City, the County, and NNC for the ACRD Facility to cease operations is not a legal basis for denying this Application. Based on the evidence, the ALJ concludes that Applicant has shown that the proposed expansion is compatible with land use in the surrounding area.

2. Whether the Application Includes Adequate Provisions to Prevent the Creation or Maintenance of a Nuisance Including Odors, Control of Spilled and Windblown Waste, Dust Control and Maintenance of Site Access Roads, in Compliance with Agency Rules.

"Nuisance" is described in 30 TAC § 303.3(95) as "municipal solid waste that is stored, processed, or disposed of in a manner that causes the pollution of the surrounding land, the

[156] 582-08-2178 PFD at 108.

contamination of groundwater or surface water, the breeding of insects or rodents, or the creation of odors adverse to human health, safety, or welfare."

The SOP contained in the Application addresses operational standards set forth in Subchapter D of Chapter 330 of the TCEQ rules, including standards regarding odor control, the control of spilled and windblown waste, dust control, and the maintenance of access roads.[157] The SOP includes an Odor Management Plan required by 30 TAC § 330.149, the control of windblown solid waste and litter required by § 330.139, the control of materials along the route to the site required by § 330.145, and the maintenance of on-site and access roadways, including the control of dust, mud, and debris as required by § 330.153.

The Odor Management Plan set forth in the Application includes effective and proven waste and leachate handling procedures, governing the placement of cover materials, the elimination of ponded waters, the control of landfill gas, incorporation of approved sludges and grease trap wastes into the working face with other wastes, the immediate covering of dead animals with three feet of waste or two feet of soil, and the stabilization of liquid wastes in the stabilization basin in a timely manner to minimize the potential for odor development. When offensive odors are identified at the Facility, site personnel will attempt to isolate the source of the odor. If an identifiable odor is detected at an active working face, the leachate collections sumps, the leachate evaporation pond, the leachate/gas condensation recirculation system, or the gas extraction system, appropriate corrective actions will be initiated.[158]

The SOP provides that windblown solid waste will be controlled by covering the working face daily with six inches of compacted cover soil or approved daily cover, the installation of portable and stationary litter fences of adequate height and width, and the daily picking up of windblown waste and litter scattered throughout the site, along fences and access roads, and at

[157] WMTX Ex. 202, v. VI, pp. 3383-3415.

[158] WMTX Ex. 202, v. VI, pp. 3399-3401.

the entrance gate. The SOP also requires that signs be posted at the site entrance stating that incoming loads must be enclosed or covered.[159]

The SOP provides that all-weather site access roads will be provided from Giles Rd. at the entrance of the Facility to the unloading areas designated for wet-weather operations. Truck traffic leaving the site will exit via a 3,200-foot paved road to help clean off excess mud before reaching Giles Rd. An on-site wheel wash facility may be used as necessary for trucks exiting the site. Tracked mud and debris will be removed daily at the access to the Facility, and mud will be removed from on-site roads as necessary. Dust will be controlled on an as-needed basis by use of an on-site water truck. On-site and access roadways will be maintained on a regular basis by grading and placing additional road materials to continuously provide access to the unloading areas.[160]

The City, County, and NNC expressed concern that, while the SOP, including the Odor Management Plan, contained in the Application might comply with the TCEQ rules, the past compliance history of Applicant and the ongoing concerns about odors, windblown trash, and dust require more specific control requirements. However, as Mr. Udenenwu testified, the SOP addresses all the elements required by the rule.[161] Accordingly, the ALJ finds that the Application includes adequate provisions to prevent the creation or maintenance of a nuisance including odors, control of spilled and windblown waste, dust control and maintenance of site access roads, in compliance with agency rules.

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[159] WMTX Ex. 202, v. VI, pp. 3395, 3398.

[160] WMTX Ex. 202, v. VI, pp. 3401-2.

[161] ED Ex. 1, pp. 56-59.

3. Whether the Application Includes Adequate Provisions to Control Noise, in Compliance with Agency Rules.

4. Whether the Landfill's Operational Hours Are Appropriate.

As the ED points out, there is no rule that specifically concerns noise control. However, as the ED suggests and the County argues, the rule regarding operational hours impliedly concerns noise. That rule at 30 TAC § 330.135 sets forth specific hours authorized for operation, 7:00 a.m. to 7:00 p.m., Monday through Friday, and provides that approval can be obtained for alternative hours for waste acceptance, transportation of materials and operation of heavy equipment. The Application states that the operating hours shall remain the same as are presently followed, from 9:00 p.m. Sunday through 7:00 p.m. Saturday, and if necessary, from 7:00 a.m. to 4:00 p.m. on Sunday.

Mr. Word, Mr. McAfee, and Mr. Rogers testified to the noise problems. Mr. Word stated that "backup alarms on garbage trucks and construction equipment, heavy diesel engines, and bird abatement methods can generate considerable noise." In addition, he opined that a "person standing 125 feet from this activity will still consider it to be a noisy location," noting that 125 feet is the minimum distance allowed between waste disposal areas and the property boundary.[162] Mr. Guernsey suggested that the operations of the landfill should be limited to daylight hours to "lessen the impact on the existing and proposed residential uses and adjacent civic uses."[163]

Protestants argue that the operating hours for the Facility should be limited to those specifically set forth in the rule, 7:00 a.m. to 7:00 p.m., Monday through Friday. The ED conceded that he was not opposed to limiting the operating hours, but was of the opinion that the current hours are in compliance with the rules. Applicant asserts in its Closing Argument that only existing facilities that "seek to operate outside the hours currently authorized in the facility permit are required to modify their permitted operating hours to comply with the rule

[162] COA Ex. JW-1, pp. 11-12.

[163] COA Ex. GG-1, p. 5.

requirement," citing the preamble to the language of the rule when it was first promulgated in 2004. Applicant argues that nothing in the evidence supports a limitation of its current operating hours.

Applicant did not seek a change in the operating hours, so the burden of proof to show that they should be changed is on the Protestants who seek such a change. The Commission has determined that accepting waste from 7:00 a.m. to 7:00 p.m. on weekdays should be the norm. Protestants offered testimony to show that limiting the operational hours to daylight hours would serve to mitigate the noise inherent in the operations of a landfill. There is no evidence in the record to support Applicant's need for operational hours other than the default hours set forth in the rule.

The ALJ agrees that limiting the operating hours will mitigate the noise conditions as well as odor and dust conditions that are inherent with the operation of a MSW landfill. As a result, the ALJ recommends that the Commission make the following change on page 3 of the Updated Draft Permit:

A. Days and Hours of Operation

~~The operating hours for receipt of waste and for all landfill related operations at the municipal solid waste facility shall be from 9 p.m. Sunday through 7 p.m. Saturday, and if necessary, from 7a.m. to 4 p.m. Sunday~~. The waste acceptance hours of the facility may be any time between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. Waste acceptance hours within the 7:00 a.m. to 7:00 p.m. weekday span do not require other specific approval. Transportation of materials and heavy equipment operation must not be conducted between the hours of 9:00 p.m. to 5:00 a.m. Operating hours for other activities do not require specific approval. The Commission's regional offices may allow additional temporary waste acceptance or operating hours to address disasters, other emergency situations, or other unforeseen circumstances that could result in the disruption of waste management services in the area. The facility must record in the site operating record the dates, times, and duration when any alternative operating hours are utilized.

5. Whether the Application Includes Adequate Provisions for Buffer Zones and Landscape Screening, in Compliance with Agency Rules.

The rule at 30 TAC § 330.543(b)(2)(B) and (C), requires the owner or operator to establish and maintain a 125-foot buffer zone from the newly permitted airspace of a lateral or vertical expansion. The Application provides for such a 125-foot buffer. However, the City and County both argue that such a buffer is not sufficient to protect the surrounding areas.

The ED points out that the revised rule requirement for a 125-foot buffer ensures adequate space to provide for visual screening, access for emergency response, maintenance, and monitoring. Mr. Udenenwu found that the buffer zone proposed for the expansion area is consistent with the rule's requirement.[164]

Regarding screening, Section 330.61(d)(7) requires that the facility layout map in the Application must provide, "where appropriate, plans for screening the facility from public view." Section 330.175 requires visual screening where the Commission determines that screening is necessary or as required by the permit.

Again, the City and County both argue that the screening provided for in the Application is not sufficient to protect the surrounding areas. Mr. Udenenwu testified that the Application meets the requirements of § 330.175 regarding the screening of deposited waste, particularly in regard to the landscaping and vegetation of the east and south slopes of East Hill.[165]

The ALJ finds that the application includes adequate provisions for buffer zones and landscape screening, in compliance with agency rules.

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[164] ED Ex. 1, pp. 56-59.

[165] ED Ex. 1, pp. 56-59.

C. Whether the Application Should Be Denied Based on the Applicant's Compliance History, in Accordance with State Laws and Agency Rules.

TEX. HEALTH & SAFETY CODE § 361.084(d) provides that that compliance history shall be used in Commission decisions regarding the issuance, amendment, extension, or renewal of an MSW permit. TEX. WATER CODE § 5.754 (i) provides that the Commission

> shall consider the compliance history of a regulated entity when determining whether to grant the regulated entity's application for a permit or permit amendment for any activity under the commission's jurisdiction to which this subchapter applies. Notwithstanding any provision of this code or the Health and Safety Code relating to the granting of permits or permit amendments by the commission, the commission, after an opportunity for a hearing, shall deny a regulated entity's application for a permit or permit amendment if the regulated entity's compliance history is unacceptable based on violations constituting a recurring pattern of conduct that demonstrates a consistent disregard for the regulatory process, including a failure to make a timely and substantial attempt to correct the violations.

Protestants argue that Applicant's compliance history shows a history of violations that constitutes a recurring pattern of conduct that demonstrates a consistent disregard for the regulatory process, thereby requiring the denial of the Application. After reviewing Compliance History reports for the Applicant for the compliance period September 1, 2003, through August 31, 2008, the ED rated the Applicant's compliance history as average with a rating of 2.76, and the Facility as average with a site rating of 6.17.[166]

The TCEQ rules in Chapter 60 of 30 TAC explain the applicability, method of calculation, and use of Compliance History in permit proceedings. The rule at § 60.2(a)(2) provides that the "average" classification means that the entity generally complies with environmental regulations. As the ED points out, the classification itself cannot be an issue in a contested case hearing pursuant to § 60.3(g).

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[166] WMTX Ex. 104.

The compliance history of the Facility shows the only compliance violations to be those set out in the 2004 Agreed Order that is discussed above. That Order concerned several allegations including the following:

1) deviating from an operational requirement in the Facility's SOP by allowing the leachate head to rise more than 12 inches above the landfill liner on February 4, 2002;

2) failing to operate the landfill gas collection system such that negative pressure was continuously maintained at each wellhead on February 4, 2002;

3) failing to operate each interior wellhead such that landfill gas contained either a nitrogen level of less than 20 percent or an oxygen level of less than 5 percent on February 4, 2002;

4) failing to monitor Well Nos. 38, 39, 40, 42, 43, and 44 monthly for temperature from January 1, 2001, through December 31, 2001;

5) failing to operate all pollution emission capture equipment and abatement equipment in good working order and operating properly during facility operations, specifically failing to seal a flange on a leachate sump pipe on February 26, 2002;

6) discharging one or more air contaminants in such concentrations and for such duration so as to interfere with the normal use and enjoyment of property on April 4, 2002;

7) allowing an unauthorized discharge of waste into or adjacent to any water in the state, specifically allowing accumulations of sediment and landfill debris in drainage channels that flow into unnamed tributaries of Walnut Creek as observed on March 28, 2002;

8) failing to submit a semi-annual deviation report for the period from April 2, 2001, until October 2, 2001, and from April 2, 2002, until October 2, 2002, and failing to include information concerning all deviations on the annual compliance certification;

9) failing to include a certification of accuracy and completeness in the deviation report submitted November 22, 2002; and

10) failing to submit an annual report containing information on monitored parameters for the gas collection system for the years 2001 and 2002.

The Agreed Order recognized corrective measures implemented at the Facility in response to the TCEQ's enforcement action, including the following:

1) repaired or replaced three leachate collection sump pumps in February 2002;

2) reduced leachate levels to less than 12 inches above the landfill liner in February 2002;

3) sealed a flange pipe leading from a leachate collection sump in February 2002;

4) installed temperature gauges on, and began recording monthly temperature readings for, landfill gas collection Well Nos. 38, 39, 40, 42, 43, and 44 in April 2002;

5) completed the installation of approximately 3,000 feet of additional silt fencing in April 2002;

6) implemented a procedure for handling waste streams which have a high odor potential, specifically either redirecting the waste streams to an alternate landfill facility or covering them immediately upon arrival, in April 2002;

7) completed the installation of 14 additional and replaced three landfill gas collection wells and approximately 2,800 feet of piping in April 2002;

8) began the operation of the portable odor-neutralizing system along the southeast corner of the Facility on May 1, 2002;

9) completed removal of sediment from on-site channels and ditches along the southwestern side of the Facility in August 2002;

10) suspended use of alternate daily cover except in emergency situations in February 2002;

11) completed relocation and upgrade of the flare system to increase operating effectiveness in July 2002;

12) installed three additional gas wells in July 2002;

13) installed and began operation of a permanent odor-neutralizing system covering 2,200 feet on the southeast corner of the Facility in August 2002;

14) installed 12 new vertical gas collection wells in November 2002;

15) Submitted the semi-annual deviation report for the period from April 2, 2002, to October 2, 2003, on November 22, 2002;

16) Submitted annual reports for 2001 and 2002 containing information on monitored parameters for the gas collection system on May 1, 2003; and

17) Submitted the semi-annual deviation report for the period from April 2, 2001, to October 2, 2001, on June 23, 2003.

The Agreed Order assessed an administrative penalty in the amount of $244,420, of which Applicant paid $122,210, and the balance was offset by Applicant's completion of a Supplemental Environment Project.[167]

Both the City and County point out that the fine levied by the Agreed Order was the largest fine ever assessed by the Commission against an MSW operator. Both point to the continued complaints from neighbors to the City and County. They explain the lack of complaints to the TCEQ since 2004 based on the comment made to Mr. McAfee in 2004 by Barry Kalda, an investigator with TCEQ, that "there was no real reason to file anymore complaints . . . none of them were going to amount to any violations."[168]

From the evidence, it appears that Applicant took various measures to correct its permit violations, including measures to minimize odor problems, and that there have been no enforcement actions taken by TCEQ against the Facility since 2004. The fact that the neighbors are still affected by odors that are inherent to a landfill operation does not indicate that Applicant has followed a "recurring pattern of conduct that demonstrates a consistent disregard for the regulatory process." The ALJ concludes that the application should not be denied based on the Applicant's compliance history.

[167] COA Ex. 1.

[168] Tr. v. 10, p. 2210, lns. 19-22.

D. Whether the Application Should Be Denied Based on the Fact that Applicant Allegedly Began Construction of the Proposed Lateral Extension Prior to the Issuance of the Draft Permit, in Violation of Agency Rules.

The rule at 30 TAC § 330.7(a) provides that no person may commence physical construction of a new MSW management facility, a vertical expansion, or a lateral expansion without first having submitted a permit application and received a permit from the commission. The phrase "physical construction" is defined in § 330.6(104) as "the first placement of permanent construction on a site" such as work "beyond the stage of excavation. Physical construction does not include land preparation, such as clearing, grading, excavating, and filling." The term "commence physical construction" is defined in § 330.6(26) as the

> initiation of physical on-site construction on a site for which an application to authorize a municipal solid waste management unit is pending, the construction of which requires approval of the commission. Construction of actual waste management units and necessary appurtenances requires approval of the commission, but other features not specific to waste management are allowed without commission approval.

Mr. Chandler testified that on December 10, 2008, he observed that "there were what appeared to be constructed sedimentation and detention ponds in the expansion area of the ACL."[169] He concluded, based on aerial photographs, that these ponds were constructed between April 30, 2006, and December 4, 2007, and were the same ponds as those described in the Application as being proposed to be located in the expansion area.[170] Mr. Lesniak also testified about "detention and sedimentation ponds on the expansion area west boundary" that were "partially constructed some time ago illustrating that the application is out of date regarding what are clearly the key surface water prevention controls for the expansion area and adjacent portions of the facility."[171]

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[169] TJFA Ex. 400, pp. 185-186; 188-190; 192-193; Ex. 451.

[170] TJFA Ex. 400, p. 191; Exs. 202 and 450.

[171] COA Ex. CL-1, p.6.

Thomas Franke is an employee of the Watershed Protection and Development Review Department of the City and performs drainage and water quality reviews of site and subdivision construction plans to ensure compliance with City Drainage Criteria and Environmental Criteria Manuals as well as the evaluation of sedimentation ponds to meet TPDES criteria.[172] Mr. Franke identified the Erosion and Restoration Site Plan (ERSP) approved by the City on July 19, 2006, that authorized the construction of two ponds at the Facility.[173] Mr. Franke testified that the two ponds in the northwest corner of the Facility expansion area are "substantially the same as the ponds that are described" in the ERSP."[174]

Although Mr. Dominguez agreed that the ponds identified by the witnesses were the same ponds depicted in the ERSP, he testified that, while they appear to be in the same location and to have a similar configuration, they have not yet been constructed in accordance with his design for the sedimentation and detention ponds in the Application.[175]

Applicant argues that the evidence shows that the ponds in existence in the expansion area are the ponds that the City required to be constructed as a wetland mitigation area with a forebay so that sediment can be removed.[176] Applicant asserts that because these ponds were constructed pursuant to the site development permit issued by the City, the construction was independent from any authorization that was needed from TCEQ as part of the permit Application.

The evidence shows that the ponds have been, at least partially, constructed prior to the issuance of the permit. In addition to being required by the ECRP, the ponds are a necessary part of the drainage controls required for the Facility expansion. As a result, the commencement of

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[172] COA Ex. TF-1, pp.1-2.

[173] COA Ex. TF-1, p. 5; Ex. TF-3.

[174] Tr. v. 10, pp. 2187, ln. 22 – p. 2188, ln. 8.

[175] Tr. v. 3, p. 460, ln. 11 – p. 462, ln. 19.

[176] WMTX Ex. 16, depo. Ex. 6.

the construction of a necessary appurtenance to the lateral expansion of the Facility is an apparent violation of 30 TAC § 330.7(a). However, this is not an enforcement case.

The question then is whether this apparent violation is sufficient to require denial of the Application. No rule requires denial of an application if an applicant begins construction before the application is approved. OPIC argues, however, that such a violation "shows a blatant disregard for TCEQ's permitting process," and that Applicant's willing disregard of this rule is an indication of concern that Applicant "will comply with other, less verifiable rules." The County and TJFA both argue that the violation requires denial of the Application. The ED does not shed any light onto the question, merely stating that "the existence of such construction activities would not affect whether the contents of the Application were sufficient."

Clearly, Applicant should have obtained prior approval from TCEQ before commencing construction of ponds that are intended to be part of its expansion, no matter what the reason was for that commencement. However, the ALJ does not agree with OPIC that this failure was a "blatant disregard," rather than an ill-considered action. In addition, while the ponds are an integral part of the erosion and drainage control system, they have not been completed, their proposed ultimate design in the Application meets the technical requirements, and the commencement of construction does not threaten the overall integrity of the permit process because nothing has been done that cannot be corrected if found to be inconsistent with the final design. For these reasons, the ALJ finds that the apparent rule violation is not a sufficient basis for denial of the Application.

E. Whether the Application Provides Adequate Information that the Waste Management Activities of the MSW Facility Will Conform to the Regional Solid Waste Management Plan, in Accordance with State Laws.

TEX. HEALTH & SAFETY CODE § 363.066(a) provides that public and private solid waste management activities and state regulatory activities must conform to a regional solid waste management plan (RSWMP) that has been adopted by Commission rule. Subsection (b)

provides that the Commission "may grant a variance from the adopted plan under procedures and criteria adopted by the commission." Pursuant to TEX. HEALTH & SAFETY CODE § 361.062(a), the Commission "must consider whether the solid waste facility and the proposed site for the facility are compatible with the county's approved local solid waste management plan." The rule at 30 TAC § 330.6(p) requires the owner or operator to submit documentation that Parts I and II of the application were submitted for review to the applicable COG for compliance with the RSWMP.

In 1992, TCEQ adopted the RSWMP submitted by the CAPCOG on May 26, 1992.[177] As indicated in a letter dated December 6, 2005, from TCEQ to the CAPCOG, the CAPCOG had authority to make conformance determinations pursuant to that adopted plan.[178]

As discussed above, on April 14, 2005, Applicant submitted the initial amendment application to the SWAC of the CAPCOG.[179] The SWAC subsequently determined that the proposed expansion of the Facility would not conform with current and future land use in that area, and in a letter to TCEQ dated January 31, 2006, the CAPCOG's Executive Committee indicated its agreement with SWAC's determination.[180] The basis of this determination was that the Application did not conform to the RSWMP approved by the Executive Committee on July 10, 2002. However, that revised RSWMP was not adopted by TCEQ until May 2007, well after the non-conformance determination issued by the CAPGOG.[181] The CAPCOG Executive Committee subsequently reaffirmed the determination of non-conformance based on the revised RSWMP in a letter to this ALJ dated April 10, 2008.[182]

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[177] WMTX Ex. 10.

[178] WMTX Ex. 9.

[179] WMTX Ex. 7.

[180] COA Ex. 2 .

[181] WMTX Ex. 218.

[182] COA Ex. 2 .

Specifically, the CAPGOG found that the Application does not conform with Goal # 7 of the revised RSWMP to encourage the proper management and disposal of an MSW based on the Facility's compliance history, its posing of a nuisance to neighbors and communities, and its location within the Desired Development Zone of the City. The CAPCOG also found that the Application does not conform to Goal # 15 of the revised RSWMP, regarding land use compatibility in order to minimize, if not avoid, adverse impacts from MSW facilities on human health and the environment. In addition to the same considerations supporting the determination of non-conformance with Goal # 7, the CAPCOG stated that

- Applicant had not confirmed that it could obtain site development plan approval from the City;
- Applicant's coordination with local governments regarding infrastructure has been minimal;
- Applicant failed to describe any real program or plan to systematically address efforts to curtail illegal dumping, litter abatement and waste reduction programs, public education programs, lower rates for waste collection events, *etc.*;
- Applicant failed to address concerns about visual and aesthetic impacts for MSW facilities on adjacent land uses by incorporating "context sensitive" design, and appropriate buffers and setbacks into facility design; and
- Applicant failed to address how the natural landscape is impacted by increasing the elevation of the natural ground at the site to an elevation of 740 feet above MSL.

Finally the Executive Committee required Applicant to agree that no landfill may be operated at the current site beyond November 2015.[183] The closing date for the Facility has been a disputed point for all the parties. Protestants argue that if the expansion is approved, the Facility should be required to cease operations on November 1, 2015, the same date on which the BFI Sunset Farms Landfill has agreed to cease operations. On this point, it should be noted that, on cross-examination Mr. White admitted that the 1992 RSWMP anticipated that the Facility

[183] COA Ex. 2 .

would continue operations until 2025, even without the proposed expansion.[184] Unlike BFI, Applicant has not agreed to a date on which to cease operations. The ALJ cannot find an evidentiary or legal basis to support the inclusion of such an arbitrary closing date in the permit.

As noted by the ED, the Commission is the ultimate decision maker on whether the Facility is compatible with the RSWMP, and, as noted above, the CAPCOG's determination is merely advisory. The specific bases for the CAPCOG's finding of nonconformance -- proper MSW management and disposal and land-use compatibility--have been separately discussed above, and none of them have been found by this ALJ as sufficient bases to support a denial of the Application. Accordingly, the ALJ recommends that the Commission find that the Application does conform to the RSWMP, despite CAPGOG's opinion to the contrary.

F. Whether WMTX Has Filed a Major Amendment to Its Application Requiring New Public Notice.

TJFA made an argument that the revisions made by the Applicant to the permit after it was declared technically complete in January 2008 constitute a major amendment to the Application under 30 TAC § 305.62(c)(1). Because these revisions were provided to the parties well before the hearing on the merits and were the subject of extensive testimony at the hearing, the ALJ concludes that no additional public notice is necessary pursuant to 30 TAC § 281.23(a).

VIII. TRANSCRIPT COSTS

At the conclusion of the hearing on the merits, the parties provided their positions on the appropriate allocation of transcription costs under the factors set forth in 30 TAC § 80.23. Applicant contends that a 50-50 allocation between itself and the Protestants would be reasonable. Applicant particularly points out that TJFA has participated in four contested cases as a protestant to competitors of TDL.

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[184] Tr. v. 8, p. 1795, ln. 11 – p. 1796, ln. 21.

The Protestants, collectively, assert that Applicant should be assessed all of the transcription costs, $23,506.90. TJFA points out that Applicant is the party that requested an expedited transcript, which added $9,000 to the cost. NNC argues that its participants are individuals who are financially unable to bear the costs. Both the City and County assert that their participation was necessitated by the need for public input into the proceedings, and also argue financial inability due to budgetary constraints. TJFA argues that the hearing was prolonged by Applicant's attempts to carve the IWU and Phase I Unit out of consideration in the hearing even though they are integral parts of the Facility. TJFA also argues that the other Protestants heavily relied on its experts due to their lack of resources relative to its own. There was no evidence regarding the finances of any party.

After reviewing the parties' arguments in light of the factors in 30 TAC § 80.23(d), the ALJ concluded that 75 percent of the costs of reporting and transcription[185] should be allocated to Applicant, primarily because it was responsible for the increased cost of an expedited transcript. The remaining 25 percent of the costs should be allocated to TJFA as the lead protestant on which the other Protestants heavily relied.

[185] That is, transcriptions provided to the ALJs for use in preparation of the PFD and Proposed Order and that accompany the record of the case sent to the Commission.

IX. SUMMARY

As set out above, the ALJ concludes that Applicant has prevailed on all of the issues except the issue concerning the groundwater monitoring system and the appropriateness of the operational hours. The ALJ recommends that the Commission adopt the attached Proposed Order, approve Applicant's Application in part, and issue the attached Draft Permit with the incorporation of the monitoring wells covered by the voluntary agreement with the City into the groundwater monitoring system covered by the permit, the reconfiguration of the POC to include those four wells, and the change in the operational hours described above in the PFD.

SIGNED July 21, 2009.

ROY G. SCUDDAY
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER
GRANTING THE APPLICATION OF WASTE MANAGEMENT OF TEXAS, INC, FOR TYPE I MSW PERMIT NO. 249D
SOAH DOCKET NO. 582-08-2186
TCEQ DOCKET NO. 2006-0612-MSW

On _____, the Texas Commission on Environmental Quality (TCEQ of Commission) considered the application (Application) of Waste Management of Texas, Inc. (WMTX) for Type I Municipal Solid Waste Permit No. MSW-249D. A Proposal for Decision (PFD) was presented by Roy G. Scudday, an Administrative Law Judge (ALJ) with the State Office of Administrative Hearings (SOAH), who conducted a hearing in this case from March 30 through April 13, 2009, in Austin, Texas.

After considering the ALJ's PFD, the Commission adopts the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

General Findings

1. The applicant is Waste Management of Texas, Inc. (WMTX). Its business address is 9900 Giles Road, Austin, Texas 78754.
2. The facility is the Austin Community Recycling and Disposal Facility (ACRD, or the Facility). The street and mailing address for the Facility is 9900 Giles Road, Austin, Texas 78754.

3. The Facility is located in Travis County 250 feet north of the intersection of Giles Road and U.S. 290. The facility is bounded by Giles Road to the east, the BFI Sunset Farms Landfill (BFI) and open land to the north, open land and Springdale Rd. to the west, and the closed Travis County Landfill to the south.

4. A portion of the permitted boundary is located within the city limits of Austin, Texas, and the remainder of the site is within the extra-territorial jurisdiction (ETJ) of Austin.

5. ACRD is an existing Type I Municipal Solid Waste (MSW) Landfill operating under TCEQ Permit No. MSW-294C. The original permit for the Facility was issued by the Texas Department of Health in 1970.

6. The Facility is currently authorized to accept municipal solid waste, Class 2 and Class 3 industrial wastes, and approved special wastes.

7. The Facility is approximately 360 acres in size, of which approximately 241 acres has been or will be used for landfill operations.

8. The current maximum elevation of 740 feet mean sea level (MSL) will be maintained.

9. The currently permitted landfill has a total disposal capacity of approximately 26.7 million cubic yards.

10. The land on which the Facility is located is owned by WMTX. WMTX operates the Facility and is the sole permittee under the existing permit

11. WMTX initially submitted its application to the TCEQ Executive Director (ED) on August 26, 2005.

12. Notice that the Application was deemed administratively complete by the ED was issued on September 15, 2005.

13. The Notice of Receipt of Application and Intent to Obtain Municipal Solid Waste Permit Amendment containing the information specified in 30 Tex. Admin. Code (TAC) § 39.11 was published on October 14, 2005, in the *Austin American-Statesman*, and in Spanish in the *El Mundo* newspaper.

14. The *Austin American-Statesman* is the newspaper of largest general circulation that is published in the county in which the facility is located.

15. The *El Mundo* newspaper is a publication of general circulation in the City of Austin and Travis County, and is published primarily in Spanish.

16. While the Application was under technical review by the ED, TCEQ revised the entirety of its MSW rules. These revisions went into effect on March 27, 2006.

17. Although not required to do so, WMTX elected to revise its pending Application to comply with the new rules and submitted a revised Application to TCEQ on October 10, 2006.

18. Notice of the ED's determination that the Application was technically complete was issued on January 4, 2008.

19. The ED issued a draft permit (proposed Permit No. MSW-294D) on January 4, 2008. An updated revised draft permit was issued on January 17, 2008 (Draft Permit). The Draft Permit was admitted into evidence without objection on March 30, 2009.

20. The Notice of Application and Preliminary Decision containing the information required by 30 TAC § 39.11 was published on February 13, 2008, in the *Austin American-Statesman* and on February 14, 2008, in Spanish in the *Ahora Si* newspaper.

21. The *Ahora Si* newspaper is a publication of general circulation in the City of Austin and Travis County, and is published primarily in Spanish.

22. On February 15, 2008, Applicant requested that the matter be directly referred to SOAH for a contested case hearing.

23. On March 11, 2008, the Commission referred the case to SOAH for a contested case hearing.

24. On March 12, 2008, the TCEQ Chief Clerk mailed the Notice of Hearing on the Application to potentially affected persons identified in the Application, to various state and local agencies and officials, to state legislators for the districts in which the Facility is located, and to other persons specified in 30 TAC § 39.13.

25. The Notice of Hearing on the Application was published on March 14, 2008, in the *Austin American-Statesman* and on March 13, 2008, in Spanish in the *Ahora Si* newspaper.

26. The Notice of Public Meeting containing the information required by 30 TAC § 39.11 was published on March 27, April 3, and April 10, 2008, in the *Austin American-Statesman* and in Spanish in the *Ahora Si* newspaper.

27. The preliminary hearing on the Application commenced before ALJ Roy G. Scudday at 10:00 a.m. on April 16, 2008, at the SOAH hearing rooms, William P. Clements Building, 300 West 15th Street, Austin, Texas 78701.

28. The following persons and entities were named as parties to the proceeding: WMTX; the ED; the Office of Public Interest Counsel (OPIC); Travis County; the City of Austin; TFJA, L.P. (TJFA); Mark and Melanie McAfee; Williams, Ltd. (Williams); Cecil and Evelyn Remmert and Alfred Wendland; Janet L. Smith; Jean Breazeale; John Wilkins; George K. Edwards; John P. Murphy; Alto S. and Rosemary M. Nauert; Northeast

Neighbors Coalition (NNC); and Harris Branch Residential Property Owners Association (HBRPO).

29. A contested hearing on the Application was conducted before ALJ Scudday on March 30 through April 13, 2009, at the SOAH offices.

30. As part of the Application, WMTX is requesting an authorization (Permit No. MSW-249-D) to laterally expand the facility to add 71.11 acres for a total permitted area of 359.71 acres.

31. As part of the Application, WMTX is requesting to increase the disposal capacity of the Facility by approximately 39.1 million cubic yards, which would extend the remaining life of the facility to the year 2025.

32. WMTX is not requesting an authorization to vertically expand the landfill.

Permit History

33. On December 20, 1970, a permit was issued to Universal Disposal, Inc. by the Texas Department of Health (TDH) to dispose of municipal solid waste at the ACRD Facility Phase I site.

34. In May 1971, Industrial Waste Materials Management, Inc. assumed ownership of the facility and began to dispose of industrial solid waste on a portion of the site (IWU) under an emergency order issued by the Texas Water Quality Board.

35. Disposal of industrial solid waste at the IWU was discontinued in June 1972, and closure operations including the construction of a 5-feet clay cap over the IWU continued until early 1973.

36. In the latter part of 1973 Industrial Waste Materials Management, Inc. sold the ACRD Facility to Longhorn Disposal Service, which continued to dispose of both municipal and

industrial wastes in the Phase I Unit of the facility (on which closure operations occurred in approximately 1979, including the construction of a 1.5 feet to 12.5 feet clay cap over the Phase I Unit).

37. On September 26, 1977, the TDH issued Permit No. MSW-249 to Longhorn Disposal Service to operate the facility as a Type 1 MSW landfill.

38. On July 31, 1981, the TDH issued Permit No. MSW-249A to the Austin Community Disposal Company to reflect the new owner and operator of the facility and to expand the facility to 216 acres.

39. On January 24, 1983, this permit was transferred to Texas Waste Systems, now WMTX, a wholly-owned subsidiary of Waste Management of North America, Inc.

40. On July 15, 1988, the TDH issued Permit No. MSW-249B to authorize the installation of a gas recovery system at the facility.

41. On July 22, 1991, the TDH issued Permit No. MSW-249C to authorize a 74-acre expansion to the site for a total permitted area of approximately 290 acres. Sales of separate tracts of land to Travis County for road improvements have reduced the permitted facility to its current acreage.

42. The Travis County Landfill, which ceased operating in 1982, is located south of the ACRD Facility at the northwest corner of the intersection of U.S. 290 East and Giles Lane. Waste disposed in the County facility and waste disposed in the Phase I Unit of the ACRD Facility are adjacent to and indistinguishable from one another.

43. The permitted area of the existing ACRD Facility includes the IWU, the Phase I Unit, and the East Hill and West Hill disposal areas. The permitted area is in the shape of a rectangle on the east with the proposed expansion on the west boundary of the rectangle.

The East Hill is on the east side of the rectangle and the West Hill is on the west side of the rectangle, and the two areas are bisected by a drainage way that flows across the site from its northern permit boundary to its southern permit boundary. Between the two disposal areas is the central area of the rectangle with the north-south drainage way on its western side. The IWU is located in the northern part of the central area and the Phase I Unit is located on the southern side of the central area, and these two areas are bisected by a drainage way that flows from the west side of the East Hill westward until it merges with the north-south drainage way.

44. The IWU is a 10.36-acre unit within the Facility permit boundary adjacent to and southwest of the East Hill section of the Facility. The IWU reportedly included four bulk liquid disposal ponds and two drum disposal areas.

45. No disposal operations are ongoing in the central area. The East Hill Disposal Area has been completely filled to final grades and final cover has been installed. Current disposal operations are ongoing on the western side of West Hill and in the 74-acre expansion authorized under Permit No. MSW-249C.

Sufficiency of the Permit Application and Draft Permit

46. The Application was prepared by Golder Associates, Inc. (GAI). The lead project engineer was Charles G. Dominguez, P.E. The lead project geoscientist was Jay Winters, P.G., of GAI. Other licensed professional engineers and geoscientists assisted in preparation of various portions of the Application.

47. The seal of Mr. Dominguez was affixed to all engineering plans and drawings and on the Application cover pages.

48. WMTX has coordinated with all appropriate agencies, officials, and authorities that may have a jurisdictional interest in the Application.

49. WMTX has provided complete information concerning governmental permits, authorizations, and construction approvals it has received or applied for.

50. The Application contains all information required of applicants under Title 30, Chapter 330 of the Texas Administrative Code and other regulations that govern MSW applications in Texas.

51. The conditions which exist at and near the Facility are favorable for the lateral expansion of an existing MSW landfill that is designed, constructed, and operated in a manner considered standard by engineers and geoscientists specializing in their respective fields and which is embodied in the MSW rules.

52. There are no site-specific conditions that require special design considerations. The site is well suited to the design, construction, operation, and, ultimately, closure and post-closure of an MSW landfill.

Governmental Coordination, Authorizations, and Permits

53. WMTX (or consultants on its behalf) coordinated the Application with the following governmental agencies:

    a. Texas Parks and Wildlife Department;

    b. Federal Aviation Administration;

    c. Texas Historical Commission; and

    d. Texas Department of Transportation.

54. Each of these federal and state governmental agencies that responded indicated that the Application was not problematic with respect to that agency's jurisdictional area. Agency coordination letters were included in Part I of the Application.

55. WMTX also provided written information regarding the proposed expansion to the Capital Area Council of Governments (CAPCOG), which is a 10-county regional planning commission. The CAPCOG issued its non-conformance letter on January 31, 2006, in which it made the determination that the proposed lateral expansion did not conform to the CAPCOG's regional solid waste management plan (RSWMP).

56. WMTX has obtained development permits from the City of Austin for the new sedimentation/water quality pond that is being proposed in the permit application.

57. WMTX operates its storm water controls pursuant to the Texas Pollutant Discharge Elimination System (TPDES) General Multi-Sector Permit.

58. WMTX has prepared and implemented a Storm Water Pollution Prevention Plan (SWPPP) in connection with TCEQ's approval of its notice of coverage under the TPDES program.

Protection of Groundwater

59. The Facility site is in central Travis County within the general outcrop area of the Taylor Group of the Cretaceous System.

60. The Taylor Group is composed of massive beds of shale and marl with clayey chalk, clay, sand, and some modular and phosphatic (containing phosphates) zones. The upper portion of the Taylor is comprised of a weathered montmorillonitic (hydrous aluminum silicate) clay with high shrink/swell potential.

61. Underlying the weathered material is the unweathered Taylor Group consisting of calcareous claystone, the top of which is most often encountered between 20 and 50 feet below ground surface (BGS). Below the claystone is an unweathered marl layer. The base of the Taylor Group is at a depth of approximately 700 feet BGS.

62. There are four strata existing beneath the ACRD Facility. Stratum IA is a stiff to hard, light brown to orange with occasional gray mottling, high plasticity clay. Small shells and calcareous nodules are frequent and crystallized gypsum seams of up to ½ inch thick are occasionally found. The stratum thickness ranges from 6 ft. to 58 ft.

63. Stratum IB is a hard, dark gray, high plasticity clay with traces of shells and occasional cracks infilled with gypsum and exhibiting mineralization as indicated by the brown colorization along cracks. The stratum thickness ranges between 0 and 60 ft.

64. Stratum II is fresh to slightly weathered, dark gray, calcareous claystone. Fossilized shells and pyrite nodules were identified in some samples. The top of the stratum is found between approximately 525 ft. and 607 ft. MSL with a thickness ranging between 39 and 116 ft. The average top of the layer is approximately at elevation 545 ft. MSL.

65. Stratum III is fresh to slightly weathered, light gray to white, marl. The top of the stratum is found between approximately elevation 453 ft. and 497 ft. MSL. The average top of the stratum is approximately 485 ft. MSL

66. In the area of the ACRD Facility, groundwater occurs primarily within the weathered portions of the clay unit, sometimes perched on top of the unweathered claystone. There is a preferential flow pathway for groundwater at the interface of Stratum I and Stratum II at an average elevation of 545 ft. MSL.

67. The interface of Stratum I and Stratum II is the uppermost aquifer beneath the site. Groundwater flows vertically through dessication/stress-relaxation cracks within the Stratum IB clay until it reaches the interface with Stratum II where the cracks are absent. The groundwater in these cracks, where present, flows in various directions depending on the part of the site under consideration, but normally flows in subdued conformity to topography following the weathered/unweathered interface.

68. The first significant aquifer underlying the ACRD Facility is the Edwards and associated limestones. This confined aquifer lies approximately 1,300 feet below the site and the groundwater within the aquifer is not considered potable because of high concentrations of dissolved solids. The thickness and permeability characteristics of the aquifer's overlying strata indicate that there is no reasonable concern for groundwater infiltrating through the site and into any aquifers underlying the site that may be used for human consumption.

69. The Application adequately describes the regional geology in the vicinity of the Facility.

70. No active faults are located at or near the ACRD site.

71. The regional geology should not require any limits to be placed on the design, construction, or operation of the Facility.

72. The Facility is located in the Blackland Prairie, which consists of rolling hills.

73. On the western portion of the site, the portion on which the expansion is proposed, the groundwater flow is generally to the west, towards a tributary of Walnut Creek.

74. On the central portion of the site between the East and West Hills, where the IWU and Phase I Unit are located, groundwater flow is generally to the south and southwest from

West Hill, and to the southeast from East Hill. Both flow systems have groundwater movement towards a low point at the southern perimeter.

75. On the eastern portion of the site, groundwater flow is generally toward the northeast.

76. The hydraulic conductivity of the clays in the IWU and Phase I areas is such that water moves through those clays at a rate of only 4.24 feet per year.

77. Both the IWU and the Phase I Unit are hydraulically downgradient of the East Hill and West Hill areas. The Phase I Unit is hydraulically downgradient from the closed Travis County Landfill site.

78. In 2002, WMTX constructed an additional five-feet thick clay soil layer over the north and south disposal areas of the IWU and additional soil was placed over the remaining cap area to provide a minimum two percent slope for drainage. A six-inch topsoil layer was placed over the clay soil layer and the area seeded. Existing drainage ditches were cleaned and widened around the north and south sides of the IWU area to improve storm water drainage.

79. In July 2002 semi-volatile organic compounds (SVOC) were discovered in some of the ground water samples taken from the monitoring wells at the Applied Materials facility east across Giles Road from the ACRD Facility and the BFI Sunset Farms Landfill.

80. The Applied Materials Site was the location for prior industrial uses such as a former gasoline station with underground storage tanks and a former automobile body repair shop.

81. The easternmost corner of the IWU is approximately 1,875 feet from the due east boundary of the ACRD Facility. With the hydraulic conductivity of the subsurface soils,

it would take over 468 years for contaminants to reach the easternmost boundary of the Facility from the IWU and then cross to the Applied Materials properties.

82. There is insufficient evidence to show that any contamination in the Applied Materials wells could have come from the ACRD Facility.

83. The Application includes four soil borings that were made in 1990 and 1994 along the southern boundary of the Facility where the central drainage way exits the site (PZ-18, PZ-1, PZ-19, and PZ-2). The boring logs indicate that each of the piezometer borings were advanced through the weathered clay and into the unweathered claystone, and none of the logs for the borings indicate that waste was found.

84. A cross-section from the 2000 ThermoRetec Consulting Corporation (TRCC) Report included in the Application is a south-to-north cross-section of the east-west drainage way between the IWU and the Phase I Unit, drawn perpendicular to the drainage way depicting a single point in the drainage way. The cross-section shows an approximately three-feet thick level of MSW between the cap/fill and the weathered clay at that point of the drainage way.

85. The TRCC Report included boring logs from two monitoring wells on the IWU side of the drainage way, but none on the Phase I Unit side of the drainage way. In addition, there is no boring log information for any point in the drainage way itself along that cross-section nor is there boring log information downstream from that cross-section to indicate the presence of MSW anywhere in the drainage way.

86. The leachate from the Phase I Unit flows from the highest elevations in the eastern and central portions to the northwest "toe of the cell," which is the lowest elevation of the Unit, where it is retained by the wall or dam created by the drainage tributary.

87. There is insufficient evidence to show that the drainage tributary between Phase I and the IWU has been partially filled with MSW.

88. There is insufficient evidence to show that there is migration of leachate from the IWU to the drainage tributary or to the Phase I Unit, or to show that there is migration of leachate from the Phase I Unit to the perimeter of the ACDR Facility.

Proposed Liner and Leachate Collection System

89. The liner systems for the existing Subtitle D cells and the proposed Subtitle D cells in the expansion consist of two feet of compacted low-hydraulic conductivity soil, a 60-mil HDPE geomembrane liner, a leachate collection system of granular and/or geosynthetic drainage layers, two feet of protective cover soil, and perforated collection pipes encased in gravel and leachate collection sumps.

90. The drainage layers will consist of either (i) a geonet overlain by geotextile or single-sided geocomposite on the landfill bottom and a double-sided geocomposite on the side slopes, or (ii) granular drainage layer consisting of 1 foot of sand and protective geotextile on both the landfill bottom and the side slopes of the landfill.

91. The liners are constructed on slopes designed to promote positive drainage to perforated collection pipes, then to the cell sumps for removal.

92. A portion of the proposed expansion will be located over a pre-Subtitle D area of the West Hill. It will be necessary to install a liner and a leachate collection system over the existing waste and under the new waste. The associated design for the vertical expansion over the unlined area is referred to as the "piggyback."

93. The proposed liner and leachate collection system for the piggyback area consists of a two foot protective cover soil, double-sided geocomposite drainage layer, 60-mil LLDPE

geomembrane liner, textured on both sides, and a two-foot compacted clay liner. In addition, a grading layer may be placed on top of the existing intermediate cover over the existing waste prior to construction of the two-foot compacted clay liner to provide a smooth subgrade for construction of the compacted clay. The leachate collection system consists of perforated collection pipes placed in gravel-filled trenches located at the cell perimeters. In these areas, the cell base grades are sloped to drain toward a sump where two vertical manholes provide access for leachate removal.

94. WMTX evaluated the settlement of the existing waste beneath the piggyback liner to determine the post-settlement liner slope and induced strains in the liner system. The existing waste in the piggyback expansion area is over 10 years old. Currently, there are soil stockpiles averaging approximately 10-feet thick overlying the old waste in most of the piggyback area, which will be removed to prepare for a uniform base grade for the new liner system. The existing waste settlement consists of two parts: (i) secondary compression and (ii) the primary settlement caused by new waste and final cover. The settlement analyses indicate that the maximum settlement of the piggyback liner is estimated to be 5.3 feet at a location with approximately 80 feet of waste in-place and approximately 40 feet of new waste. Differential settlement is expected to occur in the piggyback liner area; however, the post-settlement liner grade is 6.9% at minimum and greater than 15% in most of the area.

95. WMTX analyzed the proposed piggyback liner system to determine induced tensile strain due to differential settlement of existing waste and the formation of a localized depression beneath the liner. Results, utilizing the settlement analysis results, show that

the proposed liner system will be mainly under "compression" and a very limited length of the upper portion will experience a maximum tensile strain of 0.58%.

96. WMTX analyzed the proposed piggyback liner system to determine the impact of localized depression on the liner integrity. Topographic maps from 1998 to 2006 indicate that there were no significant depressions that occurred in the existing waste in the piggyback area and, due to the age of the waste, the formation of significant localized depressions in the future is not expected. However, to account for this possibility, an analysis was performed considering a depression occurring over a 60-foot radius and approximately five-feet deep, resulting in a calculated tensile strain on the liner of 0.46%. The calculated strain is less than the minimum allowable strain of the liner system components.

97. While waste settlement will occur beneath the piggyback liner, the estimated maximum settlement of the liner will not compromise the integrity of the piggyback liner.

98. Leachate collected from the piggyback liner area will be diverted to cell WD-11 via sheet flow. Inside cell WD-11, all leachate, including that from the piggyback liner, will be collected by the leachate collection pipe and conveyed to the cell WD-11 sump, where it will be further transmitted to storage or disposal areas. The final liner grade is 6.9% at minimum and greater than 15% in most areas, which ensures positive leachate drainage.

99. The leachate collection and removal system (LCRS) is designed to limit the maximum leachate depth over the liner to less than 30 centimeters, in accordance with 30 TAC § 330.331(a)(2). The LCRS was designed considering the leachate flow from the piggyback liner area.

100. Minimization of leachate and contaminated water will be achieved primarily by best management practices (BMP) to minimize rainfall runoff contacting waste at the working face and by minimizing the amount of water passing through or otherwise emitted from waste. Practices utilized to minimize leachate and contaminated water include landfill construction methods, surface water management practices, and cover practices.

101. The LCRS on the cell floor area is designed to limit the maximum depth on the bottom liner to less than 30 centimeters by allowing monitoring of head levels and timely recovery of leachate.

102. To limit leachate ponding on the protective cover, the gravel surrounding the leachate collection system pipes will extend through the protective cover forming chimney drains along the centerline.

103. Perforated six-inch HDPE leachate collection pipes will be installed in gravel-filled chimney drains along the centerline of each cell at a grade of 1% for removal of leachate from the drainage layer. The leachate collection pipes discharge into sumps located near the base grade low points of each cell. No portion of the leachate piping system is designed to penetrate the composite liner.

104. Leachate entering the drainage layer and collection pipes will be subsequently discharged into collection sumps located near the base grade low points of each cell, at the toe of the slideslope, where it will be pumped to temporary holding tanks or to the leachate evaporation pond. Sump inverts will be approximately three feet below the leachate collection pipe invert to allow accumulation of leachate. The sumps will be constructed of compacted low hydraulic conductivity soil, a geosynthetic clay liner, 60-mil HDPE liner and washed gravel with no more than 10% of the gravel smaller than the

perforations in the pipes. The gravel will be encased in a geotextile wrap and covered by a 24-inch protective layer.

105. Sump riser pipes will be located along the disposal area perimeter to provide a means of monitoring leachate levels and for lowering hoses and submersible pumps into the collection sumps. A geotextile and/or granular bedding will be placed between the pipe and the HDPE geomembrane liner to prevent damage to the liner.

106. The leachate collection system is designed to maintain a head of less than 30 centimeters on the liner system. The current pumps are set such that leachate is typically conveyed via pipes directly into the leachate evaporation pond.

107. Leachate recovered from pre-subtitle D and subtitle D sumps will be transferred from the leachate evaporation pond by (i) piping to a recirculation network in the landfill, (ii) via tanker to a recirculation area or transported off site, and (iii) by piping to an evaporation pond and then to a sanitary sewer system. Leachate pumped into tanker trucks will be disposed of off-site at a TCEQ-approved treatment facility.

108. Collected leachate will be stored in a permitted geomembrane-lined evaporation pond that will be located between the East Hill and the West Hill. A minimum of five consecutive days of storage capacity is desirable and will be maintained to the extent practicable. One foot of freeboard for the 25-year, 24-hour rainfall event shall be maintained in the leachate evaporation pond.

109. In disposal cells containing a standard Subtitle D liner system and leachate collection system, leachate and gas condensate may be recirculated back into the waste. Leachate recirculation may consist of spray application during dry conditions using portable tanks at the active face, injecting leachate through a perforated pipe or well buried in the refuse,

or discharging leachate in an area excavated into waste and backfilled with highly permeable material.

110. The Liner Quality Control Plan (LQCP) specifies materials, equipment, and construction methods for the construction of the disposal units. The LQCP details installation methods and quality control testing and reporting for flexible membrane liners, provides guidance necessary for testing and reporting evaluation procedures for the person preparing the Soil Liner Evaluation Report (SLER) and/or the Geomembrane Liner Evaluation Report (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).

111. The LQCP includes measures that will be taken to protect the liner and leachate collection systems during construction below the seasonal high groundwater table. Control of groundwater during excavation and liner system construction is not anticipated to be a problem. The wells are dry in much of the future construction area, and since soil will be excavated gradually for use as a daily/intermediate cover and as a borrow source for clay liner construction, the groundwater zone will be partially dewatered, lowering the potentiometric surface. In addition, much of the recharge area for the shallow unit has been removed as a result of landfill development upgradient of the future cells. The soils in Strata I are poorly permeable and the rock was generally free from joints and discontinuities; therefore, it is anticipated that no groundwater will be visible and hydrostatic pressures will take a long period of time to build below the liner system.

112. The liner design system and LQCP in the Application meet the requirements of 30 TAC § 330, Subchapter H by describing the liner design and construction details, by providing

details showing that the proposed liner system incorporates short-term and long-term hydrostatic uplift pressure relief systems, by providing for leachate and contaminated water management systems, and by explaining the groundwater flow path, including the most likely pathways for pollutant migration.

113. The evidence sufficiently demonstrates that there are adequate provisions to protect ground water in compliance with the Commission's rules.

Groundwater Monitoring

114. Data compiled from numerous site investigations were used to design the groundwater monitoring network, the purpose of which is to detect any release of contaminants into the groundwater beneath the facility.

115. The existing groundwater monitoring system is comprised of 15 groundwater monitoring wells screened within the StratumI/II interface to monitor the shallow groundwater beneath the site.

116. The proposed groundwater monitoring system will be expanded from 15 to 31 wells. Twelve of the existing wells and 19 additional wells will comprise the proposed system.

117. On the west portion of the Facility, a total of 13 wells, consisting of four existing wells and nine new wells are proposed to monitor groundwater at the Stratum I/II interface. Additionally, a total of 10 wells, four existing piezometers and six new monitoring wells, will be screened within Stratum II.

118. On the central portion of the Facility, a total of 10 monitoring wells will be located along the point of compliance in this area. These wells include six proposed wells and four existing wells. One upgradient well is also located on this portion of the site.

119. On the eastern portion of the Facility, a total of seven monitoring wells will be located along the point of compliance in this area. These wells include four proposed wells and three existing wells.

120. MW-11, a part of the current certified groundwater monitoring network under Permit No. 249C, is located on the west side of the drainage tributary along the Facility's southern permit boundary adjacent to the Travis County landfill to the south and to the west of the Phase I Unit's westernmost extent. MW-12, also a part of the current groundwater monitoring network, is located along the Facility's southern permit boundary adjacent to the Travis County landfill to the south and to the east of the Phase I Unit's easternmost extent.

121. The point of compliance (POC) under the current permit does not extend between MW-11 and MW-12.

122. The Application proposes to extend the Facility's POC north and east from MW-11 along the eastern boundary of the West Hill, over the northern limits of the IWU, and south along the western boundary of the East Hill to MW-12. Six new monitoring wells are proposed to be added along this new segment of the POC. Two of those new wells, MW-44 and MW-30, will monitor the IWU and a third new well, MW-51, will monitor the Phase I Unit. MW-51 will be located upgradient from MW-12, MW-30 will be located between the northwest corner of the IWU and MW 29A, and MW-44 will be located west and downgradient from PZ-26.

123. The area between MW-11 and MW-51 is the upgradient portion of the Phase I Unit, and, as a result, cannot be a part of the POC.

124. It is highly unlikely that potential contaminants from the IWU would not reach MW-11 because there is very slow groundwater movement at the Facility site, meaning that any plumes that would emanate from the IWU would tend to be quite wide rather than narrow, thereby facilitating the detection of those plumes.

125. In 2002, WMTX entered into a voluntary agreement with the City in which WMTX agreed to incorporate two existing wells (MW-29A and PZ-26) as downgradient groundwater sampling points. MW-29A is between the IWU and the drainage tributary to the west of the IWU, and PZ-26 is between the southwest corner of the IWU and the drainage tributary to the south of the IWU. WMTX also agreed to install a monitoring well (MW-32) along the trace of the drainage tributary downgradient from PZ 26 and to place a piezometer between the south boundary of the IWU and the south drainage tributary (PZ-31) to monitor water levels.

126. The incorporation of the wells covered by the voluntary agreement--MW-29A, MW-32, PZ-26, and PZ-31--into the groundwater monitoring system covered by the permit and the reconfiguration of the POC to include those four wells will serve to mitigate the potential threat to human health and the environment should contaminants from the IWU and/or the Phase I Unit migrate towards the boundaries of the Facility.

127. 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.

128. With the incorporation of the additional four wells into the groundwater monitoring system and the realignment of the POC to incorporate those four wells, the Draft Permit will include adequate provisions for groundwater monitoring.

Groundwater Monitoring of Additional Constituents

129. There is insufficient evidence to support the addition of a sampling requirement to the groundwater monitoring system for additional constituents.

TPDES Storm Water Permitting Requirements

130. The Facility operates under the TPDES Storm Water Multi-Sector General Permit.

131. WMTX has prepared a SWPPP as required by the TPDES General Permit.

132. The Facility has submitted a Notice of Intent (NOI) as required by the TPDES General Permit.

133. The Application complies with the MSW rule requirements for demonstrating that it has complied with TPDES storm water permitting requirements.

No Significant Alteration of Natural Drainage Patterns

134. The Application includes a surface water protection plan and drainage plan which includes the locations, details, and typical sections of the facilities that relate to the protection of surface water, and it shows the adequacy of provisions for safe passage of all internal and externally adjacent floodwaters.

135. 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. During cell construction and site development, BMPs, including, berms, culverts, pumps, pipes, and hoses, grading of

areas outside the excavation areas, sumps, detention ponds, and staged development will be used to control and minimize any contact between surface waters and solid waste. Rainfall runoff that does become contaminated will be managed and disposed of in accordance with applicable regulations. Uncontaminated water may be used for site operations, evaporate naturally, or be discharged offsite as authorized under TCEQ permits and the SWPPP.

136. The Facility Surface Water Drainage Report contained in the Application shows the locations, details, and typical sections of the surface drainage controls at the Facility. Drainage from the developed landfill is designed to maintain the existing drainage patterns and to prevent significant drainage impacts.

137. Proposed storm water drainage patterns for the Facility have been revised from the pre-development conditions, however, the surrounding existing drainage patterns will not be adversely altered as a result of landfill construction. The 25-year, 24-hour storm event was used to compute the peak flow rates, discharge volumes, velocities, and water surface elevations. In addition, in accordance with City of Austin requirements, the 100-year, three-hour storm event was used to size the perimeter channels and the sedimentation and detention pond, resulting in a conservative design for these drainage features.

138. WMTX used the Hydrologic Engineering Center Hydrologic Modeling System (HEC-HMS) to calculate the existing peak flows and volumes resulting from the 25-year recurrence interval storm to calculate storm water discharges for existing conditions and post-development conditions. Post-development flow rates are less than or equal to existing flow rates at all control points except for one, which increases slightly. Peak

flow rates have been reduced due to the redirection of flow, increased flow path, and attenuation from the proposed sedimentation and detention pond. Therefore, increases in discharge volumes from existing to post-development will be released at rates that will not adversely alter existing drainage patterns.

139. The 100-year peak flow runoff was incorrectly calculated in the 1996 amendment application to be 977 cfs. when, in fact, it should have been calculated to be 1,239 cfs.

140. Using the correct method of calculation, the Application shows that the current peak flow at the southern boundary (CP-7) is actually 1,239 cfs and the projected peak flow after the expansion will be 1,310 cfs.

141. The Application includes structural designs for all proposed collection, drainage, and detention facilities, and depictions of typical cross-sections and ditch grades, flow rates, water surface elevations, velocities, and flowline elevations along the entire length of the drainage structures.

142. The Application accurately reflects the current drainage conditions and does not propose adverse alterations to the existing drainage patterns in violation of 30 TAC § 330.305(a).

Sufficiency of Erosion Control Methods

143. The Application includes: (1) structural controls for capturing sediment before it leaves the site in both interim and final configurations, (2) erosion control practices to prevent erosion in the interim and final configurations, and (3) calculations to show that erosion in the final configuration will be below permissible levels.

144. The proposed structural controls to control erosion and sedimentation include:

- Storm water falling on the top dome and external embankment side slopes of the landfill will be routed to temporary and permanent downchutes using soil berms sloped towards these features;
- The downchutes will discharge into perimeter drainage ditches and channels and then into sedimentation ponds located throughout the facility (except for the currently permitted Ditch 7, which is permitted to discharge directly into the tributary of Walnut Creek that crosses the southwestern portion of the existing facility);
- The sedimentation ponds will then discharge storm water into the tributary of Walnut Creek or to a natural drainage way that separates the East and West Hills (the "central drainage way");
- Storm water from the East Hill and the western portion of the West Hill will discharge into the central drainage way and into two sedimentation ponds that have been constructed within the central drainage way;
- These sedimentation ponds will allow for sediment to fall out of suspension and minimize sedimentation-laden runoff from this portion of the site;
- The remaining portion of West Hill and the new portion of the West Hill to be created by the proposed expansion will be routed to a sedimentation/detention pond located along the west-central portion of the permit boundary;

- The proposed detention pond will be equipped with an outlet structure that will allow sediment to fall out of suspension prior to leaving the site in this location; and
- The proposed detention pond will be designed with a biofiltration system consisting of 1.5 feet of gravel, overlain by a filter geotextile, overlain by a 0.5 feet of soil capable of supporting vegetation, all completed to satisfy the City's Site Development Permit requirements and to further decrease the amount of sediment-laden runoff exiting the site.

145. The erosion and sedimentation controls for the intermediate cover areas will include:

- The top surfaces are to be sloped either at 3% with a maximum length of 410 feet, or at 5% with a maximum length of 360 feet, while the external embankment side slopes will be four feet horizontal to one foot vertical (4H/1V) slopes with a maximum length of 710 feet;
- The storm water velocity on the top surfaces will not exceed the permissible non-erodible velocity, while the 4H1V slopes will require diversion structures at least every 100 feet apart along the slope to limit the velocity below the permissible non-erodible velocity;
- Results of the soil erosion analyses demonstrate that the top surfaces can achieve effective erosional stability with 60% groundcover and a diversion berm near the crest of the slope to divert runoff to temporary and permanent downchutes;
- The erosion and sediment controls for the external embankment side slopes require both stabilized soil surfaces and storm water diversion

structures, and the length between such structures shall not exceed 100 feet as measured along the slope to maintain sheet flow conditions and keep flow velocities below 5 feet per second;

- The expected soil loss for the 60% groundcover is approximately 10.8 tons/acre/year, well below the permissible soil loss of 50 tons per acre per year;
- Types of soil surface stabilization BMP to be used on the intermediate cover will include vegetation, mulch, and geosynthetics; and
- Types of storm water diversion structures will include soil diversion berms, biodegradable logs or organic berms.

146. The erosion and sedimentation controls for the final cover areas will include:

- Storm water diversion berms;
- Lined diversion channels and perimeter channels, downchutes, detention and sedimentation ponds, and discharge control structures; and
- Seeding of native vegetation on a 6-inch thick top soil layer to ensure a minimum 90% ground cover.

147. The erosion control methods identified in the Application are sufficient to comply with agency rules.

Slope Stability

148. The Application contains a geotechnical report that describes and summarizes the geotechnical properties of the subsurface and discusses the suitability of the soils for the uses for which they are intended.

149. WMTX performed slope stability analyses using limit equilibrium methods to assess the stability of the proposed landfill. Stability of the proposed excavated landfill sideslopes, stability of the protective cover on landfill sideslopes, stability of the interior waste slopes, overall stability of final filled landfill, and stability of the final cover system were evaluated.

150. The critical surface analysis indicates a minimum factor of safety equal to 2.0 for the excavated slopes, which will increase as waste is placed within landfill cells. Results of the stability analysis for the pond excavation slopes indicate a minimum factor of safety equal to 3.2. Analyses of the stability of the cell sideslope liner system indicate that the factor of safety for a 3H/1V slope (worst-case slope) is 1.6, which will also increase as waste is placed within the cell. Analyses of the stability of interior waste slopes, performed using worst case conditions, indicate that, the factor of safety against sliding is greater than 1.4 for all conditions analyzed. This factor of safety is adequate for temporary conditions.

151. When textured geomembrane and double-sided geocomposite are used on the cell floor, continuous 3H/1V waste slopes without benches have a minimum factor of safety against sliding of 2.12. Stability analyses, performed using worst-case geometry, indicate that the final waste slopes will be stable with a minimum factor of safety of 1.58.

152. A stability analysis of the final cover liner system was performed to estimate the potential for sliding to occur following closure of the landfills by analyzing the worst-case section. The analyses indicate that, provided the geocomposite drainage layer is adequate to convey drainage without building up pore water pressures in the geocomposite, the factor

of safety against sliding will be approximately 1.6. For all conditions evaluated, the calculated minimum factor of safety is adequate.

153. WMTX performed stability and liner system strain analyses to support the piggyback liner design. The analyses of the stability of protective cover on the piggyback liner, using worst case conditions, indicate that the factor of safety is 2.1 without vehicle breaking force and 1.6 under a vehicle breaking force, which will increase as waste is placed within the cell.

154. Stability of the interior waste slope associated with the piggyback liner was analyzed for the worst condition when operational sequence VI is completed. The results of these analyses indicate that the factor of safety against sliding is 1.46. As waste placement reaches its final grades, the piggyback liner will be buttressed by waste placed west of the liner, producing a more stable configuration than during waste filling. The minimum factors of safety in the piggyback liner area are 7.04 and 8.21 for sliding and circular failure mechanisms respectively. For all conditions evaluated, the calculated factor of safety is adequate. .

155. The Application contains an Unstable Area Location Restriction Demonstration.

156. TCEQ has never interpreted the unstable area restriction in its regulation to require a separate slope stability analysis.

157. The Application includes adequate analysis of and provisions to ensure slope stability

Management of Landfill Gas

158. The Application contains a Landfill Gas Management Plan which includes a Landfill Gas Collection and Control System (GCCS), which is incorporated into the Site Operating Plan.

159. The GCCS serves the dual purpose of controlling surface emissions and gas-related odors.

160. The GCCS is comprised of landfill gas collection wells, a landfill gas collection system that includes gas headers, pumps, *etc.* or a landfill gas blower-flare station where methane gas is ignited and destroyed.

161. The piggyback liner system to be constructed over an area of the West Hill will interfere with gas wells W-5, W-6, and W-7. Prior to construction of the piggyback liner system, these three existing wells will be abandoned. The wells will be cut and capped below the ground surface and any laterals to these wells will be cut and capped to remove the wells from the vacuum system. Gas wells W-5, W-6, and W-7 will be reinstalled east of their current location and along the eastern side of the piggyback liner system.

162. The Application has a gap in coverage of approximately 3,000 feet along the south side of the perimeter boundary between gas monitoring probes P-9 west of the Phase I Unit and P-10 east of the Phase I Unit. The absence of permanent probes between P-9 and P-10 is due to the following;

- a considerable decrease in topography and geologic conditions on the west end of East Hill which provide a preferential flow path which surfaces in the topographic low, and

- the presence in this area of the closed Travis County Landfill and the absence of off-site receptors in this area.

163. The elevation in the drainage way that runs along the west boundary of the Phase I Unit and then south of the permit boundary along the west side of the closed Travis County Landfill becomes lower than the lowest disposal cell bottoms of the East and West Hills approximately 400 feet south of the permit boundary, providing a natural vent to atmosphere for any gas that may migrate southward from the Facility.

164. A probe cannot be put through waste in order to determine if there is methane gas at the location because the waste itself may produce methane gas so that the probe results would be meaningless. Accordingly, it is not feasible or advisable to install wells through the waste interface between the Phase I Unit and the Travis County Landfill.

165. The Application includes adequate provisions to manage landfill gas, in compliance with agency rules.

Ponding of Surface Water

166. The Site Operating Plan (SOP) contained in the Application includes a Ponded Water Prevention Plan that sets forth the different methods that will be utilized to prevent ponded water over waste-filled areas.

167. The Application proposes adequate protection of surface water.

Provisions for Cover

168. The SOP contained in the Application addresses the landfill cover systems that will be utilized in the operation of the Facility, in addition to a Final Cover Quality Control Plan as part of the Closure Plan.

169. The Application includes adequate provisions for cover, in compliance with agency rules.

Transportation Information

170. The Application includes a traffic study of the roads near the facility as well as correspondence from the Texas Department of Transportation indicating that it had no objections to the study.

171. The access roadways have a maximum limit level of 80,000 pounds and the determination of WMTX that the access roads were adequate took those weight limits into account.

172. The Application includes adequate information related to transportation, in compliance with agency rules.

Provisions for Closure and Post-Closure

173. Because the IWU and Phase I Unit are pre-Subtitle D landfill units, they are only subject to the rule at 30 TAC § 330.463, requiring a final cover of no less than 2 feet of topsoil with the final six inches of which capable of sustaining native plant growth, and final slopes not exceeding a 25% (4H/1V) grade.

174. The Application sets forth the requirements for the closure and post-closure plans in compliance with agency rules.

175. There is an error in the Final Cover Quality Control Plan regarding the specification for the soils to be used in the final cover, and the Plan should be revised to specify SCS Hydrologic Soil Group D for that soil.

Designation of Wetlands

176. The Application demonstrated that the wetlands determination met the federal, state, and local requirements and met the technical requirements for wetlands protection.

177. The Application includes adequate provisions to show that the MSW facility will not cause or contribute to significant degradation of wetlands, in compliance with agency rules.

Land Use Compatibility

178. No portion of the Facility is located within the city limits of any incorporated city except for an approximately 200-foot-wide strip along Giles Lane in the far eastern portion of the permit boundaries, which was annexed by the City of Austin in 1985.

179. The remainder of the Facility is located within the extraterritorial jurisdiction (ETJ) of the City of Austin.

180. The approximately 200-foot-wide strip along the eastern boundary is zoned "DR"-Development Reserve, and "P-CO"-Public with Conditional Overlay, by the City of Austin. No other zoning ordinance or designation applies to the remainder of the Facility.

181. The Facility and adjacent property are located within the City of Austin's Desired Development Zone, an area that the City has designated for future growth and development.

182. The predominant land use (67.5%) within one mile of the permit boundary is open, which includes agricultural property, vacant property and rights-of-way. The next largest land use (15.9%) is industrial, which includes two active landfills (Sunset Farms and ACRD), the Applied Materials manufacturing facility, and other industrial uses along U.S. 290 and Johnny Morris Road. The next largest land use (10%) is residential, and the remaining land uses (commercial, recreational, water and institutional) comprise 6.6% of the land area within one mile of the permit boundary.

183. Solid waste disposal has been a historically and geographically significant land use within one-mile of the Facility since at least 1968. Of the 4,338 acres within one mile of the ACRD Facility, approximately 795 acres (18%) have been permitted for waste disposal purposes at one time or another.

184. The majority of the residential units are single family housing, most of which are concentrated in the Harris Branch Subdivision to the northeast, the Pioneer Crossing Subdivision to the northwest, and the Springdale Road/US 290 area subdivisions to the southwest. As of July 2008, there were approximately 1,477 residential units located within one mile of the permit boundary. The nearest existing residence is approximately 305 feet southwest of the permit boundary in the Colonial Place subdivision. The proposed expansion would place the landfill operations closer to the homes in the Pioneer Crossing Subdivision.

185. An estimated 57 business establishments, including the BFI Sunset Farms Landfill, are within one mile of the permit boundary. One school is located 4,850 feet northwest of the permit boundary, one daycare center is located approximately 3,440 feet from the permit boundary, and one historic site, the Barr Mansion, is located within a mile of the permit boundary

186. Almost 90% of the residences that are located within one mile of the permit boundary have been built while the ACRD Facility and the other landfills have been operating.

187. Both the school and day care center were built while Sunset Farms and the ACRD Facility were operating.

188. The City of Austin is the community that is located closest to the Facility.

189. The bulk of the City of Austin is located to the west of the Facility. However, the City has annexed properties (including the Harris Branch subdivision) to the northeast of the Facility.

190. From 1990 to 2000, the predominant direction of residential growth for the City of Austin was northerly. The ACRD Facility is located within the fastest growing sector of the City from 1990 to 2000.

191. The ACRD Facility has not deterred growth in the vicinity of the landfill.

192. The TCEQ considered the impact of the site upon the city, community and nearby property owners and individuals in terms of compatibility of land use, zoning, community growth patterns, and other factors associated with the public interest.

193. WMTX included sufficient information in the Application pertaining to land use and land use compatibility.

194. The existing ACRD Facility is compatible with surrounding land uses.

195. The continued use of the land for an MSW site will not adversely impact human health, safety, or welfare.

196. The desires of the City, the County, and NNC for the ACRD Facility to cease operations is not a legal basis for denying this Application.

197. The proposed expansion is compatible with land use in the surrounding area

Control of Nuisances

a. Odors

198. The Odor Management Plan set forth in the SOP contained in the Application includes:

- effective and proven waste and leachate handling procedures,
- the placement of cover materials,

- the elimination of ponded waters,
- gas control,
- incorporation of approved sludges and grease trap wastes into the working face with other wastes,
- immediate covering of dead animals with three feet of waste or two feet of soil, and
- stabilization of liquid wastes in the stabilization basin in a timely manner to minimize the potential for odor development.

199. When offensive odors are identified at the Facility, site personnel will attempt to isolate the source of the odor and if an identifiable odor is detected at an active working face, the leachate collections sumps, the leachate evaporation pond, the leachate/gas condensation recirculation system, or the gas extraction system appropriate corrective actions will be initiated.

200. The Application includes adequate provisions to prevent the creation or maintenance of odors.

b. Control of Spilled and Windblown Waste and Cleanup of Spilled Waste

201. The SOP provides that windblown solid waste will be controlled by covering the working face daily with six inches of compacted cover soil or approved daily cover, installing portable and stationary litter fences of adequate height and width, and daily picking up of windblown waste and litter scattered throughout the site, along fences and access roads, and at the entrance gate.

202. The SOP also requires that signs be posted at the site entrance requiring incoming loads to be enclosed or covered.

203. The Application includes adequate provisions to control spilled and windblown waste.

c. Dust Control and Maintenance of Site Access Roads

204. The SOP provides that all-weather site access roads will be provided from Giles Rd. at the entrance of the Facility to the unloading areas designated for wet-weather operations. Tracked mud and debris will be removed daily at the access to the Facility and mud will be removed from on-site roads as necessary.

205. Truck traffic leaving the site will exit via a 3,200 foot paved road to help clean off excess mud before reaching Giles Rd. An on-site wheel wash facility may be used as necessary for trucks exiting the site.

206. Dust will be controlled on an as-needed basis by use of an on-site water truck. On-site and access roadways will be maintained on a regular basis by grading and placing additional road materials to continuously provide access to the unloading areas.

207. The Application includes adequate provision for dust control and maintenance of site access roads.

d. Noise Control and Operational Hours

208. The Facility is currently authorized to operate from 9:00 p.m. Sunday through 7:00 p.m. Saturday, and if necessary, from 7:00 a.m. to 4:00 p.m. on Sunday.

209. The Application does not seek to change the operating hours for the Facility.

210. Protestants have the burden of proof to show that the current operating hours for the Facility should be changed to conform with the default hours set forth in § 330.135, 7:00 a.m. to 7:00 p.m., Monday through Friday.

211. The preponderance of the evidence establishes that limiting the operating hours to the default hours of 7:00 a.m. to 7:00 p.m., Monday through Friday will mitigate the noise conditions that are inherent with the operation of an MSW landfill.

212. There is no evidence to show that the Facility's operational hours need to be different from the default hours of 7:00 a.m. to 7:00 p.m., Monday through Friday.

d. Summary

213. "Nuisance" is defined in the Commission's rules as "municipal solid waste that is stored, processed, or disposed of in a manner that causes the pollution of the surrounding land, the contamination of groundwater or surface water, the breeding of insects or rodents, or the creation of odors adverse to human health, safety, or welfare." 30 TAC § 330.3(95).

214. Operation of the expanded landfill as requested in the Application will not result in pollution of the surrounding land.

215. Operation of the expanded landfill as requested in the Application will not result in contamination of groundwater and surface water.

216. Operation of the expanded landfill as requested in the Application will not result in breeding of insects or rodents.

217. Operation of the expanded landfill as requested in the Application will not result in the creation of odors adverse to human health, safety, or welfare.

218. Noise is not a component of the Commission's definition of nuisance.

219. Noise from the Facility does not and will not rise to a level that would constitute a nuisance.

220. The Application proposes sufficient provisions to avoid causing a nuisance.

Buffer Zones and Landscape Screening

221. The Application provides for a 125-foot buffer zone from the newly permitted airspace of the lateral expansion.

222. The Application addresses the screening of deposited waste as required by 30 TAC §330.175, particularly regarding the landscaping and vegetation of the east and south slopes of East Hill..

223. The provisions proposed for buffer zones and landscape screening comply with agency rules.

Compliance History

224. The ED prepared compliance summaries for WMTX and the Facility.

225. After reviewing Compliance History reports for WMTX for the compliance period September 1, 2003, through August 31, 2008, the ED rated WMTX' compliance history as average, with a rating of 2.76.

226. The compliance history rating for the ACRD Facility is average, with a rating of 6.17.

227. The compliance history of the Facility shows the only violations to be those set out in the 2004 Agreed Order Docket No. 2002-0935-MLM-E. That Order concerned several allegations including the following:

- deviating from an operational requirement in the Facility's SOP by allowing the leachate head to rise more than 12 inches above the landfill liner on February 4, 2002;
- failing to operate the landfill gas collection system such that negative pressure was continuously maintained at each wellhead on February 4, 2002;

- failing to operate each interior wellhead such that landfill gas contained either a nitrogen level of less than 20 percent or an oxygen level of less than 5 percent on February 4, 2002;
- failing to monitor Well Nos. 38, 39, 40, 42, 43, and 44 monthly for temperature from January 1, 2001, through December 31, 2001;
- failing to operate all pollution emission capture equipment and abatement equipment in good working order and operating properly during facility operations, specifically failing to seal a flange on a leachate sump pipe on February 26, 2002;
- discharging one or more air contaminants in such concentrations and for such duration so as to interfere with the normal use and enjoyment of property on April 4, 2002;
- allowing an unauthorized discharge of waste into or adjacent to any water in the state, specifically allowing accumulations of sediment and landfill debris in drainage channels that flow into unnamed tributaries of Walnut Creek as observed on March 28, 2002;
- failing to submit a semi-annual deviation report for the period from April 2, 2001, until October 2, 2001, and from April 2, 2002, until October 2, 2002, and failing to include information concerning all deviations on the annual compliance certification;
- failing to include a certification of accuracy and completeness in the deviation report submitted November 22, 2002; and

- failing to submit an annual report containing information on monitored parameters for the gas collection system for the years 2001 and 2002.

228. The Agreed Order recognized corrective measures implemented at the Facility in response to the TCEQ's enforcement action, including the following:

- repaired or replaced three leachate collection sump pumps in February 2002;
- reduced leachate levels to less than 12 inches above the landfill liner in February 2002;
- sealed a flange pipe leading from a leachate collection sump in February 2002;
- installed temperature gauges on, and began recording monthly temperature readings for, landfill gas collection Well Nos. 38, 39, 40, 42, 43, and 44 in April 2002;
- completed the installation of approximately 3,000 feet of additional silt fencing in April 2002;
- implemented a procedure for handling waste streams which have a high odor potential, specifically either redirecting the waste streams to an alternate landfill facility or covering them immediately upon arrival, in April 2002;
- completed the installation of 14 additional and replaced three landfill gas collection wells and approximately 2,800 feet of piping in April 2002;
- began the operation of the portable odor-neutralizing system along the southeast corner of the Facility on May 1, 2002;

- completed removal of sediment from on-site channels and ditches along the southwestern side of the Facility in August 2002;
- suspended use of alternate daily cover except in emergency situations in February 2002;
- completed relocation and upgrade of the flare system to increase operating effectiveness in July 2002;
- installed three additional gas wells in July 2002;
- installed and began operation of a permanent odor-neutralizing system covering 2,200 feet on the southeast corner of the Facility in August 2002;
- installed 12 new vertical gas collection wells in November 2002;
- submitted the semi-annual deviation report for the period from April 2, 2002, to October 2, 2003, on November 22, 2002;
- submitted annual reports for 2001 and 2002 containing information on monitored parameters for the gas collection system on May 1, 2003; and
- submitted the semi-annual deviation report for the period from April 2, 2001, to October 2, 2001, on June 23, 2003.

229. The Agreed Order assessed an administrative penalty in the amount of $244,420, of which Applicant paid $122,210, and the balance was offset by Applicant's completion of a Supplemental Environment Project.

230. The Facility's compliance history does not warrant denial of the Application.

Construction of the proposed lateral extension prior to the issuance of the Draft Permit

231. Between April 30, 2006, and December 4, 2007, WMTX commenced construction of a detention pond and a sedimentation pond in the northwest corner of the Facility expansion area.

232. The two ponds in the northwest corner of the Facility expansion area are substantially the same as the ponds that are described in the Erosion and Restoration Site Plan (ERSP) approved by the City on July 19, 2006.

233. The two ponds have not yet been constructed in accordance with the engineering design for the detention and sedimentation ponds as set forth in the Application.

234. The two ponds have been, at least partially, constructed prior to the issuance of the Draft Permit.

235. In addition to being required by the ECRP, the two ponds are a necessary part of the drainage controls required for the Facility expansion.

236. Although the ponds are an integral part of the erosion and drainage control system of the lateral expansion, they have not been completed, their ultimate design as set forth in the Application will meet the technical requirements, and the commencement of construction of the ponds does not threaten the overall integrity of the permit process.

237. The commencement of the construction of the two ponds prior to the approval of the Application, in apparent violation of 30 TAC § 330.7(a), is not a sufficient basis for denial of the Application

Conformance with the regional solid waste management plan (RSWMP)

238. In 1992, TCEQ adopted the RSWMP submitted by the CAPCOG on May 26, 1992.

239. The CAPCOG had authority to make conformance determinations pursuant to that adopted plan.

240. On April 14, 2005, Applicant submitted the initial amendment application to the Solid Waste Advisory Committee (SWAC) of the CAPCOG.

241. The SWAC subsequently determined that the proposed expansion of the Facility would not conform with current and future land use in the area based on the RSWMP approved by the CAPCOG Executive Committee on July 10, 2002. The Executive Committee indicated its agreement with SWAC's determination in a letter to TCEQ dated January 31, 2006.

242. The revised RSWMP was not adopted by TCEQ until May 2007, well after the non-conformance determination issued by the CAPGOG.

243. The CAPCOG Executive Committee subsequently reaffirmed the determination of non-conformance based on the revised RSWMP in a letter dated April 10, 2008.

244. The CAPGOG found that the Application does not conform with Goal # 7 of the revised RSWMP to encourage the proper management and disposal of MSW based

- on the Facility's compliance history,
- its posing of a nuisance to neighbors and communities, and
- its location within the Desired Development Zone of the City.

245. The CAPCOG also found that the Application does not conform to Goal # 15 of the revised RSWMP, regarding land use compatibility in order to minimize if not avoid adverse impacts from MSW facilities on human health and the environment. In addition to the same considerations supporting the determination of non-conformance with Goal # 7, CAPCOG stated that

- Applicant had not confirmed that it could obtain site development plan approval from the City;
- Applicant's coordination with local governments regarding infrastructure has been minimal;
- Applicant failed to describe any real program or plan to systematically address efforts to curtail illegal dumping, litter abatement and waste reduction programs, public education programs, lower rates for waste collection events, *etc.*;
- Applicant failed to address concerns about visual and aesthetic impacts for MSW facilities on adjacent land uses by incorporating "context sensitive" design, and appropriate buffers and setbacks into facility design; and
- Applicant failed to address how the natural landscape is impacted by increasing the elevation of the natural ground at the site to an elevation of 740 feet above MSL.

246. The CAPCOG's determination is merely advisory.

247. None of the specific bases for the CAPCOG's non-conformance determination are a sufficient basis to support a denial of the Application.

248. The CAPCOG required that Applicant must agree that no landfill may be operated at the current site beyond November 2015.

249. The 1992 RSWMP anticipated that the ACRD Facility would continue operations until 2025, even without the proposed expansion.

250. There is no evidentiary or legal basis to support the inclusion of an arbitrary November 2015 closing date in the Permit.

Health of Protestants NCC and Their Families

251. The Application meets the requirements of the Commission's rules and goes beyond those requirements in many respects.

252. No evidence was presented that any individual has suffered any adverse health effects due to the Facility.

253. No evidence was presented that any individual will suffer adverse health effects as a result of expansion of the landfill.

254. The Application proposes sufficient provisions to protect groundwater and surface waters.

255. The Application proposes sufficient provisions regarding air emissions, landfill gas management, odor controls, dust controls, vector controls, and other measures that will be protective of human health and the environment.

256. The lateral expansion will not increase the likelihood that any individual's health will be adversely affected.

Major Amendment

257. The revisions made by the Applicant to the application after it was declared technically complete in January 2008 were provided to the parties well before the hearing on the merits and were the subject of extensive testimony at the hearing

258. No additional public notice is necessary pursuant to 30 TAC § 281.23(a).

Reporting and Transcription Costs

259. Reporting and transcription costs of $23,506.90 were incurred for the prehearing conference and evidentiary hearing.

260. The costs included $9,178.40 for an expedited transcript as requested by WTMX.

261. TJFA is a Texas limited partnership. TJFA was formed in November 2004.

262. Bob Gregory is the sole (99%) limited partner of TJFA.

263. Garra de Aguila, Inc., a Texas corporation, owns the remaining 1% interest in TJFA and serves as the managing general partner of TJFA.

264. Bob Gregory owns 100% of the shares of Garra de Aguila, Inc.

265. Bob Gregory serves as president, chief executive officer, and principal owner of Texas Disposal Systems Landfill, Inc. (TDSL) and Texas Disposal Systems, Inc. (TDS).

266. TDSL owns a municipal solid waste landfill near Creedmoor in southeast Travis County.

267. Neither TJFA nor Garra de Aguila, Inc. has any employees.

268. TJFA shares a common business location, telephone number and fax number with TDSL and TDS.

269. TJFA is an affiliate of TDSL, a business competitor of WMTX.

270. TJFA purchased a property near the ACRD Facility in December 2004. TJFA has purchased properties next to four Central Texas landfills (Sunset Farms and three facilities operated by WMTX) and participated as a party-protestant in four separate MSW permitting proceedings in the past four years.

271. The other Protestants heavily relied on TJFA's experts due to their lack of resources relative to its own.

272. There was no evidence regarding the finances of any party.

Other Remaining Issues

273. 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 ANN. §§ 39.5 and 39.101, and TEX. GOV. CODE ANN. §§ 2003.051 and 2003.052.
3. SOAH has jurisdiction to conduct a hearing and to prepare a Proposal for Decision in contested cases referred by TCEQ under TEX. GOV. CODE ANN. § 2003.47.
4. The provisions of 30 TEX. ADMIN. CODE. ANN. Ch. 330 in effect as of March 22, 2006 apply to the Application.
5. WMTX submitted an administratively and technically complete permit amendment application, as required by TEX. HEALTH & SAFETY CODE ANN. §§ 361.066 and 361.068, that demonstrates that it will comply with all relevant aspects of the Application and design requirements as provided in 30 TEX. ADMIN. CODE. ANN. §§ 330.71(a) and 330.57(d).
6. 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. ANN. § 80.1 *et seq.*, and the State Office of Administrative Hearings, specifically 1 TEX. ADMIN. CODE. ANN. § 155.1 *et seq.*, and Subchapter C of TEX. HEALTH & SAFETY CODE ANN. Chapter 361.

7. The burden of proof was on the Applicant, in accordance with 30 TEX. ADMIN. CODE. ANN. § 80.17(a). WMTX met its burden with respect to all referred issues except the proposed hours of operation.

8. The evidence in the record is sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and 30 TEX. ADMIN. CODE. ANN. Chapter 330.

9. The expansion of the proposed Austin Community Recycling and Disposal Facility, if constructed and operated in accordance with the Solid Waste Disposal Act, 30 TEX. ADMIN. CODE ANN. Chapter 330, and the attached Draft Permit, will not adversely affect public health or welfare or the environment.

10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

11. The approval of the Application and issuance of Permit No. MSW-249D, 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. WMTX's compliance history ranking was properly classified as "average" under 30 TEX. ADMIN. CODE ANN. Chapter 60.

14. The TCEQ is not prohibited by TEX. HEALTH & SAFETY CODE ANN. § 361.122 from issuing Permit No. MSW-249D.

15. 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).

16. As required by 30 TEX. ADMIN. CODE ANN. §§ 330.61(k)(3), 330.61(i)(4), and 330.61(i)(5) Applicant has submitted documentation of coordination with TCEQ for compliance with the federal Clean Water Act Section 402, the Federal Aviation Administration for compliance with airport location restricts, and the Texas Department of Transportation for traffic and location restrictions.

17. Applicant has submitted wetland determinations required by applicable federal, state, and local laws as required by 30 TEX. ADMIN. CODE ANN. §§ 330.61(m).

18. 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 ANN. § 330.57(f).

19. Part I of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c)(1), and 330.59.

20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c)(2), and 330.61.

21. The Site Development Plan, which supports Parts I and II of the Application, meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

23. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

24. Applicant has shown that it will comply with the operational prohibitions and requirements in 30 TEX. ADMIN. CODE ANN. §§ 330.5, 330.111 - 330.139.

25. The Application includes adequate provisions to prevent the ponding of water over waste in the landfill, in compliance with 30 TEX. ADMIN. CODE ANN. § 330.167.

26. Applicant submitted a geology report that complies with 30 TEX. ADMIN. CODE ANN. § 330.63(e).

27. The Application contains the required information regarding the effect of Facility construction on groundwater flow required by 30 TEX. ADMIN. CODE ANN. § 330.403(e)(1).

28. With the incorporation of the wells covered by the voluntary agreement with the City of Austin, MW-29A, MW-32, PZ-26, and PZ-31, into the groundwater monitoring system covered by the permit and the reconfiguration of the point of compliance to include those four wells, the Application will meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63(b)(4), 330.401, 330.403, 330.405, and 330.407, concerning groundwater protection.

29. The groundwater sampling and analysis plan meets the requirements set forth in 30 TEX. ADMIN. CODE ANN. §§ 330.56(k) and 330.63(f), and Subchapter J of Chapter 330.

30. Applicant has demonstrated that existing drainage patterns will not be adversely altered as a result of the proposed landfill development, as required by 30 TEX. ADMIN. CODE ANN. § 330.63(c)(D)(iii) and 330.305.

31. The landfill gas monitoring system complies with 30 TEX. ADMIN. CODE ANN. § 330.159.

32. Applicant has demonstrated compliance with applicable TPDES storm water permitting requirements.

33. Applicant has demonstrated compliance with the location restrictions set forth in 30 TEX. ADMIN. CODE ANN. §§ 330.345, 330.347, 330.553, 330.555, 330.557, and 330.559.

34. Applicant has submitted information regarding closure and post-closure that demonstrates compliance with the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63(h), (i), 330.457, 330.461, 330.463, and 330.465.

35. The SLQCP complies with 30 TEX. ADMIN. CODE ANN. §§ 330.63(d)(C)(3) and (4)(G), and 330.339.

36. 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 ANN. §§ 330.61(i)(5) and 330.545.

37. As required by TEX. HEALTH & SAFETY CODE ANN. § 361.069, the Facility is compatible with surrounding land uses.

38. Section 363.066 of the TEX. HEALTH & SAFETY CODE ANN. does not affect The Solid Waste Disposal Act, under which the Commission may supersede any authority granted to or exercised by the council of governments.

39. The Facility is compatible with the applicable regional solid waste management plan, pursuant to TEX. HEALTH & SAFETY CODE ANN. § 361.062.

40. The methods specified in the SOP comply with the MSW rules to prevent the creation of any nuisance, as defined by 30 TEX. ADMIN. CODE ANN. § 330.3(95).

41. The buffer zones established by Applicant between the edge of fill and the Facility boundary are compliant with the MSW rules, including 30 TEX. ADMIN. CODE ANN. §§ 330.141(b).

42. Applicant has provided sufficiently detailed information regarding the operational methods to be utilized at the Facility when using daily cover and its preventative effect on vectors, fires, odors, windblown waste and litter, and scavenging, as required by 30 TEX. ADMIN. CODE ANN. § 330.165(a) and (b).

43. The methods specified in the SOP for the control of windblown waste and litter comply with the MSW rules, including 30 TEX. ADMIN. CODE ANN. §§ 330.127 and 330.139.

44. Applicant has provided adequate information related to transportation in compliance with 30 TEX. ADMIN. CODE ANN. § 330.61(i).

45. The operating hours proposed in the Application have been shown to not be appropriate.

46. Pursuant to the authority of, and in accordance with applicable laws and regulations, the attached Permit should be granted with the following change in Section III. A. on page 4:

A. Days and Hours of Operation

~~The operating hours for receipt of waste and for all landfill related operations at the municipal solid waste facility shall be from 9 p.m. Sunday through 7 p.m. Saturday, and if necessary, from 7a.m. to 4 p.m. Sunday~~. The waste acceptance hours of the facility may be any time between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. Waste acceptance hours within the 7:00 a.m. to 7:00 p.m. weekday span do not require other specific approval. Transportation of materials and heavy equipment operation must not be conducted between the hours of 9:00 p.m. to 5:00 a.m. Operating hours for other activities do not require specific approval. The Commission's regional offices may allow additional temporary waste acceptance or operating hours to address disasters, other emergency situations, or other unforeseen circumstances that could result in the disruption of waste management services in the area. The facility must record in the site operating record the dates, times, and duration when any alternative operating hours are utilized.

47. The IWU stopped accepting waste prior to October 9, 1991; therefore, the only regulatory requirements that apply to the IWU are the limited closure and post-closure care provisions of 30 TEX. ADMIN. CODE ANN. §§ 330.5, 330.453, and 330.463.

48. The proposed groundwater monitoring system as revised to incorporate the wells covered by the voluntary agreement with the City of Austin -- MW-29A, MW-32, PZ-26, and PZ-31 -- into the groundwater monitoring system covered by the permit and the reconfiguration of the POC to include those four wells will adequately monitor the IWU and protects human health and the environment in compliance with 30 TEX. ADMIN. CODE ANN. §§ 330.63(b)(4), 330.401, 330.403, 330.405, and 330.407.

49. The Phase I Unit area stopped accepting waste prior to October 9, 1991; therefore, the only regulatory requirements that apply to the Phase I Unit area are the limited closure and post-closure care provisions of 30 TEX. ADMIN. CODE ANN. §§ 330.5, 330.453, and 330.463.

50. The proposed groundwater monitoring system as revised to incorporate the wells covered by the voluntary agreement with the City of Austin--MW-29A, MW-32, PZ-26, and PZ-31--into the groundwater monitoring system covered by the permit and the reconfiguration of the POC to include those four wells will adequately monitor the Phase I Unit area of the Facility and protects human health and the environment in compliance with 30 TEX. ADMIN. CODE ANN. §§ 330.63(b)(4), 330.401, 330.403, 330.405, and 330.407.

51. Pursuant to the authority of, and in accordance with, applicable laws and regulations, the requested permit should be granted with the modifications described in this Order.

52. Pursuant to 30 TEX. ADMIN. CODE ANN. §§ 80.23(d)(2), the Executive Director and Office of Public Interest Counsel may not be assessed any portion of the transcript and reporting costs.

53. For the reasons set out in the Findings of Fact, the court reporting and transcript costs should be apportioned 75% to Applicant and 25% to 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. The attached Type I Municipal Solid Waste Permit no. MSW-249D. is granted to Waste Management of Texas, Inc. with the following changes:

Section II.A on page 3:

A. Days and Hours of Operation

~~The operating hours for receipt of waste and for all landfill related operations at the municipal solid waste facility shall be from 9 p.m. Sunday through 7 p.m. Saturday, and if necessary, from 7a.m. to 4 p.m. Sunday~~. The waste acceptance hours of the facility may be any time between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. Waste acceptance hours within the 7:00 a.m. to 7:00 p.m. weekday span do not require other specific approval. Transportation of materials and heavy equipment operation must not be conducted between the hours of 9:00 p.m. to 5:00 a.m. Operating hours for other activities do not require specific approval. The Commission's regional offices may allow additional temporary waste acceptance or operating hours to address disasters, other emergency situations, or other unforeseen circumstances that could result in the disruption of waste management services in the area. The facility must record in the site operating record the dates, times, and duration when any alternative operating hours are utilized.
Attachment A

Groundwater Characterization and Monitoring Report

The groundwater monitoring system should be revised to incorporate the wells MW-29A, MW-32, PZ-26, and PZ-31 and to reconfigure the point of compliance to include those four wells.

Final Cover Quality Control Plan

The specification for the soils to be used in the final cover should be revised to specify SCS Hydrologic Soil Group D for that soil.

2. The Applicant shall pay 75% of the court reporting and transcript costs for this case and TFJA, L.P. shall pay the remaining 25%.

3. The Chief Clerk of the Commission shall forward a copy of this Order to all parties and issue the attached permit as changed to conform to this Order.

4. 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, are denied for want of merit.

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.

6. The effective date of this Order is the date the Order is final, as provided by 30 TEX. ADMIN. CODE ANN. § 80.273 and TEX. GOV. CODE ANN. § 2001.144.

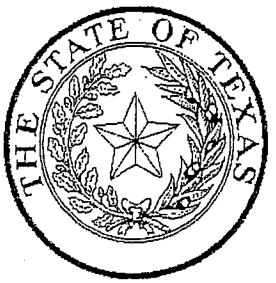
ISSUED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

_____

Buddy Garcia, Chairman
For the Commission

Final Draft Permit



THE STATE OF TEXAS
COUNTY OF TRAVIS
I hereby certify that this is a true and correct copy of a Texas Commission on Environmental Quality document, which is filed in the permanent records of the Commission.
Given under my hand and the seal of office on

APR 03 2008

LaDonna Castanuela, Chief Clerk
Texas Commission on Environmental Quality

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PERMIT FOR MUNICIPAL
SOLID WASTE (MSW) MANAGEMENT FACILITY
Issued under provisions of Texas
Health & Safety Code
Chapter 361

MSW Permit No.:	249D
Name of Permittee:	Waste Management of Texas, Inc. 9900 Giles Road Austin, Texas 78754
Property Owner:	Waste Management of Texas, Inc.
Facility Name:	Austin Community Recycling and Disposal Facility
Classification of Site:	Type I Municipal Solid Waste Management Facility

The permittee is authorized to accept, store, process, and dispose of wastes in accordance with the limitations, requirements, and other conditions set forth herein. This amended permit is granted subject to the rules and orders of the Commission and laws of the State of Texas and it replaces any previously issued permit. Nothing in this permit exempts the permittee from compliance with other applicable rules and regulations of the Texas Commission on Environmental Quality. This permit will be valid until canceled, amended, or revoked by the Commission, or until the site is completely filled or rendered unusable, whichever occurs first.

APPROVED, ISSUED AND EFFECTIVE in accordance with Title 30 Texas Administrative Code Chapter 330.

ISSUED DATE:

_____
For the Commission

Table of Contents
Travis County
Austin Community Recycling and Disposal Facility
MSW Permit No. 249D

PART NO. 1

PART NO. 1

I. Size and Location of Facility

A. The Austin Community Recycling and Disposal Facility is located at 9900 Giles Road, approximately 250 feet north of the intersection of Giles Road and US Highway 290 in Austin, Travis County, Texas.

B. The legal description is contained in the Documentation section in Parts I/II of the application found in Attachment A of this permit.

C. Coordinates and Elevation of Site Permanent Benchmark:

Latitude:	N 30° 20' 02.59"
Longitude:	W 97° 37' 22.85"
Elevation:	636.049 feet above mean sea level (ft-msl)

II. Facilities and Operations Authorized

A. Days and Hours of Operation

The operating hours for receipt of waste and for all landfill related operations at this municipal solid waste facility shall be from 9 p.m. Sunday through 7 p.m. Saturday and, if necessary, from 7 a.m. to 4 p.m. on Sunday.

B. Wastes Authorized at This Facility

The permittee is authorized to dispose of municipal solid waste resulting from, or incidental to, municipal, community, commercial, institutional, and recreational activities, including garbage, putrescible wastes, rubbish, ashes, brush, street cleanings, dead animals, abandoned automobiles, construction-demolition waste, yard waste, Class 2 non-hazardous industrial solid waste, Class 3 non-hazardous industrial solid waste, and certain special wastes that are identified in Part IV found in Attachment A of this permit. The acceptance of the special wastes indicated in Part IV of Attachment A of this permit is contingent upon such wastes being handled in accordance with Title 30 Texas Administrative Code (30 TAC) Section (§) 330.171 and §330.173, and in accordance with the listed and described procedures in Part IV found in Attachment A of this permit, subject to the limitations and special provisions provided herein.

C. Wastes Prohibited at This Facility

The permittee shall comply with the waste disposal restrictions set forth in 30 TAC §330.15. Class 1 nonhazardous industrial solid waste (with the exception of waste that is Class 1 only because of asbestos content), hazardous waste from any source (other than municipal hazardous waste from conditionally exempt small quantity generators), and any other waste not identified in Section II.B. of this permit shall not be accepted at this facility.

D. Waste Acceptance Rate

Authorized solid waste may be accepted for disposal at this site at the initial rate of approximately 447,658 tons-per-year and increasing over time to a maximum acceptance rate of approximately 673,183 tons-per-year. These estimated waste acceptance rates are not a limiting parameter to this permit. The actual yearly waste acceptance rate is a rolling quantity based on the sum of the previous four quarters of waste acceptance.

E. Waste Volume Available for Disposal

The total area within the permit boundary is approximately 359.71 acres, of which only approximately 242 acres will be used for waste disposal. The total waste disposal capacity of the landfill is approximately 39,252,000 cubic yards based upon the information contained in Section 2.1 of Parts I/II found in Attachment A of this permit.

F. Facilities Authorized

The permittee is authorized to operate a Type I municipal solid waste landfill that utilizes a combination of area excavation fill and aerial fill of the municipal solid waste subject to the limitations contained herein. All waste disposal activities subject to permitting are to be confined to the following facilities, which shall include disposal units, structures, appurtenances, or improvements: access roads, dikes, berms and temporary drainage channels, permanent drainage structures, detention ponds, landfill gas management system, contaminated water management system, final cover system, groundwater monitoring system, landfill liner and leachate collection systems, and other improvements.

G. Changes, Additions, or Expansions

Any proposed facility changes must be authorized in accordance with the Texas Commission on Environmental Quality (TCEQ) permit amendment or modification rules, 30 TAC Chapters 305 and 330.

III. Facility Design, Construction, and Operation

A. Facility design, construction, and operation and/or maintenance must comply with the provisions of this permit; Commission Rules, including 30 TAC §330.55 through 330.73, 330.121 through 330.179, 330.207, 330.261 through 330.289, 330.301 through 330.307, 330.331 through 330.341, 330.371, 330.401 through 330.415, 330.419, 330.421, 330.451 through 330.465, 330.501, 330.503, 330.507, 330.509, and 330.541 through 330.563; special provisions contained in this permit; and Parts I through IV of the application found in Attachment A of this permit, and shall be managed in a manner to protect human health and the environment.

B. The entire waste management facility shall be designed, constructed, operated, and maintained to prevent the release and migration of any waste, contaminant, or pollutant beyond the point of compliance as defined in 30 TAC §330.3 and to prevent inundation or discharge from the areas surrounding the facility components. Each receiving, storage, processing, and disposal area shall have a containment system that will collect spills and incidental precipitation in such a manner as to:

1. Preclude the release of any contaminated runoff, spills, or precipitation;

2. Prevent washout of any waste by a 100-year storm; and

3. Prevent run-on into the disposal areas from off-site areas.

C. The site shall be designed and operated so as not to cause a violation of:

1. The requirements of §26.121 of the Texas Water Code;

2. Any requirements of the Federal Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements of §402, as amended, and/or the Texas Pollutant Discharge Elimination System (TPDES), as amended;

3. The requirements under §404 of the Federal Clean Water Act, as amended; and

4. Any requirement of an area wide or statewide water quality management plan that has been approved under §208 or §319 of the Federal Clean Water Act, as amended.

D. Contaminated water shall be handled, stored, treated, disposed of, and managed in accordance with 30 TAC §330.55(b), 330.65(c), 330.177, 330.207, 330.305(g) and 330.333, and Part III, Attachment 3, Section 6 found in Attachment A of this permit. Other methods may be considered for approval as a modification to this permit.

E. Best management practices for temporary erosion and sedimentation control shall remain in place until sufficient vegetative cover has been established to control and mitigate erosion on areas having final cover. Vegetative cover will be monitored and maintained throughout the post-closure care period in accordance with Part III, Attachment 8 found in Attachment A of this permit.

F. Storm water runoff from the active portion of the landfill shall be managed in accordance with 30 TAC §330.63(c) and 330.301 through 330.307, and as described in Part III, Attachment 2 found in Attachment A of this permit.

G. All facility employees and other persons involved in facility operations shall be qualified, trained, educated, and experienced to perform their duties so as to achieve compliance with this permit. The permittee shall comply with 30 TAC §330.59(f) and as described in Section 1.6 of Parts I/II found in Attachment A of this permit. The permittee shall further ensure that personnel are familiar with safety procedures, contingency plans, the requirements of the Commission's rules and this permit, commensurate with their levels and positions of responsibility, in accordance with Part III and Part IV found in Attachment A of this permit. All facility employees and other persons involved in facility operations shall obtain the appropriate level of operator certification as required by recent changes in the statute and applicable regulations.

H. The facility shall be properly supervised to assure that bird populations will not increase and that appropriate control procedures will be followed. Any increase in bird activity that might be hazardous to safe aircraft operations will require prompt mitigation actions.

IV. Financial Assurance

A. Authorization to operate the facility is contingent upon compliance with provisions contained within the permit and maintenance of financial assurance in accordance with 30 TAC §330.63(j), 30 TAC Chapter 330, Subchapter L, and 30 TAC Chapter 37.

B. Within 60 days after the date of issuance of this permit, the permittee shall provide financial assurance instrument(s) for demonstration of closure of the landfill in accordance with 30 TAC §330.503. The closure cost estimate of $6,948,385 (2006 dollars)] is based on estimates as described in Part III Attachment 9 found in Attachment A of this permit. The financial assurance instrument shall be in an amount that includes the inflation factors for each calendar year following 2006 until the year the permit is issued.

C. Within 60 days after the date of issuance of this permit, the permittee shall provide financial assurance instrument(s) for demonstration of post-closure care of the landfill in an amount for the entire landfill facility. The post-closure care cost estimate of $4,369,723 (2006 dollars) is based on estimates as described in Part III Attachments 9 found in Attachment A of this permit. The financial assurance instrument shall be in an amount that includes the inflation factors for each calendar year following 2006 until the year the permit is issued.

D. The owner and/or operator shall annually adjust closure and/or post-closure care cost estimates for inflation within 60 days prior to the anniversary date of the establishment of the financial assurance instrument pursuant to 30 TAC §330.503(b) and 330.507(b), as applicable.

E. If the facility's closure and/or post-closure care plan is modified in accordance with 30 TAC §305.70, the permittee shall provide new cost estimates in current dollars in accordance with 30 TAC §330.503 and 330.507. The amount of the financial assurance mechanism shall be adjusted within 45 days after the modification is approved. Adjustments to the cost estimates and/or the financial assurance instrument to comply with any financial assurance regulation that is adopted by the TCEQ subsequent to the issuance of this permit shall be initiated as a modification within 30 days after the effective date of the new regulation.

V. Facility Closure

Closure of the facility shall commence:

A. Upon completion of the disposal operations and the site is completely filled or rendered unusable in accordance with Part III Attachment 7 found in Attachment A of this permit;

B. Upon direction by the Executive Director of the TCEQ for failure to comply with the terms and conditions of this permit or violation of State or Federal regulations. The Executive Director is authorized to issue emergency orders to the permittee in accordance with § 5.501 and 5.512 of the Water Code regarding this matter after

considering whether an emergency requiring immediate action to protect the public health and safety exists;

C. Upon abandonment of the site;

D. For failure to secure and maintain an adequate bond or other financial assurance as required; or

E. Upon the permittee's notification to the TCEQ that the landfill will cease to accept waste and no longer operate at any time prior to the site being completely filled to capacity.

VI. Site Completion and Closure

The landfill shall be completed and closed in accordance with 30 TAC Chapter 330, Subchapter K and as described in Part III, Attachment 7 found in Attachment A of this permit. Upon closure, the permittee shall submit to the Executive Director documentation of closure as set out in 30 TAC §330.461. Post-closure care and maintenance shall be conducted in accordance with Part III Attachment 8 found in Attachment A of this permit, for a period of 30 years or as otherwise determined by the Executive Director pursuant to 30 TAC §330.463(b)(2).

VII. Standard Permit Conditions

A. Parts I through IV, as described in 30 TAC §330.57(a) and (c), which comprise the Permit Application for MSW Permit No. 249D are hereby made a part of this permit as Part No. 2: Attachment A. The permittee shall maintain Parts I through IV, as described in 30 TAC §330.57(c), at the facility and make them available for inspection by TCEQ personnel. The contents of Part III of Attachment A of this permit shall be known as the "Approved Site Development Plan," in accordance with 30 TAC §330.63. The contents of Part IV of Attachment A of this permit shall be known as the "Approved Site Operating Plan," in accordance with 30 TAC §330.65 and 30 TAC Chapter 330, Subchapters D and E.

B. Part No. 3: Attachment B, consisting of minor amendments, modifications, and corrections to this permit, is hereby made a part of this permit.

C. The permittee shall comply with all conditions of this permit. Failure to comply with any permit condition may constitute a violation of the permit, the rules of the Commission, and the Texas Solid Waste Disposal Act, and is grounds for an enforcement action, revocation, or suspension.

D. A pre-construction conference shall be held pursuant to 30 TAC §330.73(c), prior to commencement of any construction within the expansion permit boundary to ensure that all aspects of this permit, construction activities, and inspections are met. Additional pre-construction conferences may be held prior to the opening of any new MSW landfill unit at the facility.

E. A pre-opening inspection shall be held pursuant to 30 TAC §330.73(e).

F. The permittee shall monitor sediment accumulations in ditches and culverts on a quarterly basis, and remove sedimentation to re-establish the design flow grades on an annual basis or more frequently if necessary to maintain the design flow.

G. The tracking of mud off-site onto any public right-of-way shall be minimized.

H. In accordance with 30 TAC §330.19(a), the permittee shall record in the deed records of Travis County, a metes and bounds description of all portions within the permit boundary on which disposal of solid waste has and/or will take place. A certified copy of the recorded document(s) shall be provided to the Executive Director in accordance with 30 TAC §330.19(b).

I. Daily cover of the waste fill areas shall be performed with clean soil that has not been in contact with waste or with an alternate daily cover which has been approved in accordance with 30 TAC §§330.165(d) and 305.70. Intermediate cover, run-on, and run-off controls shall not be constructed from soil that has been scraped up from prior daily cover or which contains waste.

J. During construction and operation of the facility, measures shall be taken to control runoff, erosion, and sedimentation from disturbed areas. Erosion and sedimentation control measures shall be inspected and maintained at least monthly and after each storm event that meets or exceeds the design storm event. Erosion and sedimentation controls shall remain functional until disturbed areas are stabilized with established permanent revegetation. The permittee shall maintain the on-site access road and speed bumps/mud control devices in such a manner as to minimize the buildup of mud on the access road and to maintain a safe road surface.

K. In complying with the requirements of 30 TAC §330.145, the permittee shall consult with the local District Office of the Texas Department of Transportation or other authority responsible for road maintenance, as applicable, to determine standards and frequencies for litter and mud cleanup on state, county, or city maintained roads serving the site. Documentation of this consultation shall be submitted within 30 days after the permit has been issued.

L. The permittee shall retain the right of entry onto the site until the end of the post-closure care period as required by 30 TAC §330.67(b).

M. Inspection and entry onto the site by authorized personnel shall be allowed during the site operating life and until the end of the post-closure care period as required by §361.032 of the Texas Health and Safety Code.

N. The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the remainder of this permit shall not be affected.

O. Regardless of the specific design contained in Attachments A and B of this permit, the permittee shall be required to meet all performance standards required by this permit, the regulations, and as required by local, state, and federal laws or ordinances.

P. If differences arise between these permit provisions (including the incorporated Parts I through IV of Attachment A of this permit) and the rules under 30 TAC Chapter 330, the rule provisions shall hold precedence.

Q. The permittee shall comply with the requirements of the air permit exemption in 30 TAC §106.534, if applicable, and the applicable requirements of 30 TAC Chapters 106 and 116, and 30 TAC Chapter 330, Subchapter U.

R. All discharge of storm water will be in accordance with the U.S. Environmental Protection Agency NPDES requirements and/or the State of Texas TPDES requirements, as applicable.

VIII. Incorporated Regulatory Requirements

A. To the extent applicable, the requirements of 30 TAC Chapters 37, 281, 305, and 330 are adopted by reference and are hereby made provisions and conditions of this permit.

B. The permittee shall comply with all applicable federal, state, and local regulations and shall obtain any and all other required permits prior to the beginning of any on-site improvements or construction approved by this permit.

IX. Special Provisions

None.

PART NO. 2

Attachment A

Parts I through IV of the permit application effective with the date on the permit.

PART NO. 3

Attachment B

Minor amendments, corrections, and modifications may be issued for MSW Permit No. 249D

The minor amendment, modification, or correction document prepared and executed with an approval date shall be attached to this attachment. There is no limitation on the number of these documents that may be included in Attachment B of this permit.