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THURSDAY, AUGUST 20, 2009

## VIA HAND DELIVERY

Ms. LaDonna Castañuela  
Office of Chief Clerk (MC-105)  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087

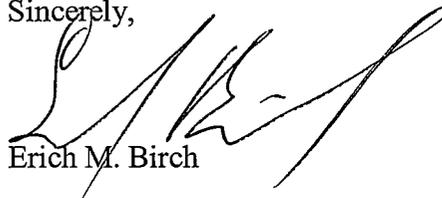
2009 AUG 20 PM 12: 36  
CHIEF CLERKS OFFICE  
TEXAS COMMISSION  
ON ENVIRONMENTAL  
QUALITY

Re: Protestant TJFA, L.P.'s Exceptions to the Proposal for Decision and the Proposed Order, *Application of Waste Management of Texas, Inc. for a Municipal Solid Waste Permit Amendment; Permit No. MSW-249D*, SOAH Docket No. 582-08-2186, TCEQ Docket No. 2006-0612-MSW.

Dear Ms. Castañuela:

Enclosed for filing in the above-referenced matter is an original and seven copies of *Protestant TJFA, L.P.'s Exceptions to the Proposal for Decision and the Proposed Order*. The Please file this document on behalf of TJFA, L.P. If you have any questions, please telephone me at the above number.

Sincerely,



Erich M. Birch

ENCLOSURE

cc: Service List  
Mr. Dennis Hobbs, TJFA, L.P.



**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**

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**BEFORE THE STATE OFFICE  
  
OF  
  
ADMINISTRATIVE HEARINGS**

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- Attachment 2 Selections from Texas Department of Health, Municipal Solid Waste Management Regulations (Apr. 1977)
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- Attachment 14 Transcript of the Hearing on the Merits, Volume 7 at 1317 ln.25 – 1323 ln.23 (Cross Exam (by Bryan Moore) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009)
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- Attachment 18 Transcript of the Hearing on the Merits, Volume 7 at 1466 ln.20 – 1469 ln.9 (Redirect Exam (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009)
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- Attachment 20 Exhibit TJFA 207 (Not Admitted) – Selections from Transcript of Oral and Videotaped Deposition of Willis Rutledge Fusilier, Jr. (June 25, 2002), at 001-014; Selections from Transcript of Oral and Videotaped Deposition of Dwight Pittman (June 19, 2002), at 015-022; Selections from Oral and Videotaped Deposition of Jane Witheridge, (June 5, 2002), at 023-027; Selections from Oral and Videotaped Deposition of Johnny Williams (June 19, 2002).
- Attachment 21 Revised Proposed Order

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

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BEFORE THE STATE OFFICE

OF

ADMINISTRATIVE HEARINGS

CHIEF CLERKS OFFICE

2009 AUG 20 PM 12: 37

TEXAS  
COMMISSION  
ON ENVIRONMENTAL  
QUALITY

**PROTESTANT TJFA, L.P.'S EXCEPTIONS  
TO THE PROPOSAL FOR DECISION AND PROPOSED ORDER**

TO THE HONORABLE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND THE HONORABLE ADMINISTRATIVE LAW JUDGE:

COMES NOW, Protestant, TJFA, L.P. ("TJFA") and presents the following specific exceptions (collectively the "Exceptions") to the Proposal for Decision<sup>1</sup> ("PFD") and Proposed Order<sup>2</sup> filed by the Administrative Law Judge in the above-referenced proceeding.

**I. INTRODUCTION**

Pursuant to the rules of the Texas Commission on Environmental Quality ("TCEQ" or the "Commission"), in a contested case hearing involving a municipal solid waste ("MSW") landfill permit application, the burden of proof is squarely on the applicant.<sup>3</sup> The applicant, here Waste Management of Texas, Inc. ("WMTX"), is required to demonstrate that its permit application—WMTX's permit amendment application—meets or exceeds the applicable MSW rules and requirements of TCEQ.<sup>4</sup> Thus, WMTX is required to prove that its permit amendment

<sup>1</sup> Proposal for Decision, *In the Matter of the Application of Waste Management of Texas, Inc., for a Municipal Solid Waste Permit Amendment, Permit No. MSW-249D*, SOAH Docket No. 582-08-2186, TCEQ Docket No. 2006-0612-MSW (July 21, 2009).

<sup>2</sup> Proposed Order, *In the Matter of the Application of Waste Management of Texas, Inc., for a Municipal Solid Waste Permit Amendment, Permit No. MSW-249D*, SOAH Docket No. 582-08-2186, TCEQ Docket No. 2006-0612-MSW (July 21, 2009).

<sup>3</sup> See 30 TEX. ADMIN. CODE § 80.17(a).

<sup>4</sup> See *id.*

application meets all applicable state statutory requirements. WMTX is required to prove that its permit amendment application meets all applicable regulatory requirements. WMTX is required to prove that the contemplated MSW landfill, if constructed and operated pursuant to the application, will be protective of human health and the environment. WMTX cannot selectively choose which state statutes and regulatory requirements it will meet, and WMTX cannot meet only those regulatory requirements for which compliance is feasible.

WMTX has not demonstrated that its application meets all applicable statutory and regulatory requirements. The weight of the evidence in this proceeding clearly demonstrates that WMTX's application for Permit No. MSW-249D fails to comply with numerous applicable statutory and regulatory requirements. The protestants in this proceeding systematically presented evidence, much of which is ignored in the Proposal for Decision, demonstrating that the application fails to meet all applicable statutory and regulatory requirements. WMTX's application misrepresents the facts regarding the Austin Community Recycling and Disposal Facility,<sup>5</sup> also known as the Austin Community Landfill ("ACL facility"), revises the history of the ACL facility, ignores the unit of the ACL facility where hazardous and industrial waste was disposed of historically, ignores the original MSW disposal unit at the ACL facility, fails to identify adequate and appropriate ground water and landfill gas monitoring systems, includes unscientific and unsound engineering practices with regard to the settlement of waste and slope stability, and, in general, attempts to obtain Permit No. MSW-249D based on incomplete and misleading information.

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<sup>5</sup> While WMTX refers to the landfill facility as a recycling facility, no recycling occurs at the facility. See Transcript of the Hearing on the Merits [hereinafter "Tr."] at Vol. 2 at 90 lns.20-23 (Cross Exam (by Erich Birch) of Don Smith) (Mar. 30, 2009).

The federal Subtitle D regulations,<sup>6</sup> and in turn, TCEQ's MSW rules,<sup>7</sup> were adopted to protect human health, property, and the environment from landfills such as the ACL facility. While portions of the ACL facility are modern, engineered MSW landfill units, other portions, as discussed below, first received waste approximately forty years ago, and large amounts of waste disposed during that timeframe were hazardous and industrial wastes. In assessing older landfills, such as the original units of the ACL facility, the U.S. Environmental Protection Agency ("EPA") wrote: "Older landfills are of most concern because they may have received large volumes of hazardous waste and, in general, their use of design controls was very limited . . . ."<sup>8</sup> The same EPA publication stated:

In general, the MSWLFs [municipal solid waste landfills] on the NPL [National Priority List] were poorly located and designed. Because most of the NPL sites were in operation before 1980 (the effective date of EPA's hazardous waste rules) and may have received hazardous wastes in addition to Subtitle D wastes, they are not representative of newer, better designed and operated MSWLFs; however, these sites indicate the extent to which older and poorly located, designed, and managed landfills can harm the environment.<sup>9</sup>

EPA could have been describing the ACL facility.

The problems at the ACL facility and with the application at issue in this proceeding are not merely the creations of protestants in this proceeding. The discussion below, based entirely on the evidentiary record, provides details on each of the issues raised by protestants, demonstrating how WMTX failed to comply with applicable statutory and regulatory requirements. Thus, the Commission must deny WMTX's application for Permit No. MSW-249D. Only the denial of WMTX's application will guarantee protection of human health and

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<sup>6</sup> See generally 40 C.F.R. pts. 257 & 258.

<sup>7</sup> See generally 30 TEX. ADMIN. CODE ch 330.

<sup>8</sup> See Exh. TJFA 448, 53 Fed. Reg. 33,314, 33,319 (Aug. 30, 1988), at 006.

<sup>9</sup> *Id.* EPA also wrote: "Typically, those facilities causing ground-water contamination were more than 10 years older than facilities reporting no impacts. . . . Most facilities that had contaminated ground water . . . had no or very limited engineering controls. *Id.*"

the environment, as required by state law and rule. As such, TJFA respectfully requests that the Commissioners of TCEQ issue their own Order, fully supported by the great weight of the evidence, adopting Findings of Fact and Conclusions of Law denying WMTX's application for Permit No. MSW-249D.

There are three areas that are particularly troublesome regarding the application, the Proposal for Decision, and the Proposed Order.

First, the Proposal for Decision concludes that no landfill gas monitoring wells are necessary along 3,000 feet of the southern property boundary of the ACL facility. State and federal regulations unequivocally require the monitoring of landfill gas to ensure that the concentration of methane gas does not exceed five percent by volume at the facility boundary. The concentration of methane gas must not be exceeded in probes, soils, or other matrices, and the standards are based on demonstrated safety concerns with the methane gas that is generated by landfills. The 3,000 feet—over one-half mile—of unmonitored property is in an area where WMTX has buried waste up to the property (and facility) boundary so that it adjoins an adjacent closed landfill, therefore leaving no buffer zone in which to place a landfill gas monitor. There are technical solutions to this situation, *e.g.*, removing waste to allow the installation of monitors; however, the Proposal for Decision instead concludes that monitors cannot be installed in this area, and therefore, WMTX need not comply with the rule. If technical impracticability or feasibility is a basis for not enforcing a technically-based safety requirement, then this undercuts the need to comply with any state or federal environmental regulation.

Second, WMTX provided misleading information about the operation and ownership of the waste in the Phase I Unit, a MSW disposal unit that is part of the ACL facility and stood by this story until it was shown to be clearly in error during the Hearing on the Merits. The application, other documentary evidence, and testimony by TCEQ witnesses demonstrate that WMTX represented to the Executive Director of TCEQ that the Phase I Unit was actually part of

the adjacent closed Travis County Landfill. Throughout the application, the Phase I Unit is identified on drawings and in the text as "Travis County Landfill (Closed)." This misrepresentation continued during the TCEQ's review of the proposed point of compliance ("POC") and related ground water monitoring system, the landfill gas monitoring system, and all other technical aspects of the application reviewed by the TCEQ and its MSW permitting staff, who were led to believe that this unit was part of the closed Travis County Landfill, as opposed to the ACL facility. During the Hearing on the Merits it became obvious that the Phase I Unit was not part of the closed Travis County Landfill and that this unit had, until this application, been historically identified as the Phase I Unit, *i.e.*, the first MSW disposal phase of the ACL facility. Yet the Proposal for Decision and the Proposed Order do not consider how this ruse affected the TCEQ's technical review of the application or the fact that WMTX and its experts blatantly and repeatedly represented false information to a state regulatory agency.

Third, the Proposal for Decision concludes that there is no waste buried under the creek located between several solid waste management units on the south central and southeastern portion of the ACL facility. Borings installed in the center of the creek bed during an investigation conducted in 1999 found MSW buried beneath an approximately 1,200-foot stretch of the creek at a depth of three to twenty-two feet. Evidence of the presence of the waste under the creek, taken from an investigation report prepared by the WMTX's own consultant, was not contested by WMTX during the Hearing on the Merits. The ramifications of the presence of this waste in the creek on the application are many. One, this clearly demonstrates that unauthorized disposal of waste has occurred throughout this portion of the ACL facility. Two, the unauthorized disposal of waste involved the raising of the creek bed by as much as twenty-two feet, resulting in the alteration of natural drainage patterns at the ACL facility. Three, water is allowed to pond over waste, which is a clear violation of state MSW rules. Four, the ponding of water is so prevalent that wetlands have developed in portions of the creek. Five, the waste has

created a subsurface conduit which functions much like a French drain to allow ground water and leachate to flow across the ACL facility and off-site undetected by any ground water monitoring well. Six, there has been no effort by WMTX to remove the waste or to properly close the waste in place. Seven, the clear evidence showing that there is waste in the creek raises doubts regarding other factual findings and legal conclusions described in the Proposal for Decision, which are premised upon the mistaken belief that there is no waste buried under the creek.

The discussion below is organized such that common subjects and related Findings of Fact and Conclusions of Law are presented together, initially focusing on those issues that will have the most serious adverse impacts on human health and welfare and the environment if they are not addressed by the Commission.

## II. EXCEPTIONS TO PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

### A. *Exceptions Related to the Management of Landfill Gas. Findings of Fact Nos. 162 through 165 and Conclusions of Law Nos. 5, 7 through 11, 21, 22, and 31.*

TJFA excepts to the following Findings of Fact and Conclusions of Law related to management of landfill gas, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 165. The Application includes adequate provisions to manage landfill gas, in compliance with agency rules.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 31. The landfill gas monitoring system complies with 30 TEX. ADMIN. CODE ANN. § 330.159.

WMTX's application fails to comply with the clear language and intent of the Commission's landfill gas management and monitoring rules. The landfill gas management and monitoring rules are straightforward and clear, and there is no regulatory mechanism to excuse an applicant from compliance with such rules. Texas Administrative Code Title 30, Section 330.371 provides, in relevant part:

(a) Owners or operators of all landfill units shall ensure that:

\* \* \*

(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.*

(b) Owners or operators of all landfill units shall implement a routine methane monitoring program to ensure that the standards of subsection (a) of this section are met.<sup>10</sup>

The landfill gas monitoring system proposed in WMTX's application has a gap in perimeter coverage between gas monitoring probes P-9 and P-10. As clearly shown throughout the application—specifically at Figure ATT6-2, the Gas Probe Location Map, and Figure ATT6-5, Gas Probe Spacing Between East and West Hills—approximately half of the entire south side of the perimeter boundary of the ACL facility will not be monitored for gas migration if the application is approved.<sup>11</sup> The “gap” between gas monitoring probes P-9 and P-10 along the southern permit boundary is approximately 3,000 feet—over one-half mile—long.<sup>12</sup> This gap in monitoring coverage, *i.e.*, this lack of landfill gas monitoring, is in direct violation of 30 TEX. ADMIN. CODE § 330.371(a)(2) and (b).

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<sup>10</sup> 30 TEX. ADMIN. CODE § 330.371(a)(2)&(b) (emphasis added).

<sup>11</sup> See Exh. APP-202, Austin Community Recycling & Disposal Facility, TCEQ Permit No. MSW-249D, Permit Amendment Application, Rev. 10 – May 2008, at Tech. Complete 3169 (Vol. V, Pt. III, Att. 6 at Fig. ATT6-2); see *id.* at Tech. Complete 3172 (Vol. V, Pt. III, Att. 6 at Fig. ATT6-5). Figures ATT6-2 and ATT6-5 are attached hereto and incorporated herein for all purposes as Attachment 1.

<sup>12</sup> See *id.* at Tech. Complete 3149 (Vol. V, Pt. III, Att. 6 § 4.1.1 at 8).

WMTX's application provides so-called justifications for this gap in landfill gas monitoring coverage, both of which are quoted directly in the Proposal for Decision: "(1) a considerable decrease in the topography and geologic conditions on the west end of the East Hill; 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."<sup>13</sup> Evidence was presented at the Hearing on the Merits that neither of the "justifications" asserted by WMTX for the gap in landfill gas monitoring coverage is recognized by TCEQ rules or the federal Subtitle D regulations.

Mr. Pierce L. Chandler, Jr., P.E. testified, based on his review of numerous state and federal authorities regarding landfill gas monitoring requirements:

The gap shown in the landfill gas monitoring system appears to be in direct contradiction to state and federal regulatory requirements as well as inconsistent with site conditions and previous history. Simply put, the area identified in the ACL Amendment Application as the closed Travis County Landfill, previously identified as the Phase 1 unit, may represent not only a landfill gas source but also a landfill-gas-permeable structure capable of allowing landfill gas to readily migrate to the facility property boundary.<sup>14</sup>

Mr. Chandler specifically testified that the "gap" is a zone representing high gas migration potential that should be monitored."<sup>15</sup> Mr. Chandler explained that the "gap" in monitoring coverage is adjacent to an area near the southeast corner of the ACL where off-site migration of explosive concentrations of landfill gas has previously been addressed.<sup>16</sup> Based on his review of actions that were taken to address these past explosive concentrations of landfill gas, Mr. Chandler concluded:

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<sup>13</sup> See *id.*; see also Proposal for Decision, *supra* note 1, at 45.

<sup>14</sup> Exh. TJFA 400, Prefiled Testimony of Pierce L. Chandler, Jr., P.E., at 167 lns.34-40.

<sup>15</sup> *Id.* at 163 lns.15-17.

<sup>16</sup> See *id.* at 168 lns.10-12; see also APP-202, *supra* note 17, at 3172 (Vol. V, Pt. III, Att. 6 at Fig. ATT6-5). In March 2005, explosive gas concentrations above the lower explosive limit ("LEL") were detected in perimeter gas migration probe P-10, which is at the eastern end of the "gap" in the perimeter gas monitoring network.

[I]t appears that there was no effort to look at related gas migration in the “gap” area. The 2005 Corrective Action and the proposed LGMP ignores the fact that what is now identified as the Travis County Landfill unit [*i.e.*, the Phase I Unit] inside the ACL facility is, in all probability, much more gas transmissive than native soil and could represent a “funnel” to route landfill gas generated inside the ACL facility across the permit boundary.<sup>17</sup>

Additionally, while WMTX asserts that there is an “absence of off-site receptors” in the area of the “gap” in landfill gas monitoring coverage, Figure ATT-6-5 contradicts that assertion. Figure ATT6-5 depicts a flea market located approximately 300 feet—less than the length of a football field—south of the ACL permit boundary outside of the “gap” area.<sup>18</sup> The Proposal for Decision does not address these health and safety concerns regarding the “gap” in landfill gas monitoring coverage.

Similarly, the Proposal for Decision does not address that TCEQ’s rules are clear that the presence of waste is no reason to not monitor for landfill gas. As identified above, one of WMTX’s justifications for failing to monitor for landfill gas along this approximately 3,000-foot stretch of the permit boundary of the ACL “is the presence in this area of the closed Travis County Landfill.” This obscure reference to the presence of the closed Travis County Landfill is a reference to the continuum of waste at the southern boundary between the Phase I Unit of the ACL facility and the closed Travis County Landfill, which will be addressed in more detail below.

Although waste is buried in the property boundary between the ACL facility and the closed Travis County Landfill, such waste is simply another “matrix” that must be monitored pursuant to 30 TEX. ADMIN. CODE § 330.371(a)(2).<sup>19</sup> That waste is considered a “matrix” was

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<sup>17</sup> Exh. TJFA 400, *supra* note 14, at 168 ln.24 – 169 ln.4.

<sup>18</sup> See APP-202, *supra* note 11, at Tech. Complete 3172 (Vol. V, Pt. III, Att. 6 at Fig. ATT6-5); see also Exh. TJFA 400, *supra* note 14, at 168 lns.2-6.

<sup>19</sup> See 30 TEX. ADMIN. CODE § 330.371(a)(2) (identifying other “matrices” at the facility boundary).

acknowledged by the Executive Director's landfill gas witness, Mr. Arten J. Avakian, P.G.<sup>20</sup> Mr. Avakian testified: ". . . well, there is no qualification there. Matrices at the facility boundary, so it could be anything, whatever happens to be at the boundary."<sup>21</sup> There is nothing in the evidentiary record, including the background documents for EPA's adoption of the federal Subtitle D regulations relating to landfill gas monitoring, to contradict Mr. Avakian's interpretation. In fact, the Subtitle D reference materials support this interpretation because they make it clear that site specific conditions, including the materials through which the gas may migrate, are to be considered when designing the perimeter monitoring system.<sup>22</sup> As identified by Mr. Chandler, and not contradicted by WMTX or the Executive Director, the waste buried at the landfill permit boundary is the most permeable strata, *i.e.*, matrix, and would most likely be the path of least resistance for methane gas migration along that portion of the ACL facility permit boundary. Thus, based on the language of 30 TEX. ADMIN. CODE § 330.371(a)(2) and EPA technical guidance, any attempt to interpret the term "matrix" to not include waste fails to pass a common sense test. One cannot have monitoring of methane released from the waste at the ACL facility without also monitoring the methane migrating through the waste buried at and along the permit boundary between the ACL facility and the closed Travis County Landfill.

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<sup>20</sup> See Tr. at Vol. 11 at 2470 lns.8-13 (Cross Exam (by Erich Birch) of Arten J. Avakian, P.G.) (Apr. 10, 2009). Mr. Avakian testified: ". . . well, there is no qualification there. Matrices at the facility boundary, so it could be anything, whatever happens to be at the boundary.

<sup>21</sup> *Id.* at Vol. 11 at 2470 ln.11-13.

<sup>22</sup> EPA's SOLID WASTE DISPOSAL FACILITY CRITERIA TECHNICAL MANUAL provides:

The direction in which landfill gas will migrate is controlled by the driving gradient and gas permeability of the porous material through which it is migrating. *Generally, landfill gas will migrate through the path of least resistance.*

\* \* \*

The number and location of gas probes is also site-specific and highly dependent on subsurface conditions, land use, and location and design of facility structures. *Monitoring for gas migration should be within the more permeable strata.*

Exh. TJFA 405, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, U.S. EPA, SOLID WASTE DISPOSAL FACILITY CRITERIA TECHNICAL MANUAL, EPA530-R-93-017, at 90 & 92 (Nov. 1993) (emphasis added).

The Proposal for Decision does address an issue regarding the legal interpretation of a portion of 30 TEX. ADMIN. CODE § 330.371(a)(2), which states, in relevant part: “at the facility boundary defined by the legal description in the permit.”<sup>23</sup> WMTX attempted to interpret the above language in a new and unfounded manner in order to further justify its design of the landfill gas monitoring network. Specifically, WMTX argued that 30 TEX. ADMIN. CODE § 330.371(a)(2) only applies to “landfill units,” not the entirety of the ACL facility. The Proposal for Decision appropriately recognizes that WMTX’s argument is an incorrect interpretation of the applicable rule. The Proposal for Decision correctly identifies that 30 TEX. ADMIN. CODE § 330.371(a)(2) specifically refers to the “facility” boundary, and the facility boundary is the permit boundary between the ACL facility in the area of the Phase I Unit and the closed Travis County Landfill.<sup>24</sup> Here, the Proposal for Decision recognizes the legal applicability of Section 330.371(a)(2), but then nevertheless concludes that this rule somehow does not apply to this particular MSW landfill.

The Proposal for Decision mentions the “decrease in topography and geologic conditions . . . which provide a preferential flow path . . .”<sup>25</sup> as somehow negating the need for landfill gas monitoring in this area of the ACL facility. Under this line of reasoning, any MSW landfill that could show a preferential flow path could exclude portions of the landfill from landfill gas monitoring requirements, something clearly not allowed pursuant to 30 TEX. ADMIN. CODE § 330.371(a)(2). Further, the presence of the closed Travis County Landfill and absence of off-site receptors near this area of the ACL facility is not only factually incorrect, but even if true, are not bases pursuant to Section 330.371(a)(2) for ignoring the landfill gas monitoring requirements. The fact that a landfill gas monitoring probe put into waste may detect methane

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<sup>23</sup> 30 TEX. ADMIN. CODE § 330.371(a)(2); *see also* Proposal for Decision, *supra* note 1, at 46.

<sup>24</sup> *See* Proposal for Decision, *supra* note 1, at 46.

<sup>25</sup> *Id.* at 45.

gas that is actually being produced by the waste itself simply shows that remedial efforts are required, *i.e.*, landfill gas is in fact present at the landfill property boundary and poses a threat to off-site receptors. WMTX is requesting a permit amendment to continue operating the ACL facility at this location, and therefore, must demonstrate compliance with all regulatory requirements.

The Proposal for Decision recognizes that 30 TEX. ADMIN. CODE § 330.371(a)(2) and (b) applies to the ACL facility and that it applies to the entirety of the facility, but instead of applying the clear language of Section 330.371(a)(2) to WMTX's application, the Proposal for Decision applies a "feasibility" test that is not present in the rule. The Proposal for Decision states: "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."<sup>26</sup> The feasibility of whether probes can be placed at any location along the facility boundary is irrelevant to the interpretation of 30 TEX. ADMIN. CODE § 330.371(a)(2). And, it is especially irrelevant, since the rule itself contemplates putting monitoring probes into other "matrices," such as waste.

In adopting WMTX's flawed rationalization for not placing landfill gas monitoring probes in the continuum of waste, as required by 30 TEX. ADMIN. CODE § 330.371(a)(2), the Proposal for Decision specifically states that the ALJ "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." Such is simply not an accurate interpretation of 30 TEX. ADMIN. CODE § 330.371(a)(2). While the rule may not specifically identify these options as methods of compliance, it requires one simple thing from permittees: perimeter landfill gas monitoring. If the methods suggested by TJFA are the only methods with which WMTX can comply with the perimeter landfill gas monitoring requirement, then the methods suggested by TJFA are

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<sup>26</sup> *See id.*

requirements of the applicable rule. In truth, any method that would allow WMTX to monitor the perimeter boundary between the ACL facility and the closed Travis County Landfill would ensure compliance with TCEQ's rules, but WMTX failed to include any provisions for such monitoring in the application.

"Catastrophic results may occur if methane levels remain unchecked . . . . The Agency [EPA] believes that methane monitoring is critical because it provides an early warning of potential methane build-up that may lead to explosions . . . ." <sup>27</sup> The landfill gas monitoring rules are truly health and safety rules. <sup>28</sup> They are in place to protect the health and safety of persons and property near MSW landfills because of the recognized "catastrophic results" associated with landfill gas buildup, <sup>29</sup> and thus, there are no exceptions defined in TCEQ's MSW rules or the federal Subtitle D regulations to allow permittees to avoid the required perimeter landfill gas monitoring. The "feasibility" of complying with a health and safety rule cannot be at issue. For example, would a "feasibility" test be applied if an industrial complex, a residential neighborhood, or even a school, was on the adjacent property? Only the public health and safety can be considered, and thus, the Findings of Fact identified above must be revised and WMTX's

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<sup>27</sup> Exh. TJFA 104, 56 Fed. Reg. 50,978, 51,051-052 (Oct. 9, 1991).

<sup>28</sup> The Executive Director's expert witness, Mr. Avakian, testified:

Q. Okay. Would it appear to you that this rule is just to make sure that methane does not cross the property boundary?

A. I think so.

Q. And as a part of the basis for this rule to be protective of human health and the environment?

A. Specifically human health.

Tr. at Vol. 11 at 2470 ln.14-20 (Cross Exam (by Erich Birch) of Arten J. Avakian, P.G.) (Apr. 10, 2009).

<sup>29</sup> Although not in the evidentiary record in this proceeding, subsequent to the Hearing on the Merits, on August 1, 2009, there was a fire at the Austin County Flea Market, which operates on the site of the closed Travis County Landfill, a mere 300 feet from the ACL facility. Had methane gas been present in the area, either generated by the closed Travis County Landfill or migrating from the ACL facility, the consequences of the fire could have been much worse.

application must be denied because it fails to comply with 30 TEX. ADMIN. CODE § 330.371(a)(2) and (b).

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 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.~~

Finding of Fact No. 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. There is a continuum of waste along the facility boundary between the Phase I Unit of the Facility and the closed Travis County Landfill.~~

Finding of Fact No. 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. 30 TEX. ADMIN. CODE § 330.371(a)(2) identifies that monitoring probes can be put through other "matrices," which would include waste.~~

Finding of Fact No. 165. The Application does not includes adequate provisions to manage landfill gas, in compliance with agency rules.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX.

HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to include all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 31. The landfill gas monitoring system does not comply ~~complies~~ with 30 TEX. ADMIN. CODE ANN. § 330.159.

***B. Exceptions Related to the Permit History. Findings of Fact Nos. 35 and 36 and Conclusions of Law Nos. 5, 7 through 9, 11, 19, 20, 24, 47, and 49.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to the Permit History for the ACL facility, as proposed by the Administrative Law Judge:

Finding of Fact No. 35. Disposal of industrial solid waste at the IWU was discontinued in June 1972, and closure operations including the construction of a 5-foot clay cap over the IWU continued until early 1973.

Finding of Fact No. 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).

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 24. Applicant has shown that it will comply with the operational prohibitions and requirements in 30 Tex. Admin. Code Ann. §§ 330.5, 330.111 [*sic*] – 330.139.

Conclusion of Law No. 47. The IWU stopped accepting waste prior to October 9, 1991; therefore, they 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.

Conclusion of Law No. 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.

As identified in the Findings of Fact set out above, the Administrative Law Judge concluded that two units of the ACL facility—the Industrial Waste Unit (“IWU”) and the Phase I Unit—were closed in the 1970s. This conclusion is not supported by the great weight of the

evidentiary record in this proceeding. While a number of figures presented in the application label both areas as “closed,” WMTX was unable to present any actual, substantiated, documentary evidence demonstrating that either unit was closed pursuant to applicable regulations. In other words, WMTX could not produce any written documentation demonstrating that either the IWU or the Phase I Unit was ever officially acknowledged by TCEQ as closed. Simply placing dirt on top of a landfill and walking away is not the same as closing the landfill in accordance with MSW rules intended to ensure that the waste in the landfill does not pose an on-going or future threat to human health and safety. Through this application, WMTX is requesting authorization to continue waste receipt at the ACL facility, while ignoring its obligations for the waste that has already been disposed at the site.

The importance of the IWU and the Phase I Unit to the protectiveness of the design of the ACL facility as set out in the application can only be understood in the context of the history of operation of both units. Such history also addresses the failure of WMTX to close the IWU and the Phase I Unit, both actually and pursuant to applicable TCEQ rules.

The site of the ACL facility has been operated as a MSW disposal facility since as early as 1970. At that time, the MSW landfill site was operated by Universal Disposal. Beginning in 1971, and possibly before, Industrial Waste Materials Management (“IWMM”), a predecessor operator of the site of the ACL facility, disposed of industrial wastes in an approximately 9.5-acre area within the MSW landfill operated by Universal Disposal.<sup>30</sup> The original authorization for acceptance of industrial wastes from the Texas Department of Water Resources (“TDWR”) was a temporary emergency authorization issued to IWMM.<sup>31</sup>

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<sup>30</sup> See Exh. TJFA 200, Prefiled Direct Testimony of Robert S. Kier, Ph.D., P.G., at 45 lns.11-18.

<sup>31</sup> See Exh. TJFA 2, Memorandum from Rusty Fusilier to Don Haufe 2 (Feb. 5, 1997), at WM-028304. “The industrial wastes were disposed on the MSW site “just north of the municipal waste disposal area.” *Id.*

On February 14, 1972, IWMM applied for a permit to dispose of “spent acids, caustics, solvents, hydrocarbons, and contaminated process waste”—wastes that were then considered industrial wastes and would now be considered hazardous wastes.<sup>32</sup> The permit sought by IWMM was not issued, and the TDWR ordered the IWMM site closed in June 1972 through a cease and desist order, apparently due to land use and potential ground water contamination concerns.<sup>33</sup> The MSW landfill site operated by Universal Disposal continued to operate, specifically: “Disposal of municipal solid waste in the area south of the industrial solid waste disposal area continued . . . .”<sup>34</sup> The area of disposal of industrial and hazardous waste by IWMM has historically been referred to as the IWU.

While the TDWR ordered the IWU to be closed in June 1972, there was no documentary evidence or even supported anecdotal evidence presented by WMTX that the IWU was actually closed either at that time or later. Witnesses for WMTX testified that they only knew anecdotally that the IWU was closed.<sup>35</sup> Conversely, evidence was presented that the IWU was never closed pursuant to applicable Commission (or predecessor agency) rules. For example, Mr. Robert S. Kier, Ph.D., P.G., after a review of over thirty years worth of documents related to the ACL facility, testified that that he had noted that the disposal pits were still evident on aerial photographs taken on February 4, 1973, along with a new pit, which contained a dark fluid, across the creek to the west of the original fluid disposal pits.<sup>36</sup> The new pit, labeled on some

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<sup>32</sup> See Exh. TJFA 203, Commercial Industrial Solid Waste Application for Site Registration in Accordance with Board Order 70-0529-7, at 1 (Feb. 14, 1972), at 005.

<sup>33</sup> See Exh. TJFA 200, *supra* note 30, at 48 lns.3-4 & 7-9; see also Exh. TJFA 21, Corrections to Prefiled Testimony of Robert S. Kier, Ph.D., P.G., at 2; Exh. TJFA 203, John P. Sutton, Hearing Commission Report, Industrial Waste Materials Mgmt., Inc. at 3 (May 17, 1972), at 022.

<sup>34</sup> Exh. TJFA 2, *supra* note 31, at 1 (WM-028304).

<sup>35</sup> See, e.g., Tr. at Vol. 2 at 101 lns.9-12 (Cross Exam (by Erich Birch) of Donald J. Smith) (Mar. 30, 2009); see also *id.* at Vol. 3 at 329 lns.8-23 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>36</sup> See Exh. TJFA 205, Robert S. Kier, Ph.D., CPG, “Industrial/Hazardous Waste Disposal and Remediation, Waste Management, Inc.’s Austin Community Landfill” at 3 (May 28, 1998), at 009.

photographs as “Acid Pit #4,” was evident on aerial photographs taken through November 1980, but “was obliterated by subsequent MSW filling activities.”<sup>37</sup> Dr. Kier concluded: “When the IWMM site was ordered closed, it was also ordered that the acid pits be neutralized and the contents spread in a thin layer in an excavated area and covered with soil; it is not known whether this was ever done.”<sup>38</sup> It is not known whether this was ever done because, after an exhaustive search of three decades of records, Dr. Kier found no written documentation of closure. Additionally, WMTX did not produce any substantiated evidence at the Hearing on the Merits that the IWU had been closed.

Industrial wastes were again received at the site of the ACL facility starting in approximately 1976. At that time, the Texas Department of Health (“TDH”) authorized Longhorn Disposal Services to accept, from within the Austin area, certain industrial wastes that would now be classified as hazardous.<sup>39</sup> Permission to accept these wastes was revoked later in 1976 when TDH discovered that Longhorn Disposal Services was accepting waste from areas outside of Austin, including areas near the cities of Waco and Houston.<sup>40</sup> While it is unclear exactly where these industrial and hazardous wastes were disposed at the site of the ACL facility, a 1975 drawing of the facility identifies locations of waste disposal areas and plans for future

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<sup>37</sup> *Id.* With regard to Acid Pit #4, Dr. Kier identified that it was not located in what was designated as the IWU and that it appeared not to have been developed pursuant to a state-issued permit and without being part of any particular unit at the ACL facility. *See* Tr. at Vol. 7 at 1419 lns.7-14 (Cross Exam (by Jim Blackburn) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009). WMTX fails to account for the location of, or even the former existence of, Acid Pit #4 in the application.

<sup>38</sup> Exh. TJFA 205, “Industrial/Hazardous Waste Disposal,” *supra* note 36, at 3 (009).

<sup>39</sup> *See* Exh. TJFA 200, *supra* note 30, at 48 lns.21-23. The industrial wastes disposed during the 1976 timeframe included acetone, styrene, methylene chloride, inks, and lubricants. *See id.* at 49 lns.7-9; *see, e.g.*, Exh. TJFA 203, Letter from Stephen A. Miller, Glastron Boat Co., to Art Elsass, Longhorn Disposal Service, Inc. (Apr. 7, 1976) (identifying acetone, polyester resin sludge, styrene, and methylene chloride), at 026; Exh. TJFA 203, Letter from Ernest J. Schmidt, Robert R. Hammond & Assocs., to Longhorn Disposal Service (Apr. 7, 1976) (identifying acetone, styrene, pigmented resin, and liquid resin), at 027.

<sup>40</sup> *See* Exh. TJFA 200, *supra* note 30, at 49 lns.19-21.

waste disposal as contemplated at that time.<sup>41</sup> Based on the 1975 drawing, it is very possible that the industrial wastes accepted during the 1976 timeframe were disposed in the area of the IWU or the Phase I Unit. In addition to the industrial solid waste disposed in the IWU, this unit was also used for the disposal of MSW. A boring investigation conducted in 1999 and 2000 revealed that extensive disposal of MSW occurred subsequent to the disposal of the industrial waste. Additional details regarding this boring investigation will be addressed below; however, the investigation results reveal a layering of industrial solid waste, soils, and MSW in portions of the IWU.<sup>42</sup>

Municipal solid waste was disposed in an area directly to the south of the IWU, historically known as the Phase I Unit.<sup>43</sup> In fact, a report prepared for WMTX identified: "The original area of municipal waste disposal at the site was in the south central portion of the site in an area currently designated "Phase I."<sup>44</sup> The Phase I Unit was the MSW disposal unit south of the IWU that adjoins the closed Travis County Landfill to the south of the ACL facility.<sup>45</sup> Again, it is not known whether the Phase I Unit was ever closed. After an exhaustive search of three decades of records, Dr. Kier found no written documentation of closure. Additionally, WMTX did not produce any substantiated evidence at the Hearing on the Merits that the Phase I Unit had been closed.

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<sup>41</sup> See *id.* at 50 Ins.3-9; see also Exh. TJFA 203, Site Plan, Municipal Solid Waste Disposal Site, Longhorn Disposal Serv., Sheet 2 of 3 (July 18, 1974, revised Oct. 10, 1975), at 024; Exh. TJFA 203, Site Plan, Municipal Solid Waste Disposal Site, Longhorn Disposal Serv., Sheet 3 of 3 (July 18, 1974, revised Oct. 10, 1975), at 025.

<sup>42</sup> See, e.g., Exh. APP-202, *supra* note 11, at Tech. Complete 2434 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. B-99-33.

<sup>43</sup> See, e.g., Exh. TJFA 205, "Industrial/Hazardous Waste Disposal," *supra* note 36, at 3 (009).

<sup>44</sup> Exh. TJFA 5, Rust Environment & Infrastructure, "Work Plan for Evaluation of Subsurface Conditions at the Austin Community Landfill Phase I and Old Wet Weather Areas," at 1 (June 19, 1995), at WM-064091; see also *id.* at Fig. 2 (WM-064102); see also Exh. TJFA 6, Texas Dep't of Health Municipal Solid Waste Landfill Site Soils and Liner Evaluation Questionnaire, Austin Community Disposal Co., Inc., Permit No. 249-A at Att. 6 (Sectorized Fill Layout) (Sept. 8, 1982), at MW-032544.

<sup>45</sup> See, e.g., Exh. TJFA 203, Site Plan, *supra* note 41, at Sheet 2 of 3 (024).

There is simply no conclusive evidence that the IWU and the Phase I Unit are “closed,” as that term is used by TCEQ and EPA. WMTX never even bothered to attempt to prove that the two units were closed at the Hearing on the Merits. Neither witnesses for WMTX nor the Executive Director of TCEQ could identify that either unit had been closed. WMTX’s engineer of record, Mr. Charles G. Dominguez, P.E., testified that his use of the word “closed” with regard to what is now the Phase I unit and the IWU was only intended to mean “that it was no longer accepting waste.”<sup>46</sup> Mr. Dominguez testified:

- Q. Have you seen any document in your review of the files that discusses the closure for that industrial waste landfill?
- A. The closure in terms of regulations, the regulated closure, or the – I’ve seen – excuse me. I’ve seen documents that described the placement of soils over the landfill. I don’t recall seeing anything related to the closure as might be defined by the regulations.
- Q. And what about the Phase I unit that I think we’re referring to it now, the Phase I unit of the Travis County landfill closed unit as identified on the permit application? Have you seen any documents discussing the actual closure as far as the regulations are concerned for the Phase I unit?
- A. No, I haven’t – not that I recall.<sup>47</sup>

Mr. Matthew Udenenwu, testifying for the Executive Director, provided similar testimony:

- Q. You stated there that, “Two closed waste disposal units, the Industrial Waste Unit and the Travis County Landfill, are located on and adjacent to southwest of the closed East Hill section of the Facility.” What did you mean by that?

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- Q. We can start with the word “closed.” What did you mean by “closed”?
- A. Okay. This simply reflects what is contained in the application.

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<sup>46</sup> Tr. at Vol. 2 at 316 ln.24 – 317 ln.4 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009). Mr. Dominguez testified:

- Q. Now, the name that’s on that unit [the Phase I Unit] – has the word “closed” in parentheses behind it. What’s the significance of adding “closed” on that name?
- A. I don’t – I don’t know that there’s any significance. I just intended that to mean that it was no longer accepting waste.

*Id.*

<sup>47</sup> *Id.* at Vol. 3 at 329 lns.8-23.

- Q. So you were just basing this sentence on information that was provided to you by the Applicant?
- A. That's correct.
- Q. Have you seen anything from the Applicant indicating that these units that you referred to in this sentence are closed, other than what was represented in the application?
- A. No.<sup>48</sup>

While WMTX points to documents in the evidentiary record as somehow being evidence that the Phase I Unit and the IWU were officially closed pursuant to applicable regulatory requirements, none of the identified documents actually demonstrate the regulatory closure of either unit. All documents identified by WMTX are anecdotal, second- and third-hand descriptions of the history of the IWU. None of the documents states that any owner or operator of the ACL facility, and specifically the Phase I Unit and the IWU, completed closure in a regulatory sense. Even the Proposal for Decision never cites to any particular document evidencing closure of either unit. Neither the IWU nor the Phase I Unit was ever closed under applicable regulatory standards at any time.

WMTX also argued that the "closure" dates for the Phase I Unit and the IWU were the dates that wastes were last disposed in each unit. First, the date that waste was placed in an authorized solid waste management unit is not the closure date as defined in the MSW rules.<sup>49</sup> Instead, a MSW unit is closed when waste receipt has ceased and the operator has undertaken the additional technical closure procedures defined in the MSW rules to permanently isolate the waste from the environment, implement maintenance and monitoring of the closed landfill unit, formally request closure from the regulatory agency, receive written confirmation of closure (assuming the regulatory agency does not instead require additional closure activities of the permittee based on the agency's review of the closure documents and inspection of the facility),

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<sup>48</sup> *Id.* at Vol. 11 at 2384 ln.13 – 2385 ln.8 (Cross Exam (by Sharon Talley) of Matthew Udenenwu) (Apr. 10, 2009).

<sup>49</sup> *See* 30 TEX. ADMIN. CODE § 330.21 & ch. 330, subch. K.

complete the post-closure care period requirements, and be released from post-closure care requirements after being inspected by the regulatory agency.<sup>50</sup>

A reading of applicable Commission rules, both now and historically, does not support a finding that the IWU and the Phase I Unit are closed. The federal Subtitle D regulations, as promulgated in 1991, did not override, replace, or eliminate the relevant state rules that were in place at that time, rules which required landfill units, such as the IWU and the Phase I Unit, to go through a process in order to be accepted as finally closed and required approval of the completion of the post-closure care period.

As early as 1977, Texas' MSW management regulations required that permittees provide notice of closure to the applicable state agency, then the TDH, that the site be inspected by TDH, and that TDH acknowledge the termination of operations and closure of the site. The 1977 MSW management regulations stated:

At least 60 days prior to completion of disposal operations or abandonment of a site, the site operator shall notify the Department and provide a closure plan and schedule. The Department will conduct a final inspection of the site to ensure proper closure. After the site has been properly closed and if the site is Type I, Type II, or Type III, the site operator shall prepare an "Affidavit to the Public" and cause the same to be filed in the Deed Records in the Office of the County Clerk of the county in which the site is located. . . .

Following receipt of the appropriate instrument, i.e., a certified copy of the "Affidavit to the Public" or the sworn statement, and an inspection report indicating satisfactory closure of the site, the Department Director will acknowledge the termination of operations and closure of the site.<sup>51</sup>

The November 1980 MSW management regulations added a "post-closure maintenance" requirement for the first year after closure to address erosion, vegetative growth, leachate or

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<sup>50</sup> *See id.*

<sup>51</sup> Texas Dep't of Health, Municipal Solid Waste Management Regulations § F-2.15 at 46 (Apr. 1977), attached hereto and incorporated herein for all purposes as Attachment 2. The term "Solid Waste Disposal Site" was defined as "a plot of ground designated for the disposal of solid waste." *Id.* § A-4.27.

methane migration, subsidence, and ponded water.<sup>52</sup> The 1980 regulations also noted that if problems persisted beyond the first year, then maintenance would continue until the problems were solved.<sup>53</sup> By 1985, the post-closure maintenance period had been extended to five years and even longer if problems persisted.<sup>54</sup>

Simply put, as early as 1977 there were specific closure requirements, and as early as 1985, a minimum of a five-year post-closure care period was required. These regulatory provisions clearly required WMTX to take an affirmative action, *i.e.*, provide notice, develop a closure plan, and implement post-closure care maintenance procedures, and those requirements only became more stringent between 1977 and 1993. There is nothing in the evidentiary record to even hint that WMTX took such an affirmative action to close the IWU or the Phase I Unit in compliance with state regulatory requirements. WMTX has not taken the steps necessary to seek closure of the Phase I Unit or the IWU, has not entered a one-year or a five-year post-closure care period, and has not been released from the required post-closure care period. In fact, it is highly unlikely that WMTX could have been released from any post-closure care period for these units. As early as 1972, ground water contamination could not be ruled out by IWMM, and ground water contamination was documented at least as early as 1980 and again throughout the

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<sup>52</sup> See Texas Dep't of Health, Municipal Solid Waste Management Regulations, Stock No. 2-102 § F-2.16(g) at 70 (Nov. 1980), attached hereto and incorporated herein for all purposes as Attachment 3.

<sup>53</sup> See *id.*

<sup>54</sup> See Texas Dept' of Health, Municipal Solid Waste Management Regulations, Vol. 1, Stock No. 2-102a § 325.153 (Apr. 1985), attached hereto and incorporated herein for all purposes as Attachment 4. With regard to the post-closure maintenance period, the 1985 regulations stated:

For at least the first five years after closure, the site operator shall maintain the right-of-entry and periodically inspect his closed site and correct as necessary any problems associated with erosion of cover material, vegetative growth, leachate or methane migration, and subsidence or ponding of water on the site. *If any of these problems persist for longer than the first five years, the site operator shall be responsible for their correction until the department determines the problems have been adequately resolved.*

*Id.* (emphasis added).

1990s.<sup>55</sup> By failing to close the IWU and the Phase I Unit by the 1993 Subtitle D deadline, the post-closure care period for each unit is now thirty years under applicable Commission rules.<sup>56</sup>

Also, TCEQ's MSW rules plainly recognize the status of the IWU and the Phase I Unit in relation to the other portions of the ACL facility. The MSW rules define three terms, "active disposal area," "active life," and "active portion," distinguishing between portions of a MSW landfill that are active disposal areas, and portions of a MSW landfill that are still active because they have not been closed.<sup>57</sup> Even if the IWU and Phase I Unit are not actively receiving waste, TCEQ's MSW rules recognize that until the affirmative act of completing closure and obtaining a certification of closure have been finalized, these units of the ACL facility are still "active." The substantive definitions of "active life" and "active portion" have been in effect since at least the adoption of the federal Subtitle D regulations in Texas in 1993,<sup>58</sup> and the consequences of WMTX's failure to close these units at that time were clear in 1993 and are still clear today. The IWU and the Phase I Unit have not been closed, and WMTX must

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<sup>55</sup> See Exh. TJFA 203, Hearing Commission Report, *supra* note 55, at 3 (022); Exh. TJFA 203, Texas Dep't of Water Resources Interoffice Memorandum from Don Wyrick, R.S. to Gary Schroeder (Aug. 22, 1980), at 049 (identifying that volatile organic compounds (VOCs), including xylene, benzene, and naphthalene, now identified as hazardous wastes, were detected in wells monitored at the site of the ACL facility); Exh. TJFA 205, "Questions and Answers with Respect to the Austin Community Landfill" at 2 (002) (identifying that in 1991 five of the six ground water monitoring wells "showed sufficiently abnormal water quality that the TDH expressed concern" and that in 1995 VOCs, including 1,1-dichloroethane, tetrachloroethene, and trichloroethene, were detected in ground water monitoring well MW-5 and ground water monitoring well MW-6 showed elevated concentrations of total organic carbon (TOC), iron, and manganese).

<sup>56</sup> See 30 TEX. ADMIN. CODE § 330.463(b)(1).

<sup>57</sup> See *id.* §§ 330.3(2), (3), & (4). The term "active disposal area" is defined as "[a]ll landfill working faces and areas covered with daily and alternative daily cover." *Id.* at § 330.3(2). The term "active life" is defined as "[t]he period of operation beginning with the initial receipt of solid waste and ending at certification/completion of closure activities in accordance with §§330.451 – 330.459 of this title (relating to Closure and Post-Closure)." *Id.* § 330.3(3). The term "active portion" is defined as "[t]hat part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with §§330.451 – 330.459 of this title (relating to Closure and Post-Closure)." *Id.* § 330.3(4).

<sup>58</sup> See 18 Tex. Reg. at 4030-43 (June 18, 1993).

show that the current permit application appropriately addresses these units, including ground water monitoring and landfill gas monitoring requirements.

By now trying to claim that both the IWU and the Phase I Unit are closed, WMTX is seeking to evade responsibility for the hazardous and industrial waste, as well as the old MSW, buried on the site of the ACL facility. It must also be noted that WMTX has attempted to ignore and treat as closed—without a basis in the evidentiary record—those areas where MSW is buried in the creek between the IWU and the Phase I Unit, a disposal area that was never even authorized to receive MSW.

WMTX also attempted to avoid responsibility for what the Administrative Law Judge refers to as the Phase I Unit. While the Administrative Law Judge uses the terminology for that area that has historically been used by WMTX, *i.e.*, the Phase I Unit, it is not the terminology used by WMTX in the application itself. Throughout the application, WMTX refers to the Phase I Unit as the “Travis County Landfill (Closed).”<sup>59</sup> As identified at the Hearing on the Merits, that same area, prior to the application for Permit No. MSW-249D, had routinely, and correctly, been referred to as the Phase I Unit of the ACL facility. In the application, WMTX affirmatively represented to TCEQ that this unit was part of the old Travis County landfill.<sup>60</sup> With regard to WMTX’s representations regarding the Phase I Unit, Mr. Avakian, a witness for the Executive Director, testified:

Q. Now, I have a question for you, to switch gears here, about what’s identified as the old Travis County Landfill. Are you familiar with that part of the facility?

A. Yes.

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<sup>59</sup> See, *e.g.*, Exh. APP-202, *supra* note 11, at Tech. Complete 590 (Vol. II, Part III, Site Development Plan at Fig. ATT1-2).

<sup>60</sup> See Exh. TJFA 3, Austin Community Recycling & Disposal Facility, TCEQ Permit No. MSW-249D, Permit Amendment Application, Rev. 2 – Mar. 2006 at pts. I&II § 1.1 at 1; *see also* Tr. at Vol. 11 at 2438 ln.19 – 2439 ln.3 (Cross Exam (by Erich Birch) of Arten J. Avakian, P.G.) (Apr. 10, 2009).

Q. And I think during our deposition, you indicated that the Applicant had represented that the part of the facility was actually an extension of the Travis County Landfill. Do you recall that?

A. Yes.<sup>61</sup>

WMTX's misrepresentation was, in fact, the basis for MSW permitting staff allowing WMTX to move the proposed Point of Compliance ("POC") ground water monitoring system such that the Phase I Unit is excluded from ground water monitoring under the application.<sup>62</sup>

During the Hearing on the Merits, WMTX abandoned its strategy to pawn-off the Phase I Unit as part of the old closed Travis County Landfill and shed its references to "Travis County Landfill (Closed)," instead referring to it then, and continuing in its *Closing Argument*, by its true name—the Phase I Unit. That same name is now used in the Proposal for Decision. Significantly, while this area is now referred to as the Phase I Unit, neither WMTX nor the Administrative Law Judge has made any attempt to revise the application or to require revision to the application, as appropriate, to delete all references to "Travis County Landfill (Closed)." Until this is done, the application will continue to misrepresent the ACL facility. Additionally,

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<sup>61</sup> Tr. at Vol. 11 at 2438 ln.19 – 2439 ln.3 (Cross Exam (by Erich Birch) of Arten J. Avakian, P.G.) (Apr. 10, 2009). Similarly, Mr. Udenenwu, also testifying for the Executive Director, stated:

Q. But was it the TCEQ that decided to label the Phase I area as Travis County Landfill or was that a decision made by Waste Management?

A. Again, we had said in the past that this is sentiment expressed by Waste Management, which the review staff instructed them to put it down on paper. So it was Waste Management's decision, not TCEQ.

*Id.* at 2387 lns.11-19 (Cross Exam (by Sharon Talley) of Matthew Udenenwu) (Apr. 10, 2009).

<sup>62</sup> See Exh. TJFA 8, Letter from Lou Ann Lowe, P.E. & Charles G. Dominguez, P.E., Golder Assocs., to Matthew Udenenwu, TCEQ, at 8 (Mar. 1, 2006), at ED 0009913. The POC ground water monitoring system, as detailed in the early versions of the application for Permit No. MSW-249D, was coterminous with the southern permit boundary of the ACL facility. See Exh. TJFA 9, Fig. ATT4-19B, Proposed Groundwater Monitoring System Central, signed and sealed by Mr. Jay A. Winters, P.G. (Aug. 24, 2005); see also Exh. TJFA 10, Fig. ATT4-19C, Proposed Groundwater Monitoring System East, signed and sealed by Mr. Jay A. Winters, P.G. (Aug. 24, 2005). The POC was first revised with WMTX's March 1, 2006 response to a TCEQ-generated Notice of Technical Deficiency ("NOD"). See Exh. TJFA 8, *supra* note 62, at 8 (ED 0009913). At that time, WMTX moved the POC to a location interior to the ACL facility ostensibly to ensure that the POC was located no more than 500 feet from the hydraulically downgradient limit of a waste management unit boundary. See *id.* It appears that such a decision was based on Mr. Dominguez's inaccurate representation to TCEQ that the IWU and the Phase I Unit were closed.

since it is clear that TCEQ allowed the POC ground water monitoring system to be moved based on the misrepresentation, the evidentiary record cannot and does not demonstrate that the Executive Director would also find that the current POC ground water monitoring system would comply with all applicable MSW rules if the Phase I Unit was accurately represented as part of the ACL facility instead of part of the closed Travis County Landfill.

By avoiding responsibility for the IWU and the Phase I Unit, WMTX was also seeking to avoid responsibility for the economically unattractive task of conducting required ground water monitoring and landfill gas monitoring of the IWU and the Phase I Unit. Because of the passage of more than three decades and the availability of more and better information regarding ground water quality both at the ACL facility and at neighboring properties, as will be discussed in more detail below, there is now evidence that the IWU is leaking, resulting in ground water contamination both at the ACL facility and beneath adjacent properties.<sup>63</sup>

As addressed in detail above, the IWU and the Phase I Unit were never properly or officially closed pursuant to applicable agency rules. No substantiated evidence was presented otherwise. Thus, the Findings of Fact identified above and the related discussion in the Proposal for Decision are in error, and such Findings of Fact and the related Conclusions of Law must be revised, and the application denied.

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<sup>63</sup> See, e.g., Exh. TJFA 200, *supra* note 30, at 56 lns.6-17; see also Exh. TJFA 203, TDWR Interoffice Memorandum, *supra* note 55, at 049; Exh. TJFA 205, Robert S. Kier, Ph.D., P.G., "Mitigating Factors Related to Recognition of Potential Ground Water Contamination Emanating from the Austin Community Landfill, at 1 (049); Tr. at Vol. 7 at 1344 lns.4-5 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009) (testifying that there is ground water contamination indicated at the Applied Materials facility from 1990 through August 2008); Exh. TJFA 209, PBS&J, Inc., "Ground Water Monitoring Results for the Applied Materials Harris Branch Facility, July 2002" (Oct. 2002) (identifying semi-volatile organic compounds (SVOCs) in ground water samples taken from the ground water monitoring wells at the Applied Materials facility); Exh. TJFA 24, Summary of Available IWU Analytical Data (indicating that VOCs, including 1,4-dioxane, methylene chloride, and 1,2,4-trichloro-benzene, have repeatedly been detected in the wells monitored in the vicinity of the IWU).

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 35.—~~Disposal of industrial solid waste at the IWU was discontinued in June 1972, and closure operations including the construction of a 5-foot clay cap over the IWU continued until early 1973. Hazardous and industrial wastes were disposed in the IWU. MSW was disposed over the hazardous and industrial waste in the area of the IWU.~~

Finding of Fact No. 35A. The IWU was never properly closed pursuant to applicable agency rules.

Finding of Fact No. 35B. Industrial and hazardous wastes were disposed of at the ACL facility in the 1976 timeframe.

Finding of Fact No. 36. In the latter part of 1973 Universal Disposal 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).~~

Finding of Fact No. 36A. The Phase I Unit was never properly closed pursuant to applicable agency rules.

Conclusion of Law No. 5. WMTX failed to ~~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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not ~~violates~~ 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.

Conclusion of Law No. 19. Part I of the Application does not meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c)(1), and 330.59.

Conclusion of Law No. 20. Part II of the Application does not meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 24. Applicant has failed to show that it will comply with the operational prohibitions and requirements in 30 TEX. ADMIN. CODE ANN. §§ 330.5, 330.12144 – 330.139.

Conclusion of Law No. 47. The IWU was never closed pursuant to applicable agency rules 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, 330.457 and 330.463 are applicable.

Conclusion of Law No. 49. The Phase I Unit was never closed pursuant to applicable agency rules 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, 330.457 and 330.463 are applicable.

**C. *Exceptions Related to the Protection of Groundwater. Findings of Fact Nos. 60, 69, 74, 76 through 78, 81 through 83, and 85 through 88 and Conclusions of Law No. 5, 7 through 11, 20 through 22, 26 through 28, 48, and 50.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to the Protection of Groundwater, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 69. The Application adequately describes the regional geology in the vicinity of the Facility.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 78. In 2002, WMTX 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 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.

Finding of Fact No. 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.

Finding of Fact No. 82. There is insufficient evidence to show that any contamination in the Applied Materials wells could have come from the ACRD Facility.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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 way.

Finding of Fact No. 87. There is insufficient evidence to show that the drainage tributary between Phase I and the IWU has been partially filled with MSW.

Finding of Fact No. 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.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 26. Applicant submitted a geology report that complies with 30 TEX. ADMIN. CODE ANN. § 330.63(e).

Conclusion of Law No. 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).

Conclusion of Law No. 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.

Conclusion of Law No. 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.

Conclusion of Law No. 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.

The Proposal for Decision begins the protection of ground water section with a discussion of the IWU and the Phase I Unit. The Proposal for Decision all but ignores the evidence presented by TJFA regarding historical and ongoing ground water contamination, in large part based on an apparent misunderstanding of the evidence presented, including even the information presented in the application by WMTX itself. The Proposal for Decision minimizes the evidence of existing ground water contamination on-site at the ACL facility and on adjacent properties. In addition, it apparently undervalues the evidence presented by TJFA's experts, including Dr. Kier and Mr. Matthew M. Uliana, Ph.D., P.G. for reasons that will be addressed below, even though much of the substance of the evidence was unchallenged by WMTX. Also as will be discussed below, it is made clear throughout the Proposal for Decision that certain information discussed therein, and which forms the basis for relevant findings of fact, is not even in the evidentiary record in this proceeding.

In the end, it seems that the overall conclusion by the Administrative Law Judge regarding protection of ground water is based on a key misunderstanding of the evidence presented, not only by TJFA, but also by WMTX itself through the information included in the application: there is a continuum of waste from the MSW disposed over hazardous and

industrial waste in the IWU, through and beneath the creek separating the IWU and the Phase I Unit, through the Phase I Unit, and across the permit boundary reaching onto the closed Travis County Landfill, resulting in a preferred pathway for the flow of contaminated ground water and leachate from the ACL facility to adjacent properties. The flow of contaminants through that preferred pathway has resulted in ground water contamination on properties adjacent to the ACL facility and also the potential contamination of surface water leaving the ACL facility. The following discussion will address the IWU, the Phase I Unit, issues surrounding the geology and ground water characterizations at the ACL facility, and the evidence presented regarding existing ground water contamination. The information herein is based solely on the evidentiary record and demonstrates how the evidence in the record simply cannot support approval of the application.

**1. History of Disposal of Hazardous and Industrial Wastes**

A summary history of the IWU and the Phase I Unit is set out above, but additional information is necessary to understand the current status of ground water contamination and the ongoing risk of continuing ground water contamination. As identified above, IWMM disposed of hazardous and industrial wastes in the area of the ACL facility now known as the IWU in the early 1970s.<sup>64</sup> Evidence was presented at the Hearing on the Merits that the historical records associated with IWMM identify spent acids, caustics, solvents, hydrocarbons, and contaminated process waste, which were received in bulk liquid form and were disposed in four to six unlined disposal pits, with a total capacity of 1.8 million gallons or more.<sup>65</sup> Industrial wastes were also received in solid, semi-solid, and liquid form in fifty-five gallon drums. A minimum of 21,000, and possibly in excess of 50,000, such drums were buried in two apparently unlined trenches.

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<sup>64</sup> See Exh. TJFA 200, *supra* note 30, at 45 lns.11-18.

<sup>65</sup> See *id.* at 46 lns.16-19; see also Exh. TJFA 21, *supra* note 33, at 1.

The amount of waste taken in bulk form is unknown, but may have amounted to as much as 80,000 tons.<sup>66</sup> The hazardous nature of the wastes and the threats posed to human health and the environment is evident not only from readily available documentation, but also from eyewitness accounts.<sup>67</sup>

The industrial wastes received by IWMM were hazardous, flammable, and explosive.<sup>68</sup> Many of the wastes received as industrial wastes by IWMM would be categorized as hazardous today. This was acknowledged by a subsequent operator of the ACL facility (but prior to WMTX's ownership) when, in 1981, the Austin Community Disposal Company, Inc. ("ACDC") submitted a "Notification of Hazardous Waste Site" to EPA, which identified that solvents and acids had been disposed of at the Longhorn Community Disposal site, a prior name of the ACL facility.<sup>69</sup> Subsequently, EPA included the site of the ACL facility, then identified as the "Austin Community Disposal Landfill" on the CERCLIS (*i.e.*, Comprehensive Environmental Response, Compensation, and Liability Information System) List.<sup>70</sup> As identified during the Hearing on the Merits in this proceeding, the significance of a facility being identified on the CERCLIS list is

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<sup>66</sup> See Exh. TJFA 200, *supra* note 30, at 46 lns.19-24; see also Exh. TJFA 21, *supra* note 33, at 1.

<sup>67</sup> One of the parties to this proceeding, Mr. Alto S. Nauert, testified that he had witnessed the "disposal of drums or other types of chemical wastes" at the site of the ACL facility. Exh. NNC AN-1, Prefiled Testimony of Alto S. Nauert, at 3 lns.1-2. He also testified that he had been told that the loads he witnessed were hauling acids. See *id.* at 3 ln.21. With regard to the acids, Mr. Nauert testified:

Q. Do you know the type of acid?

A. All I know is when it hit the ground, it bubbled about 20 foot in the air.

Q. Did you ever get burned by it?

A. No, I didn't get burned by it, but I got clothes eaten off of me one or two times. I saw a fence disappear and trees disappear.

*Id.* at 3 lns.22-26.

<sup>68</sup> See Exh. TJFA 200, *supra* note 30, at 48 lns.13-17.

<sup>69</sup> See Exh. TJFA 203, Notification of Hazardous Waste Site (June 1, 1981), at 062-064.

<sup>70</sup> See Exh. TJFA 1, Office of Emergency & Remedial Response, EPA, CERCLIS List (Apr. 20, 1987).

that EPA uses the list to identify where hazardous wastes have been buried and still remain.<sup>71</sup> Even Waste Management has acknowledged that many of the industrial wastes disposed of during the early 1970s would be classified as hazardous wastes today: “Since these wastes were generated and disposed before the promulgation of the federal Resource Conservation and Recovery Act, they were not designated as hazardous wastes although *most or all would be classified as such today.*”<sup>72</sup>

Also as discussed above, industrial and hazardous wastes were again received at the site of the ACL facility starting in approximately 1976. The industrial wastes disposed during the 1976 timeframe included acetone, styrene, methylene chloride, inks, and lubricants.<sup>73</sup>

At the time Waste Management, Inc. purchased the ACL facility in the early 1980s, it had full knowledge of the past waste disposal activities and the presence of the hazardous and industrial waste.<sup>74</sup> It appears that Texas Waste Systems<sup>75</sup> even contemplated operating the site as a hazardous waste disposal facility. For example, a former Waste Management employee, Ms. Jane LaPorte, in a memorandum written in 1980 regarding “Longhorn Community, Prospective Disposal Site,” wrote: “There is a fairly well-documented history of hazardous waste disposal on site. Although such practices have stopped, I see no reason why this site can

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<sup>71</sup> See Tr. at Vol. 7 at 1498 lns.7-10 (Apr. 6, 2009) (Redirect (by Erich Birch) of Robert S. Kier, Ph.D., P.G.).

<sup>72</sup> Exh. TJFA 2, *supra* note 31, at 1 (WM-028304). The cited memorandum is on Waste Management letterhead, and the author, Mr. Rusty Fusilier, was identified as a past employee of Waste Management by Mr. Don Smith, a witness for WMTX in this proceeding. See Tr. at Vol. 2 at 107 lns.11-14 (Cross Exam (by Erich Birch) of Don Smith) (Mar. 30, 2009).

<sup>73</sup> See Tr. at Vol. 2 at 49 lns.7-9 (Cross Exam (by Erich Birch) of Don Smith) (Mar. 30, 2009); *see, e.g.*, Exh. TJFA 203, Glastron Boat Letter, *supra* note 39, at 026 (identifying acetone, polyester resin sludge, styrene, and methylene chloride); Exh. TJFA 203, Robert R. Hammond Letter, *supra* note 39, at 027 (identifying acetone, styrene, pigmented resin, and liquid resin).

<sup>74</sup> See Exh. TJFA 204, Memorandum from Jane G. LaPorte to Al Morrow, Oscar O’Bryant, Phil Rooney, & Don Wallgren, at 1-3 (July 15, 1980), 001-003.

<sup>75</sup> In the early 1980s, Waste Management, Inc. became the sole shareholder of ACDC, and the legal name of the company changed to Texas Waste Systems, Inc. See Exh. TJFA 203, Letter from Jim Hackfeld, Longhorn-Community Trash Disposal, to Jack C. Carmichael, P.E., Texas Dep’t of Health (Oct. 23, 1981), at 065.

not be considered for a hazardous waste site.”<sup>76</sup> Ms. LaPorte’s memorandum also identified that “Longhorn was approved for the following hazardous wastes . . .,” and then stated: “The amount of these wastes is not clear, although from what I can discern, it was significant.”<sup>77</sup> She concluded: “The potential to accept hazardous wastes at this site appears to be very good if surface water drainageways can be rechannelized.”<sup>78</sup> WMTX, as late as March 2003, identified the “Austin Community RDF,” *i.e.*, the ACL facility, as a hazardous waste landfill.<sup>79</sup>

While the IWU could be considered just an old industrial waste unit, such is not the case. As identified in the Hearing on the Merits, while the IWU was the disposal area for hazardous and industrial waste, the borings included in what is known as the ThermoRetec report, drilled in the 2000 timeframe, show that at some point MSW was placed in and over the IWU, potentially in violation of the permit issued for the ACL facility, in the Phase I Unit, and beneath the creek running between the two units.<sup>80</sup> Eventually so much waste was placed in the IWU, the Phase I Unit, the creek, and the surrounding areas that there is now a continuum of waste across this southern portion of the ACL facility.

All of this history is important because WMTX, through the application, attempted to re-write history regarding waste disposal activities at the ACL facility and then used that revisionist history to justify an inappropriate, incomplete, and unprotective POC ground water monitoring

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<sup>76</sup> See Exh. TJFA 204, LaPorte Memo, *supra* note 74, at 1 (001).

<sup>77</sup> *Id.* at 2-3 (002-003).

<sup>78</sup> *Id.* at 3 (003).

<sup>79</sup> See Exh. TJFA 212, Waste Management web page, at 1 of 5 (visited Mar. 21, 2003), at 002.

<sup>80</sup> See Exh. APP-202, *supra* note 11, at 1481 (Vol. III, Pt. III, Att. 4 at Fig. ATT4-17); see also Exh. TJFA 204, ThermoRetec Consulting Corp., “Site Investigation Report, Closed Industrial Waste Unit, Austin Community Landfill,” at Fig. 3-2 (July 24, 2000), at 053; Exh. Travis County JW-5, Permit No. 249, issued to Longhorn Disposal Service, Inc. (Sept. 26, 1977), at 3 (“No excavations or filling operations shall be conducted within 50 feet of any area previously utilized for the disposal of hazardous wastes.”); Exh. Travis County JW-5, Permit No. 249-A, issued to Austin Community Disp. Co., Inc. (July 21, 1981), Finding of Fact No. 9 at 43 (“The areas of 249 which contain such industrial waste were identified and there is no additional waste to be deposited in those areas.”).

system at the ACL facility. While the proposed POC ground water monitoring system will be discussed in more detail in the section below, it is important to note that WMTX's failure to adequately characterize existing ground water contamination leads to the unprotective POC ground water monitoring system proposed in the application. Without a protective POC ground water monitoring system, the application cannot be deemed to be protective of ground water.

## 2. The Continuum of Waste at the ACL Facility

Contrary to the claims in the Proposal for Decision, the ThermoRetec report, portions of which are included in the application, clearly indicates that waste was buried in the drainageway between the Phase I Unit and the IWU. For example, Figure 3-2 in the ThermoRetec report clearly shows that MSW is buried in the drainageway.<sup>81</sup>

The presence of MSW buried throughout the creek is clearly documented in the ThermoRetec report. Soil borings from the ThermoRetec report, which are identified in the application as MW-24, MW-25, MW-26, and MW-31, span a distance of over twelve hundred linear feet along the drainage creek bed and were drilled at or near the center, *i.e.*, the lowest point, in the creek.<sup>82</sup> These borings identify MSW found buried as shallow as three feet and as deep as twenty-two feet below the ground surface of the creek.<sup>83</sup> The ThermoRetec report

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<sup>81</sup> See Exh. TJFA 204, ThermoRetec Report, *supra* note 81, at Fig. 3-2 (053). Figure 3-2 of the ThermoRetec report is also included in the application as Figure ATT4-17. See Exh. APP-202, *supra* note 11, at Tech. Complete 1481 (Vol. III, Pt. III, Att. 4 at Fig. ATT4-17), attached hereto and incorporated herein for all purposes as Attachment 5.

<sup>82</sup> See, Exh. APP-202, *supra* note 11, at Tech. Complete 2400 (Vol. IV, Pt. III, Att. 4 at Fig. 2-1), attached hereto and incorporated herein for all purposes as Attachment 6.

<sup>83</sup> See *id.* at Tech. Complete 2433 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-24); *id.* at Tech. Complete 2438 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-25); *id.* at Tech. Complete 2439 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-26); *id.* at Tech. Complete 2446 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-31). All of these boring logs are attached hereto and incorporated herein for all purposes as Attachment 7. Although not depicted on Figure 2-1, a subsequently drilled boring, MW-32, which was drilled by MFG Consulting Scientists and Engineers in 2002, is in the creek bed north of Boring Log Hole No. MW-99-25. The boring log for MW-32 identifies MSW buried ten to twelve feet below the creek. See *id.* at Tech. Complete 1677 (Vol. III, Pt. III,

includes a cross section showing that, based on the boring investigation, MSW forms a subsurface continuum of waste from north to south starting at the IWU, extending through the creek bed, and continuing across the Phase I Unit.<sup>84</sup> The Phase I Unit is adjacent to the closed Travis County Landfill, and the waste would therefore continue from the Phase I Unit into the adjacent closed Travis County Landfill.

Further, the ThermoRetec report found the presence of what was described as fluid-saturated MSW in all of the boring holes identified above.<sup>85</sup> The ThermoRetec report states that an investigation well could not be installed south of the IWU because all five of the borings south of the IWU encountered fluid-saturated MSW.<sup>86</sup> It is difficult to understand how the Proposal for Decision could state that there is no boring log information to support the presence of MSW anywhere in the drainageway when there is clear evidence in the record that there is, and the evidence of such MSW in the drainageway was not contested by WMTX. The boring logs reveal a continuum of waste that would allow the migration of leachate from the IWU to the drainage tributary, to the Phase I Unit, and on to the perimeter of the ACL facility.<sup>87</sup>

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Att. 4, appx. B at Log of Boring MW-32), attached hereto and incorporated herein for all purposes as Attachment 8.

<sup>84</sup> See *id.* at Tech. Complete 1481 (Vol. III, Pt. III, Att. 4 at Fig. ATT4-17) (Attachment 5); see also Exh. TJFA 204, *supra* note 80, at Fig. 3-2 (053).

<sup>85</sup> See Exh. TJFA 204, *supra* note 80, at 031.

<sup>86</sup> *Id.*

<sup>87</sup> Finding of Fact No. 86 states: "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." Proposed Order, *supra* note 2, at 13. The only conclusion to draw from this statement is that ground water monitoring well MW-11 does not monitor the Phase I Unit. If the drainageway acts as a dam or wall to leachate migration from the Phase I Unit, then (1) any buildup of Phase I Unit leachate must necessarily migrate by following the "dam" around to the ACL facility boundary at the southwest corner of the Phase I Unit and thence offsite into the closed Travis County landfill, in which case ground water monitoring well MW-11 has no chance of intercepting it; or (2) leachate will build up in the Phase I Unit until it overtops the "dam" as seepage into surface water draining onto the closed Travis County Landfill or is forced back to the south into the closed Travis County Landfill, again bypassing ground water monitoring well MW-11.

In addition, the boring logs included in the application show that the IWU is in direct contact with permeable MSW disposal areas and the weathered Taylor, which is the ground water bearing strata at the site of the ACL facility.<sup>88</sup> The boring logs and cross-sections included in the ThermoRetec report clearly demonstrate that there are wet, liquid, chemical wastes in the area of the IWU.<sup>89</sup> The boring logs of the subsurface conditions from the IWU, under the creek, and through the Phase I Unit were clear and descriptive. The drilling crew found liquid wastes that changed the color, *i.e.*, reacted, with the metals of the boring instruments demonstrating that the wastes were still present and in an active, *i.e.*, chemically reactive, state.<sup>90</sup> The cross-section further showed these wastes to be in direct contact with the weathered clay, *i.e.*, the ground water strata, and with MSW buried in the area.<sup>91</sup>

The MSW buried in the IWU, the creek or drainageway, and the Phase I Unit creates a continuum of waste that, in effect, forms a “French drain,” which provides a path of least resistance for migration of contaminants from all of those units of the ACL facility. Any contaminants in the ground water from those units following this path will bypass all ground

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<sup>88</sup> See, *e.g.*, Exh. APP-202, *supra* note 11, at Tech. Complete 2401 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-1); see also *id.* at Tech. Complete 2419 (Vol. IV, Part III, Att. 4 at Boring Log Hole No. GP-99-19).

<sup>89</sup> See, *e.g.*, *id.* at Tech. Complete 2403 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-3); *id.* at Tech. Complete 2404 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-4); *id.* at Tech. Complete 2418 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-18); *id.* at Tech. Complete 2419 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-19); *id.* at Tech. Complete 2420 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-20); *id.* at Tech. Complete 2426 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-26); *id.* at Tech. Complete 2427 (Vol. IV, Pt. III, Att. 4 appx. E at Boring Log Hole No. GP-99-27); *id.* at Tech. Complete 2434 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. B-99-33). Boring logs typical of the waste found during the investigation, are attached hereto and incorporated herein as Attachment 9.

<sup>90</sup> See *id.* at Tech. Complete 2403 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-3) (Attachment 9); see also Tr. at Vol. 5 at 952 lns.4-16 (Cross Exam (by Erich Birch) of Jay A. Winters, P.G.) (Apr. 2, 2009).

<sup>91</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 2401 (Vol. IV, Pt. III, Att. 4 at Boring Log Hole No. GP-99-1); see also Tr. at Vol. 5 at 947 lns.16-19 (Cross Exam (by Erich Birch) of Jay A. Winters, P.G.) (Apr. 2, 2009).

water monitoring wells in the POC ground water monitoring system, as discussed in more detail below, and will continue to migrate onto adjacent properties. The buried waste would be more permeable than the underlying soils and would be the preferred pathway for liquid migration.<sup>92</sup> Similarly, contaminated ground water and leachate seeps from the IWU area result in discharges to the creek in that area, allowing contaminants to flow off-site from the ACL facility in surface waters, into Walnut Creek, and then to the Colorado River.<sup>93</sup>

Related to this, Travis County has documented that shallow ground water or leachate from the ACL facility may be entering the closed Travis County Landfill, which is located immediately to the south of the ACL facility.<sup>94</sup> The Engineering-Science “Site Investigation Report,” which was completed for Travis County in 1991, identified that leachate from neighboring facilities, including the ACL facility, could be entering the closed Travis County Landfill site through the soils and waste underlying the creek bed and through the buried trash under the property line between the ACL facility and the closed Travis County Landfill.<sup>95</sup> Such leachate or shallow ground water can flow from the ACL facility through the saturated trash at the property boundary and through the soil and waste underlying the creek bed and then it may blend with surface flow or mix with shallow ground water in the watercourse that feeds into Walnut Creek.<sup>96</sup>

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<sup>92</sup> See Tr. at Vol. 7 at 1398 ln.25 – 1399 ln.5 (Cross Exam (by Jim Blackburn) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>93</sup> See *id.* at Vol. 10 at 2146 ln.4 – 2147 ln.1 (Cross Exam (by Erich Birch) of Charles Lesniak III (Apr. 9, 2009); see also Exh. TJFA 200, *supra* note 30, at 96 ln.21 – 97 ln.15.

<sup>94</sup> See Exh. APP-11, Engineering-Science, “Site Investigation Report, U.S. 290E Solid Waste Disposal Site,” at 26 (Nov. 1991), at WM-055377.

<sup>95</sup> See *id.* The same report noted: “If the county installs a leachate pumping system, the potential for leachate migration through the trash from off site will be increased.” *Id.* Travis County does operate a leachate collection and pumping system on the site of the closed Travis County Landfill. See Tr. at Vol. 9 at 1899 ln.19 – 1900 ln.8 (Cross Exam (by John Riley) of Jon A. White).

<sup>96</sup> See Exh. APP-12, Engineering-Science, “Feasibility Study Report, U.S. 290E Solid Waste Disposal Site,” at 19 & 20 (Mar. 1992), at WM-037428 & WM-037429; see also Exh. TJFA 5, *supra* note 44, at 3 (WM-064093).

3. *Evidence of Ground Water Contamination*

Evidence of ground water contamination is also ignored by the Proposal for Decision. The evidentiary record demonstrates that there is strong evidence that the ground water beneath the ACL facility has been adversely impacted and that ground water contamination has migrated from the ACL facility and has reached the nearby Applied Materials property. The types of contaminants identified in wells on the Applied Materials property inevitably lead back to the IWU as the most likely source due to the hazardous and industrial wastes disposed in that unit of the ACL facility.

As a first step in demonstrating that the hazardous and industrial wastes buried in the IWU are the source of what is now off-site contamination, Dr. Kier addressed the effects of these wastes on the structure of the clay at the ACL facility. The solvents, spent acids, and high salinity industrial wash waters have been shown, individually, to alter the structure of clays in a manner that would increase hydraulic conductivity and thus “eas[e] the escape and passage of contaminants placed in trenches and pits.”<sup>97</sup> Dr. Kier also noted that while the effects of the disposal of multiple types of hazardous and industrial wastes in one area is not known, in his professional opinion, he believed the effect would be “synergistic,”<sup>98</sup> stating: “the total effect associated with the disposal of all the different industrial and potentially hazardous wastes could be greater, or worse, than the effect of disposal of just one industrial or potentially hazardous waste.”<sup>99</sup> Instead of seriously considering Dr. Kier’s testimony, the Proposal for Decision relies entirely on information in the application, even though Dr. Kier’s testimony was uncontroverted

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<sup>97</sup> Exh. TJFA 200, *supra* note 30, at 54 lns.21-24. As noted by Dr. Kier, as early as 1976, the impact of solvents on clay was noted by the state regulatory agency. See Exh. TJFA 203, Letter from Jack C. Carmichael, P.E., Department of Health Resources, to Mr. William F. Kemp, Kemp, Overstreet & Spiller (Apr. 9, 1976), at 032-033. The April 1976 letter stated: “Solvents such as acetone will penetrate the Taylor marl and should not be accepted.” *Id.* at 1 (032).

<sup>98</sup> See Exh. TJFA 200, *supra* note 30, at 55 lns.2-3 & 7-14.

<sup>99</sup> *Id.* at 55 lns.11-14.

by WMTX, and a WMTX witness even agreed that chlorinated solvents, strong acids, and highly saline waters affect the nature of clay and that he had not studied the effects of the multiple types of hazardous waste, acting together, on clay.<sup>100</sup>

With regard to contamination of ground water beneath the ACL facility, Dr. Kier points to the following evidence. First, as early as 1980, volatile organic compounds (VOCs) were detected in wells monitored at the site of the ACL facility.<sup>101</sup> Specifically, a memorandum dated August 22, 1980, identifies that chemical analyses of a ground water sample indicated the presence of xylene, benzene, and naphthalene, “all three of which are listed as hazardous wastes

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<sup>100</sup> See Tr. at Vol. 5 at 992 ln.11 – 993 ln.21 & 994 lns.13-16 (Cross Exam (by Erich Birch) of Jay A. Winters, P.G.) (Apr. 2, 2009). Mr. Winters testified:

- Q. And are you aware of what impact chlorinated solvents have on clay?
- A. They can tend to desiccate them.
- Q. And when you say “desiccate” clay, that means it dries the clay out?
- A. It in essence – it can affect the clay structure.
- Q. And what about strong acids, do you know if – what effects strong acids have on clay?
- A. Strong acids can react with the calcium carbonate in the clay.
- Q. Okay. And would that also tend to – what would that do to the clay after it reacts with the clay?
- A. It would tend to dissolve some of the calcium carbonate portions out of it until it had reached its buffering capacity.
- Q. In a laymen’s version of that, would it tend to make the clay more permeable?
- A. It could make the clay more permeable.
- Q. And what about the pure chlorinated solvents when you said it desiccates the clay, would that tend to make the clay more permeable as well?
- A. Are we talking about pure solvents here?
- Q. Yes, pure solvents.
- A. Pure solvents could.

*Id.* at 992 ln.18 – 993 ln.18.

<sup>101</sup> See *id.* at 56 lns.6-12; see also Exh. TJFA 203, TDWR Interoffice Memorandum, *supra* note 55, at 049.

by the Administrator of the United States Environmental Protection Agency . . . .”<sup>102</sup> Second, sample analyses from ground water monitoring wells that were part of the very first ground water monitoring system approved for the site of the ACL facility, which was installed in 1982, indicated ground water contamination in all six monitoring wells.<sup>103</sup> Third, as will be discussed in more detail below, the analytical data obtained from WMTX’s “voluntary” monitoring in the vicinity of the IWU indicate that the ground water near the IWU has been contaminated.

With regard to the migration of contaminated ground water from the ACL facility to neighboring properties, Dr. Kier points to the following evidence. First, Dr. Kier reviewed ground water monitoring data from the Applied Materials site, which is located near the ACL facility.<sup>104</sup> Dr. Kier testified: “There’s contamination indicated on the Applied Materials tract from 1990 through August 2008 . . . .”<sup>105</sup> Some ground water monitoring data for the Applied Materials site was contained in what Dr. Kier refers to as the “PBS&J report.”<sup>106</sup> The PBS&J report, completed by PBS&J, Inc. for Applied Materials, identified semi-volatile organic

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<sup>102</sup> Exh. TJFA 203, TDWR, Interoffice Memorandum, *supra* note 55, at 1 (049).

<sup>103</sup> See Exh. TJFA 200, *supra* note 30, at 56 lns.13-17. Regarding contamination detected in ground water monitoring wells at the ACL facility, Dr. Kier had previously written:

On various occasions, chlorinated hydrocarbons have been found in samples from several of the monitoring wells at ACL; TOX, an indicator parameter for halogenated hydrocarbons, and phenolic compounds also have been detected in several wells, including those along Giles Road. In addition, total organic carbon (TOC) concentrations ranging from several times to an order of magnitude more than the TNRCC’s informal action level (10 mg/L), have been reported for ground water samples from several of the wells at the ACL. Measurements of chemical oxygen demand (COD) were 100 mg/L or more on these wells. Elevated iron and manganese concentrations in samples from several monitoring wells also suggest ground water contamination. Elevated concentrations of certain heavy metals, including thallium and cadmium, have been reported for eight of the nine existing monitoring wells at the ACL.

Exh. TJFA 205, “Mitigating Factors,” *supra* note 63, at 1 (049).

<sup>104</sup> See Exh. TJFA 200, *supra* note 30, at 59 ln.18 – 63 ln.8.

<sup>105</sup> See Tr. at Vol. 7 at 1344 lns.4-5 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>106</sup> See Exh. TJFA 200, *supra* note 30, at 58 lns.9-12; see also Exh. TJFA 209, PBS&J Report, *supra* note 63.

compounds (SVOCs) in ground water samples taken from the ground water monitoring wells at the Applied Materials facility.<sup>107</sup> Based on his review of the PBS&J report, and specifically his review and analysis of the SVOCs and tentatively identified compounds (“TICs”) identified in the PBS&J report, Dr. Kier concluded that the IWU at the ACL facility was the only known source of such compounds.<sup>108</sup> In Dr. Kier’s professional opinion, the information contained in the PBS&J report supports his long-held concern that “the disposal of pure solvents, spent acids, and industrial process wastewater that might have been highly saline, have so 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.”<sup>109</sup>

Second, Dr. Kier also reviewed ground water level maps that had been prepared by Mr. Kevin Carel of the Carel Corporation, a consultant for ground water monitoring at the adjacent Sunset Farms Landfill, which is owned and operated by BFI Waste Systems of North America, Inc. (“BFI”).<sup>110</sup> The Carel ground water level maps demonstrate that ground water flows from the IWU area of the ACL facility eastward onto the Applied Materials property directly or after having passed under the BFI Sunset Farms Landfill.<sup>111</sup> The ground water contamination from the IWU has followed this ground water flow, as is shown by the ground water sampling data from the Applied Materials property. Notably, ground water monitoring wells that are upgradient of the Applied Materials facility are contaminated and indicate an off-site source. The most likely source, and in fact, the only known source, for these contaminants is the IWU unit. Also, as shown on the Carel ground water level maps, ground water flows

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<sup>107</sup> See Exh. TJFA 200, *supra* note 30, at 59 lns.18-20.

<sup>108</sup> See *id.* at 60 ln.5 – 61 ln.8. Dr. Kier testified that two facilities formerly located on a portion of the Applied Materials property, the Lief Johnson Body Shop and the Diamond Shamrock gas station, did not generate the TICs found in the Applied Materials ground water monitoring data. See *id.* at 60 ln.12 – 61 ln.8.

<sup>109</sup> *Id.* at 61 lns.20-23.

<sup>110</sup> See *id.* at 63 lns.13-15.

<sup>111</sup> See *id.* at 65 ln.24 – 66 ln.3.

southwestward into the unnamed tributary to Walnut Creek, which flows from the BFI Sunset Farms Landfill across the ACL facility and onto the closed Travis County Landfill.<sup>112</sup>

Third, analytical data obtained from WMTX's own monitoring indicates that there is ground water contamination being detected in the limited number of ground water monitoring wells monitored in the vicinity of the IWU. As shown on Exhibit TJFA 24, VOCs, including 1,4-dioxane, methylene chloride, and 1,2,4-trichloro-benzene, have repeatedly been detected in the wells monitored in the vicinity of the IWU.<sup>113</sup>

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<sup>112</sup> See *id.*

<sup>113</sup> See Exh. TJFA 24, *supra* note 63. The data obtained from the ground water monitoring wells in the vicinity of the IWU are collected and analyzed pursuant to an agreement between WMTX and the City of Austin. See Exh. City of Austin 6, WMTX, "Voluntary Groundwater Monitoring Plan for the Industrial Waste Unit at Austin Community Landfill" (Mar. 15, 2002), at COA 1761. While the agreement between the City of Austin and WMTX is a "voluntary" agreement in that it is not required by TCEQ rules, the agreement itself does require WMTX to report monitoring results to the City of Austin and TCEQ. However, notwithstanding the terms of the agreement it made with the City of Austin, it appears that WMTX does not feel compelled to report all relevant monitoring data to the City of Austin or TCEQ. Specifically, WMTX monitored piezometer PZ-31 on October 20, 2004, identifying the highest monitored concentrations of 1,4-dioxane, methylene chloride, and 1,2,4-trichloro-benzene recorded pursuant to the monitoring agreement with the City of Austin, but failed to report the results of such monitoring to the City of Austin or TCEQ. See Exh. TJFA 24, *supra* note 63. Instead, WMTX's correspondence to both agencies clearly inferred that while PZ-31 had been sampled on May 26, 2004, it was not sampled during the October 2004 monitoring event. See Exh. TJFA 29, Letter from Tim Champagne, WMTX, to Richard Carmichael, Ph.D., P.E., CIH, Texas Comm'n on Env'tl. Quality, at 1 (Dec. 19, 2004). The December 19, 2004 WMTX letter states:

Groundwater conditions in the vicinity of the IWU facility are monitored by three downgradient wells (MW-29A, MW-32, and PZ-26). Six additional monitoring wells and piezometers (MW-03, MW-06, MW-23, MW-30, PZ-25, and PZ-31) are gauged to determine the potentiometric head in the vicinity of the IWU. These will not be used to collect groundwater samples for analytical testing purposes, unless an imminent threat of release of leachate to surface water is identified (a condition that was not identified during the previous site investigation study).

*Id.*; see also Exh. TJFA 28, Letter from Arthur Denny, TCEQ, to Tim Champagne, WMTX, at 1 (Jan. 13, 2005). The January 13, 2005 TCEQ letter identifies that TCEQ received IWU-related ground water monitoring information for May 25-26, 2004, for MW-29A, MW-32, PZ-26, and PZ-31 and IWU-related ground water monitoring information for October 20, 2004, for MW-29A, MW-32, and PZ-26. No ground water monitoring data is noted for PZ-31 from the October 20, 2004 sampling event. See *id.* at 1. The two reports attached to the correspondence to TCEQ clearly do not account for the sampling of piezometer PZ-31 that occurred in October 2004, and also infer that such sampling did not occur or that it did occur but was not reported, respectively. See Exh. TJFA 29, MFG, Inc., "Groundwater Monitoring Report, Second Semi-Annual 2004 Monitoring Event, Austin Community Landfill, Industrial Waste Unit" (Dec. 19, 2004);

A boring investigation of the waste cell at the Phase I Unit also reveals that portions of this MSW disposal unit are actually upgradient of the closed Travis County Landfill. Borings along the southwestern boundary of the Phase I Unit confirm that leachate flow from this portion of the Phase I Unit would exit the ACL facility to the south, *i.e.*, onto the closed Travis County Landfill.<sup>114</sup> Further, leachate and ground water could collect in and travel through the continuum of waste from the creek through the Phase I Unit, and be drawn out of the Phase I Unit, and thus the ACL facility, by the leachate extraction system operating on the adjacent closed Travis County Landfill. Leachate and ground water would move through the waste, much like a French drain system, avoiding detection by any of the ground water monitoring wells on the ACL facility.<sup>115</sup>

Finally, it is clear, based on the testimony and analysis presented by Dr. Uliana,<sup>116</sup> that there is a concern regarding potential migration of contamination from the ACL facility, and specifically the IWU, to offsite properties. The purpose of Dr. Uliana's analysis was to evaluate water quality at the ACL facility and to determine, based on that analysis, whether there was evidence of past releases of contamination from the ACL facility.<sup>117</sup> Dr. Uliana's analysis consisted of reviewing the ion chemistry (*i.e.*, data regarding the concentrations of dissolved

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*see also* Exh. TJFA 29, Rachele Delimont, STL Denver, "Analytical Report" (Nov. 8, 2004, Revised Dec. 20, 2004). This raises serious concerns regarding the actual level of contaminants being released by the IWU into the ground water.

<sup>114</sup> *See* Tr. at Vol. 7 at 1486 ln.25 – 1493 ln.1 (Cross Exam (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>115</sup> *Id.* at 1493 ln.2 – 1495 ln.8.

<sup>116</sup> Dr. Uliana is a hydrogeologist specializing in physical hydrogeology, which is the study and characterization of the movement of fluids in the subsurface. Dr. Uliana's 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, and fluid flow in fractured systems. Dr. Uliana is a licensed professional geoscientist in the State of Texas. *See* Exh. TJFA 300, Prefiled Direct Testimony of Matthew M. Uliana, Ph.D., P.G., at 4 ln.22 – 5 ln.6.

<sup>117</sup> *See id.* at 11 lns.4-5.

elements such as calcium, sodium, chloride, iron, the carbonate and bicarbonate ions, and the sulfate ion), as well as data on the concentrations of total organic carbon (TOC), total organic halogens (TOX) and the concentrations of dissolved organic chemicals that may potentially represent contamination from the ACL facility.<sup>118</sup> This analysis is important because a release of contaminants can often result in changes in the concentrations of various ions, “such that changes in the ground water chemistry can serve as indicators of contamination.”<sup>119</sup>

As concluded by Dr. Uliana:

High TOC concentrations in samples taken near the IWU indicate releases of organic compounds from that area; however, samples have not been taken in those wells since 1999, and have not been taken on a routine basis since 1994. The ACL Amendment Application does not address the existing data nor does it provide any provisions for continued monitoring of TOC near the IWU.

Similarly, the iron concentrations and trends in Ca/SO<sub>4</sub> ratios indicate a reducing environment and the influence of sulfate-reducing bacteria and the presence of organic compounds in the ground water near the IWU, indicating that the anaerobic conditions present in the ACL are affecting ground water. Analyses for iron, calcium, and sulfate concentrations in samples from wells near the IWMU [*sic*] have not been done since 1999 and the ACL Amendment Application does not address these trends in the existing data nor does it provide any provisions for continued monitoring or for investigation of the presence of sulfate-reducing bacteria.

High TOX concentrations near the IWU indicate the presence of chlorinated solvents in the soil and ground water; however, analysis for TOX has not been done since 1986, and the ACL Amendment Application does not include future monitoring of TOX as a means of identifying potential contamination from chlorinated solvents.

Finally, trends in Cl/Na ratios near the IWU, and throughout the ACL site, also indicate the influence of chlorinated solvents on the ground water chemistry; however, samples from the monitoring wells near the IWU have not been analyzed for chloride or sodium since 1999 and the ACL Amendment Application does not address the Cl/Na trends that indicate releases of chlorinated solvents.<sup>120</sup>

In other words, Dr. Uliana concluded, based on his review of ground water chemistry from the ground water samples obtained by WMTX from 1985 through 2006, that there were indications

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<sup>118</sup> See *id.* at 13 lns.2-8.

<sup>119</sup> *Id.* at 13 ln.23 – 14 ln.1.

<sup>120</sup> *Id.* at 39 ln.12 – 40 ln.9.

of releases of contaminants from the ACL facility and that the most likely source of those releases was the IWU.

The Proposal for Decision attacks Dr. Uliana's analysis, claiming that because it is not the type of analysis required by TCEQ's rules, it is not of any informative purpose to the Commission's consideration. Such simply is not true. Dr. Uliana never claimed that his methods were the same as the methods required by the Commission for the analyses associated with detection and assessment monitoring. As shown in Dr Uliana's testimony, his methods have been used, and are widely accepted, in other contexts to demonstrate indications of releases of contaminants and evidence of contamination.<sup>121</sup> Regardless of WMTX's and the Administrative Law Judge's views, ground water contamination in the MSW landfill context is no different than in any other context. Contamination is contamination and a method accepted in other arenas to determine evidence of contamination should also be accepted by the Commission, especially when it is presented as a supporting piece of part of a larger puzzle demonstrating

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<sup>121</sup> For example, WMTX's own witness, Mr. John R. Hultman, Jr., the author of the Groundwater Sampling and Analysis Plan ("GWSAP") in the application, has relied upon similar methods in the alternate source demonstrations ("ASDs") prepared for the ACL facility. In 2007, Mr. Hultman prepared an ASD for nitrate in ground water monitoring well MW-13 and piezometer PZ-33 at the ACL facility. See Exh. TJFA 19, John R. Hultman, Jr., Tetra Tech MM, Inc., "Alternate Source Demonstration for Nitrate in MW-13 and PZ-33 at the Waste Management Austin Community Landfill," MSW Permit No. 249-C (June 28, 2007), at WM-TETR-0001122. In that ASD, Mr. Hultman evaluated other indicators, including chloride and ammonia, to analyze whether, in his opinion, a release of leachate from the ACL facility had occurred. Mr. Hultman wrote:

Chloride is a good indicator parameter because it has a low retardation factor (i.e.  $R \sim 1$ , very mobile) and is not readily absorbed by subsurface materials or altered by biological processes. Ammonia is also mobile and is an excellent indicator of anaerobic conditions similar to those found in the landfill environment.

*Id.* at 4 (WM-TETR-000129). Mr. Hultman relied upon the relationship between nitrate and the indicator species of chloride and ammonia to determine that the exceedances of nitrate were not related to landfill leachate. See *id.*; see also Exh. TJFA 18, MFG, Inc., "Alternate Source Demonstration for Nitrate in MW-02C at the Waste Management Austin Community Landfill," MSW Permit No. 249-C, at 2-3 (June 24, 2005), at WM-TETR-0001143 – WM-TETR-0001144; Exh. TJFA 20, John R. Hultman, Jr., Tetra Tech, Inc., "Alternate Source Demonstration for Chromium in PZ-33 at the Waste Management Austin Community Landfill," MSW Permit No. 249-C, at 3-4 (Jan. 2008), at WM-081190 – WM-081191. As discussed above, Dr. Uliana relied upon these same types of relationships to demonstrate the likelihood of releases of contaminants from the ACL facility and most likely from the IWU.

ground water contamination at and near the ACL facility. To simply ignore Dr. Uliana's testimony because the Commission's rules do not contemplate such an analysis is arbitrary and capricious, and disregards otherwise credible and substantive evidence demonstrating ground water impacts from the IWU.

For all of these reasons, the great weight of the evidence in the records supports one conclusion—that the ground water at and adjacent to the ACL facility has been contaminated by the wastes disposed at the ACL facility.

#### 4. Evidence of Surface Water Contamination

The south-central portion of the ACL facility is the surface water discharge point for water draining over a large area of the ACL facility. This large volume of water runs directly over areas of buried waste, including areas with documented leachate seepage, which would then wash contaminants off the site before any opportunity to be detected by the POC ground water monitoring system. In addition, leachate seeps have been observed emanating from the Phase I Unit at both the eastern and western ends of the unit.<sup>122</sup> Seeps of leachate from the Phase I Unit would enter the creek in this area, which in turn empties into the tributary to Walnut Creek. As identified above, any contaminated surface water runoff from this area enters Walnut Creek and later discharges into the Colorado River.<sup>123</sup> Thus, not only does the ACL facility contribute to ground water contamination, it also has the potential to contaminate to surface water contamination, both in violation of TCEQ rules.

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<sup>122</sup> See Tr. at Vol. 7 at 1480 ln.14 – 1483 ln.8 (Redirect (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>123</sup> See *id.* at Vol. 10 at 2146 ln.4 – 2147 ln.1 (Cross Exam (by Erich Birch) of Charles Lesniak III) (Apr. 9, 2009).

5. Geological Characterization

While Finding of Fact No. 69 makes the conclusory statement that the “[a]pplication adequately describes the regional geology in the vicinity of the Facility,”<sup>124</sup> the evidence in the record does not support this conclusion. Such simply cannot be said where the application relies on inconsistent and unrecognized methods for identifying the geological strata at the site of the ACL facility. Such inconsistencies raise additional questions about the locations of ground water monitoring wells and the overall reliability of the POC ground water monitoring system.

The application identifies four geologic strata in the proposed expansion area, identified as Stratum IA, Stratum IB, Stratum II, and Stratum III.<sup>125</sup> TCEQ’s MSW rules require that the geologic strata and that the bottom confining aquiclude be identified at the site.<sup>126</sup> The aquiclude is a lower confining geologic layer which prevents downward migration of ground water, and its identification is critical to the proper placement of ground water monitoring wells. WMTX states that Stratum II is the lower confining stratum at the site of the ACL facility, yet it fails to follow a rational scientific approach when identifying the Stratum II interface.

At one point in the application, the Stratum II interface is said to be defined by split-spoon refusal and the absence of infilled, weathered desiccation/stress-relation cracks in the collected samples.<sup>127</sup> At another point in the application, the Stratum II interface is said to be defined only by split-spoon refusal.<sup>128</sup> However, a review of the logs of borings made at the ACL facility fails to reveal any clear and consistent approach to defining the Stratum II

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<sup>124</sup> Proposed Order, *supra* note 2, at 11.

<sup>125</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1391 (Vol. III, Pt. III, Att. 4 § 5.2 at 22).

<sup>126</sup> See 30 TEX. ADMIN. CODE § 330.63(e)(4).

<sup>127</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1392 (Vol. III, Pt. III, Att. 4 § 5.2 at 23). Split-spoon refusal is where the advancement of a split-spoon sampler was less than six inches after 50 blows. See *id.*

<sup>128</sup> See *id.* at Tech. Complete 1395 (Vol. III, Pt. III, Att. 4 § 5.3.3 at 26).

interface.<sup>129</sup> Then, during testimony at the Hearing on the Merits, WMTX's expert, Mr. Jay A. Winters, P.G. claimed that other criteria were used to identify the Stratum II interface.<sup>130</sup>

As indicated by these conflicting approaches, it is unclear just how the Stratum II interface at the site of the ACL facility was defined for this application. Further, since the Stratum II interface is used to design the POC ground water monitoring system and the specific depths of the tops and bottoms of the screens for taking ground water samples, it is possible that the monitoring well placement and depths of screens has not been defined accurately and reliably to identify releases of contaminants to ground water. If a ground water monitoring well screen opening is set too high or too low, ground water could either flow under or above the monitoring well screen, resulting in an area of the ACL facility that is not properly monitored.

The POC ground water monitoring system is further flawed in that the geologic definitions utilized in the Golder Associates borings to describe the strata encountered at the ACL facility use the same designations as earlier investigations, yet are actually different than the geologic definitions utilized in those investigations. Thus, although strata with the same designation are presumed to correlate from one portion of the ACL facility to the next, this is not demonstrated in the application.<sup>131</sup> Without a demonstration of consistency of interpretation, the geology and hydrogeology have not been thoroughly characterized, as the MSW rules require.

**6. Reliance on Information Outside the Evidentiary Record**

Contrary to State law and Commission rules, the Administrative Law Judge relied on information outside the evidentiary record in this proceeding as a basis for certain Findings of Fact, and thus the related Conclusions of Law, regarding ground water flow and the movement

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<sup>129</sup> See, e.g., *id.* at Tech. Complete 1680 (Vol. III, Pt. III, Att. 4 at Record of Borehole B-101).

<sup>130</sup> See Tr. at Vol. 5 at 883 lns. 5-14 (Cross-Exam (by Erich Birch) of Jay A. Winters, P.G.) (Apr. 2, 2009).

<sup>131</sup> See Exh. TJFA 200, *supra* note 30, at 107 ln.1 – 110 ln.8.

of contaminants from the ACL facility to adjacent properties. Such reliance is contrary to State law and application regulations.

State law requires that findings of fact be based on the evidentiary record and on matters that are officially noticed. Texas Government Code Section 2001.141(c) states: "Findings of fact may be based only on the evidence and on matters that are officially noted."<sup>132</sup> The purpose of this requirement is "to protect the parties' fundamental due process rights" in the administrative process.<sup>133</sup> While Findings of Fact can be based on matters that are officially noticed, both State law and Commission rules require that the parties be notified of such matters and be given an opportunity to contest the material to be officially noticed. Specifically, TEX. GOV'T CODE § 2001.090 provides:

(a) In connection with a hearing held under this chapter, official notice may be taken of:

- (1) all facts that are judicially cognizable; and
- (2) generally recognized facts within the area of the state agency's specialized knowledge.

(b) Each party shall be notified either before or during the hearing, or by reference in a preliminary report or otherwise, of the material officially noticed, including staff memoranda or information.

(c) Each party is entitled to be given an opportunity to contest material that is officially noticed. . . .<sup>134</sup>

Similarly, the Commission's rules provide:

(e) Official notice.

(1) The judge may take official notice of all facts judicially cognizable. In addition, the judge may take official notice of any generally recognized facts within the specialized knowledge of the commission.

(2) The judge shall notify all parties of any material officially noticed, including any memoranda or data prepared by the executive

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<sup>132</sup> TEX. GOV'T CODE ANN. § 2001.141(c).

<sup>133</sup> *West Texas Util. Co. v. Office of Pub. Util. Counsel*, 896 S.W.2d 261, 273 (Tex.App.—Austin 1995, no writ).

<sup>134</sup> TEX. GOV'T CODE § 2001.090(a)-(c).

director and relied upon by the commission in prior proceedings. All parties shall be afforded the opportunity to contest any material so noticed.<sup>135</sup>

Here, the Proposal for Decision includes multiple citations to a document outside the evidentiary record of this proceeding to support certain statements, and proposed Findings of Fact, regarding ground water flow, contaminant migration, and the veracity of TJFA's witnesses. The document referenced is the Proposal for Decision in a different case which is currently pending before the Commission, *Application of BFI Waste Systems of North America, LLC, for Type I MSW Permit No. 1447A*.<sup>136</sup> The Proposal for Decision in the BFI case had not yet been issued by the State Office of Administrative Hearings ("SOAH") Administrative Law Judge when the Hearing on the Merits in this proceeding occurred<sup>137</sup> and has not been considered, revised, or adopted by the Commission as of the date of this pleading. In other words, the Administrative Law Judge in this case relied upon a preliminary document that has not yet been considered or acted on by the Commission, and that is clearly not in the evidentiary record in this proceeding, as the basis for important Findings of Fact in this proceeding.

Nor did the Administrative Law Judge notify the parties that he would take judicial notice of the Proposal for Decision in the BFI case. Even if such notification had been made, the Proposal for Decision in the BFI case is not the type of information for which judicial notice can be taken. Specifically, the "alleged facts" taken from the BFI Proposal for Decision and utilized by the Administrative Law Judge in the Proposal for Decision in this case and as a basis for the related Findings of Fact, are not "facts that are judicially cognizable" nor are they "generally recognized facts within the area" of the Commission's "specialized knowledge." The information used by the Administrative Law Judge falls into two categories: (1) highly technical

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<sup>135</sup> 30 TEX. ADMIN. CODE § 80.127(e).

<sup>136</sup> See Proposal for Decision, *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 (May 8, 2009).

<sup>137</sup> The Proposal for Decision in the BFI case was issued on May 8, 2009. See *id.*

information apparently presented during the BFI hearing, which is specific to the BFI hearing and which would not be generally recognized facts; and (2) information related to TJFA and its alleged business practices that would not be within the specialized knowledge of the Commission.

To the degree that the Administrative Law Judge's citation to the BFI Proposal for Decision is his notification to the parties of material officially noticed, TJFA strenuously contests any official notice of the BFI Proposal for Decision for the reasons outlined above. The BFI Proposal for Decision is simply that—an administrative law judge's recommendations to the Commission based on evidence in a different proceeding. The BFI Proposal for Decision has not been considered by the Commission and certainly has not been adopted, in any form, into a final Commission order. As such, it is not a prior administrative decision of the Commission that can be relied upon as precedent in other cases. In addition, the information relied upon by the Administrative Law Judge was case-specific facts that were presented in the BFI case. If any party in this proceeding had believed that such facts were important or relevant to this proceeding, they had the opportunity to present such evidence. The evidence in the BFI case is not in the evidentiary record in this proceeding, and the parties to this proceeding did not have the opportunity to challenge such evidence in the context of this proceeding. Any reference to or reliance on the BFI Proposal for Decision is contrary to State law and is error by the Administrative Law Judge, and will be error by the Commission if the Findings of Fact, and related Conclusions of Law, based on the BFI Proposal for Decision are adopted in a final order in this proceeding.

For all of these reasons, it is clear that the great weight of the evidence does not demonstrate that the ACL facility, if designed, constructed, and operated in accordance with the application, will be protective of ground water and surface water, as required by TCEQ rules. As such, the proposed findings of fact should be revised, and the application must be denied.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 60. The Taylor Group is composed of massive beds of calcareous shale with siltstone seams and marl with clayey chalk, clay, sand, and some nodular and phosphatic (containing phosphates) zones. The upper portion of the Taylor is recognized as heavily over-consolidated. The lower Taylor present at the ACL site is also referred to as the Sprinkle Formation. The near-surface portion of the Taylor is comprised of a weathered montmorillonitic (hydrated aluminum silicate) clay with high shrink/swell potential. The weathered Taylor is stiff, fissured, and slickensided.

Finding of Fact No. 69. The Application does not adequately describe the regional geology in the vicinity of the Facility.

Finding of Fact No. 74. In the central portion of the site between the East and West Hills, where the IWU and Phase I Unit area are located, groundwater flow is generally to the southeast and southwest from West Hill, and to the southeast southwest from East Hill. Both flow systems have groundwater movement towards a low point at the southern permit boundary perimeter.

Finding of Fact No. 76. The hydraulic conductivity of the clays in the IWU and Phase I areas has been adversely affected, i.e., the rate of hydraulic conductivity has increased, due to the effects of the hazardous and industrial wastes on the clay. Such that water moves through these clays at a rate of only 4.24 feet per year.

Finding of Fact No. 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 both hydraulically downgradient from and upgradient to the closed Travis County Landfill site.

Finding of Fact No. 78. The IWU and the Phase I Unit have not been closed in accordance with MSW regulations. Over the years, aerial photographs have indicated disturbance of the soils on and in the vicinity of these units, and additional soils were placed over the Phase I Unit and the IWU in an effort to prevent seeps and leaks. A deep crack extends along the north side of the IWU, providing an unimpeded pathway for surface runoff to enter the underlying waste. The north side of the IWU is still narrow. In 2002, WMTX 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 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.

Finding of Fact No. 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. The disposal of pure solvents,

spent acids, and industrial process wastewater that might have been highly saline, have so 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. The hydraulic conductivity of the clays in the Taylor has been altered such that contaminants could move through it ten to one hundred times faster than through unaffected clays, easily reaching the easternmost boundary of the ACL facility and crossing the Applied Materials property.

Finding of Fact No. 82. There is insufficient evidence to show that any contamination in the Applied Materials wells likely came could have come from the ACRD Facility.

Finding of Fact No. 83. The Application includes four soil borings that were made in 1990 and 1994 along the southern boundary of the Facility near 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. These borings did not identify waste located on or immediately next to the ACL facility property boundary; however, MSW was found in other borings (MW-99-24, MW-99-25, MW-99-26, MW-99-31, and MW-32), all of which are beneath the drainageway between the IWU and the Phase I Unit and between those two units and the West Hill. In addition, two of the borings (MW-99-24 and MW-9925) indicated that MSW is buried beneath the South Pond.

Finding of Fact No. 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. of boring locations covering a distance of approximately twelve hundred linear feet along the drainage creek. These borings (identified in the application as MW-24, MW-25, MW-26, MW-26A, MW-27, MW-28, MW-29, and MW-31) show municipal solid waste buried as shallow as 3 feet and as deep as 33 feet below the ground surface of the creek.

Finding of Fact No. 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," where it can then flow off the ACL facility through the MSW buried in the drainageway which is the lowest elevation of the Unit, where it is retained by the wall or dam created by the drainage way. Leachate may also cross the ACL facility boundary into the adjacent closed Travis County Landfill prior to reaching the creek.

Finding of Fact No. 87. There is insufficient evidence to show that the drainage tributary between Phase I and the IWU has been partially filled with MSW.

Finding of Fact No. 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 and that there is migration of leachate from the Phase I Unit and the IWU to the permit boundary perimeter of the ACDR Facility.

Conclusion of Law No. 5. WMTX failed to ~~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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation~~.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to ~~includes~~ all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not ~~violates~~ 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.

Conclusion of Law No. 20. Part II of the Application does not ~~meets~~ the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not ~~meets~~ the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not ~~meets~~ the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 26. Applicant submitted a geology report that fails to ~~comply~~ ~~complies~~ with 30 TEX. ADMIN. CODE ANN. § 330.63(e).

Conclusion of Law No. 27. The Application does not ~~contains~~ the required information regarding the effect of Facility construction on groundwater flow required by 30 TEX. ADMIN. CODE ANN. § 330.403(e)(1).

Conclusion of Law No. 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 still not 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.

Conclusion of Law No. 48. The proposed groundwater monitoring system ifas 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 not 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.

Conclusion of Law No. 50. The proposed groundwater monitoring system ifas 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 not 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.

***D. Exceptions Related to Groundwater Monitoring. Findings of Fact Nos. 122 through 124, 126, and 128 and Conclusions of Law Nos. 5, 7 through 11, 21, 22, 27, 28, 48, and 50.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Groundwater Monitoring, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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 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.

Finding of Fact No. 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.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 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).

Conclusion of Law No. 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.

Conclusion of Law No. 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.

Conclusion of Law No. 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.

As identified above, the POC ground water monitoring system proposed in the application is inappropriate, incomplete, and unprotective of human health and the environment. Any other conclusion is simply not supported by the great weight of the evidence in this proceeding.

WMTX fails to protect ground water as required by TCEQ's MSW rules because the application fails to meet the standard set out in 30 TEX. ADMIN. CODE § 330.403(a)(2) regarding monitoring at the POC—Point of Compliance. Section 330.403(a)(2) provides:

(a) 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 as defined in §330.3 of this title (relating to Definitions).

\* \* \*

(2) The point of compliance monitoring system must include monitoring wells installed to allow determination of the quality of groundwater passing the point of compliance as defined in § 330.3 of this

title and to ensure the detection of groundwater contamination in the uppermost aquifer. . . .<sup>138</sup>

As identified in TCEQ's MSW rules, the "point of compliance" is:

A vertical surface located no more than 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.<sup>139</sup>

The existing POC ground water monitoring system under Permit No. MSW-249C does not, and the POC ground water monitoring system proposed in the application for Permit No. MSW-249D will not, detect ground water contamination in the uppermost aquifer at the ACL facility for the reasons detailed below.

As shown in Figure ATT5-5 in the application, the POC is located "interior" of the ACL facility.<sup>140</sup> In other words, it is not along the permit boundary of the ACL facility, instead dividing the IWU and the Phase I Unit from the rest of the ACL facility. Finding of Fact No. 122 specifically notes that six new monitoring wells are proposed to be added along this interior portion of the POC, but as will be addressed in detail below, the location of these wells does not make the POC compliant with TCEQ's rules or protective of human health and the environment.

The disposal of hazardous and industrial wastes at the ACL facility occurred in what is known as the IWU and in what has been referred to as Acid Pit #4, and possibly in other areas in the 1976 time frame. The application identifies that the IWU is managed separately from the permitted ACL facility and "in accordance with requirements established under a voluntary agreement with TCEQ concurrence";<sup>141</sup> it never even mentions Acid Pit #4. The application continues: "The IWU is located hydraulically downgradient of the units permitted under Permit

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<sup>138</sup> 30 TEX. ADMIN. CODE § 330.403(a)(2).

<sup>139</sup> *Id.* § 330.3(106).

<sup>140</sup> *See* Exh. APP-202, *supra* note 40, at Tech. Complete 3023 (Vol. V, Pt. III, Att. 5 at Fig. ATT5-5).

<sup>141</sup> *Id.* at Tech. Complete 22 (Vol. I, Pts. I&II § 3.1.5.2 at 16).

No. MSW-249C and, therefore, does not impact the proposed facility design or operation of the Austin Community Recycling and Disposal Facility.”<sup>142</sup>

As discussed above, the Phase I Unit is just south of the IWU. As with the IWU, when addressing the area identified as “Travis County Landfill (Closed)”—*i.e.*, the Phase I Unit, the application states: “The Travis County Landfill is located hydraulically downgradient of the units permitted under Permit No. MSW-249C and, therefore, does not impact the proposed facility design or operation of the Austin Community Recycling and Disposal Facility.”<sup>143</sup>

While the IWU and the Phase I Unit are a large part of the problem with the location of the POC and the effectiveness of the POC ground water monitoring system, it cannot be overlooked that, as described above, waste is buried throughout the area between the IWU and the Phase I Unit and under the creek, extending all the way to the detention pond at the southern permit boundary. This continuum of waste, as described in the section above, in addition to the IWU and the Phase I Unit individually, can properly be considered a solid waste management unit.<sup>144</sup> While most of the following discussion will focus on the IWU and the Phase I unit, any discussion of those two units must always be considered with one fact in mind: both units are a part of the continuum of waste at the ACL facility.

The initial problem with the placement of the POC proposed in the application is WMTX’s incorrect assumption that the IWU and the Phase I Unit are not waste management

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<sup>142</sup> *Id.* at Tech. Complete 23 (Vol. I, Pts. I&II § 3.1.5.2 at 17).

<sup>143</sup> *Id.*

<sup>144</sup> While the term “waste management unit,” as used in the definition of the POC, is not defined in TCEQ’s MSW rules, the term “solid waste management unit” is defined as:

A landfill, surface impoundment, waste pile, furnace, incinerator, kiln, injection well, container, drum, salt dome waste containment cavern, land treatment unit, tank, container storage area, or any other structure, vessel, appurtenance, or other improvement on land used to manage solid waste.

30 TEX. ADMIN. CODE § 330.3(146).

units of the ACL facility.<sup>145</sup> The IWU and the Phase I Unit are part and parcel of the ACL facility,<sup>146</sup> and thus, ground water originating from those units cannot be managed separately from the rest of the ACL facility. Instead, the POC ground water monitoring system for the ACL facility must be capable of detecting migration of ground water contamination offsite from these units of the ACL facility. As designated in the application, the TCEQ-enforceable ground water monitoring system, also known as the POC ground water monitoring system or the detection monitoring system, is not designed to detect contamination migrating from the IWU and the Phase I Unit. Instead, the application affirmatively states that the IWU and the Phase I Unit are downgradient of what WMTX considers to be the operational portions of the ACL facility. Testimony provided during the Hearing on the Merits confirmed that the impact from these units was not considered in the design of the POC ground water monitoring system.<sup>147</sup>

Because the POC has been located in the interior of the ACL facility it cannot be hydraulically downgradient of the IWU or the Phase I Unit, and does not comply with applicable TCEQ rules, contrary to proposed Finding of Fact No. 122. As discussed above, the application

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<sup>145</sup> As addressed above, the IWU and the Phase I Unit were never closed pursuant to applicable agency rules, but at this facility, it does not really matter whether the two units are closed or not. Both units, as well as the MSW disposed in the creek/drainageway and between the two units, are within the permitted boundary of the ACL facility, as described in the application, and there is evidence that both units have had releases of contaminants into ground water and/or surface water, thus requiring continued ground water monitoring pursuant to MSW rules.

<sup>146</sup> Regarding whether the IWU and the Phase I Unit are part and parcel of the ACL facility, the Executive Director's own witness testified:

Q. Is the Industrial Waste Unit part of the ACL facility?

A. I would say yes, it's part of the facility.

Q. Okay. And what about the Phase I unit or what was labeled as the Travis County Landfill Closed but we've all been calling Phase I unit? Is that part of the facility?

A. Of the facility, yes.

Tr. at Vol. 11 at 2471 lns.1-8 (Cross Exam (by Erich Birch) of Arten J. Avakian, P.G.).

<sup>147</sup> See *id.* at Vol. 5 at 935 lns.13-14 (Cross Exam (by Erich Birch) of Jay A. Winters, P.G.) (Apr. 2, 2009).

itself identifies that the IWU and the Phase I Unit are “located hydraulically downgradient” of the rest of the ACL facility; therefore, the POC, in its current location between (1) the IWU and the Phase I Unit and (2) the rest of the ACL facility, cannot comply with the regulatory requirements that the POC be hydraulically downgradient of the waste management unit boundary when, as part of the ACL facility, the IWU and the Phase I Unit are properly considered. The POC ground water monitoring system cannot detect contamination from these solid waste management units, as required by TCEQ rules, nor can it detect releases from the waste buried under the creek and within the permit boundary of the ACL facility. The POC ground water monitoring system is not designed in a manner responsive to the continuum of waste that is clearly present at the ACL facility.

While the application clearly states that the Phase I Unit and the IWU are managed separately, for ground water monitoring purposes, from the rest of the ACL facility, Mr. Winters, WMTX’s expert regarding geology and ground water issues, suggested, at the Hearing on the Merits, that the detection monitoring system set out in the application, while not explicitly designed to do so, did monitor the Phase I Unit and the IWU.<sup>148</sup> This appears to be testimony relied upon by the Administrative Law Judge, but several discrepancies in Mr. Winters’ testimony must be noted.

Based on Mr. Winters’ interpretation at the Hearing on the Merits, one ground water monitoring well, MW-11, would be responsible for monitoring a majority of the ACL facility, including the Phase I Unit and the IWU.<sup>149</sup> Based on a complete review of the evidentiary record, and specifically the application itself, the POC ground water monitoring system was not designed to monitor the Phase I Unit or the IWU, and the suggestion by Mr. Winters that ground

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<sup>148</sup> See *id.*

<sup>149</sup> See *id.* at Vol. 5 at 930 ln.16 – 932 ln.8; see also Exh. APP-202, *supra* note 11, at Tech. Complete 3022 (Vol. VI, Pt. III, Att. 5 at Fig. ATT5-4).

water monitoring well MW-11 could monitor the Phase I Unit and the IWU was nothing more than a last ditch effort to shore up what was, and still is, a glaring regulatory deficiency in the application.

Dr. Kier identified multiple concerns with the POC ground water monitoring system, including WMTX's reliance on ground water monitoring well MW-11, and, concluded that the application failed to adequately address protection of ground water as required by TCEQ rules. As discussed by Dr. Kier, while ground water monitoring well MW-11 may be the only ground water monitoring well included in the POC ground water monitoring system potentially capable of detecting contamination from the Phase I Unit and the IWU, it is not placed appropriately to reliably detect migration of contaminants from those two units.

With regard to the ability of ground water monitoring well MW-11 to monitor releases from the Phase 1 unit, Dr. Kier testified:

The only one that could possibly be said to monitor Phase I is, again, Monitor Well 11, but that's asking it to monitor any contamination that would migrate from the West Hill from the industrial waste unit or portions of the East Hill and Phase I, which is a lot for one monitoring well.<sup>150</sup>

Thus, while ground water monitoring well MW-11 may detect a release from the Phase I Unit, it would only do so after a release from the Phase I Unit migrated to the west and crossed the creek separating ground water monitoring well MW-11 from the Phase I Unit.<sup>151</sup> Clearly, this is not the most likely flow path from the Phase I Unit. But, other than ground water monitoring well MW-11, there is no monitoring well proposed in the application in any position at all to monitor releases from the Phase I Unit, contrary to the conclusions identified in the Proposal for Decision.

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<sup>150</sup> See Tr. at Vol. 7 at 1348 lns.5-10 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>151</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 3023 (Vol. V, Pt. III, Att. 5 at Fig. ATT5-5 (showing the Phase I Unit (identified as "Travis County Landfill (Closed)" separated from ground water monitoring well MW-11 by the creek).

While Mr. Winters testified at the Hearing on the Merits that ground water monitoring well MW-51 could be used to monitor the Phase I Unit,<sup>152</sup> such testimony is clearly contradicted by Mr. Winters' own "Groundwater Flow Path Map," which is included in the application.<sup>153</sup> The Groundwater Flow Path Map does not show any flow from the Phase I Unit (identified on the figure as "Travis County Landfill (Closed)") moving toward ground water monitoring well MW-51. Ground water monitoring well MW-51 would instead monitor what is coming onto the ACL facility.<sup>154</sup> As Dr. Kier testified, to have true downgradient monitoring of the Phase I Unit would require one or more wells on the same side of the creek as the Phase I Unit.<sup>155</sup>

Regarding the ability of ground water monitoring well MW-11 to monitor releases from the IWU, Dr. Kier testified:

- Q. How is the industrial waste unit being monitored for groundwater contamination based on your review of this application?
- A. With respect to the application, it's not. There are no monitoring wells of the industrial waste unit other than, perhaps, 11, which is distant and somewhat questionable in its placement to monitor the industrial waste unit that are part of the monitoring well system at present.<sup>156</sup>

While there was a lot of speculation at the Hearing on the Merits by Mr. Winters about existing or proposed monitoring wells that might be able to monitor the IWU, the overwhelming weight of the evidence demonstrates: (1) that Mr. Winters did not design the POC ground water monitoring system to monitor the IWU;<sup>157</sup> (2) that based on the ground water contours

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<sup>152</sup> See *Tr.* at Vol. 5 at 1017 lns.1-4 (Cross Exam (by Annalynn Cox) of Jay A. Winters, P.G.) (Apr. 2, 2009).

<sup>153</sup> See *Exh. APP-202*, *supra* note 11, at Tech. Complete 3022 (Vol. V, Pt. III, Att. 5 at Fig. ATT5-4).

<sup>154</sup> See *Tr.* at Vol. 7 at 1357 lns.13-17 (Clarifying questions (by the Honorable Roy Scudday) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>155</sup> See *id.* at Vol. 7 at 1357 lns. 7-23.

<sup>156</sup> See *id.* at Vol. 7 at 1346 lns.10-19 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>157</sup> In his deposition, Mr. Winters testified that the POC "went around" the IWU because the "IWU is not part" of the ACL municipal solid waste facility. See *Exh. TJFA 11*, Oral Deposition of Jay Arthur Winters, at 117 ln.11 (Feb. 19, 2009). Mr. Winters continued:

represented in the application and in other evidentiary materials, flow from the IWU would not be sufficiently monitored by the POC ground water monitoring system;<sup>158</sup> and (3) that based on representations in the application, WMTX proposed to continue to rely entirely on the voluntary ground water monitoring agreement between WMTX and the City of Austin to monitor the IWU.<sup>159</sup> Mr. Winters did testify that ground water monitoring wells MW-44 and MW-30 could be used to monitor the IWU, but again, such testimony is contradicted by Mr. Winters' own "Groundwater Flow Path Map," which is included in the application, as well as other hearing exhibits.<sup>160</sup>

The presence of the creek between the IWU and the Phase I Unit critically impacts the ability of ground water monitoring well MW-11 to monitor releases from those waste management units at all, much less reliably monitor releases from the Phase I Unit or the IWU.

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Q. So just to make sure I understand your answer, even if you found out that was part of one of the municipal solid waste disposal units, you would basically ignore that disposal unit and keep the point of compliance where it is?

A. That is correct, because the IWU has its own monitoring system.

Q. Okay. And because it has its own – okay.  
And the "IWU" being the industrial waste unit, is that correct?

A. Correct.

Q. You're saying it has its own monitoring system and somehow that is going to monitor the Travis County Landfill as well?

A. That's monitoring the IWU.

*Id.* at 120 ln.22 – 121 ln.11.

<sup>158</sup> See Exh. TJFA 200, *supra* note 30, at 80 ln.9 – 81 ln.20; see also Exh. TJFA 21, *supra* note 33.

<sup>159</sup> The application affirmatively states: "WMTX manages . . . [the IWU] separately from the permitted Austin Community Recycling and Disposal Facility (Permit No. MSW-249C) and in accordance with requirements established under a voluntary agreement with TCEQ concurrence." Exh. APP-202, *supra* note 11, at Tech. Complete 22 (Vol. I, Pts. I&II § 3.1.5.2 at 16).

<sup>160</sup> See *id.* at Tech. Complete 3022 (Vol. V, Pt. III, Att. 5 at Fig. ATT5-4); see also *id.* at Tech. Complete 3023 (Vol. V, Pt. III, Att. 5 at Fig. ATT5-5); Exh. TJFA 11, *supra* note 157, at Depo. Exh. 4, Fig. ATT4-19A, Potentiometric Surface Map May 2005, signed and sealed by Mr. Jay A. Winters, P.G., Feb. 18, 2008; *id.* at Depo Exh. 7, Fig. 2, IWU Potentiometric Map April 2008, signed and sealed by John R. Hultman, Jr., June 23, 2008.

As discussed above, MSW is buried under the creek and in the areas between the IWU and the Phase I Unit and between the IWU and the Phase I Unit and the West Hill, and the buried waste will operate as a “French drain” in that contaminants will be collected in and migrate through the waste.<sup>161</sup> The creek and the buried MSW would be preferential flow paths for contaminants released from the IWU and the Phase I Unit, and the contaminants would leave the ACL property boundary without ever being detected by ground water monitoring well MW-11.<sup>162</sup>

The bottom line is that the entire south-central portion of the ACL facility is not adequately and appropriately monitored for the migration of contamination as required by TCEQ rules. If Permit No. MSW-249D was to be issued based on the application, only the more recently active portion of the ACL facility would be monitored for releases into ground water. The following areas would not be monitored: (1) the IWU where uncontrolled dumping of hazardous and industrial waste occurred in unlined pits and trenches, where MSW was disposed over such wastes, and where recent investigations have shown that liquid chemical wastes are still present;<sup>163</sup> (2) the Phase I Unit, an entire MSW landfill unit with a history of confirmed leachate seeps and releases;<sup>164</sup> and (3) a natural drainageway that has been elevated over time

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<sup>161</sup> See Tr. at Vol. 7 at 1494 lns.11-22 (Redirect (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>162</sup> See *id.* at Vol. 7 at 1472 lns.12-18.

<sup>163</sup> See Exh. TJFA 200, *supra* note 30, at 45 lns.11-18; see also Exh. APP-202, *supra* note 11, at Tech. Complete 2403 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-3) (Attachment 9); *id.* at Tech. Complete 2404 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-4); *id.* at Tech. Complete 2418 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-18); *id.* at Tech. Complete 2419 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-19); *id.* at Tech. Complete 2420 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-20); *id.* at Tech. Complete 2426 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-26); *id.* at Tech. Complete 2427 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. GP-99-27) (Attachment 9); *id.* at Tech. Complete 2434 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. B-99-33) (Attachment 9).

<sup>164</sup> See Tr. at Vol. 7 at 1480 ln.14 – 1481 ln.9 (Redirect (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

due to the disposal of waste in the creek bed;<sup>165</sup> in other words, a natural drainageway that, in effect, was used as an unauthorized solid waste management unit at the ACL facility. Clearly, the POC ground water monitoring system identified in the application is deficient to detect potential migration of contaminants from all solid waste management units within the ACL facility.<sup>166</sup>

Apparently, the Proposal for Decision is attempting to remedy these inadequacies in the POC ground water monitoring system by requiring the addition of certain monitoring wells associated with a ground water monitoring agreement between WMTX and the City of Austin.<sup>167</sup> The ground water monitoring wells identified in the agreement have not been considered or evaluated by TCEQ's MSW permitting staff,<sup>168</sup> and there is no evidence in the record to demonstrate that such wells would ensure that the POC ground water monitoring system

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<sup>165</sup> See Exh. TJFA 200, *supra* note 30, at 85 lns.7-14; see also Exh. TJFA 204, ThermoRetec Report, *supra* note 80, at Fig. 3-2 (053).

<sup>166</sup> If WMTX truly wished to exclude the IWU, Phase I Unit, and the creek area from ground water monitoring requirements, there is a procedure that it should have followed. The MSW rules at 30 TEX. ADMIN. CODE § 330.401(d) provide that ground water monitoring requirements may be suspended by the Executive Director at a solid waste management unit if the owner or operator of that solid waste management unit can demonstrate *there is no potential for migration of hazardous constituents from that solid waste management unit to the uppermost aquifer during the active life and the closure and post-closure care period of the unit*. See 30 TEX. ADMIN. CODE § 330.401(d). Section 330.401(d) requires the demonstration to be certified by a qualified groundwater scientist and approved by the Executive Director, and it must be based on predictions that maximize contaminant migration and consider impacts on human health and the environment. See *id.* Clearly this sets a high standard for a permittee to cease monitoring of a solid waste management unit and recognizes the serious role ground water detection monitoring plays in ensuring protection of the environment and human health and safety. It is also rather obvious that the IWU, the Phase I Unit, and the waste disposal area in the creek could not satisfy this standard. As previously addressed, cross sections and boring logs show the waste in each of these units to be in direct contact with the weathered Taylor clay. See, e.g., Exh. APP-202, *supra* note 11, at Tech. Complete 1481 (Vol. III, Pt. III, Att. 4 at Fig. ATT4-17) (Attachment 5). The weathered Taylor clay is the uppermost aquifer at the site; and therefore, it would seem impossible to prove no migration of hazardous constituents from the solid waste management unit to the uppermost aquifer, as required for the demonstration in 30 TEX. ADMIN. CODE § 330.401(d).

<sup>167</sup> See Exh. City of Austin 6, *supra* note 113.

<sup>168</sup> See generally Tr. at Vol. 11 at 2443 lns.11-15 (Apr. 10, 2009) (Cross Exam (by Erich Birch) of Arten J. Avakian, P.G.).

complied with TCEQ rules. In fact, Charles Lesniak III, appearing on behalf of the City of Austin, testified that the number of wells and the location of the wells were selected after lengthy negotiations and compromises with WMTX.<sup>169</sup> Just as importantly, there is no evidence in the record, whatsoever, to indicate that the ground water monitoring wells associated with the WMTX/City of Austin agreement would be able to monitor contaminants migrating from the Phase I Unit.<sup>170</sup> The MSW rules do not anticipate compromises when it comes to monitoring of contaminants as necessary to protect human health and the environment.

An additional concern with the POC ground water monitoring system is not addressed at all by the attempted inclusion of the additional monitoring wells. Ground water flow from under portions of the East Hill exits the ACL facility to the north at the north property boundary.<sup>171</sup> The nearest ground water monitoring well is MW-13—the last POC ground water monitoring well on the northeast side of the ACL facility.<sup>172</sup> But as discussed at the Hearing on the Merits, ground water monitoring well MW-13 cannot detect contamination in ground water flow to the north of the ACL facility, *i.e.*, to the west of ground water monitoring well MW-13.<sup>173</sup> During the Hearing on the Merits, WMTX's ground water scientist, Mr. Winters, testified that ground water flowing to the west of ground water monitoring well MW-13 would stay on the site of the ACL facility.<sup>174</sup> However, this is contradictory to previous investigations regarding ground

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<sup>169</sup> See Tr. at Vol. 10 at 2136 ln.25 – 2138 ln.8 (Cross Exam (by Erich Birch) of Charles Lesniak III) (Apr. 9, 2009).

<sup>170</sup> The purpose of the agreement between the City of Austin and WTMX is to provide some sort of sampling data associated with the IWU, not the Phase I Unit. See Exh. City of Austin 6, *supra* note 113, § 1.0 at 1 (COA 1763).

<sup>171</sup> See Exh. TJFA 11, *supra* note 157, at Depo. Exh. 4, Fig. ATT4-19A, Potentiometric Surface Map May 2005, signed and sealed by Mr. Jay A. Winters, P.G., Feb. 18, 2008; see also Exh. APP-202, *supra* note 11, at Tech. Complete 3023 (Vol. V, Pt. III, Att. 5 at Fig. ATT5-5).

<sup>172</sup> See *id.*

<sup>173</sup> See Tr. at Vol. 5 at 988 lns.10-11 (Cross-Exam (by Erich Birch) of Jay A. Winters, P.G.) (Apr. 2, 2009).

<sup>174</sup> See *id.* at Vol. 5 at 984 lns.17-25; see also *id.* at Vol. 5 at 986 ln.5 – 988 ln.11.

water flow in this area. In a 1996 letter to the Texas Natural Resource Conservation Commission (“TNRCC”), the predecessor agency of TCEQ, WMTX identified the POC for the ACL facility as being much further to the west of ground water monitoring well MW-13.<sup>175</sup> A contour map included as an attachment to the letter shows the area west of ground water monitoring well MW-13 to be downgradient of the ACL facility.<sup>176</sup>

Again, the proposed POC ground water monitoring system is not designed to detect potential contamination in flow emanating from all of the solid waste management units at the ACL facility; therefore, the POC ground water monitoring system, specifically to the west of ground water monitoring well MW-13, is not designed to allow determination of the quality of ground water passing the POC, nor is it designed to ensure the detection of ground water contamination in the uppermost aquifer in that area of the ACL facility, in violation of 30 TEX ADMIN. CODE § 330.403(a)(2).

The POC ground water monitoring system, while inadequate, can only be revised after additional technical consideration by TCEQ. The current application is fatally flawed and cannot be saved by the simple addition of monitoring wells that have not been considered by TCEQ MSW staff, especially when the addition of such wells does not even address all of the flaws in the POC ground water monitoring system. The issues associated with the POC ground water monitoring system’s ability to ensure detection of contaminants from the entirety of the ACL facility are highly technical and require detailed characterization and consideration. Simply adding additional wells—wells that were placed based on a negotiated agreement, not sound technical review pursuant to TCEQ rules—cannot produce a technically sufficient correction to

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<sup>175</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 2321 (Vol. IV, Pt. III, Att. 4 at Letter from Rusty Fusilier, P.E., WMTX, to Ada Lichaa, TNRCC (Mar. 15, 1996)).

<sup>176</sup> See *id.* at Tech. Complete 2335 (Vol. IV, Pt. III, Att. 4 at Rust Environment & Infrastructure, “Ground Water Monitoring System Design Report for Austin Community Landfill, MSW Permit No. 249-C,” at Fig.4B), attached hereto and incorporated herein for all purposes as Attachment 10.

the problem.<sup>177</sup> As such, the Commission should revise the proposed findings of fact, as suggested below, and deny the application.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 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. As described, the proposed ground water monitoring system will not comply with TCEQ rules. 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.

Finding of Fact No. 123. No monitoring well adequately monitors the area between MW-11 and MW-51, which includes the upgradient portion of the Phase I Unit. The area between MW-11 and MW-51 is possibly the upgradient portion of the Phase I Unit and, as a result, cannot be part of the POC; however, in order to provide the requisite information on the exchange of leachate in contaminated ground water between the ACL facility and the closed Travis County Landfill, monitoring along the permit boundary is necessary. ~~and, as a result, cannot be a part of the POC.~~

Finding of Fact No. 124. It is ~~highly unlikely~~ that potential contaminants from the IWU would not reach MW-11 because MW-11 is not placed appropriately. Inference that Phase I is down hydraulic gradient from the closed Travis County Landfill is based solely on the surface topography of the Phase I Unit. No direct evidence to support this inference was presented in the application or by testimony of WMTX's experts. 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.

Finding of Fact No. 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 permit and the reconfiguration of the POC to include those four wells will not serve to mitigate the potential threat to human

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<sup>177</sup> As noted by the Executive Director, significant alterations to the application cannot be made through the instant proceeding. See Executive Director's Closing Argument, *Application of Waste Management of Texas, Inc. for a Municipal Solid Waste Permit Amendment No. MSW-249D*, SOAH Docket No. 582-08-2186, TCEQ Docket No. 2206-0612-MSW at 24 (May 8, 2009). The Executive Director wrote that revisions cannot significantly alter the design of the landfill, stating: "The concern about significant alterations is to address the possibility that the previous declaration of technical completeness would be undone and thereby requiring re-notice and another hearing on the entire Application . . ." *Id.*

health and the environment should contaminants from the IWU and/or the Phase I Unit migrate towards the boundaries of the Facility.

Finding of Fact No. 128. ~~With the i-~~Incorporation of the additional four wells into the groundwater monitoring system and the realignment of the POC to incorporate those four wells will not result in, the Draft Permit ~~will include adequately providing provisions~~ for groundwater monitoring.

Conclusion of Law No. 5. WMTX ~~failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation~~.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and or the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, does not includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not violates 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 27. The Application does not contains the required information regarding the effect of Facility construction on groundwater flow required by 30 TEX. ADMIN. CODE ANN. § 330.403(e)(1).

Conclusion of Law No. 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 still not 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.

Conclusion of Law No. 48. The proposed groundwater monitoring system ifas 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 not 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.

Conclusion of Law No. 50. The proposed groundwater monitoring system ifas 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 not 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.

***E. Exceptions Related to Groundwater Monitoring of Additional Constituents. Finding of Fact No. 129 and Conclusions of Law Nos. 5, 7, 8, 21, and 22.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Groundwater Monitoring of Additional Constituents, as proposed by the Administrative Law Judge:

Finding of Fact No. 129. There is insufficient evidence to support the addition of a sampling requirement to the groundwater monitoring system for additional constituents.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

As identified in Finding of Fact No. 129, the Administrative Law Judge determined that there was insufficient evidence to support a finding that additional sampling constituents should be added to the proposed list of constituents to be monitored pursuant to the POC detection ground water monitoring plan.<sup>178</sup> TJFA disagrees with this conclusion because the evidentiary record clearly demonstrates that there are a number of constituents not currently monitored which likely are related to the wastes disposed in the IWU. However, in excepting to this Finding of Fact, TJFA must state that it does not believe additional constituents should be added to the proposed list of constituents to be monitored pursuant to the POC ground water monitoring system because, as identified above, the POC ground water monitoring system itself fails to meet applicable agency rules, and thus cannot be approved as set out in the application.

With regard to the issue of additional monitoring constituents, to ensure that the POC ground water monitoring system at the ACL facility can detect migration of contaminants from the IWU, WMTX should clearly be required to monitor for all constituents that might be contained in the IWU. As addressed by Dr. Kier, simply monitoring the ACL facility for the “detection monitoring constituents,”<sup>179</sup> *i.e.*, those constituents shown on Exhibit City of Austin 7, is not comprehensive enough based on the history of disposal of hazardous and industrial wastes

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<sup>178</sup> See Proposed Order, *supra* note 2, at 23.

<sup>179</sup> See Exh. City of Austin 7, 40 C.F.R. pt. 258, appx. I, Constituents for Detection Monitoring. The Commission’s rule entitled Constituents for Detection Monitoring states:

(a) The owner or operator shall sample and analyze the groundwater monitoring system for the constituents listed in 40 Code of Federal Regulations (CFR) Part 258, Appendix I, effective July 14, 2005, herein adopted by reference.

30 TEX. ADMIN. CODE § 330.419(a).

at the ACL facility. In response to a series of questions regarding those constituents for which monitoring should be conducted at the ACL facility, Dr. Kier testified:

Q. Do you have an opinion concerning the constituents that – any constituents that should be added for detecting – for detection in the monitoring system?

A. Yes.

Q. And what is your opinion?

A. I think that the detection monitoring constituents in Appendix I are insufficient given the history of this landfill, that it needs to have – basically go to Appendix II list, a much more expanded list that would be normally associated with assessment monitoring, and that, in addition, the top 10 to 20 TICs be identified to the extent – and quantified to the extent possible, and that if they can be broken down to a CAS number, then they could be added specifically to the list. In other words, the list needs to be expanded tremendously.<sup>180</sup>

Thus, Dr. Kier concluded, based on his review of over thirty years worth of records, including over twenty years worth of monitoring data, that to ensure the POC ground water monitoring system at the ACL facility is potentially comprehensive enough to identify contaminants of concern migrating from the IWU, the constituents to be monitored would need to include, at a minimum, those constituents identified in TCEQ's rules for assessment monitoring, *i.e.*, 40 C.F.R. Part 258, Appendix II,<sup>181</sup> the top ten to twenty TICs, as identified in previous monitoring at the ACL facility and at the Applied Materials facility, and any additional constituents currently monitored pursuant to the WMTX/City of Austin monitoring program (in order to ensure consistency).

The Commission's MSW rules allow the Executive Director to add inorganic or organic constituents to the detection monitoring constituent list if the additional constituents "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

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<sup>180</sup> Tr. at Vol. 7 at 1364 ln.13 – 1365 ln.5 (Cross Exam (by Holly Noelke) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009).

<sup>181</sup> See 30 TEX. ADMIN. CODE § 330.409(b); *see also* 40 C.F.R. pt. 258, appx. II.

groundwater.”<sup>182</sup> As discussed in detail above, there is ample evidence, both throughout the history of the ACL facility and in the evidentiary record in this proceeding, regarding the types of constituents that can be expected to be in or derived from the waste contained in the IWU. The ACL facility has accepted extremely large quantities of hazardous and industrial wastes over time in what were unlined industrial waste pits and trenches. During its investigation in 1999, ThermoRetec collected and analyzed samples from borings installed at the IWU and found the presence of VOCs, SVOCs, pesticides, polychlorinated biphenyls (PCBs), dioxin/furans, cyanide, and metals.<sup>183</sup> As shown on Exhibit TJFA 24, VOCs, including 1,4-dioxane, methylene chloride, and 1,2,4-trichloro-benzene, have repeatedly been detected in the ground water wells monitored in the vicinity of the IWU. These monitoring results, along with the detailed information about the hazardous and industrial wastes disposed at the ACL facility and the monitoring data from the Applied Materials facility, provide ample justification for the addition of multiple constituents to the list of constituents to be monitored. Thus, if any list of monitoring constituents were to be approved in the future for the ACL facility, such list should include a greatly expanded list of constituents in order to ensure protection of human health and the environment.

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<sup>182</sup> 30 TEX. ADMIN. CODE § 330.419(c). In determining additional constituents, the Executive Director is to consider the following factors:

- (1) the type, 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 coefficient of variation of monitoring parameters or constituents in the groundwater background.

*Id.*

<sup>183</sup> See Exh. TJFA 204, ThermoRetec Report, *supra* note 80, at 039.

But monitoring for additional constituents alone is not enough to ensure that the POC ground water monitoring system can adequately detect releases from the IWU and the Phase I Unit of the ACL facility. As addressed above, the POC ground water monitoring system, as proposed in the application, does not monitor the IWU or the Phase I Unit; therefore, it must be redesigned to ensure that it includes monitoring wells in appropriate locations to detect migration of contamination from those units of the ACL facility. And, also as addressed above, the simple addition of the monitoring wells from the ground water monitoring agreement between the City of Austin and WMTX to the proposed POC ground water monitoring system will not ensure that monitoring wells are placed in appropriate locations and screens placed at the proper depths to detect migration of contaminants from the IWU and the Phase I Unit.

It is not possible to remedy this situation through approval of the application. The current application is fatally flawed because it fails to adequately consider and evaluate the proper list of monitoring constituents, possible ground water flow paths, the existence of the IWU and the Phase I Unit, the POC, *et cetera*. These issues are highly technical and require detailed characterization, and to simply add additional monitoring wells, as proposed by the Administrative Law Judge, or additional constituents to be monitored, even if supported by the evidentiary record, cannot produce a technically sufficient correction to the problem. As identified above, the design of the POC ground water monitoring system contained in the application is technically deficient; therefore, the application must be denied for its failure to adequately address ground water quality and monitoring as required by TCEQ rules.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 129.—There is insufficient evidence to support the addition of a sampling requirement to the groundwater monitoring system for additional constituents. Volatile organic compounds (VOCs), including 1,4-dioxane, methylene chloride, and 1,2,4-trichloro-benzene, have been detected in the ground water monitoring wells monitored in the vicinity of the IWU.

Finding of Fact No. 129A. As recently as 1999 samples of waste in the IWU revealed the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), dioxin/furans, cyanide, and metals.

Finding of Fact No. 129B. The history of disposal of industrial and hazardous waste in the IWU and the evidence of ground water contamination both on-site at the ACL facility and at the Applied Materials facility is sufficient evidence that additional constituents should be added to any approved detection constituent monitoring list for the ACL facility.

Finding of Fact No. 129C. Any approved detection constituent monitoring list should include: (1) the constituents identified for assessment monitoring, 40 C.F.R. Part 258, Appendix II; (2) the top ten to twenty tentatively identified compounds (TICs) identified in previous monitoring at the ACL facility and at the Applied Materials facility; and (3) any additional constituents currently monitored pursuant to the voluntary monitoring agreement between the City of Austin and WMTX.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

**F. *Exceptions Related to Slope Stability. Findings of Fact Nos. 148, 150, 151, and 157 and Conclusions of Law Nos. 5, 7 through 11, 21, 22, and 33.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Slope Stability, as proposed by the Administrative Law Judge:

Finding of Fact No. 148. The Application contains a geotechnical report that describes and summarizes the geotechnical properties of the subsurface and discusses the stability of the soils for the uses for which they are intended.

Finding of Fact No. 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 of 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.

Finding of Fact No. 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.

Finding of Fact No. 157. The Application includes adequate analysis of and provisions to ensure slope stability.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 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.

**1. Unstable Area**

The discussion in the portion of the Proposal for Decision identified as “Unstable Area” repeatedly mischaracterizes the testimony of TJFA’s engineering expert witness, Mr. Chandler, and thus misrepresents the evidence presented regarding this issue. Before addressing the mischaracterizations, it is first important to identify the applicable regulatory requirements and what information is, and is not, contained in the application.

The regulatory standard for structural stability of a MSW landfill is found in TCEQ’s MSW rules at 30 TEX. ADMIN. CODE § 330.559, which provides:

For the purposes of this section, an unstable area is defined to be 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. Owners or operators of new municipal solid waste landfills, existing landfill units, and lateral expansions located in an unstable area shall demonstrate that engineering measures have been incorporated into the landfill unit’s design to ensure that the integrity of the structural components of the landfill unit will not be disrupted. The owner or operator shall submit the demonstration with a permit application or a permit amendment application. The demonstration must become part of the operating record once approved. The owner or operator shall consider the following factors, at a minimum, when determining whether an area is unstable:

- (1) on-site or local soil conditions that may result in significant differential settling;
- (2) on-site or local geologic or geomorphologic features; and

(3) on-site or local human-made features or events (both surface and subsurface).<sup>184</sup>

While TCEQ's rules are clear that the application for a lateral expansion, which is how WMTX has characterized its application, must contain the demonstration outlined in 30 TEX. ADMIN. CODE § 330.559, the application includes no such demonstration for the expansion area, especially with regard to the portion of the expansion that will be constructed over existing, unlined, pre-Subtitle D waste disposal cells, *i.e.*, the "piggyback area."

To meet the requirements of Section 330.559 the application relies on a sixteen-year old Unstable Area Assessment Report.<sup>185</sup> With regard to the unstable areas demonstration the application states: "An unstable area assessment was previously prepared for the Austin Community Recycling and Disposal Facility by Cook-Joyce, Inc., in November 1993. The assessment indicates that no unstable area exists at, or adjacent to, the site."<sup>186</sup> The problem with this is simple: in 1993 WMTX was not proposing to construct new MSW disposal cells over existing pre-Subtitle D waste disposal areas. Because of that, the 1993 Unstable Area Assessment Report does not consider the effect of the poor foundation conditions, *i.e.*, the old waste, on the structural components of the expansion landfill.

WMTX claimed that all of the calculations necessary to make the unstable area location restriction demonstration are included in the application. This claim is apparently the basis for a favorable Proposal for Decision on this issue, but as discussed in more detail below, many of the calculations that would support an unstable area analysis are fatally flawed because they are based on unscientific methods and unfounded assumptions.

In its discussion of unstable areas, the Proposal for Decision takes issue with much of Mr. Chandler's testimony, but in doing so grossly mischaracterizes that testimony. For example,

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<sup>184</sup> 30 TEX. ADMIN. CODE § 330.559.

<sup>185</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 536 (Vol. I, Pts. I&II, appx. B-4, Cook-Joyce, Inc., "Unstable Area Assessment Report, Austin Community Landfill" (Nov. 22, 1993)).

<sup>186</sup> See *id.* at Tech. Complete 30 (Vol. I, Pts. I&II § 3.3.5 at 24).

with regard to the issue of slope failures raised by Mr. Chandler, the Proposal for Decision states: “On cross-examination, Mr. Chandler agreed that, with the exception of the concerns regarding the piggyback liner, the instances of slope failure that he pointed to for support of his conclusion were operational rather than design failures.”<sup>187</sup> While the slides at Waste Management’s Skyline Landfill, near Dallas, the City of Irving Landfill,<sup>188</sup> the ACL facility itself,<sup>189</sup> and the BFI Sunset Farms Landfill<sup>190</sup> were triggered by operational factors, there are two problems with the characterization in the Proposal for Decision. First, Mr. Chandler was identifying that the application does not include operating instructions that would avoid the same type of failure at the ACL facility. Second, all four examples of slides document “poor foundation conditions” and “unstable area” conditions for the same and similar geology and landfill designs.<sup>191</sup>

The Proposal for Decision also includes the following mischaracterization of Mr. Chandler’s testimony: “He admitted he had designed geosynthetic liner/leachate collection system interfaces.”<sup>192</sup> This was in response to Mr. Chandler’s opinion that the design described in the application includes a significant number of geosynthetic liner/leachate collection system

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<sup>187</sup> Proposal for Decision, *supra* note 1, at 40.

<sup>188</sup> See generally Exh. TJFA 400, *supra* note 14, at 79 ln.13 – 82 ln.4.

<sup>189</sup> See *id.* at 92 ln.1 – 97 ln.17; see also Exh. TJFA 433, Letter from Rusty Fusilier, P.E. & Steven M. Hamilton, R.E.P., SCS Engineers, to Jerry Allred, Texas Natural Resource Conservation Comm’n (July 26, 1999), at 001-002; Exh. TJFA 433, SCS Engineers, “Austin Community Recycling and Disposal Facility, Repair Report for a Portion of the Sidewall Drainage Layer for Cell WD-3” (July 1999), at 003-016; Exh. TJFA 434, Letter from Jerry Allred, Texas Natural Resource Conservation Comm’n, to Jack Steele, Waste Mgmt., Inc. (Sept. 9, 1999); Exh. TJFA 435, Letter from Jack Steele, WMTX, to Jerry Allred, Texas Natural Resource Conservation Comm’n (Sept. 23, 1999); Exh. TJFA 436, Letter from Jerry Allred, Texas Natural Resource Conservation Comm’n, to Jack Steele, Waste Mgmt., Inc. (Oct. 4, 1999), at 001-002; Exh. TJFA 436, Letter from Jerry Allred, Texas Natural Resource Conservation Comm’n, to Jack Steele, Waste Mgmt., Inc. (Jan. 24, 2000), at 003.

<sup>190</sup> See Exh. TJFA 400, *supra* note 14, at 107 lns.22-25.

<sup>191</sup> The Skyline Landfill is situated in the same geologic materials present at the ACL facility. See *id.* at 79 lns.23-24.

<sup>192</sup> Proposal for Decision, *supra* note 1, at 40.

(“LCS”) interfaces, which are “notorious for low strength and instability.”<sup>193</sup> It appears the Administrative Law Judge has confused the fact that Mr. Chandler has designed geosynthetic liner/LCS interfaces with the conclusion that *any* geosynthetic interface design is adequate and stable. Such a conclusion simply is not true generally, and is clearly not true in this case.

The Proposal for Decision again mischaracterizes Mr. Chandler’s testimony, this time with regard to the proposed underdrain system. Mr. Chandler identified that the application described an underdrain system, and as described in the application, the underdrain system was problematic.<sup>194</sup> Regarding Mr. Chandler’s list of concerns with the underdrain system, the Proposal for Decision states: “He agreed that his concern with an “underdrain” system used during the construction phase would only come into play “if construction was delayed unnecessarily.”<sup>195</sup> Mr. Chandler did voice his personal opinion that an underdrain system is probably not needed at the ACL facility, but his true concerns with the underdrain system were that WTMX has failed to provide supporting calculations and operating requirements for the underdrain system.<sup>196</sup> Such calculations and operating requirements are necessary and required to demonstrate that the application complies with applicable MSW rules.

The Proposal for Decision goes on to discuss the provisions in the application for confirmatory testing of the geosynthetic materials; however, the Proposal for Decision makes no note of the limited number of confirmatory tests, an issue that was specifically raised at the Hearing on the Merits as a significant problem with the application. While WMTX boasted that conformance shear strength testing will be required during construction of the liners, it, and the Proposal for Decision, failed to note the very limited, almost meaningless, testing requirements.

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<sup>193</sup> Exh. TJFA 400, *supra* note 14, at 43.

<sup>194</sup> *See id.* at 91 lns.10-16.

<sup>195</sup> Proposal for Decision, *supra* note 1, at 40.

<sup>196</sup> *See, e.g.*, Exh. TJFA 400, *supra* note 14, at 143 lns.7-17.

The application only requires one interface shear strength test for an entire landfill cell, regardless of its size.<sup>197</sup> By contrast, WMTX's witness, Ms. Beth Gross, Ph.D., P.E., indicated that twenty tests or more would be required for other soil properties, *e.g.*, liquid limit, plastic limit, and plasticity index, based on the size of the cell.<sup>198</sup> The significance of this is that one small sample used for an interface shear strength test is very unlikely to characterize all of the soil-geosynthetic interfaces to be used in the construction and/or identify weak soils that may be in a residual strength condition. The single soil test required in the application is highly unlikely to indicate whether the soils will actually have the strength to prevent slope failure.

Contrary to the claim in the Proposal for Decision, *i.e.*, "Clearly, Mr. Chandler's concerns have been answered,"<sup>199</sup> Mr. Chandler's concerns are not accurately or adequately addressed in the Proposal for Decision, nor were they addressed, and sometimes not even refuted, by WMTX.

Lastly in this section of the Proposal for Decision, the Administrative Law Judge states:

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.<sup>200</sup>

In support of these statements, the Proposal for Decision cites to the following testimony offered by Mr. Chandler:

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<sup>197</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1101 (Vol. II, Pt. III, Att. 3, appx. E at tbl. 3E.4); see also Tr. at Vol. 12 at 2630 lns.8-15 (Cross Exam (by Erich Birch) of Beth Gross, Ph.D., P.E.) (April 13, 2009).

<sup>198</sup> See Tr. at Vol. 12 at 2627 ln.12 – 2629 ln.21 (Cross Exam (by Erich Birch) of Beth Gross, Ph.D., P.E.) (Apr. 13, 2009); see also Exh. APP-202, *supra* note 11, at Tech. Complete 1097 (Vol. II, Pt. III, Att. 3 appx. E at tbl. 3E-2).

<sup>199</sup> Proposal for Decision, *supra* note 1, at 41.

<sup>200</sup> *Id.*

- Q. Okay. You're not aware of anyone else who has ever taken that position in a permitting proceeding in Texas, are you?
- A. At least none of the ones that I've attended.
- Q. And to your knowledge, TCEQ has never interpreted the unstable area restriction in its regulation to require stability analysis, have they?
- A. I don't know.
- Q. And, in fact, in your work for applicants on municipal solid waste permits, you have never conducted stability analysis as part of the unstable area restriction demonstration, have you?
- A. At the time we did these stability analyses, that would be correct.
- Q. You did not previously interpret the unstable area restriction regulation to require stability analyses, did you?
- A. I did not.<sup>201</sup>

In other words, Mr. Chandler testified that he had never attended a permitting proceeding in Texas where the argument had been made, and he did not know TCEQ's position regarding the interpretation. Also, while Mr. Chandler has not previously provided a stability analysis to meet the unstable area location restriction in the applications on which he has worked, it does not mean that such an analysis is not necessary in this case in order for WMTX to prove that engineering measures have been incorporated into the design of the landfill to ensure that the integrity of the structural components of the landfill unit will not be disrupted. This is especially true where the piggyback liner for the expansion of the ACL facility will be placed over an unlined, pre-Subtitle D disposal area and this application is the first application including a piggyback liner to be considered under the Commission's new MSW rules.

With regard to whether Mr. Chandler was aware of others who agree with his interpretation of the unstable area location restriction, the answer is clearly answered "yes" based on his own prefiled testimony.<sup>202</sup> For example, EPA's SOLID WASTE DISPOSAL FACILITY

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<sup>201</sup> Tr. at Vol. 8 at 1656 lns.7-24 (Cross Exam (by Bryan Moore) of Pierce L. Chandler, Jr., P.E.) (Apr. 7, 2009).

<sup>202</sup> See Exh. TJFA 400, *supra* note 14, at 44 lns.15-19 & 46 lns.15-19.

CRITERIA: TECHNICAL MANUAL<sup>203</sup> (“Technical Manual”), provides technical guidance on “unstable areas,” specifically identifying that a “a closed landfill as the foundation for a new landfill (‘piggy-backing’) may be unstable unless the closed landfill has undergone complete settlement of the underlying wastes.”<sup>204</sup> Thus, EPA’s Technical Manual identifies stability analyses as part of the unstable areas determination. Similarly, Dr. Bob Gilbert of the University of Texas at Austin,<sup>205</sup> a recognized authority in geotechnical engineering, with technical interests in slope stability, waste containment, and performance reliability and risk management for geotechnical and geoenvironmental systems, has identified that stability analyses are part of the unstable area location restriction.<sup>206</sup>

In conclusion, WMTX failed to comply with the requirements of the unstable area location restriction because it has failed to demonstrate that engineering measures have been incorporated into the landfill unit’s design to ensure that the integrity of the structural components of the landfill unit will not be disrupted. For all of these reasons, the appropriate Findings of Fact should be revised, and the application denied.

## 2. Stability Analyses

As with the unstable area location restriction discussion above, the Proposal for Decision, when addressing the stability analysis, fails to accurately analyze the entirety of the evidence

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<sup>203</sup> Exh. TJFA 405, OFFICE OF SOLID WASTE & EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY, SOLID WASTE DISPOSAL FACILITY CRITERIA: TECHNICAL MANUAL, EPA530-R-93-017 (Nov. 1993, revised Apr. 1998)

<sup>204</sup> *Id.* at 48 (017). While the Technical Manual references “closed” landfills, the true concern to be addressed is that of settlement of the underlying waste. Settlement of the underlying waste is a concern here where the piggyback liner and new waste disposal cell will be placed over unlined, pre-Subtitle D disposal areas of the ACL facility.

<sup>205</sup> Dr. Gilbert is the Hudson Matlock Professor in Civil Engineering at the University of Texas at Austin. *See* Exh. TJFA 400, *supra* note 14, at 45 lns.24-25.

<sup>206</sup> *See id.* at 45 lns.2-7; *see also* Exh. TJFA 406, Bob Gilbert, Ph.D., “Shear Strength and Slope Stability” at 11 (Sept. 30, 2008), at 002.

presented. Most concerning, though, is the shifting of the burden of proof onto the protestants to show that the existing waste that will form the foundation for the piggyback liner is unstable. The Proposal for Decision states: “Something more is needed to prove that Applicant’s existing waste mass in the West Hill is unstable, yet there is no proof.”<sup>207</sup> Apparently, it is the Administrative Law Judge’s belief that the protestants must prove that expansion of the ACL facility will not meet applicable regulatory requirements, instead of WMTX’s burden to prove that it will.

Such a shift in the burden of proof simply is not appropriate and is in clear violation of TCEQ’s rules at 30 TEX. ADMIN. CODE § 80.17(a).<sup>208</sup> It is always the applicant’s burden—here, WMTX’s burden—to demonstrate that all necessary design conditions, including the stability of the foundation of the proposed disposal units, meet applicable requirements and will be protective of human health and welfare and the environment. The Administrative Law Judge cannot shift that burden, and because through his consideration of this issue the burden was clearly shifted onto protestants, the Commission must revise the findings of fact to appropriately represent the evidence presented in this proceeding and deny the application.

Overlooked by the Proposal for Decision is the clear evidence that there are significant problems with slope stability, as described in the application. The Taylor Marl clays are generally considered to be a good geologic formation for the siting of MSW landfills. However, such soils are subject to dramatic loss of strength over time due to strain softening, and proper design is crucial to the structural stability when using these soils.<sup>209</sup> There have been problems associated with these soils in the construction of MSW landfill liners. Two of the most widely

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<sup>207</sup> Proposal for Decision, *supra* note 1, at 43.

<sup>208</sup> See 30 TEX. ADMIN. CODE § 80.17(a) (“The burden of proof is on the moving party by a preponderance of the evidence, except as provided in subsections (b) – (d) of this section.”). Subsections (b) through (d) of Section 80.17 do not provide any exception that shifts the burden of proof from WMTX to the protestants in this proceeding.

<sup>209</sup> See Exh. TJFA 400, *supra* note 14, at 53 lns.5-17.

recognized landfill slope failures occurring in Texas took place at Waste Management's Skyline Landfill and the City of Irving Landfill.<sup>210</sup> As identified above, slope failures also have occurred at the ACL facility<sup>211</sup> and at the adjacent BFI Sunset Farms Landfill.<sup>212</sup>

The soils present at the ACL facility that will be used to construct the landfill slopes are prone to slope failures, as evidenced by a prior slope failure at the ACL facility in 1999, due to the very nature of the clays at the site. The ACL facility is situated in the Taylor Marl, which is also referred to as the Sprinkle Formation in Travis County. The Guidebook to the Geology of Travis County states: "The Sprinkle is one of the most unstable formations in the Austin area; it has caused many construction failures . . . ."<sup>213</sup>

In his prefiled testimony, Mr. Chandler discusses concerns with the application's reliance on "peak" soil strength for design purposes, instead of the more appropriate "residual" strength, for many of the slope stability calculations in the application.<sup>214</sup> A recognized text, SOIL STRENGTH AND SLOPE STABILITY, identifies concerns with the use of "stiff-fissured clay" soils and discusses slope failures involving these types of soils.<sup>215</sup> Residual strength values are of particular importance because of the limited ability of these soils to resist sliding once a failure

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<sup>210</sup> See generally *id.* at 79 ln.13 – 82 ln.4. Waste Management's Skyline Landfill is in identical geologic conditions and the City of Irving Landfill is in very similar geologic conditions. See *id.* at 79 lns.18-24.

<sup>211</sup> See *id.* at 92 ln.1 – 97 ln.17; see also Exh. TJFA 433, July 26, 1999 Letter, *supra* note 189, at 001-002; Exh. TJFA 433, SCS Repair Report, *supra* note 189, at 003-016; Exh. TJFA 434, *supra* note 189; Exh. TJFA 435, *supra* note 189; Exh. TJFA 436, October 4, 1999 Letter, *supra* note 189, at 001-002; Exh. TJFA 436, January 24, 2000 Letter, *supra* note 189, at 003.

<sup>212</sup> See Exh. TJFA 400, *supra* note 14, at 107 lns.22-25.

<sup>213</sup> Exh. TJFA 31, Keith Young, "Chapter 2: Rocks of the Austin Area," GUIDEBOOK TO THE GEOLOGY OF TRAVIS COUNTY, at TJFA 084581.

<sup>214</sup> See Exh. TJFA 400, *supra* note 14, at 53, lns.13-17.

<sup>215</sup> See Exh. TJFA 411, J. MICHAEL DUNCAN & STEPHEN G. WRIGHT, SOIL STRENGTH AND SLOPE STABILITY at 49 (021). Duncan & Wright states: "Heavily overconsolidated clays are usually stiff, and they usually contain fissures. *Id.* It continues: "In clays without coarse particles, the decline to residual strength is accompanied by formation of a slickensided surface along the shear plane." *Id.* And, finally, it states: "Skempton also showed that once a failure has occurred and a continuous slickensided surface has developed, only the residual shear strength is available to resist sliding." *Id.* at 50 (022).

surface has developed. Of particular concern with these clay soils is that the actual strengths of the clays in the field are less than the strengths of the same material measured in the laboratory.<sup>216</sup>

During his rebuttal testimony, Mr. Dominguez testified that he had not observed stiff-fissured clays at the ACL facility,<sup>217</sup> but the application states unequivocally that “the site soils consist of heavily over-consolidated clays underlain by rock.”<sup>218</sup> More significantly, Mr. Dominguez testified that if stiff-fissured clays are present at the site of the ACL facility, it would change his opinion regarding the residual strength of the clays in the area and that he would have concerns about potential stability, stating:

Q. If there are still-fissured clays at the ACL site, would that change your opinion regarding the residual strength of the clays in that area?

A. Well, yeah. I mean, if they were present and there was water available, I think there would be concerns about potential stability.<sup>219</sup>

In not accounting for the stiff-fissured clays in his design of the ACL facility, Mr. Dominguez seems to have failed to even consider all of the information that he included in the application. The Proposal for Decision does not acknowledge this inconsistency and the inherent flawed nature of the application because of this inconsistency.

Boring logs contained in the application indicate that, contrary to Mr. Dominguez’s observations, stiff-fissured clays are present at the ACL facility. At least sixteen borings contained in the application identify soils with characteristics of stiff-fissured clays present at the

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<sup>216</sup> *Id.* at 49 & 51 (021 & 023).

<sup>217</sup> *See* Tr. at Vol. 12 at 1270 lns.8-10 (Cross Exam (by Erich Birch) during Rebuttal Testimony of Charles G. Dominguez, P.E.) (Apr. 13, 2009).

<sup>218</sup> Exh. APP-202, *supra* note 11, at Tech. Complete 912 (Vol. II, Pt. III, Att. 3 § 4.2.4 at 11).

<sup>219</sup> *See* Tr. at Vol. 12 at 2570 lns.11-19 (Cross Exam (by Erich Birch) during Rebuttal Testimony of Charles G. Dominguez, P.E.) (Apr. 13, 2009).

ACL facility.<sup>220</sup> These borings identify the presence of slickensides and fissures, both of which are clear indicators of residual strength characteristics for heavily-overconsolidated, stiff-fissured clay soils.<sup>221</sup> Interestingly, all of these boring logs were done by other consultants over a period of years at the ACL facility. Unlike the previous borings, the 2005 borings logged by Golder Associates fail to identify fissures or slickensides. The use of the stiff-fissured clays, as present at the ACL facility, for construction of landfill structural components raises serious concerns about the slope stability, as acknowledged by Mr. Dominguez.

The stability of liner slopes and finish contour slopes is of concern for the proposed expansion of the ACL facility. The application fails to demonstrate that slopes will be stable during all phases of landfill construction, waste disposal, and closure. Further, historical failures at the ACL facility and other landfills constructed in the Taylor clay provide undisputed evidence that slope failures are of concern and do occur.

The key areas of concern in the slope designs for the ACL facility are that questionable assumptions were made during the design process, and the potential failure analyses did not consider worst case scenarios. The stability evaluation was based on soil strength properties from a proprietary database maintained by Golder Associates, the employer of the engineer-of-

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<sup>220</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1546 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-8P); see also *id.* at Tech. Complete 1548 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-9); *id.* at Tech. Complete 1550 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-10); *id.* at Tech. Complete 1553 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-11P); *id.* at Tech. Complete 1555 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-12); *id.* at Tech. Complete 1558-59 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-13P); *id.* at Tech. Complete 1561 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-14P); *id.* at Tech. Complete 1563 (Vol. III, Pt. III, Att. 4, appx. E at Soil Borehole Log CB-15); *id.* at Tech. Complete 1566 (Vol. III, Pt. III, Att. 4, appx. E at Monitor Well Installation Well No. 1A); *id.* at Tech. Complete 1570 (Vol. III, Pt. III, Att. 4, appx. E at Monitor Well Installation Well No. 4); *id.* at Tech. Complete 1578 (Vol. III, Pt. III, Att. 4, appx. E at Log of Boring MW-10); *id.* at Tech. Complete 1587 (Vol. III, Pt. III, Att. 4, appx. E at Log of Boring MW-33); *id.* at Tech. Complete 1618 (Vol. III, Pt. III, Att. 4, appx. E at Log of Boring PZ-33); *id.* at Tech. Complete 1676 (Vol. III, Pt. III, Att. 4, appx. E at Log of Boring PZ-31); *id.* at Tech. Complete 1677 (Vol. III, Pt. III, Att. 4, appx. E at Log of Boring MW-32) (Attachment 8).

<sup>221</sup> See Exh. TJFA 411, *supra* note 215, at 49-50 (021-022).

record for the application. The actual calculations used a design strength value based on an average of the strengths of the soils in the database. The problem with this approach is that the majority of the soils in the database are not applicable to the soils available at the site of the ACL facility, and an average of the soil properties therefore yields an unrealistically high strength value. The bottom line is that the stability calculations are based on invalid data, and thus, the calculations themselves are simply wrong.

Mr. Dominguez's response to this situation is that the actual construction is based on field data for the soils. However, as identified during the cross examination of Dr. Gross, rebuttal witness for WMTX, and as discussed above, there is only one soil strength sample required pursuant to the application for an entire landfill cell.<sup>222</sup> Further, if the soils were actually sampled and the strength values were lower than the design basis values, then to correct the situation would require that someone actually recognize in the field that the soil strength value was lower than the value used in the calculations in the application (an application that by the time of the field test would likely be many years old and would still be over 3,480 pages long), and that upon recognizing this design flaw would either (1) redesign the landfill slopes to accommodate the lower strength values, or (2) import new soils from another source that have the proper strength values so that the landfill liner slopes could be safely constructed. An even greater concern is the tendency of the stiff-fissured clays at the site to exhibit greater strength in the laboratory than they do in the field.<sup>223</sup> The single soil test required in the application is highly unlikely to indicate whether the soils will actually have the strength to prevent slope failure.

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<sup>222</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1101 (Vol. II, Pt. III, Att. 3, appx. E at tbl. 3E.4). Note 2 to Table 3E.4 requires one test on the sideslope and one test on the floor; however, if both the sideslope and floor are composed of the same components a single test is acceptable. *See id.*

<sup>223</sup> See Exh. TJFA 411, *supra* note 215, at 49 (021).

Further, the design calculations were based on the most optimal design and field conditions in order to demonstrate proper slope stability. The strength values of the soils vary based on whether the soils are in “peak” strength condition or “residual” strength condition. The ACL facility is designed based on an assumption that the peak strengths, which are the highest strengths of the soils, would be present throughout the entire construction and waste disposal stages of the application. In fact, the soils may instead be in a much lower residual strength condition based on activities at the site that have placed the soils in a residual strength state. The bottom line is that the liner design could be based on values which are destined for failure at some time during construction and operation of the ACL facility.

The application also does not consider worst case scenarios in the failure analyses. Most notably the friction angles between the various components of the composite liner design indicate that the “weak link” of the design actually has not been evaluated. This error was tied to the soil strength assumptions identified above. As previously discussed, incorrect assumptions about the strength of the soils resulted in incorrect assumptions about which interface of the composite liner design was actually the weak link. If the correct soil values had been used, then the friction angle at the actual weak link of the composite liner would have revealed that failures are destined to occur at the soil to flexible membrane interface.

It also must be noted that the Proposal for Decision again mischaracterizes Mr. Chandler’s testimony, this time as it relates to whether the clay shear strengths in the application were determined through site-specific testing and whether they were representative.<sup>224</sup> Contrary to the assertion in the Proposal for Decision, Mr. Chandler never

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<sup>224</sup> See Proposal for Decision, *supra* note 1, at 41.

conceded that the clay shear strengths contained in the application were from site specific testing or that the clay shear strengths in the application were representative.<sup>225</sup>

Slope failures are avoidable occurrences at landfills. In fact, structurally stable facilities are commonly constructed in and on Taylor clay. Facilities that take into account the inherent instability of the clay and include features in the design to compensate for the clay's structural limitations are significantly less likely to fail. Likewise, the application could have included certain design elements that would allow the liners to be safely constructed in the Taylor clay. However, this application did not include those design elements, and this application must be denied because it will result in the construction of landfill components that are unstable in violation of TCEQ rules. And, as argued above, the Findings of Fact and related Conclusions of Law are fatally flawed because they are based on the Administrative Law Judge's inappropriate shifting of the burden of proof onto protestants in violation of 30 TEX. ADMIN. CODE 80.17(a).

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 148. The Application contains a geotechnical report that does not adequately describe and summarize the geotechnical properties of the subsurface as required by TCEQ MSW rules. The Application also fails to and discuss the suitability stability of the soils for the uses for which they are intended in compliance with TCEQ MSW rules.

Finding of Fact No. 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 of 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. The ACL facility is situated in the Taylor Marl, which is also referred to as the Sprinkle Formation in Travis County. The Sprinkle Formation is one of the most unstable formations in the Austin area; it has caused many construction failures.~~

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<sup>225</sup> See Tr. at Vol. 8 1680 ln.2 – 1681 ln.8 (Cross Exam (by Bryan Moore) of Pierce L. Chandler, Jr., P.E.) (Apr. 7, 2009); see also Exh. TJFA 400, *supra* note 14, at 49 lns.8-19.

Finding of Fact No. 150A. The ACL facility has previously experienced slope stability problems involving the liner system.

Finding of Fact No. 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. Stability analyses contained in the application were based on unconservative and non-representative shear strength value inputs. Shear strengths were average peak strengths largely obtained from a proprietary database non-specific to the site of the ACL facility and design of the ACL facility. Assumptions used in the stability analyses are not included as part of the site operating plan requirements. The reported factors of safety have little relevance, although post-filling factors of safety are lower than EPA-recommended values (1.5), as contained in the Subtitle D Technical Manual.~~

Finding of Fact No. 157. The Application does not include adequate analysis of and provisions to ensure slope stability.

Conclusion of Law No. 5. WMTX failed to ~~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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to ~~includes~~ all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not ~~violates~~ 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 33. Applicant has not 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.

**G. *Exceptions Related to Proposed Liner and Leachate Collection System. Findings of Fact Nos. 94 through 97, 107, 109, 112, and 113 and Conclusions of Law Nos. 5, 7 through 11, 21, and 22.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to the Proposed Liner and Leachate Collection System, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 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%.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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.

Finding of Fact No. 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 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.

Finding of Fact No. 113. The evidence sufficiently demonstrates that there are adequate provisions to protect ground water in compliance with the Commission's rules.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

**1. Settlement Calculations**

The Findings of Fact related to settlement of waste in the area of the piggyback liner are gravely flawed because they rely exclusively on the fatally flawed settlement analysis performed by WMTX and included in the application. To call the settlement analysis flawed is almost an understatement. It is not scientifically sound; it is not based on sound engineering practices; and the information utilized to conduct the analysis is not substantiated by documentary support. Simply put, the waste settlement calculations and the related analyses are absurd.

The application proposes to construct an engineered composite liner system over pre-Subtitle D waste disposed at the ACL facility. The proposed design involves a composite clay, geotextile, and geomembrane liner system being placed on top of previously disposed waste at the ACL facility, *i.e.*, a piggyback liner.<sup>226</sup> WMTX has failed to demonstrate that the design proposed for the ACL facility is stable as it is intended to be used at the ACL facility. There are

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<sup>226</sup> It should also be noted that this is the first piggyback liner design to be considered by the Commission pursuant to the new MSW rules. If the Commission approves the approach used by WMTX in this case, it will not doubt be used as the standard for all future piggyback liner designs in Texas. As noted above, the current design is fraught with numerous engineering deficiencies, is poorly conceived, and is based on invalid assumptions.

three principle defects with the design and the analyses presented by WMTX in support of the design.

The approach used in the application to predict waste settlement under the piggyback liner was to measure landfill elevation changes over a nine-year period at specific locations by the use of aerial topographical surveys. The manner in which the aerial topographical surveys are used for this purpose is fraught with errors. First, the accuracy of the surveys themselves is unknown and could have a significant impact on the validity of this entire approach to measuring settlement. Under cross-examination, Mr. Dominguez, the engineer-of-record for the application and the person placing reliance on the surveys for the entirety of the design of the piggyback liner, did not know the accuracy of the surveys. Specifically, Mr. Dominguez testified:

Q. And do you know how accurate the topo maps were as far as reading elevations?

A. I don't know what the accuracy of the maps were.<sup>227</sup>

In addition, the use of the data collected is totally unscientific and cannot form the basis of good engineering practices. So-called "good" data points were used in the study, but "bad" data points were excluded. "Good" data points were those tending to show that the ACL facility was decreasing in elevation, *i.e.*, tending to show that settlement was occurring, whereas "bad" data points included those showing that the ACL facility was increasing in height instead of decreasing. The Proposal for Decision's only comment on the excluded data states: "However, Mr. Dominguez testified, the data that were excluded were taken from locations where soil stockpiles had been placed, and, therefore, were not representative."<sup>228</sup> While this was part of Mr. Dominguez's testimony, it is only part of the story, and certainly overlooks what Mr. Dominguez did not know about the data.

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<sup>227</sup> Tr. at Vol. 3 at lns.3-6 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>228</sup> Proposal for Decision, *supra* note 1, at 43.

Mr. Dominguez had no documentation to account for the increase in height, nor, for that matter, did Mr. Dominguez have documentation to account for the decreases in height that seemed out of the ordinary. Mr. Dominguez had no documentation to identify exactly where stockpiles had been located, when they had been present, or when they had been removed. He simply assumed, based on anecdotal information from his client, WMTX, and topographical surveys, that there had been stockpiles present. He did no independent research to coordinate the inconsistent data with possible stockpiling in the area. In other words, he really does not know, nor could he identify, why the data were inconsistent.

In addition, the definition of “bad” versus “good” data was applied inconsistently by Mr. Dominguez. A brief review of just part of the data relied upon by Mr. Dominguez demonstrates the lack of scientific analysis and the inconsistencies that went into the analysis of the settlement data. The following is an excerpt from the table of settlement data in the application:<sup>229</sup>

	Date	4/4/98	7/26/99	4/21/00	4/25/01	5/21/02	9/23/03	5/4/04	3/8/05	2/26/06
Pt. No.	Cumulative Days	0	478	748	1117	1508	1998	2222	2530	2885
1	Topo. Elev.	<b>705.0</b>	<b>703.9</b>	<b>703.7</b>	<b>703.5</b>	<b>702.3</b>	<i>702.8</i>	<b>702.6</b>	<b>702.6</b>	<b>702.0</b>
2		<b>708.5</b>	<b>706.3</b>	<i>706.7</i>	<b>706.7</b>	<b>705.6</b>	<b>705.2</b>	<i>705.2</i>	<i>705.2</i>	<i>708.2</i>
3		<b>698.3</b>	<b>697.1</b>	<i>698.1</i>	<i>698.1</i>	<b>697.1</b>	<b>696.5</b>	<i>696.5</i>	<i>697.1</i>	<i>712.1</i>
4		<b>713.7</b>	<b>713.6</b>	<b>712.4</b>	<i>712.4</i>	<b>710.7</b>	<i>710.8</i>	<i>710.9</i>	<b>710.6</b>	<b>709.9</b>
5		<b>718.8</b>	<b>716.8</b>	<i>717.5</i>	<i>717.5</i>	<b>715.9</b>	<i>716.4</i>	<b>715.8</b>	<i>716.0</i>	<b>715.8</b>

Note: *Italicized values neglected (i.e., excluded).*

<sup>229</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1213 (Vol. II, Pt. III, Att. 3, appx. F.1., Settlement Data Analysis, at Sheet 2 of 20).

For Point No. 1, the data from September 23, 2003 (702.8) was excluded, but the data for May 4, 2004 (702.6) was not, even though it still showed a higher elevation than measured on May 21, 2002 (702.3). Also, the data from March 8, 2005 (702.6) was not excluded even though it was not a decrease when compared to May 4, 2004 (702.6). Similarly, for Point No. 2, the data from April 25, 2001 (706.7) is not excluded even though it was not a decrease when compared to April 21, 2000 (706.7). Conversely, the data from May 4, 2004 (705.2), and March 8, 2005 (705.2) are excluded because they are not a decrease when compared to September 23, 2003 (705.2). The same is true for a comparison of the data between May 4, 2004 (696.5), and September 23, 2003 (696.5), for Point No. 3. And, even stranger, the data for Point No. 3 for May 21, 2002 (697.1), is not excluded though it is identical to the data from July 26, 1999 (697.1), and the two intervening dates had shown increases over the July 26, 1999 data. These types of inconsistencies are common throughout the data that forms the entire basis for the settlement analysis in the application.

Ultimately, forty-three of the 112 data points, *i.e.*, over thirty-eight percent of the data points, were excluded by WMTX simply because they were not producing expected results.<sup>230</sup> Obviously what WMTX should have excluded was the entire study because the “bad” data points make it abundantly clear that the approach was unreliable and only producing bad data. The study was producing clearly invalid data showing that the ACL facility was expanding in places instead of settling, and there was no uniformity in how the data was were, and thus, there can be no scientific certainty associated with the resulting settlement data analyses. Any reliance on these data is in error.

In addition, the time frame used in determining the compression index (*i.e.*, slope of best-fit linear regression of time versus strain data) is problematic, but the Proposal for Decision

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<sup>230</sup> See Tr. at Vol. 3 at 410 Ins.7-14 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

dismisses out of hand the concerns raised by TJFA's witness, Mr. Chandler, and all of the documentary evidence supporting his concerns. Instead, the Proposal for Decision relies exclusively on the opinions of Mr. Dominguez.

Mr. Dominguez clearly understood the difference between primary (short-time) settlements and secondary (long-time) settlements.<sup>231</sup> Accordingly, it is important to note that the application utilized short-time analyses using year 1998 as the beginning time point to analyze the empirical settlement data.<sup>232</sup> However, the resulting short-time compression index was used to calculate long-time settlement. If the beginning time for plotting settlement data had been 1992, as Mr. Dominguez indicated was the appropriate time in his rebuttal testimony,<sup>233</sup> an entirely different and much steeper linear regression fit would have been obtained for the data due to the inherent nature of using a logarithmic scale for time. WMTX incorrectly mixed short-time data analysis with long-time settlement calculations. The significant increase in compression index (*i.e.*, slope of best-fit line) would more closely approximate long-time or secondary settlement. If the larger compression index had been appropriately used, significantly more settlement would have been predicted. Since the settlement calculations in the application were based on the flawed and incomplete settlement data analysis, such settlement calculations are clearly invalid.

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<sup>231</sup> See *id.* at Vol. 12 at 2548 ln.25 – 2549 ln.11 (Cross Exam (by Erich Birch) during Rebuttal Testimony of Charles G. Dominguez, P.E.) (Apr. 13, 2009).

<sup>232</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1214 (Vol. II, Pt. III, Att. 3, appx. F.1 at Sheet 3 of 20); see also Tr. at Vol. 3 at 385 lns.6-7 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>233</sup> See Tr. at Vol. 12 at 2549 ln.25 – 2550 ln.2 (Cross Exam (by Erich Birch) during Rebuttal Testimony of Charles G. Dominguez, P.E.) (Apr. 13, 2009). The settlement data was analyzed in the application assuming that waste was last placed in 1998; then, Mr. Dominguez testified during WMTX's rebuttal case, that he used the "median" last disposal date of 1992 for long-term settlement calculations. He used such data without any understanding or knowledge of when waste was last placed in various areas of the landfill or whether these data have any significance to when the waste was actually placed in the area of the piggyback liner.

Based on this invalid study, an eighty-foot column of waste intended to serve as the foundation for the piggyback liner—an eighty-foot column of waste that is disposed in a pre-Subtitle D, unlined area of the ACL facility—is predicted to settle a mere 5.3 feet.<sup>234</sup> This equates to a total settlement amount of approximately 6.6% of the landfill waste column height that is predicted to occur over a forty-seven year period. Not surprisingly, this calculated settlement amount is contrary to published authorities.

Published authorities indicate that the settlement at a closed landfill facility is expected to be much greater than the results of the settlement calculations in the application. A recognized authority, GEOTECHNICAL ASPECTS OF LANDFILL DESIGN AND CONSTRUCTION, includes studies of landfill settlement over many years at numerous MSW facilities.<sup>235</sup> Many factors affect the magnitude of waste settlement, including the initial density or void ratio of the solid waste, amount of daily cover used, the waste compaction, the decomposable waste content, leachate levels and fluctuations, and other environmental factors, including moisture content, temperature within the landfill, whether landfill gases are present or generated, *et cetera*,<sup>236</sup> none of which were known for the waste disposed in the area where the piggyback liner is proposed to be installed. The settlement of MSW landfills can be enormous, and final settlement occurs over a long period of time and can approach thirty percent of the initial fill height.<sup>237</sup> It is clear, therefore, that WMTX's prediction that the landfill will settle 6.6% over a forty-seven year

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<sup>234</sup> See Exh. APP-202, *supra* note 11, at Vol. II, Pt. III, appx. F.2 at Sheet 8 of 12 (Aug. 16, 2006, Rev. 1 May 2007, Rev. 2 Aug. 2007) (formerly Tech. Complete 1240) (as supplemented at the Mar. 23, 2009 preliminary hearing); see Tr. at Vol. 1 at 48 ln.7 – 49 ln.10 (Mar. 23, 2009); see also *id.* at Vol. 3 at 402 lns.8-20 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>235</sup> See Exh. TJFA 438, XUEDE QIAN, ROBERT M. KOERNER, & DONALD H. GRAY, GEOTECHNICAL ASPECTS OF LANDFILL DESIGN AND CONSTRUCTION.

<sup>236</sup> See *id.* at 442 (023).

<sup>237</sup> See *id.* at 204 & 440 (020 & 021).

period is not only based on an invalid study, but it is also contrary to what is predicted by published authorities.

The technical and environmental consequences of incorrect settlement calculations cannot be overstated. Literally and figuratively, the foundation of the composite liner in the piggyback area is the settling waste material. Mr. Dominguez testified that if the ACL facility actually settles as much as twenty or thirty percent instead of the estimate 5.3 feet, then the clay liner would certainly be cracked.<sup>238</sup> Mr. Dominguez also did not know whether the liner systems could handle a significant amount of differential settlement.<sup>239</sup> As described above, the calculated settlement figures are flawed and fail to demonstrate that the foundation in the piggyback area will be stable or protective of human health and the environment

The burden of proof was on WMTX to prove that the waste mass that will form the foundation for the piggyback liner is stable. For all of the reasons discussed in detail above, WMTX failed to meet this burden, and while the Proposal for Decision seems to shift the burden to protestants to prove that the waste mass is unstable, such a shift in the burden of proof is in violation of the Commission rules. The great weight of the evidence in this proceeding in no way supports a finding that WMTX met its burden of proof on this issue. As such the related Findings of Fact and Conclusions of Law must be revised and the application denied.

## 2. Recirculation of Leachate

Findings of Fact Nos. 107 and 109 are both related to the use of leachate at the ACL facility. Most important to this discussion is the recirculation of leachate at the ACL facility back into waste disposal cells. Contrary to these findings of fact, the provisions in the

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<sup>238</sup> See Tr. at Vol. 3 at 406 lns. 14-24 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>239</sup> See *id.*

application regarding the recirculation of leachate are in violation of the applicable regulatory requirements.

The application includes the following description of leachate recirculation: "In disposal cells containing a standard Subtitle D liner system (i.e., a compacted clay/geomembrane composite) and leachate collection system, leachate and gas condensate may be recirculated back into the waste."<sup>240</sup> A similar provision is included for gas condensate in the Landfill Gas Management Plan in the application: "Liquids from the gas system may be recirculated in the landfill . . . . Liquids from gas the system may be recirculated over areas that are designed and constructed with a composite liner system and a leachate collection system that meets the requirements of 30 TAC § 330.331(a)(2)."<sup>241</sup> Both of these provisions are in violation of applicable federal Subtitle D regulations.

Code of Federal Regulations Part 40, Section 258.28 provides:

(a) Bulk or noncontainerized liquid waste may not be placed in MSWLF units unless:

\* \* \*

(2) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF, or lateral expansion, is designed with a composite liner and leachate collection system as described in §258.40(a)(2) of this part.<sup>242</sup>

Section 258.28(a)(2) makes it clear that only leachate and/or gas condensate derived from a specific unit at the ACL facility can be recirculated back into that same unit, and only if that unit has a composite liner system and a leachate collection system ("LCS") in conformance with specified regulatory requirements. The recirculation of leachate and gas condensate described in the application is not limited to the composite lined cell of generation contrary to this

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<sup>240</sup> Exh. APP-202, *supra* note 11, at Tech. Complete 928 (Vol. II, Pt. III, Att.3 § 6.2.1.8 at 27).

<sup>241</sup> *Id.* at Tech. Complete 3159-60 (Vol. V, Pt. III, Att. 6 § 5.4 at 18).

<sup>242</sup> 40 C.F.R. § 258.28(a)(2).

requirement, and thus violates applicable regulatory requirements. As such the Findings of Fact and Conclusions of Law should be revised and the application denied.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 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. Such settlement evaluation was flawed. ~~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.~~

Finding of Fact No. 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, were flawed. ~~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%.~~

Finding of Fact No. 96. WMTX analyzed the proposed piggyback liner system to determine the impact of localized depression on the liner integrity, but such analysis was flawed. ~~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.~~

Finding of Fact No. 97. WMTX failed to prove that ~~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.~~

Finding of Fact No. 107. The application details that leachate and gas condensate ~~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. The proposed recirculation of leachate is in violation of 40 C.F.R. § 258.28. Leachate pumped~~

~~into tanker trucks will be disposed of off site at a TCEQ approved treatment facility.~~

~~Finding of Fact No. 109. In disposal cells containing a standard Subtitle D liner system and leachate collection system, leachate and gas condensate can only may be recirculated back into the unit where it was generated. 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.~~

~~Finding of Fact No. 112. The liner design system and LQCP in the Application do not meet the requirements of 30 TAC § 330, Subchapter H because they do not sufficiently describe by describing the liner design and construction details, by providing details showing that the proposed liner system incorporates short term and long term hydrostatic pressure relief systems, by providing for leachate and contaminated water management systems, and by explaining the groundwater flow path and , including the most likely pathways for pollutant migration. The provisions for recirculation of leachate and gas condensate are in violation of applicable regulatory provisions.~~

~~Finding of Fact No. 113. The evidence fails to sufficiently demonstrates that there are adequate provisions to protect ground water as required by in compliancee with the Commission's rules.~~

~~Conclusion of Law No. 5. WMTX failed to 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).~~

~~Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet met its burden with respect to all referred issues ~~except the proposed hours of operation.~~~~

~~Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.~~

~~Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and or the environment.~~

~~Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to includes all matters required by law.~~

~~Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not violates 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

**H. *Exceptions Related to Designation of Wetlands. Findings of Fact Nos. 176 and 177 and Conclusions of Law Nos. 5, 7 through 11, 21, 22, and 33.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to the Designation of Wetlands, as proposed by the Administrative Law Judge:

Finding of Fact No. 176. The Application demonstrated that the wetlands determination met the federal, state, and local requirements and met the technical requirements for wetland protection.

Finding of Fact No. 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.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 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.

Contrary to the finding set out in Finding of Fact No. 176, neither the application nor the great weight of the evidence in this proceeding demonstrated that the wetlands determination put forward by WMTX met the federal, state, and local requirements and the technical requirements for wetland protection. Similarly, neither the application nor the great weight of the evidence in this proceeding demonstrated that the application included adequate provisions to show that the MSW facility will not cause or contribute to significant degradation of wetlands, as asserted in Finding of Fact No. 177.

The Proposal for Decision ignores testimony presented by Mr. C. Lee Sherrod, WMTX's wetlands experts, regarding his wetlands survey of the ACL facility and his opinion regarding certain wetlands vegetation identified on the property of the ACL facility. Additionally, the Proposal for Decision relies on the testimony of Mr. Udenenwu, testifying for the Executive Director, even though Mr. Udenenwu has no independent training related to wetlands and he does not consider himself an expert on wetlands issues.<sup>243</sup> The Proposal for Decision blatantly

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<sup>243</sup> Instead, Mr. Udenenwu relies upon reviews provided by other agencies of the wetlands information submitted by WMTX—agencies that review only the information provided by WMTX and may be unaware of the particular details of TCEQ's rules. *See* Tr. at Vol. 10 2311 ln.17 – 2312 ln.14 (Cross Exam (by Erich Birch) of Matthew Udenenwu) (Apr. 9, 2009).

ignores evidence presented by TJFA and the other protestants in this proceeding regarding the faults with Mr. Sherrod's wetlands survey.

Important to this discussion is 30 TEX. ADMIN. CODE § 330.61(m)(2)&(3), which states, in relevant part:

(m) Floodplains and wetlands statement. The floodplains and wetlands statement must:

\* \* \*

(2) include a wetlands determination under applicable federal, state, and local laws and discuss wetlands in accordance with §330.553 of this title (relating to Wetlands). For the purpose of this subsection, demonstration can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area; and

(3) *identify wetlands located within the facility boundary.*<sup>244</sup>

The wetlands survey, or wetlands delineation report, contained in the application failed to identify wetlands contained within the permit boundary of the ACL facility as permitted by Permit No. MSW-249C and as proposed to be permitted under Permit No. MSW-249D. As shown in the photographs in Exhibits City of Austin 10 and City of Austin 11, there are wetlands plants, also called hydrophytic plants, located in an area between the IWU and the Phase I Unit.<sup>245</sup> Mr. Sherrod identified that the photographs in Exhibits City of Austin 10 and City of Austin 11 depicted vegetation that exhibited characteristics of a wetland.<sup>246</sup> Specifically, Mr. Sherrod testified:

Q. Can you look also at exhibit – TJFA exhibit 14 [later identified as Exhibit City of Austin 11], which is a close-up of some of those plants? Do you see that?

A. Yes.

Q. And was that also – are those plants also consistent with plants being located in wetlands?

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<sup>244</sup> 30 TEX. ADMIN. CODE § 330.61(m)(2)&(3).

<sup>245</sup> See Exh. City of Austin 10, Photo of Wetlands (TJFA-073765); see also Exh. City of Austin 11, Photo of Wetlands (TJFA -073766).

<sup>246</sup> See Tr. at Vol. 6 at 1118 lns.5-7 (Cross Exam (by Erich Birch) of C. Lee Sherrod) (Apr. 3, 2009).

A. Yes, those are wetland plants.<sup>247</sup>

Mr. Sherrod emphasized during his testimony at the Hearing on the Merits that his wetlands survey had been focused on the expansion area of the ACL facility and that he had only looked generally at the rest of the ACL facility.<sup>248</sup> But, as set out above, TCEQ rules require the wetlands survey to consider the entirety of the to-be-permitted facility<sup>249</sup>—here, the entirety of the ACL facility pursuant to proposed Permit No. MSW-249D.

In light of the fact that Mr. Sherrod failed to identify the location depicted in the photographs as a wetlands feature in his wetlands survey, Mr. Sherrod went so far as to suggest, without an evidentiary basis, that the area where the photographs had been taken was not a “wetland” because it was a “manmade drainage feature.”<sup>250</sup> Contrary to Mr. Sherrod’s assertion, there is substantial evidence that the area where the photographs were taken is a natural creek/drainageway, not a manmade drainage feature. Mr. Chandler testified that the photographs in Exhibits City of Austin 10 and City of Austin 11 were taken by him in “the drainageway between the Phase I Unit and the Industrial Waste Unit.”<sup>251</sup> He continued: “This is the swayover [sic]<sup>252</sup> or ditch that’s between the two units. This is at the upper end of the ditch close to where the drainage comes onto the property.”<sup>253</sup> As shown on historical topographic maps, this area of the ACL facility is part of a natural creek/drainageway that runs through the site of

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<sup>247</sup> *Id.* at Vol. 6 at 1118 lns.8-14.

<sup>248</sup> *See id.* at Vol. 6 at 1114 lns.8-10 (“My general focus was on the proposed expansion area, but, again, I did look at the entire facility, *at least in generalities.*” (emphasis added)).

<sup>249</sup> *See* 30 TEX. ADMIN. CODE § 330.61(m)(3).

<sup>250</sup> Tr. at Vol. 6 at 1124 ln.9 (Cross Exam (by Erich Birch) of C. Lee Sherrod) (Apr. 3, 2009).

<sup>251</sup> *Id.* at Vol. 8 at 1748 lns.14-16 (Cross Exam (by Meitra Farhadi) of Pierce L. Chandler, Jr., P.E.) (Apr. 7, 2009).

<sup>252</sup> It appears that Mr. Chandler may have said “swale” and was misunderstood by the court reporter.

<sup>253</sup> Tr. at Vol. 8 at 1748 lns.16-18 (Cross Exam (by Meitra Farhadi) of Pierce L. Chandler, Jr., P.E.) (Apr. 7, 2009).

the ACL facility.<sup>254</sup> In addition, Dr. Kier testified that the drainage course between the IWU and the Phase I Unit was a natural drainage course.<sup>255</sup> Similarly, this area has previously been defined as a creek in the report prepared by Engineering-Science for Travis County.<sup>256</sup>

As discussed above, WMTX and its predecessor owners and operators of the ACL facility placed waste in the creek bed and raised the grade significantly while keeping the same channel alignment and entrance and exit points from the permit boundary. In addition, WMTX constructed impoundments at various locations along the creek. The presence of wetland vegetation, the chronic ponding of water (*i.e.*, frequent flooding), and the location “on-channel” of an existing creek would likely lead to the determination that the area is a wetlands from a regulatory standpoint. Because Mr. Sherrod failed to take this area into serious consideration during his “general” review of this portion of the ACL facility, the wetlands survey included in the application fails to meet the requirements of 30 TEX. ADMIN. CODE § 330.61(m)(2)&(3).

For all of these reasons, Findings of Fact No. 176 and 177 must be rejected by the Commission and replaced with revised findings based on the great weight of the evidentiary record. WMTX’s failure to fully delineate all wetlands within the permit boundary of the ACL facility renders it impossible for WMTX to demonstrate that, in compliance with TCEQ’s rules, the operation of the ACL facility will not result in the degradation of wetlands. As such, the application must be denied.

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<sup>254</sup> See Exh. TJFA 211, U.S. Dep’t of the Interior Geological Survey, Austin East Quadrangle, Texas – Travis Co., 7.5 minute series (topographic) (1966, photorevised 1973), at 001, & U.S. Dep’t of the Interior Geological Survey, Manor Quadrangle Texas – Travis Co., 7.5 minute series (topographic) (1968), at 002.

<sup>255</sup> See Tr. at Vol. 7 at 1348 Ins. 18-25 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009) (“That was a natural drainage course. It wasn’t an artificial one. At least it was natural before the landfill.”).

<sup>256</sup> See Exh. APP-11, *supra* note 94, at 4 (WM-055355); see also *id.* at 6 (WM-055357).

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 176. The Application ~~fails to demonstrate~~ that the wetlands determination met the federal, state, and local requirements and met the technical requirements for wetland protection.

Finding of Fact No. 176A. Wetlands vegetation is present in the area between the Phase I Unit and the IWU.

Finding of Fact No. 176B. The area between the Phase I Unit and the IWU is frequency flooded by constructed impoundment structures.

Finding of Fact No. 176C. The area between the Phase I Unit and the IWU was an existing tributary (i.e., natural channel) of Walnut Creek.

Finding of Fact No. 176D. The area between the Phase I Unit and the IWU has the characteristics for designation as a regulated, jurisdictional wetland.

Finding of Fact No. 176E. The wetlands survey failed to provide a complete survey of the entirety of the ACL facility.

Finding of Fact No. 176F. The wetlands survey failed to identify all potential wetlands within the permit boundary of the ACL facility.

Finding of Fact No. 177. The Application ~~does not include~~ adequate provisions to show that the MSW facility will not cause or contribute to significant degradation of wetlands, ~~in compliance with agency rules.~~

Conclusion of Law No. 5. WMTX ~~failed to submit~~ 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX ~~failed to meet~~ ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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,~~ and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to include all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 33. Applicant has not 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.

***I. Exceptions Related to Ponding of Surface Water. Findings of Fact Nos. 166 and 167 and Conclusions of Law Nos. 5, 7 through 11 and 23 through 25.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Ponding of Surface Water, as proposed by the Administrative Law Judge:

Finding of Fact No. 166. The Site Operating Plan (SOP) contained in the Application includes a Pondered Water Prevention Plan that sets forth the different methods that will be utilized to prevent ponded water over waste-filled areas.

Finding of Fact No. 167. The Application proposes adequate protection of surface water.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 23. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 24. Applicant has shown that it will comply with the operational prohibitions and requirements in 30 TEX. ADMIN. CODE ANN. §§ 330.5, 330.111 [*sic*] – 330.139.

Conclusion of Law No. 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.

There is a Poned Water Prevention Plan in the Site Operating Plan (“SOP”) included in the application, which is designed to prevent the future ponding of water over waste at the ACL facility. The Poned Water Prevention Plan is written to be applied during future operations of the ACL facility, but it includes no provisions to address or remediate existing ponded water over waste. Because there is existing ponded water over waste at the ACL facility and because the application fails to include any methods to address such ponded water, the application is in violation of TCEQ’s rules, including 30 TEX. ADMIN. CODE § 330.167.

Texas Administrative Code Title 30, Section 330.167 provides:

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 regarded 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.<sup>257</sup>

Thus, TCEQ's rule requires that no water be allowed to pond or accumulate over waste. The application is in clear violation of this rule.

There is a detention pond, identified as the South Pond, constructed in the creek exiting the ACL facility near surface water drainage point CP7.<sup>258</sup> Boring logs, which were part of the ThermoRetec report and which are included in the application, show waste buried in the area of the South Pond at depths up to twenty-two feet.<sup>259</sup> Even WMTX's own witness, Mr. Winters, testified that the pond was located over waste:

Q. Okay. This south pond structure, if you'll go back, please, and look at Volume IV, 2433, Page 2433 that we were looking at, Monitor Well 99-24. Okay. Do you see that?

A. Yes, I do.

Q. Okay. And would it appear that that south pond structure that we were just looking at is located in the general vicinity of Monitor Well 99-24 on this map?

A. Yes.

Q. And looking at borehole Monitor Well 99-24, do you see the municipal solid waste that's identified in that part of the site?

A. We looked at the MSW on that boring log.

Q. Yes. And so would it appear that that municipal solid waste is actually under the pond that we just looked at a few minutes ago on ATT2-2?

A. It appears that way.

Q. I beg your pardon?

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<sup>257</sup> 30 TEX. ADMIN. CODE § 330.167.

<sup>258</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 615 (Vol. II, Pt. III, Att. 2 at Fig. ATT2-2), attached hereto and incorporated herein for all purposes as Attachment 11.

<sup>259</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 2433 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-24) (Attachment 7); *see also id.* at Tech. Complete 2438 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-25) (Attachment 7); *id.* at Tech. Complete 2400 (Vol. IV, Pt. III, Att. 4 at Fig. 2-1) (Attachment 6); Tr. at Vol. 5 at 963 lns.2 -24 (Cross Exam (by Erich Birch) of Jay A. Winters, P.G.) (Apr. 2, 2009); *id.* at 970 ln.15 - 971 ln.9.

A. It appears that way.<sup>260</sup>

In fact, the South Pond is constructed over what appears to be the thickest section of waste in that area of the ACL facility. The South Pond is constructed over approximately eighteen to nineteen feet of waste.<sup>261</sup> Pursuant to the application WMTX proposes no changes to remove the waste itself or to remove the South Pond from over the waste, apparently intending to continue operating in violation of 30 TEX. ADMIN. CODE § 330.167.

The Proposal for Decision minimizes all of these facts about the location of the pond over the buried waste, stating:

Applicant responds that borings made along and just above the southern boundary in close proximity to the pond (from west to east being PZ-18, PZ-1, PZ 19, and PZ-2) do not indicate the presence of waste. 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. If there is no waste at that location, then there is no obligation for Applicant to prevent ponding there.<sup>262</sup>

What the boring logs for piezometers PZ-18, PZ-1, PZ-19, and PZ-2 show is largely irrelevant because all four piezometers are located along the south facility boundary, south and west of the location of the South Pond itself. Unlike Boring Hole No. MW- 99-24, which is located below the South Pond, piezometers PZ-18, PZ-1, PZ-19, and PZ-2 are not located under the South Pond. In addition, Mr. Udenenwu's testimony is also not as reliable as that of Mr. Winters, nor is it as reliable as the actual cross-sections and boring logs contained in the application. Mr. Winters provided his testimony while reviewing maps, cross-sections, and boring logs contained in the application and concluded, as identified above, that waste was shown in the boring log for Boring Hole No. MSW-99-24 and that MSW was actually under the South Pond.

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<sup>260</sup> Tr. at 970 ln.15 – 971 ln.9 (Cross Exam (by Erich Birch) of Jay A. Winter, P.G.) (Apr. 2, 2009). Mr. Winters had previously identified that there was MSW in Boring Hole No. MW-99-24 from three feet down to 22 feet. *See id.* at 961 ln.25 – 962 ln.6.

<sup>261</sup> *See* Exh. APP-202, *supra* note 11, at Tech. Complete 616 (Vol. II, Pt. III, Att. 2 at Fig. ATT2-2) (Attachment 11); *see also id.* at Tech. Complete 2400 (Vol. IV, Pt. III, Att. 4 at Fig. 2-1) (Attachment 6); *id.* at Tech. Complete 2433 (Vol. IV, Pt. III, Att. 4 at Boring Log Hole No. MW-99-24) (Attachment 7).

<sup>262</sup> Proposal for Decision, *supra* note 1, at 47-48.

On the other hand, Mr. Udenenwu briefly answered a question without reviewing any of the maps, cross-sections, or boring logs in the application. At other times during the Hearing on the Merits, Mr. Udenenwu admitted that he had reviewed the application over a period of several months to years and that he had missed other mistakes in the application (*e.g.*, the failure of the buffer zones to meet regulatory requirements) that continued to be present in the application even after it was deemed technically complete in January 2008.<sup>263</sup> It is possible that Mr. Udenenwu simply did not remember that the cross-sections and boring logs clearly identify that there is MSW buried under the South Pond.

In addition to the existence of a detention pond over waste, as explained above, photographs taken in the area of the IWU and the Phase I Unit demonstrate there is wetlands vegetation in that area.<sup>264</sup> Such wetlands vegetation indicates that water ponds in this area and that the water ponding is of such extent and duration to make the area suitable for this type of vegetation to survive.<sup>265</sup> Further, based on cross-sections from the ThermoRetec report it is clear that there is waste buried in this same area.<sup>266</sup> The borings in the ThermoRetec report from this

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<sup>263</sup> See generally Tr. at Vol. 11 at 2335 ln.12 – 2336 ln.4 & 2360 lns.14-17.

<sup>264</sup> See Exh. City of Austin 10, *supra* note 245; see also Exh. City of Austin 11, *supra* note 245.

<sup>265</sup> At the Hearing on the Merits, Mr. Chandler, who took the photographs, testified:

Q. Okay. Any my question to you is, could the presence of these wetland type plants be an indication of a location on the facility where water tends to pond on the site?

A. That was my impression, and that's why I took the picture, was to document that situation.

Tr. at Vol. 8 at 1750 lns.19-24 (Cross Exam (by Meitra Farhadi) of Pierce L. Chandler, Jr., P.E.) (Apr. 7, 2009).

<sup>266</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 1481 (Vol. III, Pt. III, Att. 4 at Fig. ATT4-17) (Attachment 5).

area of the ACL facility show wastes buried up to twenty feet deep in and below the creek running between the IWU and the Phase I Unit.<sup>267</sup>

Again, the Proposal for Decision minimizes all of these facts, instead stating: “[T]he TRCC report did not establish the presence of MSW anywhere in the drainage way.”<sup>268</sup> The reference to the “TRCC report” is to the ThermoRetec report, portions of which are included in the application and the entirety of which is included in TJFA Exhibit 204, pages 011 through 241. The claim in the Proposal for Decision that the ThermoRetec report does not establish the presence of MSW in the drainageway is simply, and unmistakably, incorrect. Multiple boring logs included in the ThermoRetec report, including the boring logs for MW-99-24, MW-99-25, MW-99-26, MW-99-31, and MW-99-32, demonstrate that waste is buried in the drainageway.<sup>269</sup>

The Proposal for Decision also minimizes the presence of the wetland plants, claiming that the presence of wetland plants in the drainageway could simply be explained by the fact that it is a drainageway that carries water.<sup>270</sup> That the drainageway simply carries water does not explain the presence of wetlands vegetation. Simple periodic drainage will not create wetland plant colonies, or hydrophytic vegetation. Ponding is required. As identified in the U.S. Army Corps of Engineers (“USACE”) 1987 WETLANDS DELINEATION MANUAL, which was relied upon by WMTX’s wetlands expert Mr. Sherrod, the term “hydrophytic vegetation” is defined as “the

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<sup>267</sup> See *id.* at Tech. Complete 2446 (Vol. IV, Pt. III, Att. 4 at Boring Log Hole No. MW-99-31) (Attachment 7); see also *id.* at Tech. Complete 2439 (Vol. IV, Pt. III, Att. 4 at Boring Log Hole No. MW-99-26) (Attachment 7); *id.* at Tech. Complete 2440 (Vol. IV, Pt. III, Att. 4 at Boring Log Hole No. MW-99-26A); *id.* at Tech. Complete 2441 (Vol. IV, Pt. III, Att. 4 at Boring Log Hole No. MW-99-27).

<sup>268</sup> Proposal for Decision, *supra* note 1, at 47.

<sup>269</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 2433 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-24) (Attachment 7); *id.* at Tech. Complete 2438 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Log Hole No. MW-99-25) (Attachment 7); *id.* at Tech. Complete 2439 (Vol. IV, Pt. III, Att. 4 at Boring Log Hole No. MW-99-26) (Attachment 7); *id.* at Tech. Complete 2446 (Vol. IV, Pt. III, Att. 4, appx. E at Boring Hole No. MW-99-31) (Attachment 7); *id.* at Tech. Complete 1677 (Vol. III, Pt. III, Att. 4, appx. B at Log of Boring MW-32) Attachment 8).

<sup>270</sup> See Proposal for Decision, *supra* note 1, at 47.

sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present.”<sup>271</sup> Similarly, as discussed above with regard to wetlands, Mr. Sherrod testified about how the State of Texas defines a wetland:

The applicable TCEQ regulations at the state level define a “wetland” as an area (including a swamp, marsh, bog, prairie pothole, or similar area) having a predominance of hydric soils that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support (and that under normal circumstances to support) the growth and regeneration of hydrophytic vegetation. The term “hydric soil” means soil that, in its undrained condition, is saturated, flooded, or *ponded long enough* during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation.<sup>272</sup>

In other words, the ponding of water is necessary for the development of hydrophytic or wetland plants. The presence of wetland plants in the drainageway—the drainage way which is over buried waste—is clear evidence that there is ponding water over buried waste in contravention of 30 TEX. ADMIN. CODE § 330.167.

While the ponding of water over waste is a problem at any landfill because the water may drain into the waste below, the Proposal for Decision completely ignores why ponding of water is especially problematic at the ACL facility. The ponding of water at the ACL facility is clearly a more serious environmental threat because the waste buried in the drainage way is not in a lined cell, nor is it in an approved waste disposal cell, and after the water sinks down into the waste below, it would then travel through the waste mass as through a French drain, and eventually exit the site along some downgradient point at the ACL facility’s permit boundary.

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<sup>271</sup> ENVIRONMENTAL LABORATORY, U.S. ARMY CORPS OF ENGINEERS, CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, Wetlands Research Program Technical Report Y-87-1, at 12 (Jan. 1987), available at <http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>. WMTX previously requested that the Administrative Law Judge take official notice of the USACE’s 1987 Wetlands Delineation Manual, Technical Report Y-87-1. See Exh. APP-600, Prefiled Direct Testimony of C. Lee Sherrod, at 15.

<sup>272</sup> See Exh. APP-600, *supra* note 271, at 13 (emphasis added).

The waste is buried under the drainageway (*i.e.*, creek) and the South Pond up to the property line (between the ACL facility and the closed Travis County Landfill), and there are no ground water monitoring wells at that location to detect contaminated water exiting through the waste in that area.

For all of these reasons, the above-referenced Finding of Facts and Conclusions of Law should be revised, and the application must be denied because it fails to comply with all applicable TCEQ rules.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 166. The Site Operating Plan (SOP) contained in the Application includes a Poned Water Prevention Plan that sets forth the different methods that will be utilized to prevent ponded water over waste-filled areas. The Poned Water Prevention Plan does not address how WMTX will address water that is currently ponded over waste at the ACL facility.

Finding of Fact No. 166A. There is clear evidence that waste is buried under the South Pond and in the drainage way between the IWU and the Phase I Unit.

Finding of Fact No. 166B. There is clear evidence that water is ponding over buried waste in the areas of the South Pond and in the drainage way between the IWU and the Phase I Unit.

Finding of Fact No. 167. The Application fails to proposes adequate protection of surface water.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~of~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, ~~will not~~ violates 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.

Conclusion of Law No. 23. Part IV of the Application, the SOP, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 24. Applicant failed to show ~~has shown~~ that it will comply with the operational prohibitions and requirements in 30 TEX. ADMIN. CODE ANN. §§ 330.5, 330.121-~~111~~ – 330.139.

Conclusion of Law No. 25. The Application does not includes adequate provisions to prevent the ponding of water over waste in the landfill, in violation of compliance ~~with~~ 30 TEX. ADMIN. CODE ANN. § 330.167.

**J. *Exceptions Related to Provisions for Cover. Finding of Fact No. 169 and Conclusions of Law Nos. 5, 7 through 11 and 21 through 23.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Provisions for Cover, as proposed by the Administrative Law Judge:

Finding of Fact No. 169. The Application includes adequate provisions for cover, in compliance with agency rules.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 23. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

The Proposed Order contains the following ordering provision regarding the 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.”<sup>273</sup> While this information is included in the Proposed Order, it is only addressed in passing in the Proposal for Decision,<sup>274</sup> thus, an awareness of the background of this proposed ordering provision is necessary to an understanding of why TJFA believes that the addition of a simple ordering provision is inappropriate and is not in compliance with TCEQ rules.

The Final Cover Quality Control Plan contained in the application includes the following provision regarding soil cover material: “The soil cover material shall consist of soils that are classified as SCS Hydrologic Soil Groups (HSG) A, B, or C.”<sup>275</sup> On the other hand, the

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<sup>273</sup> Proposed Order, *supra* note 2, at 56.

<sup>274</sup> See Proposal for Decision, *supra* note 1, at 50.

<sup>275</sup> Exh. APP-202, *supra* note 11, at Tech. Complete 3316 (Vol. VI, Pt. III, Att. 7, appx. A § 4.2 at 21).

calculations for soil loss due to erosion, which are also included in the application, utilized a soil erodibility factor, or “K,” based on Ferris and Heiden soils.<sup>276</sup> Mr. Dominguez, during cross-examination, identified that Ferris and Heiden soils are both HSG D soils.<sup>277</sup> In addition, the final cover surface runoff modeling and final cover infiltration modeling were based on HSG D soils. Thus, there are numerous contradictions in the application itself regarding what types of soils will be utilized in the final cover. Mr. Dominguez admitted that the reliance on HSG A, B, or C soils in the Final Cover Quality Control Plan was incorrect.<sup>278</sup>

WMTX properly acknowledged that the Final Cover Quality Control Plan incorrectly identifies the type of soil to use for final cover, and, in its *Closing Argument*, requested that the Administrative Law Judge simply modify the soil type. It appears, based on the proposed Ordering Provision quoted above, that the Administrative Law Judge responded affirmatively to WMTX’s request. However, modifying the soil type identified in the Final Cover Quality Control Plan is not appropriate since there is only limited testimony regarding whether simply changing the soil type designation in that one location in the application adequately addresses the extent of the mistake. Other issues, *e.g.*, erosion control, drainage, slope stability, *et cetera*, may be affected if the soil type is simply re-designated from one type to another. It is unclear whether changes to other portions of the design set out in the application might be impacted by this revision to the application if the proposed Ordering Provision is adopted. As such, the proposed Ordering Provision should not be adopted by the Commission, and the Final Cover Quality Control Plan should be found to be deficient in violation of TCEQ rules.

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<sup>276</sup> See *id.* at Tech. Complete 888 (Vol. II, Pt. III, Att. 2, appx. F at tbl. 1).

<sup>277</sup> See Tr. at Vol. 3 at 368 ln.25 – 369 ln.11 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>278</sup> See *id.* at Vol. 3 at 369 lns.17-21.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 169. The Final Cover Quality Control Plan incorrectly identifies that soil cover material is to consist of soils that are classified as SCS Hydrologic Soil Groups (HSG) A, B, or C. ~~Application includes adequate provisions for cover, in compliance with agency rules.~~

Finding of Fact No. 169A. While there is testimony that the Final Cover Quality Control Plan should identify SCS HSG D, there is inadequate evidence to demonstrate that a simple revision to the soil group in the Final Cover Quality Control Plan will address all related inconsistencies in the application.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to ~~includes~~ all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not ~~violates~~ 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not ~~meets~~ the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not ~~meets~~ the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 23. Part IV of the Application, the SOP, does not meet the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

**K. *Exceptions Related to Provisions for Closure and Post-Closure. Findings of Fact Nos. 173 and 174 and Conclusions of Law Nos. 5, 7 through 11, 21 through 23, 34, 47, and 49.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Provisions for Closure and Post-Closure, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 174. The Application sets forth the requirements for the closure and post-closure plans in compliance with agency rules.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 23. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 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.

Conclusion of Law No. 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.

Conclusion of Law No. 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.

As discussed in detail above, the great weight of the evidence in this proceeding demonstrates that the IWU and the Phase I Unit were never closed pursuant to applicable agency rules, and thus are subject to all current closure and post-closure rules. For all of the reasons addressed above, TJFA excepts to Finding of Fact No. 173.

Additionally, the conclusions set forth in the Proposal for Decision related to closure and post-closure appear to be based exclusively on the application and Mr. Udenenwu's testimony that the closure and post-closure plans in the application comply with TCEQ rules. Most importantly, though, the conclusion that the closure and post-closure care plans are in compliance with agency rules is made based on the incorrect assumption that the IWU and the Phase I Unit are closed units. When this assumption is corrected, it is clear that the closure and post-closure care plans for the ACL facility do not meet applicable regulatory requirements. Additionally, the Proposal for Decision mistakenly identifies that TJFA's entire argument regarding the closure and post-closure care plans is dependant on the IWU and Phase I Units not

being considered closed. Such is not the case. Even if the IWU and the Phase I Unit are closed units, as identified below, the post-closure care plan fails to meet applicable regulatory requirements.

The great weight of the evidence in this proceeding demonstrates that the application does not comply with all of TCEQ's post-closure regulatory requirements as set out at 30 TEX. ADMIN. CODE § 330.463(b).<sup>279</sup>

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<sup>279</sup> 30 TEX. ADMIN. CODE § 330.463(b) provides:

(b) Post-closure care requirements for municipal solid waste management units subject to the requirements of this subsection.

(1) After professional engineer certification of the completion of closure requirements for a municipal solid waste management unit as accepted by the executive director, the owner or operator shall conduct post-closure care for the unit for 30 years, except as specified by paragraph (2)(A) or (B) of this subsection. Post-closure care shall consist, at a minimum, of the following.

(A) The owner or operator shall retain the right of entry to the closed unit and shall maintain all rights-of-way and conduct maintenance and/or remediation activities, as needed, in order to maintain the integrity and effectiveness of all final cover, facility vegetation, and drainage control system(s), to correct any effects of settlement, subsidence, ponded water, erosion, or other events or failures detrimental to the integrity of the closed unit and to prevent any surface run-on and run-off from eroding or otherwise damaging the final cover system.

(B) The owner or operator shall maintain and operate the leachate collection system in accordance with the requirements in §330.331 and §330.333 of this title (relating to Design Criteria and Leachate Collection System, respectively). The executive director may allow the owner or operator to stop managing leachate if the owner or operator demonstrates to the approval of the executive director that leachate no longer poses a threat to human health and the environment.

(C) The owner or operator shall monitor groundwater in accordance with the requirements of Subchapter J of this chapter (relating to Groundwater Monitoring and Corrective Action) and maintain the groundwater monitoring system, if applicable.

(D) The owner or operator shall maintain and operate the gas monitoring system in accordance with the requirements of Subchapter I of this chapter (relating to Landfill Gas Management).

The ACL facility fails to satisfy structural integrity requirements for the piggyback liner area and for sideslope stability in violation of 30 TEX. ADMIN. CODE § 330.463(b)(1)(A). Ponding of water occurs over waste in the filled-in creek between the IWU and the Phase I Unit, and the final cover and erosion requirements will not be met due to inaccurate surface water flow calculations and improper final cover soils in violation of 30 TEX. ADMIN. CODE § 330.463(b)(1)(B). The POC ground water monitoring system is incapable of monitoring releases from the IWU, the Phase I Unit, the creek between those two units, and from the area to the west of ground water monitoring well MW-13 on the north permit boundary in violation of 30 TEX. ADMIN. CODE § 330.463(b)(1)(C). WMTX does not monitor landfill gas at the southern permit boundary south of the Phase I Unit or along portions of the north permit boundary in violation of 30 TEX. ADMIN. CODE § 330.463(b)(1)(D). The ACL facility's ability to meet post-closure requirements for the Phase I Unit is particularly problematic because this unit is on the permit boundary adjacent to the closed Travis County Landfill, making it impossible to maintain the required buffer zone and difficult without remedial action to monitor releases of ground water or landfill gas from the unit or to maintain final cover and address maintenance issues.

For all of these reasons, the closure and post-closure care plans fail to meet all applicable TCEQ rules, and thus, Findings of Fact Nos. 173 and 174 and the related Conclusions of Law should be revised, and the application must be denied.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 173. ~~Because the The IWU and Phase I Unit are not pre-Subtitle D landfill units; thus, they are only subject to all TCEQ closure and post-closure care maintenance rule 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~~

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(E) The owner or operator shall continue earth electrical resistivity surveys at the frequency stated in the approved site development plan.

30 TEX. ADMIN. CODE § 330.463(b).

~~sustaining native plant growth, and final slopes not exceeding a 25% (4H/1V) grade.~~

Finding of Fact No. 174. The Application does not sets forth the requirements for the closure and post-closure plans in compliance with agency rules.

Conclusion of Law No. 5. WMTX failed to ~~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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to ~~includes~~ all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not ~~meets~~ the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not ~~meets~~ the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 23. Part IV of the Application, the SOP, does not ~~meets~~ the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 34. Applicant has failed to ~~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.

Conclusion of Law No. 47. The IWU was never closed pursuant to applicable agency rules 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, 330.457 and 330.463 are applicable.

Conclusion of Law No. 49. The Phase I Unit was never closed pursuant to applicable agency rules 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, 330.457 and 330.463 are applicable.

**L. *Exceptions Related to TPDES Storm Water Permitting Requirements. Finding of Fact No. 133 and Conclusions of Law Nos. 5, 7 through 9, 11, 15, 16, 20, and 32.***

TJFA excepts to the following Finding of Fact and Conclusions of Law related to TPDES Storm Water Permitting Requirements, as proposed by the Administrative Law Judge:

Finding of Fact No. 133. The Application complies with the MSW rule requirements for demonstrating that it has complied with TPDES storm water permitting requirements.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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).

Conclusion of Law No. 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.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 32. Applicant has demonstrated compliance with applicable TPDES storm water permitting requirements.

Contrary to proposed Finding of Fact No. 133, the application does not comply with the MSW regulatory requirements for demonstrating that it has complied with Texas Pollutant Discharge Elimination System (“TPDES”) storm water permitting requirements. While the application does contain the required certification statement indicating that WMTX has obtained storm water permit coverage pursuant to TPDES General Permit No. TXR050000,<sup>280</sup> *i.e.*, the Multi-Sector General Permit (“MSGP”), and that WMTX and will either modify or obtain the appropriate TPDES permit coverage when required for the pending application in compliance with 30 TEX. ADMIN. CODE § 330.61(k),<sup>281</sup> it has failed to demonstrate that storm water management is in compliance with the regulations of the commission, as required by 30 TEX. ADMIN. CODE § 330.55(b).<sup>282</sup>

While there are clearly two separate permitting programs—(1) the MSW landfill permit and (2) the TPDES storm water permit—WMTX itself inextricably linked the two through the application in this proceeding. WMTX directly incorporated compliance with MSGP

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<sup>280</sup> See Exh. City of Austin TF-5, Texas Comm’n on Env’tl. Quality, TPDES General Permit No. TXR050000 (Aug. 14, 2006).

<sup>281</sup> 30 TEX. ADMIN. CODE § 330.61(k).

<sup>282</sup> *Id.* § 330.55(b).

requirements into the application as a means to demonstrate compliance with the MSW permit.

The Facility Surface Water Drainage Report contained in the application contains the following:

The facility will be monitored to ensure the integrity and adequate operation of the stormwater collection, drainage, and storage facilities. *On a weekly basis, pursuant to the facility's Multi-Sector General Stormwater Permit Stormwater Pollution Prevention Plan ("SWPPP"), and following major storm events, all temporary and permanent drainage facilities will be inspected.* In the event of a washout or failure, the drainage system will be restored and repaired pursuant to 30 TAC § 330.305(e)(1). Plans and actions will be developed to address and remediate the problem to ensure protection to ground and surface waters. . . .<sup>283</sup>

The subsequent section of the Facility Surface Water Drainage Report provides:

Landfill cover soils are inspected on a regular basis. Daily cover soils are inspected and applied as part of the Site Operating Plan requirements. *In addition, pursuant to the facility's SWPPP, during the active life of the site, daily, intermediate, and final cover will be inspected weekly and after a significant rainfall event for areas of erosion, exposed waste, or other damage.* During the post-closure maintenance period of the site, the final cover will be inspected quarterly. The inspections will include any temporary or permanent erosion measures that are in place at the time of the inspection.

Reports of these inspections will be documented in the Cover Application Log and will be maintained as part of the site operating record, in accordance with Part IV, the Site Operating Plan. . . .<sup>284</sup>

Both of these provisions of the application make clear that WMTX is actually relying on enforceable requirements of its Storm Water Pollution Prevention Plan ("SWPPP"), which it developed in order to comply with the MSGP, to meet requirements of its MSW permit. For example, the daily, intermediate, and final cover will be inspected pursuant to the SWPPP, but such inspections are a requirement of the MSW rules.<sup>285</sup>

It makes no sense, and is legally not defensible, to include storm water and erosion control practices in the application for the MSW permit, if those same practices will result in violation of the TPDES MSGP. Such an action would render the certification of compliance

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<sup>283</sup> Exh. APP-202, *supra* note 11, at Tech. Complete 610 (Vol. II, Pt. III, Att. 2 § 6.1 at 17) (emphasis added).

<sup>284</sup> *Id.* (Vol. II, Pt. III, Att. 2 § 6.2 at 17) (emphasis added).

<sup>285</sup> See 30 TEX. ADMIN. CODE § 330.165(h); see also Exh. City of Austin TF-5, *supra* note 280, at pt. V § L.5.(a)(2)(i) at 74 (74 of 111).

with the TPDES permitting requirements—the certification that is required by 30 TEX. ADMIN. CODE § 330.61(k) and that is included in the application—null. Additionally, such an action is in clear violation of 30 TEX. ADMIN. CODE § 330.55(b).

Similarly, 40 C.F.R. § 258.27, a section of the applicable federal Subtitle D regulations, states: “MSWLF units shall not: (a) Cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to section 402,<sup>286</sup> including storm water permitting requirements. EPA made the decision through adoption of the federal Subtitle D regulations that MSW permits were not the appropriate vehicle for implementation of specific National Pollutant Discharge Elimination System (“NPDES”) (in Texas, TPDES) requirements, such as effluent limitations or Best Management Practices (“BMPs”), but EPA affirmatively stated in the final Subtitle D rule, 40 C.F.R. § 258.27, that a MSW landfill is prohibited from discharging pollutants into waters of the United States in violation of the federal Clean Water Act (“CWA”). In other words, pursuant to 40 C.F.R. § 258.27 and 30 TEX. ADMIN. CODE § 330.55(b), the ACL facility is prohibited from discharging pollutants into waters of the United States in violation of the CWA, NPDES requirements, and, in Texas, TPDES requirements, not to mention the Texas Water Code.<sup>287</sup> Any such discharge from the ACL facility would not only be in violation of the CWA, TPDES requirements, and State law, it would also be in violation of MSW permitting requirements,

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<sup>286</sup> 40 C.F.R. § 258.27(a). The National Pollutant Discharge Elimination System (“NPDES”) program is implemented in Texas through the TPDES program. *See* Memorandum of Agreement between the Texas Natural Resource Conservation Commission and the U.S. Environmental Protection Agency, Region 6 Concerning the National Pollutant Discharge Elimination System at 1 (Sept. 14, 1998), *available at* <http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/municipal/c1.pdf> (“The TNRCC has primary responsibility for implementing the NPDES program for Texas, herein called the Texas Pollutant Discharge Elimination System (TPDES), for facilities within its jurisdiction.”).

<sup>287</sup> *See, e.g.*, TEX. WATER CODE § 26.121.

including 40 C.F.R. § 258.27 and 30 TEX. ADMIN. CODE § 330.55(b), and Permit No. MSW-249D, if issued.

In addition, the City of Austin presented evidence that the ponds identified in the application are insufficient to deal with the high concentrations of total suspended solids (TSS) in the runoff from the ACL facility.<sup>288</sup> In making this argument, the City of Austin referred to the benchmark monitoring requirements for TSS that are contained in the MSGP. WMTX is correct that the benchmark values for TSS are not permit limits, but it overlooks the important role of benchmark monitoring and compliance with benchmark values in protecting surface water quality. The MSGP provides:

The permittee must compare the results of analyses to the benchmark values, and must include this comparison in the overall assessment of the SWP3s [Storm Water Pollution Prevention Plan] effectiveness. Analytical results that exceed a benchmark value are not a violation of this permit, as these values are not numeric effluent limitations . . . . Results of analyses are indicators that modifications of the SWP3 may be necessary. The Pollution Prevention Team must investigate the cause for each exceedance and must document the results of this investigation in the SWP3 within 90 days following the sampling event.

The Pollution Prevention Team investigation must identify the following:

- 1) any additional potential sources of pollution, such as spills that might have occurred,
- 2) necessary revisions to the Good Housekeeping Measures section of the SWP3,
- 3) additional BMPs [Best Management Practices], including a schedule to install or implement the BMPs,
- 4) other parts of the SWP3 for which revisions are appropriate.<sup>289</sup>

Thus, Mr. Lesniak's evaluation was correct:

And a benchmark – and I think particularly in the case of the multisector general permit, is a guide – guideline or target for determining whether or not

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<sup>288</sup> See Exh. City of Austin CL-1, Direct Testimony of Chuck Lesniak, at 7 Ins.143-51. Specifically, Mr. Lesniak identified that the sedimentation and filtration pond may be sufficient for the ACL facility once final cover is in place, many years in the future, but in the interim, it would not be adequate to handle the very high sediment concentrations in the runoff from the ACL facility. See *id.* at 7 Ins.145-48; see also Exh. City of Austin TF-1, Direct Testimony of Tom Franke, at 9 Ins.187-93.

<sup>289</sup> See Exh. City of Austin TF-5, *supra* note 288, at pt. IV § A. at 48 (48 of 111).

your erosion and sedimentation controls are adequate. And if you – and if the permittee is not able to achieve that 100 milligrams per liter [TSS standard], it indicates that the erosion control system is inadequate and needs to be upgraded or needs to be modified.<sup>290</sup>

Similarly, Mr. Lesniak's ultimate conclusion regarding the relationship between being able to obtain benchmark values and the issue of noncompliance with the MSGP permit is also correct:

I believe that, to start off with, under your SWPPP or as part of this permit application with an erosion and sedimentation control plan that, on its face, can't meet that benchmark would – I would argue that that is not in compliance with the intent, if not the letter, of the TPDES regulations. And that – and that was the sense at which I was using the discharge limit is that *if you start in a condition of not being able to meet that benchmark, then you are starting in a condition where you are not compliant with TPDES.*<sup>291</sup>

Again, an action that results in noncompliance with the TPDES MSGP would render the certification of compliance with the TPDES permitting requirements, which is included in the application, null, and thus, would be in direct violation of TCEQ's MSW permitting rules, including 30 TEX. ADMIN. CODE §§ 330.55(b) and 330.61(k).

Related to this is that the ponds identified in the application differ from what are supposed to be the same ponds that were approved by the City of Austin.<sup>292</sup> WMTX presents information in the application that it has received all necessary approvals from the City of Austin for construction of the ponds.<sup>293</sup> To the extent the plans submitted to and approved by the City of Austin differ from those plans presented in the application, WMTX cannot represent that it has received all necessary approvals from local governmental authorities for construction of structural controls associated with the ACL facility, in violation of TCEQ rules.

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<sup>290</sup> Tr. at Vol. 10 at 2155 ln.24 – 2156 ln.6 (Cross Exam (by Tim Reidy) of Charles Lesniak III) (Apr. 9, 2009).

<sup>291</sup> *Id.* at Vol. 10 at 2158 ln.11-20 (emphasis added).

<sup>292</sup> See Exh. City of Austin TF-1, *supra* note 288, at 3 lns.65-67; *id.* at 5 lns.92-98.

<sup>293</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 192 (City of Austin Site Plan Development Permit (July 19, 2006)).

For all of these reasons, any action by WMTX at the ACL facility that results in noncompliance with the TPDES MSGP would result in a direct violation of TCEQ's MSW rules, 40 C.F.R. § 258.27, and Permit No. MSW-249D, if issued. As demonstrated at the Hearing on the Merits, WMTX cannot comply with the provisions of the MSGP based on the design of the ACL facility as set out in the application, and thus, would clearly be in violation of 40 C.F.R. § 258.27. Thus, Finding of Fact No. 133 should be revised and the application denied.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 133. The Application does not comply ~~complies~~ with the MSW rule requirements for demonstrating that it has complied with TPDES storm water permitting requirements.

Conclusion of Law No. 5. WMTX failed to ~~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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation~~.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not ~~violates~~ 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.

Conclusion of Law No. 15. Applicant has not 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 § 330.61(k)(3) ~~51(b)(5)~~.

Conclusion of Law No. 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 restrictions, and the Texas Department of Transportation for traffic and location restrictions.

Conclusion of Law No. 20. Part II of the Application does not meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 32. Applicant has not demonstrated compliance with applicable TPDES storm water permitting requirements.

***M. Exceptions Related to No Significant Alteration of Drainage Patterns. Findings of Fact Nos. 137, 139, 140, and 142 and Conclusions of Law Nos. 5, 7 through 9, 11, 21, 22, and 30.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to No Significant Alteration of Drainage Patterns, as proposed by the Administrative Law Judge:

Finding of Fact No. 137. Proposed storm water drainage patterns for the Facility have been revised from the predevelopment conditions, however, the surrounding existing drainage patters 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 additions, 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.

Finding of Fact No. 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.

Finding of Fact No. 140. Using the correct method of calculation, the Application shows that the current peak flow after the expansion will be 1,310 cfs.

Finding of Fact No. 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).

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 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.

The Proposal for Decision and proposed Findings of Facts incorrectly apply TCEQ's rules to the drainage argument put forth by TJFA. TCEQ's rules regarding drainage clearly require applicants to define existing drainage conditions and to complete calculations to demonstrate that existing or permitted drainage patterns will not be adversely altered as a result of the development of a proposed landfill.<sup>294</sup> TCEQ's applicable guidance document identifies that the existing condition to be used for the drainage analysis should be the currently permitted condition.<sup>295</sup> For the application, the existing condition should reflect the current permit, Permit

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<sup>294</sup> See 30 TEX. ADMIN. CODE § 330.305.

<sup>295</sup> See Exh. TJFA 502, Waste Permits Div., Texas Comm'n on Env'tl. Quality, "Guidelines for Preparing a Surface Water Drainage Report for a Municipal Solid Waste Facility," RG-417, at 5 (Aug. 2006), at 005.

No. MSW-249C, as modified since its original issuance in 1991, including those revisions made by the 1996 modification. This existing condition is the condition that is to be used to compare with the proposed condition to determine that there has not been an adverse alteration to existing or permitted drainage patterns, as required by 30 TEX. ADMIN. CODE § 330.305.

As outlined by TJFA's witness, Mr. Lawrence G. Dunbar, P.E., the current application improperly relies on calculation errors made during the 1996 modification to Permit No. MSW-249C, which revised drainage structures at the ACL facility.<sup>296</sup> Modifications made to the drainage design in 1996 resulted in actual increased surface water runoff rates to the south that were not accounted for in the 1996 modification or any subsequent modification.<sup>297</sup> The calculations included in the 1996 modification did not accurately reflect the approximate doubling of runoff rates resulting from that modification.<sup>298</sup> Mr. Dunbar testified: "This runoff rate to the south also should have been shown to have doubled from what it had been calculated to be for the ACL before the drainage improvements associated with the 1996 MOD [modification] were incorporated into the design."<sup>299</sup>

As identified during the Hearing on the Merits, the incorrect calculations from the 1996 modification were carried through two subsequent modifications to the drainage design in 2002 and 2003.<sup>300</sup> Thus, the 100-year peak flow rate leaving the ACL facility to the south was determined to be:

- 1981 – 977 cubic feet per second (cfs) (Permit No. MSW-249A)
- 1988 – 977 cfs (Permit No. MSW-249B)

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<sup>296</sup> See Exh. TJFA 500, Prefiled Direct Testimony of Lawrence G. Dunbar, P.E., at 13 lns.9-15.

<sup>297</sup> See generally Exh. TJFA 504, correspondence regarding the 1996 modification.

<sup>298</sup> See Exh. TJFA 500, *supra* note 296, at 12 ln.24 – 13 ln.2.

<sup>299</sup> *Id.* at 13 lns.2-5.

<sup>300</sup> See *id.* at 33 at tbl. 1; see also Exh. TJFA 505, correspondence regarding the 2002 modification; Exh. TJFA 506, correspondence regarding the 2003 modification.

- 1991 – 977 cfs (Permit No. MSW-249C)
- 1996 – 977 cfs (modification to Permit No. MSW-249C)
- 2002 – 977 cfs (modification to Permit No. MSW-249C)
- 2003 – 977 cfs (modification to Permit No. MSW-249C).

The application, though, shows the existing, or currently permitted, 100-year peak runoff rate leaving the ACL facility to the south to be 1,931 cfs, over twice the 977 cfs previously, and repeatedly, identified by WMTX.<sup>301</sup>

It appears that the Proposal for Decision ignores this more than doubling of the runoff rate because it occurred, in its interpretation, from a regulatory standpoint in 1996. But, WMTX by seeking Permit No. MSW-249D has opened the entirety of the permitted facility, including what are obviously incorrect drainage calculations from 1996, to scrutiny.<sup>302</sup> Such scrutiny is required by TCEQ's MSW rules, and such scrutiny reaches the inevitable conclusion that the existing drainage conditions at the ACL facility have been adversely altered through actions taken by WMTX, regardless of whether such actions are specifically taken in this application or may have occurred, in violation of TCEQ rules, in the past.

No evidence was presented to show that Mr. Dunbar's determination regarding the past modifications of Permit No. MSW-249C is inaccurate. WMTX attempted to attribute the almost

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<sup>301</sup> See Exh. TJFA 500, *supra* note 296, at 13 lns.9-15.

<sup>302</sup> A recent TCEQ rulemaking reinforced that certain revisions to existing permits, including lateral expansions such as is proposed for the ACL facility, require an application for a major amendment for which a full permit application must be submitted. See 33 Tex. Reg. 4157, 4157 (May 23, 2008) (identifying that a full permit application is required for lateral expansions, but that other types of revisions require submittal of only those permit documents specifically related to the proposed change, *i.e.*, a limited application). Contrary to WMTX's claims, TJFA is not attempting to attack TCEQ's, then the Texas Natural Resource Conservation Commission ("TNRCC"), approval of the 1996 modification. Instead, it is the current application that is being challenged. WMTX's application for major amendment results in the necessary review of the entirety of the application as well as all presumptions that form the basis for information in the application. The application requires consideration of existing, *i.e.*, permitted, drainage conditions, and such conditions as shown through the application and the 1996 modification are clearly inaccurate. WMTX's engineers failed to account for the differences in permitted conditions, and thus, the drainage calculations in the application are flawed.

1,000 cfs increase to a change in methodology used to complete the calculation, but Mr. Dunbar clearly testified (and was not contradicted by WMTX witnesses) that only forty to fifty percent of the difference could be attributed to the change in methodology.<sup>303</sup> Mr. Dunbar continued:

Q. But am I correct that that was not reflected in the flow numbers that were shown exiting the south side of the site?

A. Right. It was reflected in flow numbers internal to the site, but the flow number that was mentioned in the application at the southern end had not changed. So if I took that 700 cfs, if I doubled it – it would be about 1400 cfs, which approximately would be what I would expect to see at the southern boundary as a result of those drainage modifications. Then using the lag method, 1931 is being shown to represent this currently-permitted condition. So that amounts to another 530 cfs, approximately 40 percent more of an increase because of the different methodology.<sup>304</sup>

Even allowing for the change in methodology, there was still an increase of over 500 cfs at the southern property boundary due to the 1996 modification to Permit No. MSW-249C,<sup>305</sup> clearly a significant increase in contravention of TCEQ rules. The result is that drainage conditions have been adversely altered by the increase in peak flow rate leaving the ACL facility to the south, in

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<sup>303</sup> See Tr. at Vol. 7 at 1555 lns.15-19 (Cross Exam (by Jim Blackburn) of Lawrence G. Dunbar, P.E.) (Apr. 6, 2009). Specifically, Mr. Dunbar stated:

The change in methodology shows about 40 to 50 percent difference between using the rational method versus using the SCS lag method as reflected in the information that the applicant has in their documents. The 977 number, which is intended to represent a hundred-year peak flow rate leaving the property to the south was calculated, back in the 1981 document, using the rational method. And that document is shown in my prefiled at TJFA-503. And in my opinion it wasn't calculated correctly. They appear to have just added peak flows along the way rather than recalculating the peak flow rate, which is the correct way to do it. So as Mr. Riley mentioned, I had kind of in my head done that kind of calculation and got approximately 700 cfs as the hundred-year peak flow rate at the southern boundary that should have been calculated using the rational method back in 1981. My review of the applicant's documents showed that that peak flow rate subsequently was approximately doubled as a result of the modifications to the drainage on the landfill design that was done in the modification in 1996.

*Id.* at Vol. 7 at 1555 ln.15 – 1556 ln.12.

<sup>304</sup> *Id.* at Vol. 7 at 1556 ln.13 – 1557 ln.2.

<sup>305</sup> See *id.* at Vol. 7 at 1558 lns.4-14.

violation of TCEQ rules.<sup>306</sup> Thus, the following Findings of Fact should be revised, and the application must be denied based on its failure to comply with TCEQ's MSW drainage rules.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 137. Proposed storm water drainage patterns for the Facility have been revised from the predevelopment conditions ~~and, 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 additions, 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.~~

Finding of Fact No. 139. The 100-year peak flow runoff was incorrectly calculated in the 1996 amendment application to be 977 cfs at CP7, ~~when.~~ ~~When,~~ in fact, it should have been calculated to be approximately 1,400,239 cfs.

Finding of Fact No. 140. Using the correct method of calculation, the Application shows that the current peak flow after the expansion will be 1,971,310 cfs at CP7, resulting in an increase in peak flow at this location of over 500 cfs.

Finding of Fact No. 142. The Application does not accurately reflect the current drainage conditions, ~~instead proposing and does not propose~~ adverse alterations to the existing drainage patterns in violation of 30 TAC § 330.305(a).

Conclusion of Law No. 5. WMTX failed to submit 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even if constructed and operated in accordance with the Solid Waste Disposal Act, 30 TEX. ADMIN. CODE ANN. Chapter 330, and

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<sup>306</sup> See Exh. TJFA 500, *supra* note 296, at 34 lns.4-8.

the attached Draft Permit, will ~~not~~ adversely affect public health, ~~or~~ welfare, and  
~~or~~ the environment.  
~~or~~ the environment.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, ~~will not~~ violates 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 30. Applicant did not 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.

***N. Exceptions Related to Sufficiency of Erosion Control Methods. Findings of Fact Nos. 143 and 147 and Conclusions of Law Nos. 5, 7 through 9, 11, 21, and 22.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Sufficiency of Erosion Control Methods, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 147. The erosion control methods identified in the Application are sufficient to comply with agency rules.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Contrary to the discussion in the Proposal for Decision and the proposed Findings of Fact, surface water quality will also be adversely affected by erosion from the ACL facility. The City of Austin presented testimony that the ACL facility has a history of poor erosion and sedimentation control, including poor vegetation of intermediate cover and problems with other source control methodologies such as silt fencing, mulching, and limiting area coverage of disturbed soil.<sup>307</sup> Charles Lesniak III, an employee with the City of Austin's Watershed Protection and Development Review Department, testified that during his visit to the site of the ACL facility in January 2009, he observed a large amount of silt fencing at the facility, presumably used for erosion control, but much of the silt fencing was installed improperly or was inadequate to function properly.<sup>308</sup> In addition, Mr. Lesniak testified that through his years of inspecting the ACL facility he has observed poor intermediate cover stabilization practices that,

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<sup>307</sup> See Exh. City of Austin CL-1, *supra* note 288, at 4 lns.67-70 & lns.74-80; see also Exh. City of Austin CL-3, March 2003 Google Earth Aerial Photos.

<sup>308</sup> See Exh. City of Austin CL-1, *supra* note 288, at 4 lns.84-87.

in his opinion, “do not comply with the facility’s TPDES permit or City of Austin requirements and are likely to create discharges with pollutants exceeding TPDES discharge limits for Total Suspended Solids (TSS) and for sediment impacts to adjacent waterways.”<sup>309</sup>

Mr. Lesniak reviewed the application, specifically the Erosion and Sedimentation Control Plan, and the TPDES SWPPP, and determined, in his professional opinion, that neither plan would “substantively improve upon the current and historical erosion and sedimentation control practices sufficiently to prevent the same kind of problems at the facility.”<sup>310</sup>

TJFA’s Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 143. The Application fails to 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.

Finding of Fact No. 147. The erosion control methods identified in the Application are not sufficient to comply with agency rules.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation~~.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even if constructed and operated in accordance with the Solid Waste Disposal Act, 30 TEX. ADMIN. CODE ANN. Chapter 330, and

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<sup>309</sup> *Id.* at 4 ln.88 – 5 ln.93.

<sup>310</sup> *Id.* at 5 lns.107-09.

the attached Draft Permit, will ~~not~~ adversely affect public health, ~~or~~ welfare, and  
~~or~~ the environment.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, ~~will not~~ violates 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.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

**O. *Exceptions Related to Land Use Compatibility. Findings of Fact Nos. 192 through 195 and 197 and Conclusions of Law Nos. 5, 7 through 11, 20, and 37.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Land Use Compatibility, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 193. WMTX included sufficient information in the Application pertaining to land use and land use compatibility.

Finding of Fact No. 194. The existing ACRD Facility is compatible with surrounding land uses.

Finding of Fact No. 195. The continued use of the land for an MSW site will not adversely impact human health, safety, or welfare.

Finding of Fact No. 197. The proposed expansion is compatible with land use in the surrounding area.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 37. As required by TEX. HEALTH & SAFETY CODE ANN. § 361.069, the Facility is compatible with surrounding land uses.

The Proposal for Decision details the information contained in the land use report prepared for the WMTX application, and a selection of the evidence presented by the protestants in this proceeding. But again, the Proposal for Decision ignores the adverse impacts of the IWU on all facets of the existence and operation of the ACL facility, including land use compatibility, and in doing so, fails to even acknowledge testimony by WMTX's own land use compatibility expert regarding the assumptions that he relies upon in completing a land use analysis and the effect of the migration of contaminants from the ACL facility onto neighboring properties on his land use analysis. As detailed above, the IWU has leaked and continues to leak contaminants associated with the historical disposal of hazardous and industrial waste in the IWU area of the ACL facility. Such contaminants have polluted the ground water at and adjacent to the ACL facility. Such contamination affects surrounding land owners and thus has a direct effect on land use compatibility that simply cannot be ignored or dismissed as it was by the Proposal for

Decision. As recognized by WMTX's land use expert, such contamination, if he had known about it, would affect a land use analysis.

The Proposal for Decision identifies certain requirements of 30 TEX. ADMIN. CODE § 330.63(g)&(h), relating to the land use map and the impact on surrounding area, but it fails to even identify the primary concern of the land use compatibility analysis. Texas Administrative Code Title 30, Section 330.63(h) provides, in relevant part:

(h) Impact on surrounding area. *A primary concern is that the use of any land for a municipal solid waste facility will not adversely impact human health or the environment.* 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. . . .<sup>311</sup>

The primary concern that the ACL facility not adversely impact human health or the environment can only be considered and addressed if complete and accurate information is utilized to make the determination. WMTX did not present complete and accurate information in the application, and based on the Proposal for Decision, the Administrative Law Judge did not consider the totality of the evidence related to the IWU, the migration of contamination, and land use compatibility when reaching the conclusions and recommendations set out in the Proposal for Decision and Proposed Order.

While the application contains a land use analysis, the land use analysis is fatally flawed because it failed to account for historical and current conditions at the ACL facility. Specifically, Mr. John Worrall, WMTX's land use expert and the author of the Land Use Analysis contained in the application, identified that he began his land use analysis based on the presumption that the "landfill will be operating in compliance with the TCEQ rules."<sup>312</sup> In this case, Mr. Worrall, in his analysis of land use, did not account for the fact that the ACL facility

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<sup>311</sup> 30 TEX. ADMIN. CODE § 330.63(h).

<sup>312</sup> Tr. at Vol. 4 at 567 Ins.23-25 (Cross Exam (by Erich Birch) of John Worrall) (Apr. 1, 2009).

site had previously been used for the disposal of hazardous and industrial waste.<sup>313</sup> In addition, because Mr. Worrall assumed that a facility is in compliance with applicable environmental regulations, he did not consider the effects of migrating contaminated ground water on adjacent properties as part of his land use analysis.

When asked whether information tending to show that a facility was out of compliance with environmental regulations would affect his land use analysis, the following exchange occurred:

- Q. Well, if you find information that tends to show that perhaps the facility's compliance was not what you thought it was, would that tend to reduce your confidence in your land use analysis?
- A. I guess it would depend on what that factor was, as to whether it would be something that would affect the land use compatibility issues.
- Q. What if you found there were conditions from a facility that would result in contaminants leaving the facility property?
- A. That would probably affect my opinions about compatibility.
- Q. Would part of use and enjoyment of property include residents and nearby property owners being able to enjoy their property without having contamination, be it whatever?
- A. Yeah, I think that's correct.
- Q. So if it was determined that landfill gas, for example, was leaving a landfill property and affecting neighbors, would that be affecting their use and enjoyment of property?
- A. If it was affecting neighbors in a way that -- I guess by definition, yes, it would be doing that.
- Q. And what about groundwater? If it was determined that groundwater contamination was leaving a municipal solid waste facility and affecting neighbors, would that affect your determination?
- A. That's a good question. And maybe a good way to begin to differentiate this just a little bit, because if your neighbors are, let's say, on a municipal water system, which is to say -- well, municipal water system versus wells, then I think you could make a distinction that one of them would be more impacted of the use and enjoyment and health than the other.

So I don't think there's a single answer to that.

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<sup>313</sup> See generally *id.* at Vol. 4 at 664 Ins.5-18 (Clarifying questions (by the Honorable Roy Scudday) and Cross Exam (by Meitra Farhadi) of John Worrall) (Apr. 1, 2009).

Q. Well, you're not saying that the adjacent or the nearby property owner to a landfill would actually have to be using the groundwater to be impacted by the groundwater, would you?

A. Well, we are talking about the use and enjoyment of the property. So I think we are talking about use and enjoyment of the mineral rights or how we would classify the groundwater, yes.

Q. What if the landowner decided to sell its property, would the fact that contamination was in the groundwater under that person's property affect their use and enjoyment of the property?

\* \* \*

A. Yes, sir. I'm not sure how the sale of the property would impact on the use and enjoyment.

\* \* \*

Q. Well, Mr. Worrall, if a landowner owns property, would not part of the use and enjoyment – and I'm not a land use expert – but would part of the use and enjoyment be the ability to sell the property at market rate?

A. It hadn't occurred to me till this moment, but I suspect that's right.

Q. Okay. Well, if it turns out the market rate had been reduced because there was contamination discovered on the property, would that affect its use and enjoyment?

A. Probably would.<sup>314</sup>

Through this exchange, Mr. Worrall admitted that contaminants migrating off the site of the ACL facility could affect his analysis and that contaminated ground water migrating offsite from the ACL facility, even when that contamination only affects the market value of the adjacent properties, could affect his land use analysis. In addition, Mr. Worrall later testified that if there was a leaking hazardous waste unit on site at a MSW facility that he evaluated, and that unit was causing ground water contamination to the adjacent landowners, he “would have difficulty determining that we've got land use compatibility.”<sup>315</sup> He continued: “Had I discovered it after the fact, I might have to revisit my findings.”<sup>316</sup>

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<sup>314</sup> *Id.* at Vol. 4 at 788 ln.3 – 790 ln.25 (Cross Exam (by Erich Birch) of John Worrall) (Apr. 1, 2009).

<sup>315</sup> *Id.* at Vol. 4 at 793 lns.8-19.

<sup>316</sup> *Id.* at Vol. 4 at 793 lns.19-20.

As described in detail above, the ACL facility is the site of the disposal of both hazardous and industrial waste. There is also evidence that the IWU is leaking and is causing ground water contamination both on-site at the ACL facility and at offsite properties. Based on this information, it is clear that the Land Use Analysis included in the application is fatally flawed. While Mr. Worrall drafted the Land Use Analysis based on the presumption that the ACL facility was in compliance with applicable environmental regulations, and thus, was not contributing to ground water contamination on adjacent properties, the great weight of the evidence in this proceeding proves that presumption to be false. As such, the Land Use Analysis, based on that false assumption, is flawed and does not comply with TCEQ's regulatory requirements. Contrary to the Proposal for Decision's conclusions, WMTX has failed to demonstrate that the ACL facility, as described in the application, is a compatible land use, and thus, the Commission must revise the appropriate Findings of Fact and Conclusions of Law and deny the application.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 192. ~~The TCEQ WMTX failed to~~ 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, specifically failing to consider whether the ACL facility will adversely impact human health and the environment.

Finding of Fact No. 193. WMTX ~~did not~~ included sufficient information in the Application pertaining to land use and land use compatibility.

Finding of Fact No. 193A. The Land Use Analysis contained in the application is based on the false assumption that the ACL facility is operating and will operate in compliance with all environmental regulations.

Finding of Fact No. 193B. The evidentiary record shows that the Land Use Analysis should be reconsidered based on the noncompliance of WMTX at the ACL facility.

Finding of Fact No. 194. The existing ACRD Facility is not compatible with surrounding land uses.

Finding of Fact No. 195. The continued use of the land for an MSW site will ~~not~~ adversely impact human health, safety, and ~~or~~ welfare.

Finding of Fact No. 197. The proposed expansion is not compatible with land use in the surrounding area.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet met-its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 20. Part II of the Application does not meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 37. ~~As required by TEX. HEALTH & SAFETY CODE ANN. § 361.069, the~~ The Facility is not compatible with surrounding land uses.

**P. *Exceptions Related to Control of Nuisances, d. Summary. Findings of Fact Nos. 214, 215, and 220 and Conclusions of Law Nos. 5, 7 through 9, 11, 20, 23, and 40.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Control of Nuisances, d. Summary, as proposed by the Administrative Law Judge:

Finding of Fact No. 214. Operation of the expanded landfill as requested in the Application will not result in pollution of the surrounding land.

Finding of Fact No. 215. Operation of the expanded landfill as requested in the Application will not result in contamination of groundwater and surface water.

Finding of Fact No. 220. The Application proposes sufficient provisions to avoid causing a nuisance.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 23. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 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).

Texas Administrative Code Title 30, Section 330.15(a)(2) provides:

(a) A person may not cause, suffer, allow, or permit the collection, storage, transportation, processing, or disposal of municipal solid waste (MSW), or the use or operation of a solid waste facility to store, process, or dispose of solid waste, or to extract materials under Texas Health and Safety Code

§ 361.092, in violation of the Texas Health and Safety Code, or any regulation, rules, permit, license, order of the commission, or in such a manner that causes:

\* \* \*

(2) the creation and maintenance of a nuisance . . . .<sup>317</sup>

As identified in the Proposal for Decision, the term “nuisance” is defined at 30 TEX. ADMIN. CODE § 330.3(95), in part, as: “Municipal solid waste that is stored, process, 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.”<sup>318</sup> As discussed in detail above, the ACL facility, and specifically the IWU and the Phase I Unit, are operated in such a manner as to cause the pollution of the surrounding land and the contamination of ground water and surface water. The extent of the contamination of ground water and surface water has been addressed at length and need not be reargued, but it must be recognized that the contamination of ground water and surface water both at the site of the ACL facility and on adjacent properties is also important in the context of nuisance.

The definition of the term “nuisance” clearly contemplates that the operation of a MSW landfill facility, such as the ACL facility, in such a manner as to cause pollution of the surrounding land and contamination of ground water and surface water will be considered a nuisance by the Commission. In turn, 30 TEX. ADMIN. CODE § 330.15(a)(2) prohibits WMTX from operating the ACL facility in such a manner as to create and maintain a nuisance. The historical and ongoing contamination of ground water and surface water is clearly a nuisance, and thus, WMTX is currently and will continue to be in violation of 30 TEX. ADMIN. CODE § 330.15(a)(2) if proposed Permit No. MSW-249D is issued. As such, the relevant Findings of Fact and Conclusions of Law must be revised and the application denied.

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<sup>317</sup> 30 TEX. ADMIN. CODE § 330.15(a)(2).

<sup>318</sup> *Id.* § 330.3(95) (emphasis added).

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 214. Operation of the expanded landfill as requested in the Application will ~~not~~ result in pollution of the surrounding land.

Finding of Fact No. 215. Operation of the expanded landfill as requested in the Application will ~~not~~ result in contamination of groundwater and surface water.

Finding of Fact No. 220. The Application does not proposes sufficient provisions to avoid causing a nuisance.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation~~.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not violates 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.

Conclusion of Law No. 20. Part II of the Application does not meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 23. Part IV of the Application, the SOP, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 40. The methods specified in the SOP do not comply with the MSW rules to prevent the creation of any nuisance, as defined by 30 TEX. ADMIN. CODE ANN. § 330.3(95).

***Q. Exceptions Related to Compliance History. Finding of Fact No. 230 and Conclusion of Law No. 8.***

TJFA excepts to the following Finding of Fact and Conclusion of Law related to Compliance History, as proposed by the Administrative Law Judge:

Finding of Fact No. 230. The Facility's compliance history does not warrant denial of the Application.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

The Proposal for Decision considers the compliance history of WMTX and the ACL facility in a vacuum of the Commission's compliance history rules. While the compliance history rules provide a method for developing a compliance history score and ranking, *i.e.*, a compliance history summary, and such a compliance history summary is to be considered in a proceeding such as this, that is not the required end of any consideration of the past operational practices of a facility such as the ACL facility.

Texas Health and Safety Code Section 361.084, states:

(a) The commission by rule shall establish a procedure to prepare compliance summaries relating to the applicant's solid waste management activities in accordance with the method for evaluating compliance history developed by the commission under Section 5.754, Water Code.

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(c) Evidence of compliance or noncompliance by an applicant for a solid waste management facility permit with agency rules, permits, other orders, or evidence of a final determination of noncompliance with federal statutes or statutes of any state concerning solid waste management may be:

(1) offered by a party at a hearing concerning the application; and

(2) admitted into evidence subject to applicable rules of evidence.

(d) The commission shall consider all evidence admitted, including compliance history, in determining whether to issue, amend, extend, or renew a permit.<sup>319</sup>

Thus, while the Commission is clearly directed to consider compliance history scores and rankings developed pursuant to the compliance history rules (*i.e.*, pursuant to TEX. WATER CODE § 5.754), it is also directed to consider all evidence admitted when determining whether an application should be approved or denied. Section 361.084(c) specifically states that “[e]vidence of compliance or noncompliance . . . with agency rules, permits, other orders . . .” may be offered and admitted into evidence.<sup>320</sup> Thus, the evidentiary record with regard to the question of compliance history is not limited to the compliance history score and ranking generated pursuant to the Commission’s compliance history rules. The evidentiary record may, and does in this proceeding, include other evidence of noncompliance with agency rules, permits, and orders. Based on the Proposal for Decision it appears that only the compliance history summary and the elements of the compliance history score and ranking determination were considered. The other evidence of WMTX’s noncompliance at the ACL facility must be considered by the Commission in order to fully address the ongoing compliance problems that adversely impact public health, property, and the environment.

WMTX touted the fact that it had only one Agreed Order in its TCEQ-generated compliance history, but the history of that Agreed Order and the number of violations involved, both directly and indirectly are an important part of a full understanding of the history of noncompliance at the ACL facility. All of this information is contained in the evidentiary record.

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<sup>319</sup> TEX. HEALTH AND SAFETY CODE § 361.084(a), (c), & (d).

<sup>320</sup> *Id.* § 361.084(c).

The Agreed Order, which included a final monetary penalty of \$244,420.00,<sup>321</sup> included ten separate allegations of violations, but the actual number of violations involved is much greater.<sup>322</sup> Multiple “events” or violations are associated with many of the violations identified in the Agreed Order. For example:

- (1) “The Respondent failed to maintain negative pressure at each landfill gas collection wellhead.” *Fifty-one* violation events were identified by TCEQ.<sup>323</sup>
- (2) “The Respondent failed to maintain either a nitrogen level of less than 20 percent or an oxygen level less than 5 percent in the landfill gas.” *Twenty-six* violation events were identified by TCEQ.<sup>324</sup>
- (3) “The Respondent failed to take monthly temperature readings at six wells from January through December 2001. Well Nos. 38-40 and 42-44 were not monitored.” *Seven* violation events were identified by TCEQ.<sup>325</sup>
- (4) “The Respondent failed to take monthly temperature readings at six wells from January through December 2001. Well Nos. 39-40 and 42-44 were not monitored.” *Sixty-five* violation events were identified by TCEQ.<sup>326</sup>

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<sup>321</sup> The initial calculated penalty was \$881,508.00. See Exh. TJFA 27, “Executive Summary – Enforcement Matter, Docket Number: 2002-0935-MLM-E,” at 3 of 4.

<sup>322</sup> See Exh. City of Austin 1, Agreed Order Docket No. 2002-0935-MLM-E, *In the Matter of an Enforcement Action Concerning Waste Management of Texas, Incorporated, Municipal Solid Waste Permit No. 249-C, Air Account No. TH-0502-F* (July 5, 2004).

<sup>323</sup> See Exh. TJFA 27, Penalty Calculation Worksheet at 3 of 16 (PCW Revision Sept. 23, 2002). This “violation description,” as identified on the Penalty Calculation Worksheet, is related to alleged violation number two in the Agreed Order. See Exh. City of Austin 1, *supra* note 322, at pt. II ¶ 2 at 4.

<sup>324</sup> Exh. TJFA 27, *supra* note 323, at 5 of 16. This “violation description” is related to alleged violation number three in the Agreed Order. See Exh. City of Austin 1, *supra* note 322, at pt. II ¶ 3 at 4.

<sup>325</sup> Exh. TJFA 27, *supra* note 323, at 7 of 16. This “violation description” is related to alleged violation number four in the Agreed Order. See Exh. City of Austin 1, *supra* note 322, at pt. II ¶ 4 at 4.

<sup>326</sup> Exh. TJFA 27, *supra* note 323, at 9 of 16. This “violation description” is also related to alleged violation number four in the Agreed Order. See Exh. City of Austin 1, *supra* note 322, at pt. II ¶ 4 at 4.

- (5) “The Respondent deviated from an operational requirement in the facility’s site operation plan, by allowing the leachate head to rise more than 12 inches above the liner. Waste Management records showed that the limit was exceeded from March 30, 2000, until February 12, 2002. The exceedances were from a few inches to over 16 feet above the 12-inch limit.” *Twenty-three* violation events were identified by TCEQ.<sup>327</sup>

In other words, just five violations identified in the Agreed Order actually equated to 172 violation events over a two-year period.

Also, “odor” has been an ongoing, long-term compliance problem at the ACL facility, yet WMTX argues that “odor” has historically not been a problem at the ACL facility simply because there was only one alleged violation specific to “odor” in the Agreed Order. There are clear limitations to WMTX’s argument that were not addressed in the Proposal for Decision.

First, while only one odor-specific nuisance violation was included in the Agreed Order, TCEQ documentation associated with the Agreed Order states: “Since December 14, 2001, the TCEQ Region 12 Office has received approximately 800 odor complaints regarding the Waste Management Austin Community Landfill and the neighboring BFI Sunset Farms Landfill. Most of these complaints cited a ‘rotting garbage’ and or ‘gassy’ odor.”<sup>328</sup> Second, there are multiple other violations identified in the Agreed Order that are associated with potential odors from the ACL facility. In addition, Travis County provided documentation of hundreds of complaints regarding odors associated with the ACL facility.<sup>329</sup> These reports of odors had been provided directly to Travis County by constituents who live near the ACL facility.

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<sup>327</sup> Exh. TJFA 27, Penalty Calculation Worksheet at 3 of 4 (PCW Revision Mar. 13, 2003). This “violation description” is related to alleged violation number one in the Agreed Order. *See* Exh. City of Austin 1, *supra* note 322, at pt. II ¶ 1 at 4.

<sup>328</sup> Exh. TJFA 27, *supra* note 321, “Executive Summary,” at 1 of 4.

<sup>329</sup> *See* Exh. Travis County 6.

Together the large number of odor nuisance violations noted by TCEQ and reported to Travis County and the other odor-related violations identified by TCEQ in the Agreed Order draw a picture of continued, long-term noncompliance. The ACL facility has clearly been a source of nuisance odor over an extended period of time to the detriment of the individuals and families that live near it. Such a nuisance cannot be deemed to have a good compliance history, at least when measured by those people who actually live near the facility.

In addition, the ongoing contamination of ground water and surface water that is caused by the ACL facility must also be considered when looking at compliance history. The nature and extent of the ground water and surface water contamination has been discussed in detail above. Ongoing ground water contamination is clearly not in compliance with State statutes, Commission rules, or the existing permit for the ACL facility. This noncompliance must be considered by the Commission when determining whether to issue Permit No. MSW-249D.

For all of these reasons, based on the entirety of the evidence in the record in this proceeding, the Commission should find that WMTX's compliance history at the ACL facility fails to demonstrate that Permit No. MSW-249D should be issued, and thus, should deny the application.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 229A. There is a history of noncompliance, including nuisance odors and ground water and surface water contamination originating from the ACL facility.

Finding of Fact No. 230. The Facility's compliance history ~~does not warrants~~ denial of the Application.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

**R. *Exceptions Related to Conformance with the Regional Solid Waste Management Plan (RSWMP). Finding of Fact No. 247 and Conclusions of Law Nos. 7, 8, 20, and 39.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Conformance with the Regional Solid Waste Management Plan, as proposed by the Administrative Law Judge:

Finding of Fact No. 247. None of the specific bases for the CAPCOG's non-conformance determination are a sufficient basis to support a denial of the Application.

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 39. The Facility is compatible with the applicable regional solid waste management plan, pursuant to TEX. HEALTH & SAFETY CODE ANN. § 361.062.

TJFA excepts to Finding of Fact No. 247, as set out above, and the related Conclusions of Law. While the Commission is the final decision maker as to whether an application for a MSW landfill permit is in compliance with a regional solid waste management plan ("RSWMP"), the appropriate council of governments, here the Capital Area Council of Governments ("CAPCOG"), makes an initial determination and recommendation to the Commission regarding compliance and conformity with its RSWMP. Contrary to Finding of Fact No. 247, CAPCOG's recommendation, based on its own interpretation and implementation of its RSWMP, and the totality of evidence in this proceeding support a final determination by the Commission that the application is not in compliance with the applicable RSWMP.

As early as January 2006, pursuant to its mandate under state law, CAPCOG determined that WMTX's application to expand the ACL facility was not in conformance with CAPCOG's

RSWMP.<sup>330</sup> Specifically, CAPCOG stated in its determination letter to TCEQ: “The SWAC [Solid Waste Advisory Committee] has made the determination that the proposed expansion of this facility will not conform to current and future land use in that area and furthermore, there are significant local concerns about the site . . . .”<sup>331</sup> As identified in the January 2006 letter, the Executive Committee of CAPCOG agreed with the SWAC’s determination of nonconformance.<sup>332</sup> CAPCOG’s determination was reaffirmed in its April 2008 letter to the Honorable Roy Scudday, again asserting its determination of nonconformance with the RSWMP.<sup>333</sup>

CAPCOG conducted the type of evaluation required of it by state law. CAPCOG conducted its evaluation based on the information submitted by WMTX,<sup>334</sup> and CAPCOG’s final determination was made pursuant to what was to become its approved RSWMP. While Finding of Fact No. 247 dismisses the findings made by CAPCOG, such findings cannot simply be ignored. They were made by the agency that developed the RSWMP based on its members’ knowledgeable interpretation of the document.

The CAPCOG RSWMP identifies one goal and eight objectives as the “Goals and Objectives for Conformance Review of Facility Applications.”<sup>335</sup> CAPCOG’s SWAC reviewed

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<sup>330</sup> See Exh. City of Austin JW-5, Letter from Betty Voights, Capital Area Council of Gov’ts, to Richard C. Carmichael, Ph.D., P.E., Texas Comm’n on Env’tl. Quality (Jan. 31, 2006), at (2 of 8).

<sup>331</sup> *Id.*

<sup>332</sup> *See id.*

<sup>333</sup> See Exh. City of Austin 2, Letter from Betty Voights, Capital Area Council of Gov’ts, to the Honorable Roy Scudday (Apr. 10, 2008)

<sup>334</sup> See Exh. APP-7, Letter from Lou Ann Lowe, Golder Assocs., to Keith Helmers, Capital Area Council of Gov’ts (Apr. 14, 2005), with attached completed CAPCOG Solid Waste Plan Conformance Checklist.

<sup>335</sup> Goal #15 states:

Use the Plan Conformance/Facility Application Review process and the provisions of §363.066, Health & Safety Code, to address land use compatibility and other local issues in order to avoid, if possible, or minimize if avoidance is not possible, adverse impacts from municipal solid waste (MSW) facilities on human health and the environment.

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Exh. APP-218, Capital Area Council of Gov'ts, Regional Solid Waste Management Plan 2002-2022 (Feb. 9, 2005), as adopted by TCEQ, May 31, 2007, at 37 (00050). The eight objectives are as follows:

- Ensure that the use of a site for a MSW facility does not adversely impact human health or the environment by evaluating and determining impacts of the site upon counties, cities, communities, groups of property owners, or individuals in terms of compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest.
- Ensure that MSW facilities comply with local zoning requirements, siting ordinances, and other local government land use regulations.
- Ensure that MSW facilities' impacts on roads, drainage ways, and other infrastructure are assessed, that both existing and planned future land uses near the facility are considered, and that infrastructure problems created by the facility and the potential for land use conflicts between MSW facilities and existing and planned development are fully and adequately taken into account and addressed.
- Ensure that MSW facilities are good neighbors, by assessing and considering every applicant's five year compliance history in Texas to the fullest extent allowed by TCEQ.
- Encourage programs that provide incentives for using landfills instead of illegal dumping including but not limited to conducting and increasing awareness of community cleanup events, efforts to curtail illegal dumping, litter abatement and waste reduction programs, public education programs, lower rates for waste-collection events, etc.
- Avoid if possible, or minimize if avoidance is not possible concerns about visual and aesthetic impacts from MSW facilities on adjacent land uses by incorporating "context sensitive" design, appropriate buffers and setbacks into facility design. Ensure that operators take reasonable and appropriate steps to avoid such impacts if possible or minimize them if complete avoidance is not possible.
- Address local land use concerns about the long term and cumulative effects of MSW facilities and protect the public interest in a natural landscape, avoid if possible, or minimize if not possible, major disruptions to the landscape and other adverse long term and cumulative effects by ensuring that the permitted and maximum potential (theoretical geometric calculation) height and capacity of a MSW facility are accurately calculated and taken into account.
- Avoid if possible, or minimize if avoidance is not possible, nuisance conditions associated with MSW facilities that generate community concerns by ensuring that applicants implement reasonable and appropriate measures and best management practices to prevent and control litter, stormwater runoff, vectors, odor, excessive noise, light pollution, and other nuisance conditions.

*Id.* at 37-38 (00050-00051).

WMTX's application and systematically applied its goal and objectives to WMTX's application.

Based on that review, the SWAC made the following determinations, among others:

- Specifically, the applicant's Conformance Checklist states that there are 1163 residences within one mile of the site. In terms of siting facilities to avoid nuisances to neighbors and communities, this site is a poor choice. The existing and future land uses surrounding the site are incompatible with ongoing waste disposal activities. . . . Moreover, the applicant's Conformance Checklist provides no documentation regarding compatibility from appropriate governmental agencies as required by Section 2.12 of the checklist.<sup>336</sup>
- The applicant has not provided the documentation required by Section 2.8 of the Checklist confirming that the applicant can obtain site development approval from the City of Austin and Travis County.<sup>337</sup>
- These serious violations resulted in nuisance odors that affected neighbors and communities. Given applicant's history of serious violations, there is a risk of future violations, and the applicant must demonstrate that it has taken steps to mitigate this risk.<sup>338</sup>
- The applicant's response to Section 2.13 of the Conformance Checklist states only that [sic] will consider or address these issues [*i.e.*, concerns about visual and aesthetic impacts on adjacent land uses] in the future. Section 2.13 clearly requires the application to address these issues at the time of the conformance review. A statement that the applicant will address these issues in the future is inadequate.<sup>339</sup>

CAPCOG even went so far as to provide guidance to WMTX regarding how it could address the issues raised through CAPCOG's review pursuant to its RSWMP. But, as identified by WMTX's witnesses, no revisions were made to the application in response to CAPCOG's

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<sup>336</sup> Exh. City of Austin JW-5, *supra* note 330, at 5 of 8.

<sup>337</sup> *Id.* This finding took on new meaning during the Hearing on the Merits when the accuracy of the Erosion & Restoration Plan that was submitted to the City of Austin on behalf of WMTX to obtain the required development permit was called into question. Witnesses for the City of Austin testified that the ponds detailed in the Erosion & Restoration Plan submitted to the City of Austin differed from the ponds detailed in the application itself. As such, it is not clear that WMTX has obtained the necessary approvals from the City of Austin for construction of the ponds as described in the application.

<sup>338</sup> *Id.* at 6 of 8.

<sup>339</sup> *Id.*

review.<sup>340</sup> In fact, WMTX witnesses went so far as to infer that they were in a better position to determine WMTX's conformance with the RSWMP than CAPCOG.<sup>341</sup>

WMTX simply did not demonstrate conformance with the CAPCOG RSWMP, and as described above, CAPCOG's findings are a sufficient basis to determine nonconformance with the CAPCOG RSWMP, and thus, cannot be ignored. The CAPCOG findings along with the totality of the evidence in the record in this proceeding, where the City of Austin, Travis County, and a neighborhood association were contesting the application, provide more than ample evidence for the Commission to make a finding of noncompliance with the CAPCOG RSWMP. As such, Finding of Fact No. 247 should be revised and the Commission should find that the application is not in compliance with the CAPCOG RSWMP.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 247. ~~None of the specific bases for the CAPCOG's non-conformance determination provides a basis for the Commission to make a final determination of noncompliance with the applicable regional solid waste management plan are a sufficient basis to support a denial of the Application.~~

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX ~~failed to meet~~ ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 20. Part II of the Application does not meet the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 39. The Facility is not compatible with the applicable regional solid waste management plan, pursuant to TEX. HEALTH & SAFETY CODE ANN. § 361.062.

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<sup>340</sup> See Tr. at Vol. 3 at 448 lns.5-14 (Cross Exam (by Sharon Talley) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>341</sup> See, e.g., *id.* at Vol. 4 at 733 lns.10-13 (Cross Exam (by Adam Friedman) of John Worrall) (Apr. 1, 2009).

*S. Exceptions Related to Health of Protestants NCC and Their Families. Findings of Fact Nos. 251 and 253 through 256 and Conclusions of Law Nos. 5, 7 through 9, 11, and 20.*

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Health of Protestants NNC and Their Families, as proposed by the Administrative Law Judge:

Finding of Fact No. 251. The Application meets the requirements of the Commission's rules and goes beyond those requirements in many respects.

Finding of Fact No. 253. No evidence was presented that any individual will suffer adverse health effects as a result of expansion of the landfill.

Finding of Fact No. 254. The Application proposes sufficient provisions to protect groundwater and surface waters.

Finding of Fact No. 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.

Finding of Fact No. 256. The lateral expansion will not increase the likelihood that any individual's health will be adversely affected.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Findings of Fact Nos. 251 and 253 through 256 address the potential adverse impacts of the ACL facility, if permitted, on the persons and families that live adjacent to and in the vicinity of the ACL facility. Incredibly, in the face of overwhelming evidence of historical and existing ground water and surface water contamination, ponding of water over waste, landfill gas migration, and landfill gas and ground water monitoring systems that fail to comply with TCEQ requirements, and years of nuisance issues from the facility, in addition to all of the other regulatory violations enumerated above, the Proposed Order sets forth the Findings of Fact above. These Findings of Fact and the related conclusions of law simply are not supported by the evidence presented in this proceeding.

To the contrary, as discussed in detail above, leachate seeps from the Phase I Unit and the IWU enter the creek in the area of the Phase I Unit, which in turn empties into the tributary to Walnut Creek, and then on to the Colorado River.<sup>342</sup> Thus, contaminated surface water potentially can go from the ACL facility to the Colorado River, risking the health and property of all persons along the route. Similarly, contaminated ground water is present both at the ACL facility and on neighboring properties, such as the Applied Materials property. Even worse, the POC ground water monitoring system proposed in the application is not designed to monitor releases of contaminants from the IWU and the Phase I Unit, the most likely sources of the contaminated ground water. And, the landfill gas monitoring network is also incapable of adequately monitoring the entirety of the ACL facility as required by TCEQ rules. These are only the most blatant examples of how the application fails to comply with TCEQ MSW rules. As discussed above there are a myriad of other violations.

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<sup>342</sup> See Tr. at Vol. 7 at 1480 ln.14 – 1481 ln.8 (Redirect (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009); see also *id.* at Vol. 10 at 2146 ln.4 – 2147 ln.1 (Cross Exam (by Erich Birch) of Charles Lesniak III (Apr. 9, 2009).

All of these violations, especially when taken together, lead to only one conclusion. The ACL facility, as described in the application, will not be protective of human health, property, and the environment. Thus, the Findings of Fact and related Conclusions of Law set out above must be revised and the application denied.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 251. The Application does not meets the requirements of the Commission's rules ~~and goes beyond those requirements in many respects.~~

Finding of Fact No. 253. ~~No~~ Evidence was presented demonstrating that any individual will suffer adverse health effects could as a result from the expansion of the landfill.

Finding of Fact No. 254. The Application does not proposes sufficient provisions to protect groundwater and surface waters.

Finding of Fact No. 255. The Application does not 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.~~

Finding of Fact No. 256. The lateral expansion will ~~not~~ increase the likelihood that any individual's health will be adversely affected.

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues except the proposed hours of operation.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 20. Part II of the Application does not meet the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

***T. Exceptions Related to Construction of the Proposed Lateral Expansion Prior to the Issuance of the Draft Permit. Findings of Fact Nos. 233, 234, 236, and 237 and Conclusions of Law Nos. 7 and 8.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Construction of the Proposed Lateral Expansion Prior to the Issuance of the Draft Permit, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 234. The two ponds have been, at least partially, constructed prior to the issuance of the Draft Permit.

Finding of Fact No. 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.

Finding of Fact No. 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.

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

In large part, TJFA agrees with the Proposal for Decision's findings regarding the construction of the ponds on the expansion area of the ACL facility. Legally, though, the

construction of such ponds on the expansion area of the ACL facility prior to issuance of Permit No. MSW-249D is a violation of TCEQ rules and is grounds for denial of the application pursuant to 30 TEX. ADMIN. CODE § 330.15(b). An understanding of the construction that has taken place and the applicable regulations is necessary to understand the basis for denial of the application.

During and after the Hearing on the Merits, WMTX failed to provide a consistent story regarding the construction of the sedimentation and bio-filtration ponds in the proposed expansion area of the ACL facility. Initially, WMTX claimed that the ponds constructed were not the ponds in the application, and thus, were not constructed in violation of the permit.<sup>343</sup> Then, WMTX attempted to justify the construction of the sedimentation and bio-filtration ponds as a mitigation project required by the City of Austin.<sup>344</sup> WMTX claimed that such authorization from the City of Austin is independent from any authorization from TCEQ for the expansion of the ACL facility and that WMTX did not need to obtain the MSW permit amendment from TCEQ to construct the ponds.<sup>345</sup> Such a claim is not based on the evidentiary record and is not supported by TCEQ's regulatory requirements.

First, while the sedimentation and bio-filtration ponds at issue may, in fact, be required by the City of Austin as a mitigation project, such mitigation was only required based on WMTX's identification of a stock tank, defined by the City as a "critical environmental feature," in the expansion area of the ACL facility.<sup>346</sup> As such, the mitigation project was not required to

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<sup>343</sup> See, e.g., Tr. at Vol. 3 at 372 lns.2-8 (Cross Exam (by Charles G. Dominguez, P.E.) (Mar.31, 2009).

<sup>344</sup> See Applicant Waste Management of Texas, Inc.'s Closing Argument, *Application of Waste Management of Texas, Inc. for a Municipal Solid Waste Permit Amendment; Permit No. MSW-249D*, SOAH Docket No. 582-08-2186, TCEQ Docket No. 2006-0612-MSW at 67 (May 8, 2009).

<sup>345</sup> See *id.*

<sup>346</sup> See Exh. APP-202, *supra* note 11, at Tech. Complete 33 (Vol. 1, Pts. I&II § 3.6.2 at 27) The application states:

The pond in the north central portion of the expansion area that is considered a wetland by the COA [City of Austin] will be impacted by the proposed expansion. This impact

go forward until WMTX actually impacted the stock tank through construction of the expansion of the ACL facility. In other words, WMTX was not required to construct any mitigation project until there were expansion-related actions to mitigate. That WMTX constructed a required mitigation project shows that WMTX has begun the expansion itself of the ACL facility.

Second, while WMTX is correct that the authorization from the City of Austin is independent from TCEQ's issuance of Permit No. MSW-249D, it is issuance of Permit No. MSW-249D by the Commission that is required for WMTX to move forward with any construction of the expansion of the ACL facility, including construction of the sedimentation and bio-filtration ponds in the expansion area. Pursuant to TCEQ rules, WMTX clearly was required to obtain TCEQ authorization in the form of the amended permit to construct any structural component of the proposed expansion of the ACL facility, including the sedimentation and bio-filtration ponds, prior to beginning such construction.

Texas Administrative Code Title 30, Section 330.7(a) provides, in relevant part:

*No person may commence physical construction of a new municipal solid waste (MSW) management facility, a vertical expansion, or a lateral expansion without first having submitted a permit application in accordance with §§330.57, 330.59, 330.61, 330.63, and 330.65 of this title (relating to Permit and Registration Application Procedures) and received a permit from the commission . . . .*<sup>347</sup>

The ponds are clearly located in the expansion area, *i.e.*, not within the permitted boundary of existing Permit No. MSW-249C.<sup>348</sup> In addition, there was abundant testimony at the Hearing on the Merits that the sedimentation and bio-filtration ponds that were constructed are the ponds

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will be mitigated in accordance with the COA Site Development Permit, a copy of which is included in the Land Use Analysis Report found in Appendix A.

*Id.*

<sup>347</sup> 30 TEX. ADMIN. CODE § 330.7(a) (emphasis added).

<sup>348</sup> See, e.g., Exh. APP-202, *supra* note 11, at Tech. Complete 616 (Vol. II, Pt. III, Att. 2 at Fig. ATT2-2) (Attachment 11).

identified in the application.<sup>349</sup> In fact, WMTX's own witness, Mr. Dominguez, identified that they were the "same ponds."<sup>350</sup> Similarly, the multiple plan views shown in the Erosion & Restoration Plan that was submitted to the City of Austin on August 8, 2005,<sup>351</sup> show the identical configuration as shown in the application for the pond.<sup>352</sup> A comparison of the details of the Erosion & Restoration Plan submitted to the City of Austin and the application confirms that the general design and location of these ponds are essentially the same.

Clearly, such construction is in violation of 30 TEX. ADMIN. CODE § 330.7(a). WMTX has constructed, and even appears to be utilizing "structural components,"<sup>353</sup> of the lateral expansion that is proposed in the application prior to any final decision regarding issuance of Permit No. MSW-249D. These "structural components," or ponds, are necessary components of the design of the MSW management facility, and thus, their construction is prohibited by TCEQ rules. Therefore, WMTX is in violation of TCEQ rules.

This type of violation of TCEQ rules is grounds for denial of the application, contrary to the Proposal for Decision's conclusion. Texas Administrative Code Title 30, Section 330.15(b) provides:

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<sup>349</sup> See Tr. at Vol. 3 at 372 Ins.22-23 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009); see generally *id.* at Vol. 10 at 2129 Ins.20-23 (Cross Exam (by Erich Birch) of Charles Lesniak III) (Apr. 9, 2009); see also *id.* at Vol. 10 at 2187 ln.22 – 2188 ln.6 (Cross Exam (by Erich Birch) of Thomas Franke) (Apr. 9, 2009).

<sup>350</sup> *Id.* at Vol. 3 at 372 Ins.22-23 (Cross Exam (by Erich Birch) of Charles G. Dominguez, P.E.) (Mar. 31, 2009).

<sup>351</sup> See Exh. City of Austin TF-3, Doucet & Assocs., Inc., "Erosion & Restoration Plan for Waste Management of Texas" (submitted Aug. 8, 2005).

<sup>352</sup> See, e.g., Exh. APP-202, *supra* note 11, at Tech. Complete 616 (Vol. II, Pt. III, Att. 2 at Fig. ATT2-2) (Attachment 11).

<sup>353</sup> The term "structural components" is defined by TCEQ as: "Liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the municipal solid waste landfill that is necessary for protection of human health and the environment." 30 TEX. ADMIN. CODE § 330.3(152). The ponds are structural components in that they are necessary to the design of the expansion of the ACL facility to address storm water runoff from the ACL facility in protection of human health and the environment.

MSW land disposal facilities (Types I, IAE, IV, IVAE, and VI) failing to satisfy the applicable requirements of this chapter, unless exempted by this chapter, are considered open dumps for purposes of state solid waste management planning under the Resource Conservation and Recover Act *and are prohibited* under Resource Conservation and Recovery Act, §4005(a).<sup>354</sup>

Therefore, based on WMTX's violation of 30 TEX. ADMIN. CODE § 330.7(a) and the provisions of 30 TEX. ADMIN. CODE § 330.15(b), commencement of construction of a lateral expansion without a permit is clearly a basis for denial of the application.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 233. ~~The two ponds are have not yet been constructed in accordance with the engineering design for the detention and sedimentation ponds as set forth in the Application.~~

Finding of Fact No. 234. ~~The two ponds have been, at least partially, constructed prior to the issuance of the Draft Permit No. MSW-249D.~~

Finding of Fact No. 234A. ~~The two ponds are located in the expansion area of the ACL facility as described in the application.~~

Finding of Fact No. 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. Construction of the ponds is a violation of 30 TEX. ADMIN. CODE § 330.7(a).~~

Finding of Fact No. 236A. ~~Because of its violation of 30 TEX. ADMIN. CODE § 330.7(a), the ACL facility is considered an "open dump" pursuant to 30 TEX. ADMIN. CODE § 330.15(b), and thus the ACL facility is prohibited under Section 4005(a) of the Resource Conservation and Recovery Act.~~

Finding of Fact No. 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.~~

Conclusion of Law No. 7. ~~The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet met its burden with respect to all referred issues except the proposed hours of operation.~~

Conclusion of Law No. 8. ~~The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX.~~

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<sup>354</sup> *Id.* § 330.15(b) (emphasis added).

HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

***U. Exceptions Related to Permit History. Findings of Fact Nos. 50 through 52 and Conclusions of Law Nos. 5, 7 through 12, 19 through 23, 26, 27, 33, and 51.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Permit History, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 51. The conditions that 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.

Finding of Fact No. 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.

Conclusion of Law No. 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).

Conclusion of Law No. 7. The burden 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.

Conclusion of Law No. 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 TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 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.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the 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.

Conclusion of Law No. 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 ACT ANN. §§ 361.086(b) and 361.087.

Conclusion of Law No. 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.

Conclusion of Law No. 20. Part II of the Application meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 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.

Conclusion of Law No. 22. Part III of the Application meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 23. Part IV of the Application, the SOP, meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 26. Applicant submitted a geology report that complies with 30 TEX. ADMIN. CODE ANN. § 330.63(e).

Conclusion of Law No. 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).

Conclusion of Law No. 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.

Conclusion of Law No. 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.

For all of the reasons previously identified in these Exceptions, TJFA excepts to Findings of Fact Nos. 50 through 52. For the reasons addressed—inaccurate and misleading information regarding the IWU and the Phase I Unit, the proposed POC ground water monitoring system that will fail to monitor the migration of contaminants from hazardous and industrial waste disposed in the IWU, the existing ground water contamination both on-site at the ACL facility and offsite on adjacent properties, the proposed landfill gas monitoring system that fails to comply with

applicable regulatory requirements, the migration of contaminants into surface waters, and the failure to address waste settlement and slope stability in a scientific and sound engineering manner, as well as all of the other inadequacies and deficiencies in the application that have been addressed in detail above—there is simply no evidence to support Findings of Fact Nos. 50 through 52 and the related Conclusions of Law. TJFA urges the Commission to revise these findings of fact as proposed below, and thus, deny the application.

Also, contrary to the conclusions of the Proposal for Decision, the failure of WMTX to comply with all of the regulatory requirements enumerated above is grounds for denial of the application. Specifically, 30 TEX. ADMIN. CODE § 330.15(b) provides:

MSW land disposal facilities (Types I, IAE, IV, IVAE, and VI) failing to satisfy the applicable requirements of this chapter, unless exempted by this chapter, are considered open dumps for purposes of state solid waste management planning under the Resource Conservation and Recover Act *and are prohibited* under Resource Conservation and Recovery Act, §4005(a).<sup>355</sup>

To the extent that the ACL facility is operated in violation of applicable MSW rules it is considered an “open dump” is prohibited from operating pursuant to Section 4005(a) of RCRA.

TJFA’s Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 50. The Application does not 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.

Finding of Fact No. 51. The conditions that exist at and near the Facility are not 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.~~

Finding of Fact No. 52. There are ~~no~~ site-specific conditions that require special design considerations. The site is not well suited to the design, construction, operation, and ultimately, closure and post-closure of an MSW landfill.

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<sup>355</sup> *Id.* (emphasis added).

Conclusion of Law No. 5. WMTX failed to 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).

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation~~.

Conclusion of Law No. 8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.

Conclusion of Law No. 9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.

Conclusion of Law No. 10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to includes all matters required by law.

Conclusion of Law No. 11. The approval of the Application and the issuance of Permit No. MSW-249D, will not violates 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.

Conclusion of Law No. 12. The contents of the permit to be issued to the Facility do not meet the requirements of the Texas Solid Waste Disposal Act, TEX. HEALTH & SAFETY ACT ANN. §§ 361.086(b) and 361.087.

Conclusion of Law No. 19. Part I of the Application does not meets the technical requirements of 30 Tex. Admin. Code Ann. §§ 305.45, 330.57(c)(1), and 330.59.

Conclusion of Law No. 20. Part II of the Application does not meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.

Conclusion of Law No. 21. The Site Development Plan, which supports Parts I and II of the Application, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.

Conclusion of Law No. 22. Part III of the Application does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.45, 330.57(c)(3), and 330.63.

Conclusion of Law No. 23. Part IV of the Application, the SOP, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.

Conclusion of Law No. 26. Applicant submitted a geology report that does not comply ~~complies~~ with 30 TEX. ADMIN. CODE ANN. § 330.63(e).

Conclusion of Law No. 27. The Application does not contains the required information regarding the effect of Facility construction on groundwater flow required by 30 TEX. ADMIN. CODE ANN. § 330.403(e)(1).

Conclusion of Law No. 33. Applicant has not 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.

Conclusion of Law No. 51. Pursuant to the authority of, and in accordance with, applicable laws and regulations, the requested permit should not be granted ~~with the modifications described in this Order.~~

Conclusion of Law 51A. Pursuant to 30 Tex. Admin. Code § 330.15(b), the application should be denied because the ACL facility is operated in violation of applicable MSW rules, and thus, is considered an "open dump" and is prohibited pursuant to Section 4005(a) of the Resource Conservation and Recovery Act.

***V. Exceptions Related to Major Amendment. Findings of Fact Nos. 257 and 258 and Conclusions of Law Nos. 2 and 5 through 7.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Major Amendment, as proposed by the Administrative Law Judge:

Finding of Fact No. 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.

Finding of Fact No. 258. No additional public notice is necessary pursuant to 30 TAC § 281.23(a).

Conclusion of Law No. 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.

Conclusion of Law No. 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).

Conclusion of Law No. 6. The Application was processed and the proceedings described in this Order were conducted in accordance with applicable laws 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.

Conclusion of Law No. 7. The burden 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.

Findings of Fact Nos. 257 and 258 provide only part of the story when it comes to the application that was considered at the Hearing on the Merits in this proceeding. They fail to acknowledge that WMTX made significant changes to the technically complete application, changes that when considered in their entirety constitute a “major amendment” to the technically complete application, thus requiring additional public notice.

The application in this proceeding was deemed technically complete in January 2008,<sup>356</sup> but after that determination was made, WMTX submitted over 150 pages of revisions to the January 2008 technically complete application.<sup>357</sup> Such revisions were substantive, and in certain cases, actually brought the application into compliance with Commission rules.

Two sets of changes were made to the January 2008 technically complete application. The changes were substantive, *e.g.*, changes to the ground water monitoring system, increasing the size of the buffer zone, redefining contaminated water, *et cetera*. As acknowledged by one of the Executive Director’s witnesses, Mr. Udenenwu, the buffer zone identified in the January 2008 technically complete application failed to comply with TCEQ’s MSW rules.<sup>358</sup> As such, the January 2008 technically complete application clearly was not in compliance with TCEQ’s buffer zone rules. Because the application was never actually technically complete, the notice was also flawed.

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<sup>356</sup> See APP-204, Letter from Richard C. Carmichael, Ph.D., P.E., Texas Comm’n on Env’tl. Quality, to Steve Jacobs, WMTX (Jan. 4, 2008), at 00001.

<sup>357</sup> See Exh. APP-211A, Letter from Lou Ann Lowe, P.E. & Charles G. Dominguez, P.E., Golder Assocs., to Matthew Udenenwu, Texas Comm’n on Env’tl. Quality (Feb. 21, 2008); *see also* Exh. APP-211B, Letter from Lou Ann Lowe, P.E. & Charles G. Dominguez, P.E., Golder Assocs., to Matthew Udenenwu, Texas Comm’n on Env’tl. Quality (Apr. 14, 2008).

<sup>358</sup> See Tr. at Vol. 11 at 2359 lns.2-7 (Cross Exam (by Erich Birch) of Matthew Udenenwu) (Apr. 10, 2009).

Based on a review of the entirety of the revisions requested by WMTX in February and April 2008, it is clear that such extensive revisions are a “major amendment” to the application. As contemplated by TCEQ rules, when an applicant proposes a “major amendment” to a pending application, the applicant must re-publish notice before the proceeding can move forward, and in this case, before the application can be fully evaluated and potentially approved.

Texas Administrative Code Title 30, Section 281.23(a) provides:

No amendments to an application which would constitute a major amendment under the terms of § 305.62 of this title (relating to Amendment) can be made by the applicant after the chief clerk has issued notice of the application and draft permit, unless new notice is issued which includes a description of the proposed amendments to the application.<sup>359</sup>

Section 305.62(c)(1) describes a “major amendment” as “an amendment that changes a substantive term, provision, requirement, or a limiting parameter of a permit.”<sup>360</sup> Conversely, a “modification,” and thus not a “major amendment,” to a MSW landfill permit, or in this case a MSW landfill permit application, applies “to minor changes to an MSW facility or its operation that do not substantially alter the permit or registration conditions and do not reduce the capability of the facility to protect human health and the environment.”<sup>361</sup> The proposed revisions to the January 2008 technically complete application, as submitted by WMTX in February and April 2008, do not qualify as minor changes to the pending technically complete permit application. Instead, the aggregate of all of the changes must be considered a major amendment to the January 2008 technically complete application because they change a proposed substantive term, provision, requirement, and/or limiting parameter and substantially alter the permit conditions as set out in the January 2008 technically complete application.

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<sup>359</sup> 30 TEX. ADMIN. CODE § 281.23(a).

<sup>360</sup> *Id.* § 305.62(c)(1).

<sup>361</sup> *Id.* § 305.70(d).

Both sets of requested revisions substantively change the compliance requirements for the ACL facility under applicable MSW rules. For example, the February 2008 revisions redefined contaminated water in such a way as to render the conditions of the January 2008 technically complete application, and thus potentially the conditions of the permit, less protective of the environment.<sup>362</sup> As identified in the February 2008 revisions, Part III, Attachment 3, the Waste Management Unit Design Report, of the January 2008 technically complete application defined contaminated water as storm water “which falls directly into the uncovered active area or otherwise comes in contact with waste, or areas that have received daily cover.”<sup>363</sup> Such contaminated water required collection for treatment. Through the February 2008 revisions, WMTX redefined “contaminated water,” excluding that water that falls onto areas that have received daily cover. Thus, the revised version is less protective of the environment than the January 2008 technically complete application. In addition, the landfill footprint, site life, and disposal capacity were all changed by the February 2008 revisions. Drainage plans and calculations were revised. Drainage culverts were added and the level of the water table was revised.<sup>364</sup>

The sheer magnitude of revisions results in substantial changes to the January 2008 technically complete application, and when taken together serve to reduce even further the capability of the ACL facility to protect human health and the environment. State law and TCEQ’s rules are designed to provide interested and affected persons a fair opportunity to know and understand the details of the facility being proposed. While public notice was provided on the January 2008 technically complete application, because of the revisions submitted in February and April 2008, the application was changed repeatedly and dramatically. Contrary to

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<sup>362</sup> See Exh. APP-211A, *supra* note 357, at Pt. III, Att. 3 § 6.1.2 at 21 (00043).

<sup>363</sup> *Id.*

<sup>364</sup> See generally *id.*

state law and regulation, the public has not been provided the required notice of the current application that is the subject of this proceeding.

For all of these reasons, it is clear that additional public notice was required under Commission rules. Such additional public notice was not provided, and to act on the application without such notice being provided, is a violation of Commission rules and State law.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

Finding of Fact No. 257. The revisions made by the Applicant to the application after it was declared technically complete in January 2008 constitute a major amendment to the technically application ~~were provided to the parties well before the hearing on the merits and were the subject of extensive testimony at the hearing.~~

Finding of Fact No. 258. ~~No additional~~ Additional public notice is necessary pursuant to 30 TAC § 281.23(a).

Conclusion of Law No. 2. ~~While notice~~ 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, additional public notice is required by 30 TEX. ADMIN. CODE § 281.23(a) because of substantial, substantive revisions made by WMTX to the technically complete application.

Conclusion of Law No. 5. WMTX ~~failed to~~ 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).

Conclusion of Law No. 6. ~~While the~~ The Application was processed and the proceedings described in this Order were conducted in accordance with applicable laws 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, additional public notice is required by 30 TEX. ADMIN. CODE § 281.23(a) because of substantial, substantive revisions made by WMTX to the technically complete application.

Conclusion of Law No. 7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

**W. *Exceptions Related to Reporting and Transcription Costs. Findings of Fact Nos. 261 through 270 and Conclusion of Law No. 53.***

TJFA excepts to the following Findings of Fact and Conclusions of Law related to Reporting and Transcription Costs, as proposed by the Administrative Law Judge:

Finding of Fact No. 261. TJFA is a Texas limited partnership. TJFA was formed in November 2004.

Finding of Fact No. 262. Bob Gregory is the sole (99%) limited partner of TJFA.

Finding of Fact No. 263. Garra de Aguila, Inc., a Texas corporation, owns the remaining 1% interest in TJFA and serves as the managing general partner of TJFA.

Finding of Fact No. 264. Bob Gregory owns 100% of the shares of Garra de Aguila, Inc.

Finding of Fact No. 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).

Finding of Fact No. 266. TDSL owns a municipal solid waste landfill near Creedmoor in southeast Travis County.

Finding of Fact No. 267. Neither TJFA nor Garra de Aguila, Inc. has any employees.

Finding of Fact No. 268. TJFA shares a common business location, telephone number and fax number with TDSL and TDS.

Finding of Fact No. 269. TJFA is an affiliate of TDSL, a business competitor of WMTX.

Finding of Fact No. 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.

Conclusion of Law No. 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.

Findings of Fact Nos. 261 through 270 are simply not supported by the evidence presented in this proceeding. Instead, these Findings of Fact, and the related discussion in the Proposal for Decision, are almost exclusively based on the Proposal for Decision in the BFI case.

As argued in detail above, information outside the evidentiary record, such as information set out in the Proposal for Decision from the BFI case, cannot be relied on in this proceeding. Such reliance is in violation of State law—TEX. GOV'T CODE §§ 2001.090 and 2001.141(c)—and Commission rules, 30 TEX. ADMIN. CODE § 80.127(e).

State law requires that findings of fact be based on the evidentiary record and on matters that are officially noticed in order to protect the fundamental due process rights of parties in the administrative process.<sup>365</sup> Also as discussed above, the matters noticed here by the Administrative Law Judge, if he is taking judicial notice of the BFI Proposal for Decision, are not of a type for which judicial notice can be taken. The BFI Proposal for Decision is simply that—an administrative law judge's recommendations to the Commission based on evidence in a different proceeding. The BFI Proposal for Decision has not been considered by the Commission and certainly has not been adopted, in any form, into a final Commission order. As such, it is not a prior administrative decision of the Commission that can be relied upon in other cases. It has no precedential value and is not evidence in this case. In addition, the information relied upon by the Administrative Law Judge included case-specific facts that were presented in the BFI case. If any party in this proceeding had believed that such facts were important or relevant to this proceeding, the opportunity to present such evidence was available.

The evidence in the BFI case is not in the evidentiary record in this proceeding, and the parties to this proceeding did not have the opportunity to challenge such evidence in the context of this proceeding. Any reference to or reliance on the BFI Proposal for Decision is contrary to State law and is error by the Administrative Law Judge, and will be error by the Commission if the Findings of Fact, and related Conclusions of Law, based on the BFI Proposal for Decision are adopted in a final order in this proceeding.

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<sup>365</sup> See TEX. GOV'T CODE § 2001.141(c); see also *West Texas Util. Co.*, 896 S.W.2d at 273.

The following information is in the evidentiary record in this proceeding regarding TJFA. TJFA is a limited partnership that invests in real estate.<sup>366</sup> The managing partner of TJFA is Garra de Aguila, Inc.<sup>367</sup> Mr. Dennis Hobbs is currently the president and managing partner of Garra de Aguila and in those positions is responsible for decisions regarding TJFA.<sup>368</sup> TJFA owns two pieces of property within the vicinity of the ACL facility as well as other pieces of property throughout central Texas.<sup>369</sup> As identified, by Mr. Hobbs, the purpose of TJFA's land ownership is to manage and to make money off of the investment properties.<sup>370</sup> TJFA, as an adjacent landowner, is adversely affected by the ACL facility, and Mr. Hobbs, testifying for TJFA, identified that TJFA's economic interests would be affected if the application, as proposed, were approved.<sup>371</sup> WMTX presented no evidence to demonstrate that TJFA's purposes were not exactly what Mr. Hobbs identified them to be. As such, TJFA was a proper party to this proceeding having demonstrated that it owned property in the vicinity of the ACL facility and having demonstrated personal justiciable interests as recognized by Commission rules.<sup>372</sup>

TJFA has made no attempt to hide the relationships between TJFA and Mr. Bobby Gregory and the relationships between Texas Disposal Systems Landfill, Inc. ("TDSL") and Mr. Gregory. Mr. Gregory is a co-owner of TDSL, which owns the TDS Landfill, and he is also associated with Garra de Aguila.<sup>373</sup> In addition, Mr. Hobbs made no attempt to hide that he also

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<sup>366</sup> Tr. of Preliminary Hearing at 26 lns.12-14 (Direct Testimony of Dennis Hobbs) (Apr.16, 2008).

<sup>367</sup> *Id.* at 26 lns.15-16.

<sup>368</sup> *Id.* at 26 lns.19-22.

<sup>369</sup> *Id.* at 26 ln.25 – 27 ln.5; *see also id.* at 29 lns.5-9.

<sup>370</sup> *Id.* at 29 lns. 10-12.

<sup>371</sup> *Id.* at 28 ln.20 – 29 ln.1.

<sup>372</sup> 30 TEX. ADMIN. CODE § 55.203.

<sup>373</sup> Tr. of Preliminary Hearing at 35 ln.24 – 36 ln.1 (Cross Exam (by Bryan Moore) of Dennis Hobbs). (Apr. 16, 2008).

works at the TDS Landfill. TJFA has made no attempt to hide the well-publicized fact that the TDS Landfill and the ACL facility are competitive landfills in the central Texas waste disposal market. But, importantly, there is nothing in the evidentiary record indicating that the business practices of TDSL have any influence over the business practices of TJFA. TDSL and TJFA are two completely separate businesses and one does not share ownership in the other; they are not affiliated in any way.<sup>374</sup>

When considering the role that TJFA plays as a protestant, the only important facts are that it is a proper party to this proceeding because it demonstrated that it owns property in the vicinity of the ACL facility and that it has personal justiciable interests as recognized by Commission rules. TJFA, as a proper party, had the same rights as every other protestant to raise concerns regarding the application and the operation of the ACL facility on those issues recognized in TCEQ's MSW rules. That was what TJFA did in this proceeding. TJFA rightfully contends that real estate in proximity to a properly designed and managed landfill will increase in value. On the other hand, a poorly operated landfill or a landfill that does not comply with all applicable MSW rules will have an adverse impact not only on property values, but also on the environment and health of those persons living in the vicinity of the landfill, and thus, TJFA's property.

As shown by the serious deficiencies in the application, as demonstrated time and time again above, TJFA rightfully challenged WMTX's ability to demonstrate compliance with MSW rules at the ACL facility. As demonstrated by the Executive Director's repeated attempts to assist WMTX in meeting its burden of proof and to rehabilitate the application—through his prefiled testimony, during the Hearing on the Merits, and in his *Closing Argument*—and by his

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<sup>374</sup> Finding of Fact No. 269 affirmatively states that "TJFA is an affiliate of TDSL." There is no evidence in the record to support this, and the statement is legally incorrect. The term "affiliate" is defined as a "corporation that is related to another corporation by shareholdings or other means of control; a subsidiary, parent, or sibling corporation." BLACK'S LAW DICTIONARY, 2d Pocket Ed. at 23 (West 2001). No such corporate relationship exists between TJFA and TDSL.

wholesale endorsement of the testimony of WMTX's witnesses, even when such testimony was clearly contradictory of the facts and the application itself as well as applicable regulatory requirements, it is clear that these deficiencies were not being adequately addressed by TCEQ.

What TJFA is and what its purpose is are simply distractions from the only important matter in this proceeding (and in any proceeding before the Commission): whether the application complies with all applicable regulatory and statutory requirements. TJFA presented reasoned, credible, and factually supported evidence regarding the long-existing hazardous and industrial wastes buried at the ACL facility and the numerous other deficiencies in the application. That is the role, and duty, of a protestant pursuant to State law and Commission rule. It is clear, based on the Proposal for Decision, that the Administrative Law Judge only considered what he believed TJFA to be as opposed to the proper role of protestants in the contested case hearing process when considering transcript costs.

Applicable TCEQ rules require the Commission to consider the following factors in assessing transcription costs:

- (A) the party who requested the transcript;
- (B) the financial ability of the party to pay the costs;
- (C) the extent to which the party participated in the hearing;
- (D) the relative benefits to the various parties of having a transcript;
- (E) the budgetary constraints of a state or federal administrative agency participating in the proceeding;
- (F) in rate proceedings, the extent to which the expenses of the rate proceedings is included in the utility's allowable expenses; and
- (G) any other factor which is relevant to a just and reasonable assessment of costs.<sup>375</sup>

An evaluation of these factors reflects that WMTX should pay all of the transcription costs of this proceeding.

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<sup>375</sup> 30 TEX. ADMIN. CODE § 80.23(d)(1)(A)-(G).

WMTX is the party seeking the ability to expand and continue future operations at the ACL facility. It was WMTX's decision to seek authority to expand the ACL facility that made this entire proceeding necessary. Alone, that is enough reason to allocate all transcription costs to WMTX.

In addition to that fact, it is important to note that WMTX's handling of the application forced all parties into this proceeding and increased the length of the Hearing on the Merits driving up transcription costs. WMTX's purposeful exclusion of the IWU and the Phase I Unit, as well as WMTX's erroneous designation of the Phase I Unit as the "Travis County Landfill (Closed)," and thus its failure to provide adequate and appropriate ground water monitoring and landfill gas monitoring, made the entirety of this proceeding necessary. WMTX, as the applicant, chose how to structure its application and chose to attempt to ignore these units and all of the problems that are associated with them.

The protestants raised important issues in this proceeding—issues that are clearly recognized by State law and TCEQ's MSW rules. The issues raised by protestants were focused on the inability of the design of the ACL facility, as represented in the application, to protect human health, property, and the environment. The issues raised during this proceeding identified severe flaws in the current operation of the ACL facility and in the application. Such is the role of protestants in these proceedings.

WMTX has represented in the application that it has sufficient financial resources to construct, operate, close, and provide post-closure care to the proposed expanded ACL facility. WMTX would not expend the millions of dollars necessary to develop and seek an amendment to its existing MSW landfill permit, if it had not determined that it would profit from the expanded ACL facility. WMTX can hardly complain about the costs associated with transcription of its own permit hearing where such costs are at most negligible when compared to the financial commitments necessary for the development of a major amendment to an existing

and complex MSW landfill facility located in close proximity to an urban, municipal setting. WMTX knew that the City of Austin, Travis County, and multiple landowners neighboring the existing ACL facility had historically opposed the continued operation of the existing facility, much less expansion of the facility. WMTX was clearly aware that under applicable state laws and regulations such opposition would necessarily result in a contested case hearing. Additionally, WMTX, by seeking a direct referral of the application to SOAH,<sup>376</sup> knew that every aspect of the application would be open to attack by the protestants (as opposed to seeking to have the Commissioners define limited issues for hearing), and thus, was well aware that there would be a comprehensive hearing on the merits. In other words, transcription costs are simply an expected and understood cost of doing business for an applicant seeking a MSW landfill permit amendment.

To address the serious deficiencies in the application, the protestants have already gone to extraordinary expense to review ten revisions of the application, gather evidence, and present their cases in a comprehensive, reasoned, and professional manner. The burden on the protesting parties should not be further compounded by requiring any of them, including TJFA, to pay transcription costs on top of the substantial sums expended to meaningfully participate in the contested case hearing process. In addition, no evidence was presented regarding the ability of any of the protestants to pay transcription costs.

Although WMTX and all of the parties participated fully in the hearing and obtained the benefit of the transcript, it is the applicant, WMTX, which should rightfully bear the transcription costs. Finally, it must be noted that TJFA and the other protesting parties have no way of recouping their litigation costs even if, at the end of the day, the Commission ultimately denies WMTX's amendment application. Conversely, WMTX has every reason to believe that it

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<sup>376</sup> See Exh. APP-102, Letter from M. Nicole Adame Winningham, Vinson & Elkins, LLP, to LaDonna Castañuela, TCEQ (Feb. 15, 2008); see also Exh. ED1, Executive Director's Direct Written Testimony of Matthew Udenenwu, at 9 ln.16.

will profit for years to come should it be the prevailing party.<sup>377</sup> The costs associated with development and prosecution of the amendment application are the necessary costs of doing business for MSW landfill permit applicants in the State of Texas. WMTX has already assumed that it would have to absorb these permitting costs as a small measure for its overall objective of expanding its profitability at the ACL facility.

Thus, pursuant to the information identified above, TJFA respectfully urges the Commission to adopt the proposed modified Findings of Fact and Conclusions of Law identified below and assign all transcription costs to WMTX.

TJFA's Proposed Modified Findings of Fact and Conclusions of Law:

~~Finding of Fact No. 261.~~ TJFA is a Texas limited partnership. ~~TJFA was formed in November 2004.~~

~~Finding of Fact No. 262.~~ Bob Gregory is the sole (99%) limited partner of TJFA.

~~Finding of Fact No. 262263.~~ Garra de Aguila, Inc., a Texas corporation, owns the remaining 1% interest in TJFA and serves as the managing general partner of TJFA.

~~Finding of Fact No. 264.~~ Bob Gregory owns 100% of the shares of Garra de Aguila, Inc.

~~Finding of Fact No. 265.~~ Bob Gregory is a co-owner serves as president, chief executive officer, and principal owner of Texas Disposal Systems Landfill, Inc. (TDSL) and Texas Disposal Systems, Inc. (TDS).

~~Finding of Fact No. 266.~~ TDSL owns a municipal solid waste landfill near Creedmoor in southeast Travis County.

~~Finding of Fact No. 267.~~ Neither TJFA nor Garra de Aguila, Inc. has any employees.

~~Finding of Fact No. 268.~~ TJFA shares a common business location, telephone number and fax number with TDSL and TDS.

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<sup>377</sup> In fact, even if this application is denied, WMTX would more than likely recover its costs since much of the area's MSW would likely be directed to other WMTX landfill facilities in the area. See Tr. at Vol. 2 at 243 ln.9 – 244 ln.10 (Cross Exam (by Erich Birch) of Don Smith) (Mar. 30, 2009).

~~Finding of Fact No. 269. TJFA is an affiliate of TDSL, a business corporation of WMTX.~~

~~Finding of Fact No. 263270. TJFA owns two pieces of property purchased 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.~~

~~Conclusion of Law No. 53. For the reasons set out in the Findings of Fact, the court reporting and transcript costs should be apportioned 10075% to Applicant and 25% to Protestant TJFA.~~

### III. EVIDENTIARY ISSUES

A number of exhibits offered by TJFA during the Hearing on the Merits were ruled inadmissible by the Administrative Law Judge. The exclusion of such evidence was error and harmed the substantive and due process rights of TJFA for a just and fair administrative proceeding. With respect to each exhibit, TJFA made the required offer of proof after the evidence had been offered and an adverse ruling had been made by the Administrative Law Judge. TJFA now urges the Commission to reconsider TJFA's offers of the following identified exhibits and to admit all such exhibits. Each of these exhibits is relevant to the matters considered in this proceeding and is admissible pursuant to the applicable rules of evidence.

A decision in an administrative proceeding such as this fails for arbitrariness if it does not comply with procedural due process.<sup>378</sup> Specifically, the Texas Supreme Court in *Lewis v. Metropolitan Savings & Loan Association* includes the following discussion:

The governing rule was stated in *Donnelly Garment Co. v. NLRB*, 123 F.2d 215 (8th Cir.1941), and restated with approval in *NLRB v. Burns*, 207 F.2d 434 (8th Cir.1953), as follows:

"That a refusal by an administrative agency such as the National Labor Relations Board to receive and consider competent and material evidence offered by a party to a proceeding before it, amounts to a denial of due process is not open to debate. \* \* \* That the Board would or might have reached no different conclusion had the rejected evidence been received, is entirely

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<sup>378</sup> See *Lewis v. Metropolitan Savings & Loan Assoc.*, 550 S.W.2d 11, 15 (Tex. 1977).

beside the point. *The truth is that a controversy tried before a court or before an administrative agency is not ripe for decision until all competent and material evidence proffered by the parties has been received and considered. . . .*"

In the eyes of the law there is no hearing unless a fair opportunity is afforded the parties to prove their case before an administrative agency. *People ex rel. Hirschberg v. Board of Supervisors*, 251 N.Y. 156, 167 N.E. 204, 211 (1929). See also *Gallant's Case*, 326 Mass. 507, 95 N.E.2d 536 (1950); *Prince v. Industrial Comm'n*, 89 Ariz. 314, 361 P.2d 929 (1961).<sup>379</sup>

In other words, because competent and material evidence offered by TJFA was excluded from the administrative record, this proceeding is not ripe for decision, and any decision by the Commission will be arbitrary.

The decision in *Lewis* has continued to be relied upon by courts throughout Texas, with decisions as recently as 2007. In 2007, the Court in *City of Arlington v. Centerfolds, Inc.*, wrote, referring to *Lewis*:

The supreme court recognized that there can be evidence in the administrative record that qualifies as substantial, yet the parties may have also been denied due process and the rudiments of fair play in the conduct of the proceeding. The court also noted that in that case in particular and in similar administrative cases in which the decision maker is also a fact-finder, it was difficult or impossible to tell whether the improper exclusion of evidence (and, hence, the denial of due process) affected the result of the proceeding. Accordingly, the court concluded and held that "arbitrary action of an administrative agency cannot stand [regardless of whether there is substantial evidence supporting the agency's decision]. There is arbitrariness where the treatment accorded parties in the administrative process denies them due process of law."<sup>380</sup>

In the *City of Arlington* case, the court determined that appellees were entitled to procedural due process, *i.e.*, for their material and competent evidence to be considered in the evidentiary record. The appellants' argument that the agency decision was not subject to reversal for failure to comply with due process requirements was rejected by the court.

The law in this area has been summarized as follows:

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<sup>379</sup> *Id.* at 16 (quoting *National Labor Relations Bd. v. Burns*, 207 F.2d 434 (8th Cir. 1953)).

<sup>380</sup> *City of Arlington v. Centerfolds, Inc.*, 232 S.W.3d 238, 249 (Tex.App.—Ft. Worth 2007) (citing to *Lewis*, 550 S.W.2d at 13-16) (internal citations omitted).

The exclusion of proper evidence may vitiate the agency's decision, if it appears that its exclusion may have affected the result. State courts agree with decisions in the federal courts that refusal to receive competent and material evidence may be a denial of due process. The requirement that proper evidence be received is a necessary counterpart of the rule that the agency must give due weight to all the evidence before it; refusal to consider proper evidence which has been duly proffered falls within the condemnation that voids arbitrary administrative action.

If it appears that the excluded evidence could not materially have affected the outcome of the case—if a remand to receive and consider the evidence improperly excluded would amount to nothing more than “a postponement of the inevitable,” the error committed is not prejudicial. But normally it is impossible for a reviewing court to be assured that the outcome could not have been affected by the consideration of the excluded testimony, and in the usual case the necessary result of the exclusion of proper testimony is to void the administrative order.<sup>381</sup>

Here, until TJFA's competent and material evidence is admitted into the evidentiary record, TJFA's due process rights have been denied and it is impossible to make a final finding in this proceeding that is not considered arbitrary.

**A. TJFA Exhibit 23.**

Exhibit TJFA 23 is a summary of analytical data obtained by TJFA from Applied Materials, for the time periods August 1990 through July 2002 and February 2003 through August 2008.<sup>382</sup> The pages included in Exhibit TJFA 23—Bates labeled pages TJFA-082484 through TJFA-082486 and TJFA-084306 through TJFA-084331—were provided during discovery in this proceeding through supplemental responses to Requests for Disclosure as additional documents reviewed by testifying experts identified by TJFA, including Dr. Kier, in anticipation of their testimony in this proceeding. The pages included in Exhibit TJFA 23 make up only a small portion of the documents provided by Applied Materials to TJFA that were then produced during discovery in this proceeding. Also, as previously discussed, the documents

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<sup>381</sup> FRANK E. COOPER, STATE ADMINISTRATIVE LAW, Vol. I at 403-404 (1965).

<sup>382</sup> See Exh. TJFA 23 (Not Admitted), Letter from Peter D. Kenney, Graves, Dougherty, Hearon & Moody, to Eric Birch (Mar. 9, 2009), at TJFA-082484, and related attached records, attached hereto and incorporated herein for all purposes as Attachment 12.

from Applied Materials were provided pursuant to an Affidavit from the Custodian of Records of Applied Materials, which the Administrative Law Judge ruled was in substantial compliance with the requirements of TEX. R. EVID. 902(10)(b). Because the Affidavit was in substantial compliance with TEX. R. EVID. 902(10)(b), the issue became whether under cross-examination of Dr. Kier by parties in this proceeding questions had been raised regarding the Applied Materials' monitoring data such that discussion of Exhibit TJFA 23 was an appropriate line of re-direct questioning.

Based on the hearing transcripts from Friday, April 3, 2009, and Monday, April 6, 2009, it is clear that questions were raised by both Mr. Bryan Moore, on behalf of WMTX, and other parties to the proceeding, regarding ground water sampling at the Applied Materials site to which re-direct questioning, including discussion of Exhibit TJFA 23, to address additional ground water sampling at the Applied Materials site was appropriate.

Mr. Moore pursued two lines of questions with Dr. Kier that bear specifically on future or subsequent (*i.e.*, post 2002) monitoring data from the Applied Materials site. First, on Friday, April 3, 2009, Mr. Moore had asked Dr. Kier a series of questions regarding releases of contaminants from the ACL facility and whether such a release would continue today.<sup>383</sup> As clearly identified in Dr. Kier's prefiled testimony, the significance of the ground water sampling data from the Applied Materials' facility is that such sampling data is an indicator of an ongoing release from the ACL facility.<sup>384</sup> Mr. Moore's questions regarding the continual nature of the release from the ACL facility are directly related to all monitoring data, both from the ACL facility itself and from other sources including the Applied Materials site, which may demonstrate the continual nature of a release from the ACL facility. The information contained

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<sup>383</sup> See Tr. at Vol. 6 at 1295 ln.25 – 1296 ln.25 (Cross Exam (by Bryan Moore) of Robert S. Kier, Ph.D., P.G.) (Apr. 3, 2009), attached hereto and incorporated herein as Attachment 13.

<sup>384</sup> See generally Exh. TJFA 200, *supra* note 30, at 59 ln.17 – 62 ln.13.

in Exhibit TJFA 23 is just part of the information used by Dr. Kier to demonstrate the continuing nature of the release of contaminants from the ACL facility. In addition, Exhibit TJFA 24, "Summary of Available IWU Analytical Data," identifying monitoring data from certain monitoring wells at the ACL facility, which has been admitted as evidence in this proceeding, is another example of the information relied upon by Dr. Kier to demonstrate the continuing nature of the release of contaminants from the Facility. Both Exhibit TJFA 23 and Exhibit TJFA 24 address the issues raised by Mr. Moore regarding the continuing nature of a release from the ACL facility, and thus both should be equally admissible in this proceeding in response to that line of questions from Mr. Moore.

In addition, on Monday, April 6, 2009, Mr. Moore asked Dr. Kier a series of questions starting with Exhibit TJFA 209 as their premise.<sup>385</sup> Most directly related to subsequent ground water monitoring at the Applied Materials site, Mr. Moore asked Dr. Kier questions regarding the detection of VOCs and SVOCs,<sup>386</sup> inferring that because VOCs were not identified in the 2002 monitoring event discussed in Exhibit TJFA 209 that VOCs have not been detected in ground water monitoring wells at the Applied Materials site. Additionally, Mr. Moore asked Dr. Kier a series of questions regarding follow-up activities in response to the 2002 monitoring event identified in Exhibit TJFA 209. Specifically, Mr. Moore asked Dr. Kier whether PBS&J, the consultant who had carried out the monitoring event addressed in Exhibit TJFA 209, had followed-up the July 2002 sampling event with additional ground water sampling,<sup>387</sup> inferring that no additional sampling had been completed at the Applied Materials facility simply because it had not been done by PBS&J. Such inferences regarding the lack of additional monitoring at

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<sup>385</sup> See Tr. at Vol. 7 at 1317 ln.25 – 1323 ln.23 (Cross Exam (by Bryan Moore) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009), attached hereto and incorporated herein for all purposes as Attachment 14; see also Exh. TJFA 209, *supra* note 63.

<sup>386</sup> See *id.* at Vol. 7 at 1319 lns.10-25.

<sup>387</sup> See *id.* at Vol. 7 at 1322 ln.22 – 1323 ln.23.

the Applied Materials site and the findings of such additional monitoring clearly led to the re-direct questioning of Dr. Kier regarding subsequent sampling events at the Applied Materials site as addressed in Exhibit TJFA 23.

In addition to the questions raised by Mr. Moore on cross-examination of Dr. Kier, because of the multi-party nature of this proceeding, cross-examination questions raised by other parties must also be considered when evaluating the appropriateness of the line of re-direct questions through which Exhibit TJFA 23 was offered for admission. Both Ms. Annalynn Cox, on behalf of Travis County, and Mr. Jim Blackburn, on behalf of the landowner protestants (*i.e.*, Protestants 1) questioned Dr. Kier regarding the nature of contamination at the ACL facility and the evidence of such contamination, including ground water sampling data from the Applied Materials site. For example, Ms. Cox asked Dr. Kier about his concerns regarding the IWU and the potential effects on human health and the environment beyond the ACL facility. Ms. Cox elicited testimony from Dr. Kier regarding the basis for his concern that contamination has continued beyond the ACL facility boundary and WMTX's property. In response, Dr. Kier referenced the findings of the ongoing ground water sampling at the Applied Materials site as part of the evidence of such migration of contamination from the ACL facility.<sup>388</sup> Ms. Cox's questions were not limited to the report included in Exhibit TJFA 209.

Also, Mr. Blackburn asked Dr. Kier about the documentary basis for his contentions regarding contamination from the ACL facility reaching the Applied Materials site.<sup>389</sup> Mr. Blackburn's questions were clearly not limited to the report included in Exhibit TJFA 209, and counsel for WMTX did not object when Mr. Blackburn specifically asked Dr. Kier to

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<sup>388</sup> See *id.* at Vol. 7 at 1334 ln.25 – 1337 ln.19 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009), attached hereto and incorporated herein for all purposes as Attachment 15; see also *id.* at Vol. 7 at 1343 ln.11 – 1344 ln.5, attached hereto and incorporated herein for all purposes as Attachment 16.

<sup>389</sup> See *id.* at Vol. 7 at 1391 ln.15 – 1392 ln.19, and 1394 ln.16 – 1395 ln.2 (Cross Exam (by Jim Blackburn) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009), both attached hereto and incorporated herein for all purposes as Attachment 17.

identify the additional documentary basis for his conclusions regarding contamination on the Applied Materials site.<sup>390</sup>

Throughout this proceeding, the scope of re-direct was open to all issues raised on cross-examination by any and all parties. Thus, as was mentioned numerous times during the hearing, because of the multi-party nature of this proceeding, through re-direct questioning any particular protestant party consistently was allowed to address issues raised by the applicant, the Executive Director of TCEQ, the other protestant parties, and/or the Office of Public Interest Council (“OPIC”) of TCEQ. Multiple exhibits were admitted during either “friendly” cross-examination of a witness or re-direct by any number of parties based on questions raised during so-called “friendly” cross-examination. For example, Exhibit TJFA 24 was admitted over Mr. Moore’s objection that it was in direct response to “friendly” cross-examination of Dr. Kier by Ms. Noelke. Similarly, City of Austin Exhibit 14 was admitted over applicant’s objections based on issues that had been raised by TJFA during the Hearing on the Merits. In addition, City of Austin Exhibit 7 through City of Austin Exhibit 11 were admitted through what applicant would surely characterize as “friendly” cross-examination.

Because the re-direct examination of protestant witnesses was not limited to only those issues raised by applicant during its cross-examination, the evaluation of the admissibility of Exhibit TJFA 23 should include consideration of all cross-examination questions asked of Dr. Kier—both “friendly” and “unfriendly.” When the entirety of the cross-examination of Dr. Kier is considered it is clear that the line of questions through which TJFA sought to admit Exhibit TJFA 23 was appropriate re-direct examination.

For all of the reasons identified above, TJFA respectfully re-urges the admission of Exhibit TJFA 23 in that Exhibit TJFA 23 was responsive not only to the questions raised by Mr. Moore’s cross-examination of Dr. Kier on behalf of WMTX, but also because it is

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<sup>390</sup> See *id.* at Vol. 7 at 1391 ln.15 – 1392 ln.19 (Attachment 17).

responsive to the issues raised through the cross-examination of Dr. Kier by Ms. Cox and Mr. Blackburn. For these same reasons, TJFA respectfully re-urges the admission of testimonial evidence presented by Dr. Kier regarding Exhibit TJFA 23, which was stricken from the evidentiary record by the Administrative Law Judge. Specifically, TJFA urges the admission of Dr. Kier's testimony that is found in the transcript of the Hearing on the Merits at Volume 7, page 1466 line 20 through page 1469 line 9.<sup>391</sup>

**B. Exhibit TJFA 30.**

Exhibit TJFA 30 is an Analytical Report identifying ground water monitoring results for a sampling event pursuant to the ground water monitoring agreement between the City of Austin and WMTX for those monitoring well locations near the IWU at the ACL facility.<sup>392</sup> The Analytical Report included in Exhibit TJFA 30 was prepared by Severn Trent STL Denver and is dated November 8, 2004. This Analytical Report is related to and necessary for a complete understanding of the Severn Trent Analytical Report, dated "Revised December 20, 2004), that was admitted as Exhibit TJFA 29.

While WMTX argued that Exhibit TJFA 30 was inadmissible hearsay, such is not the case. Instead, Exhibit TJFA 30 fits squarely within two exceptions to the hearsay rule where the availability of the declarant is immaterial. As such, Exhibit TJFA 30 should be admitted.

First, Exhibit TJFA 30 is a record of regularly conducted activity, qualifying for the hearsay exception provided TEX. R. EVID. 803(6), which provides:

A memorandum, report, record, or data compilation, in any form, of acts, events, conditions, opinions, or diagnoses, made at or near the time by, or from information transmitted by, a person with knowledge, if kept in the course of a regularly conducted business activity, and if it was the regular practice of that

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<sup>391</sup> See Tr. at Vol. 7 at 1466 ln.20 – 1469 ln.9 (Redirect Exam (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009), attached hereto and incorporated herein for all purposes as Attachment 18.

<sup>392</sup> See Exh. TJFA 30 (Not Admitted), Rachele Delimont, Severn Trent, STL Denver, "Analytical Report" (Nov. 8, 2004), attached hereto and incorporated herein for all purposes as Attachment 19.

business activity to make the memorandum, report, record, or data compilation, all as shown by the testimony of the custodian or other qualified witness, or by affidavit that complies with Rule 902(1) . . . . "Business" as used in this paragraph includes any and every kind of regular organized activity whether conducted for profit or not.<sup>393</sup>

The report included in Exhibit TJFA 30 is a data compilation of the conditions identified during a quarterly sampling event pursuant to the ground water monitoring agreement between the City of Austin and WMTX. In other words, Exhibit TJFA 30 reports the results of the analysis of samples obtained during the ground water sampling event. It was clearly the regular practice of WMTX to maintain records of ground water sampling events. The evidentiary record is replete with examples of ground water monitoring reports, including reports submitted to the City of Austin and TCEQ, ASDs submitted to the Commission, and even summaries of such reports, which are included in the application itself. The report included in Exhibit TJFA 30 was produced by WMTX during discovery in this proceeding. In its discovery response, WMTX specifically stated: "Applicant will produce its documents as they are kept in the usual course of business."<sup>394</sup> WMTX's statement, signed by its attorney in this proceeding, that the documents are kept in the usual course of business clearly demonstrates that the record was kept in the course of regular business, and thus meets the exception of TEX. R. EVID. 803(6), and should be admitted in this proceeding.

Second, Exhibit TJFA 30 also meets the hearsay exception of TEX. R. EVID. 803(7), which states:

Absence of Entry in Records Kept in Accordance with the Provisions of Paragraph (6). Evidence that a matter is not included in the memoranda, reports, records, or data compilations, in any form, kept in accordance with the provisions of paragraph (6), to prove the nonoccurrence or nonexistence of the matter, if the matter was of a kind of which a memorandum, report, record, or data compilation

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<sup>393</sup> See TEX. R. EVID. 803(6).

<sup>394</sup> See Applicant Waste Management of Texas, Inc.'s Response and Objections to Protestant TJFA L.P.'s First Set of Interrogatories and Requests for Production, *Application of Waste Management of Texas, Inc. for a Municipal Solid Waste Permit Amendment; Permit No. MSW-249D*, SOAH Docket No. 582-08-2186, TCEQ Docket No. 2006-0612-MSW at 1 (Sept. 4, 2009).

was regularly made and preserved, unless the source of the information or other circumstances indicate a lack of trustworthiness.<sup>395</sup>

As identified previously, the sampling results from the ground water monitoring required by the agreement between the City of Austin and WMTX were required to be submitted by WMTX to both TCEQ and the City of Austin.<sup>396</sup> Mr. Avakian, testifying for the Executive Director, identified that he had never seen the report included in Exhibit TJFA 30.<sup>397</sup> Similar, Mr. Lesniak, testifying for the City of Austin, presented evidence regarding all of the ground water monitoring reports that had been submitted to the City of Austin by WMTX, and the report included in Exhibit TJFA 30 was not included.<sup>398</sup> He testified that he was unfamiliar with certain testing results that, as identified on Exhibit TJFA 24, were associated with the sampling event being conveyed through what was later identified as Exhibit TJFA 30.<sup>399</sup>

In that the sampling results were required to be submitted to the City of Austin and TCEQ, both governmental entities with record retention requirements, the sampling results, and thus any report of those results, would become a record kept in the usual course of business of either entity. Here, neither entity received the report and Exhibit TJFA 30 was introduced to specifically show that absence of a record, as contemplated by TEX. R. EVID. 803(7). As such, TJFA Exhibit 30 should be admitted pursuant to the hearsay exception of TEX. R. EVID. 803(7).

Even if Exhibit TJFA 30 is determined to be hearsay, it should still be admitted pursuant to the Texas Administrative Procedures Act ("Texas APA"). Pursuant to the SOAH rules of

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<sup>395</sup> TEX. R. EVID. 803(7).

<sup>396</sup> See Exh. City of Austin 6, *supra* note 113, at 1.

<sup>397</sup> See generally Tr. at Vol. 11 at 2458 lns.8-9 (Cross Exam (by Erich Birch) of Arten J. Avakian, P.G.); see also Tr. at 2460 ln.14-16 (Statement by Timothy Reidy). Mr. Avakian also testified that he was the person at TCEQ that reviewed the ground water monitoring reports submitted by WMTX and was generally familiar with the reports submitted. *Id.* at Vol. 11 at 2443 ln.23 – 2444 ln.2.

<sup>398</sup> See generally Exh. City of Austin 14; see also Tr. at Vol. 10 at 2163 lns.3-16 (Redirect Exam (by Holly Noelke) of Chuck Lesniak III) (Apr. 9, 2009); *id.* at Vol. 11 at 2165 ln.11 – 2167 ln.15 (Redirect Exam (by Holly Noelke) and Clarifying Questions (by the Honorable Roy Scudday) (Apr. 9, 2009).

<sup>399</sup> See *id.* at Vol. 11 at 2165 ln.11 – 2167 ln.15 (Redirect Exam (by Holly Noelke) and Clarifying Questions (by the Honorable Roy Scudday) (Apr. 9, 2009).

procedure regarding evidence, the Texas Rules of Evidence apply to contested case hearings, but evidence may also be admitted if it meets the standards of TEX. GOV'T CODE § 2201.081 (of the Texas APA), which states that evidence may be admitted if the evidence is:

- (1) necessary to ascertain facts not reasonably susceptible of proof under [the Texas Rules of Evidence];
- (2) not precluded by statute; and
- (3) of a type on which a reasonably prudent person commonly relies in the conduct of the person's affairs.<sup>400</sup>

Pursuant to TEX. R. EVID. 801, TJFA provided evidence sufficient to support a finding that the documents within Exhibit TJFA 30 are what TJFA claims them to be, and furthermore, WMTX failed to provide any evidence, aside from conclusory statements, otherwise.<sup>401</sup>

In summary, for the following reasons, the Commission should determine that Exhibit TJFA 30 is admissible in this proceeding: (1) that it is a record maintained in WMTX's usual course of business; (2) that it demonstrates the entry of a record that would normally be maintained in the usual course of business by the City of Austin and TCEQ; (3) that the report will assist the Commission in understanding the testimony of multiple witnesses in this proceeding; and (4) if Exhibit TJFA 30 contains hearsay it is still admissible under the Texas APA. Therefore, TJFA respectfully re-urges the admission of Exhibit TJFA 30.

**C. *Exhibit TJFA 207.***

Exhibit TJFA 207 contains the portions of the sworn deposition testimony of four individuals, all of which were obtained during prior litigation in which WMX and its affiliated entities were defendants.<sup>402</sup> Portions of the following deposition transcripts are included in Exhibit TJFA 207:

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<sup>400</sup> TEX. GOV'T CODE § 2001.081.

<sup>401</sup> TEX. R. EVID. 801.

<sup>402</sup> See Exh. TJFA 207 (*Not Admitted*), Selections from Transcript of Oral and Videotaped Deposition of Willis Rutledge Fusilier, Jr., *Texas Disposal Sys. Landfill, Inc. v. Waste Mgmt., Inc., Waste Mgmt. of Tex.*,

- Selections from Transcript of Oral and Videotaped Deposition of Willis Rutledge Fusilier, Jr., (June 25, 2002).
- Selections from Transcript of Oral and Videotaped Deposition of Dwight Pittman (June 19, 2002).
- Selections from Transcript of Oral and Videotaped Deposition of Jane Witheridge (June 5, 2002).
- Selections from Transcript of Oral and Videotaped Deposition of Johnny Williams (June 19, 2002).

WMTX asserted two arguments regarding why Exhibit TJFA 207 should be excluded: (1) the deposition transcripts are hearsay because the depositions were not taken in this proceeding and the deponents have not shown to be unavailable; and (2) under TEX. R. EVID. 705(d), the deposition transcripts should be excluded because the danger that they will be used for a purpose other than as explanation or support for the expert's opinion outweighs their value as explanation or support or they are unfairly prejudicial.

WMTX's hearsay claims are flawed given that WMTX was a party in the prior litigation. The caption for the previous litigation clearly lists the defendants as Waste Management, Inc., Waste Management of Texas, Inc., and Don Martin. All four deponents were either WMTX employees or consultants. Specifically, Mr. Willis Rutledge ("Rusty") Fusilier, Jr. was the then Compliance Manager and former District Engineer for WMTX. Mr. Dwight Pittman was an

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*and Donald Martin*, Cause No. 97-12163, (126th Jud. Dist., Travis County) (June 25, 2002), at 001-014; *id.* (Not Admitted), Selections from Transcript of Oral and Videotaped Deposition of Dwight Pittman, *Texas Disposal Sys. Landfill, Inc. v. Waste Mgmt., Inc., Waste Mgmt. of Tex., and Donald Martin*, Cause No. 97-12163, (126th Jud. Dist., Travis County) (June 19, 2002), at 015-022; *id.* (Not Admitted), Selections from Oral and Videotaped Deposition of Jane Witheridge, *Texas Disposal Sys. Landfill, Inc. v. Waste Mgmt., Inc., Waste Mgmt. of Tex., and Donald Martin*, Cause No. 97-12163, (126th Jud. Dist., Travis County) (June 5, 2002), at 023-027; *id.* (Not Admitted), Selections from Oral and Videotaped Deposition of Johnny Williams, *Texas Disposal Sys. Landfill, Inc. v. Waste Mgmt., Inc., Waste Mgmt. of Tex., and Donald Martin*, Cause No. 97-12163, (126th Jud. Dist., Travis County) (June 19, 2002). All portions of Exh. TJFA 207 are attached hereto and incorporated herein for all purposes as Attachment 20.

engineer hired by Waste Management in the 1980s to perform certain engineering services at the ACL facility. Ms. Jane Witheridge, formerly known as Jane LaPorte, was an employee of Waste Management and her memoranda regarding the ACL facility are included in the evidentiary record as TJFA Exhibit 204. Mr. Johnny Williams was an employee of Waste Management.

Pursuant to TEX. R. EVID. 801(e)(2)(A), such depositions, even if not taken in the same proceeding, are not hearsay and are admissible as party-admissions if the statement is the party's own statement in either an individual or representative capacity.<sup>403</sup> Accordingly it is wholly irrelevant whether the deponents are or are not available in this proceeding. WMTX also argued that the deponents were not testifying as corporate representatives, and thus, they should not be characterized as party admissions. However, the plain language of the rule indicates that it is the "party's statement in either an individual or representative capacity" that is admissible.

Pursuant to TEX. R. EVID. 801(e)(2)(D), such depositions, even if not taken in the same proceeding, are not hearsay and are admissible as party admissions if the statement is by the party's agent or servant concerning a matter within the scope of agency or employment made during the existence of the relationship.<sup>404</sup> Accordingly, it is wholly irrelevant whether the same deponents are or are not available and this exception to the hearsay rule.

As identified above, WMTX also claimed that Exhibit TJFA 207 should be excluded because the danger that they would be used for a purpose other than as explanation or support for an expert's opinion would outweigh their value as explanation or support or are unfairly prejudicial. An analysis pursuant to TEX. R. EVID. 705(d) involves two questions: (1) is the probative value of the inadmissible data to support or explain the reasonableness of the expert's opinion outweighed by the likelihood that the decision maker may use the inadmissible data for an improper purpose; and (2) is the probative value of the inadmissible data to support or explain

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<sup>403</sup> TEX. R. EVID. 801(e)(2)(A).

<sup>404</sup> *Id.* at R. 801(e)(2)(D).

the reasonableness of the expert's opinion outweighed by the unfairly prejudicial effect of this inadmissible material on the opposing party.<sup>405</sup>

In answer to the first prong, WMTX did not provide even one specific factual assertion regarding why it is likely that the decision maker would use the deposition transcripts for an improper purpose. To the contrary, WMTX expressed confidence in the Administrative Law Judge as being the one best positioned to determine whether the testimony of an expert witness has any utility.

In answer to the second prong, WMTX has not provided even one specific factual assertion regarding any prejudicial effect, unfair or otherwise, that the deposition transcripts create. To the contrary, WMTX's argument was undercut by the fact that all four transcripts were from prior litigation in which WMTX and its affiliated entities were defendants, WMTX was represented by counsel at all of the depositions, and all four witnesses were either WMTX employees or WMTX consultants. Dr. Kier affirmed that Exhibit TJFA 207 contains true and accurate copies of the deposition transcripts,<sup>406</sup> and WMTX makes no assertions challenging the authenticity of these documents, nor does WMTX assert that these documents are uncertain or otherwise untrustworthy materials. Dr. Kier affirmed that the deposition transcripts of WMTX employees or consultants comprising Exhibit TJFA 207 both support and explain his expert opinions.<sup>407</sup> The probative value of these documents is readily evident from their face, particularly regarding past operations at the ACL facility in particular regarding the disposal of hazardous and industrial wastes in the IWU. Additionally, WMTX's argument is undercut by

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<sup>405</sup> *Id.* at R. 705(d).

<sup>406</sup> *See* Exh. TJFA 200, *supra* note 30, at 42 lns.7-10.

<sup>407</sup> *See id.* at 41 lns.1-5.

the fact that use of TEX. R. EVID. 705(d) by a court to prohibit any mention of otherwise inadmissible underlying facts supporting an expert's opinion is rare.<sup>408</sup>

WMTX additionally argued that Tex. R. Evid. 705 should be applied as the court did in *First Southwest Lloyds Insurance Co. v. MacDowell*;<sup>409</sup> however, TEX. R. EVID. 705(d) was amended in 1998, a full decade after *MacDowell* was decided, to provide the decision maker with explicit discretion versus the pre-amendment implicit discretion under TEX. R. EVID. 403.<sup>410</sup> WMTX's argument is outdated and does not address the current requirements of TEX. R. EVID. 705(d).

Even if Exhibit TJFA 207 is determined to be hearsay, it should still be admitted pursuant to the Texas APA. As identified above, the SOAH rules of procedure regarding evidence identify that the Texas Rules of Evidence apply to contested case hearings, but evidence may also be admitted if it meets the standards of TEX. GOV'T CODE § 2201.081 (of the Texas APA).<sup>411</sup>

Pursuant to TEX. R. EVID. 801, TJFA provided evidence sufficient to support a finding that the documents within Exhibit TJFA 207 are what TJFA claims them to be, and furthermore, WMTX failed to provide any evidence, aside from conclusory statements, otherwise.<sup>412</sup> In summary, for the following reasons, the Commission should determine that Exhibit TJFA 207 is admissible in this proceeding: (1) the lack of evidence or specific assertions provided by WMTX regarding prejudicial effect or risk of misuse; (2) the ample evidence that the documents relied upon by Dr. Kier are accurate copies of the transcripts of depositions of WMTX employees and/or representatives that will assist the Commission in understanding Dr. Kier's

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<sup>408</sup> See 2 Steven GOODE ET AL, TEXAS PRACTICE GUIDE: GUIDE TO THE TEXAS RULES OF EVIDENCE: CIVIL AND CRIMINAL § 705.3 at 75 (2d ed. 1993); see also *Speering v. State*, 763 S.W.2d 801, 801 (Tex.App.—Texarkana 1988), reformed on other grounds, 797 S.W.2d 36 (Tex. Crim. App. 1990).

<sup>409</sup> *First Southwest Lloyds Ins. Co. v. MacDowell*, 769 S.W.2d 954, 958 (Tex.App.—Texarkana 1989, writ denied).

<sup>410</sup> TEX. R. EVID. 705(d).

<sup>411</sup> TEX. GOV'T CODE § 2001.081.

<sup>412</sup> TEX. R. EVID. 801.

testimony; (3) Exhibit TJFA 207 is not hearsay, but instead is a party admission; and (4) if Exhibit TJFA 207 contains hearsay it is still admissible under the Texas APA. Therefore, TJFA respectfully re-urges the admission of Exhibit TJFA 207.

#### IV. STANDARD OF REVIEW

The Administrative Law Judge has the regulatory authority to file an amended PFD, including amended proposed Findings of Fact and Conclusions of Law, in response to Exceptions, Replies to Exceptions, or briefs submitted by the parties.<sup>413</sup> Should the Administrative Law Judge decide not to amend the Proposal for Decision, the Commission may decline to adopt the Proposal for Decision and Proposed Order as proposed by the Administrative Law Judge, and, in the alternative, adopt its own order, including its own Findings of Fact and Conclusions of Law, denying the permit being sought by WMTX.<sup>414</sup> The provisions of such a modified order are proposed by TJFA in these Exceptions.<sup>415</sup> The provisions of such a modified order are supported by the clear weight of the evidence presented in this proceeding.

The Commission may reject the Administrative Law Judge's Proposed Order and approve its own Order, but the Commission's Order must be based solely on the record made before the Administrative Law Judge.<sup>416</sup> The Commission must also explain the basis of its Order.<sup>417</sup> The Commission's authority to review specific proposed Findings of Fact and Conclusions of Law as set out in the Administrative Law Judge's Proposal for Decision and

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<sup>413</sup> See 30 TEX. ADMIN. CODE § 80.259.

<sup>414</sup> See TEX. GOV'T CODE ANN. § 2003.47(m).

<sup>415</sup> A revised Proposed Order is attached hereto and incorporated herein for all purposes as Attachment 21.

<sup>416</sup> See *id.*

<sup>417</sup> See *id.*

Proposed Order is found in the Texas Solid Waste Disposal Act. Specifically, Section 361.0832 of the Texas Health and Safety Code provides, in relevant part:

- (c) The commission may overturn an underlying finding of fact that serves as the basis for a decision in a contested case only if the commission finds that the finding was not supported by the great weight of the evidence.
- (d) The commission may overturn a conclusion of law in a contested case only on the grounds that the conclusion was clearly erroneous in light of precedent and applicable rules.
- (e) If a decision in a contested case involves an ultimate finding of compliance with or satisfaction of a statutory standard the determination of which is committed to the discretion or judgment of the commission by law, the commission may reject a proposal for decision as to the ultimate finding for reasons of policy only.
- (f) The commission shall issue written rulings, orders, or decisions in all contested cases and shall fully explain in a ruling, order, or decision the reasoning and grounds for overturning each finding of fact or conclusion of law or for rejecting any proposal for decision on an ultimate finding.<sup>418</sup>

Adoption of the Administrative Law Judge's current Proposal for Decision and Proposed Order would result in approval of an application that, as discussed in detail above, is in violation of multiple Commission rules; thus, modification of the Proposed Order in accordance with the above-referenced statutory standards is well within the Commission's statutory authority. As identified above, to overturn a proposed finding of fact, the Commission may exercise its discretion to revise those findings that "do not find support in the 'great weight' of the evidence in the record."<sup>419</sup> In reversing a proposed conclusion of law, the clearly erroneous standard applies.<sup>420</sup> This simply means that the Commission must have the "definite and firm conviction

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<sup>418</sup> TEX. HEALTH & SAFETY CODE ANN. § 361.0832(c)-(f); *see also Hunter Indus. Facilities, Inc. v. Texas Natural Res. Conservation Comm'n*, 910 S.W.2d 96, 102 (Tex. App.—Austin 1995, writ denied).

<sup>419</sup> *Hunter Indus.*, 910 S.W.2d at 103.

<sup>420</sup> The clearly erroneous standard grants the reviewing agency, *i.e.*, the Commission, great latitude in reversing legal conclusions. The courts and the legislature recognize that forcing the Commission to accept an Administrative Law Judge's proposed conclusions of law would destroy the Commission's discretion to interpret its own rules. *See id.* at 104.

that a mistake has been committed.”<sup>421</sup> The Commission may change an “ultimate finding” for reasons of policy.<sup>422</sup> Therefore, should the Commission decide to modify the Administrative Law Judge’s proposed Findings of Fact and Conclusions of Law, it must articulate a rationale and legal basis for each change.<sup>423</sup>

TJFA has specifically identified in these Exceptions those proposed Findings of Fact and Conclusions of Law that should be modified based on applicable statutes and regulations, current Commission policy, and the great weight of the evidence in the record. TJFA has also suggested modified Findings of Fact and Conclusions of Law that will achieve this result. The Commission will need to include in its adoption of TJFA’s proposed modification an analysis of its decision suitable to pass judicial scrutiny.

## V. CONCLUSION AND PRAYER

The Findings of Fact and Conclusions of Law, as discussed in the Proposal for Decision and as set out in the Proposed Order, which were the bases of the Administrative Law Judge’s recommendation to approve the amendment application by WMTX for proposed Permit No. MSW-249D to increase the size of the ACL facility, are not supported by applicable statutes and regulations, Commission precedent and policy, or the great weight of the evidentiary record. Information in the record which addresses the issues underlying the proposed Findings of Fact and Conclusions of Law has been highlighted in these Exceptions. The Administrative Law Judge should now have more than adequate bases to modify the Proposal for Decision accordingly and recommend denial of proposed Permit No. MSW-249D. TJFA respectfully requests that the Administrative Law Judge do so.

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<sup>421</sup> *Id.* (quoting *U.S. v. U.S. Gypsum Co.*, 333 U.S. 364, 395, 68 S. Ct. 525, 542 (1948)).

<sup>422</sup> *See* TEX. HEALTH & SAFETY CODE ANN. § 361.0832(e).

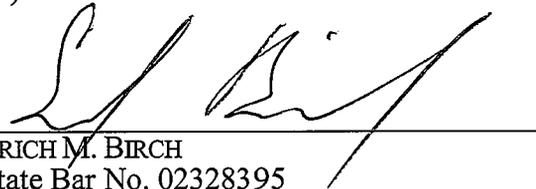
<sup>423</sup> *See id.* § 361.0832(f).

If the Administrative Law Judge chooses not to make the revisions necessary to recommend denial of proposed Permit No. MSW-249D, TJFA respectfully requests that the Commission issue its own Order, fully supported by the great weight of the evidence, adopting Findings of Fact and Conclusions of Law denying proposed Permit No. MSW-249D, as presented by TJFA. TJFA has provided a modified Order as Attachment 21 for the Administrative Law Judge's and the Commission's consideration.

Respectfully submitted,

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By:

  
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State Bar No. 00789148

**ATTORNEYS FOR TJFA, L.P.**

**CERTIFICATE OF SERVICE**

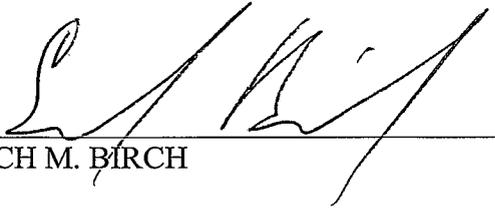
I certify that a true and correct copy of the foregoing document has been served upon all counsel of record via facsimile, e-mail transmission, first class mail, Federal Express overnight delivery, or hand-delivery addressed to:

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<p>Mr. Bryan J. Moore Mr. John A. Riley Vinson &amp; Elkins, LLP 2801 Via Fortuna, Suite 100 Austin, Texas 78746-7568 Fax: (512) 236-3257 <a href="mailto:bmoore@velaw.com">bmoore@velaw.com</a> <a href="mailto:jriley@velaw.com">jriley@velaw.com</a></p>	<p><i>Representing Waste Management of Texas, Inc.</i></p>
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<p>Ms. Mary Carter  Mr. Jim Blackburn  Mr. Adam Friedman  Blackburn Carter PC  4709 Austin  Houston, Texas 77004</p> <p>Fax: (713) 524-5165  <a href="mailto:mcarter@blackburncarter.com">mcarter@blackburncarter.com</a>  <a href="mailto:jbb@blackburncarter.com">jbb@blackburncarter.com</a></p>	<p><i>On behalf of Protestant Group 1 (Northeast Neighbors Coalition, Harris Branch Homeowners Association, individuals)</i></p>

<p>Mr. Paul M. Terrill The Terrill Firm, P.C. 810 West 10th Street Austin, Texas 78701 Fax: (512) 474-9888 <a href="mailto:pterrill@terrill-law.com">pterrill@terrill-law.com</a></p>	<p><i>Representing Giles Holdings</i></p>
<p>Docket Clerk Office of Chief Clerk (MC-105) Texas Commission on Environmental Quality P.O. Box 13087 Austin, Texas 78711-3087 (mail) 12100 Park 35 Circle, Building F Austin, Texas 78753 (delivery) Fax: (512) 239-3311</p>	
<p>Ms. Bridget Bohac Office of Public Assistance (MC-108) Texas Commission on Environmental Quality P.O. Box 13087 Austin, Texas 78711-3087 (mail) 12100 Park 35 Circle, Building F Austin, Texas 78753 (delivery) Fax: (512) 239-4007</p>	

On this the 20th day of August, 2009,

  
ERICH M. BIRCH

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

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§

BEFORE THE STATE OFFICE

OF

ADMINISTRATIVE HEARINGS

CHIEF CLERKS OFFICE

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TEXAS  
COMMISSION  
ON ENVIRONMENTAL  
QUALITY

PROTESTANT TJFA, L.P.'S

EXCEPTIONS TO THE PROPOSAL FOR DECISION

AND PROPOSED ORDER

VOLUME II

AUGUST 20, 2009

**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**

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**BEFORE THE STATE OFFICE**

**OF**

**ADMINISTRATIVE HEARINGS**

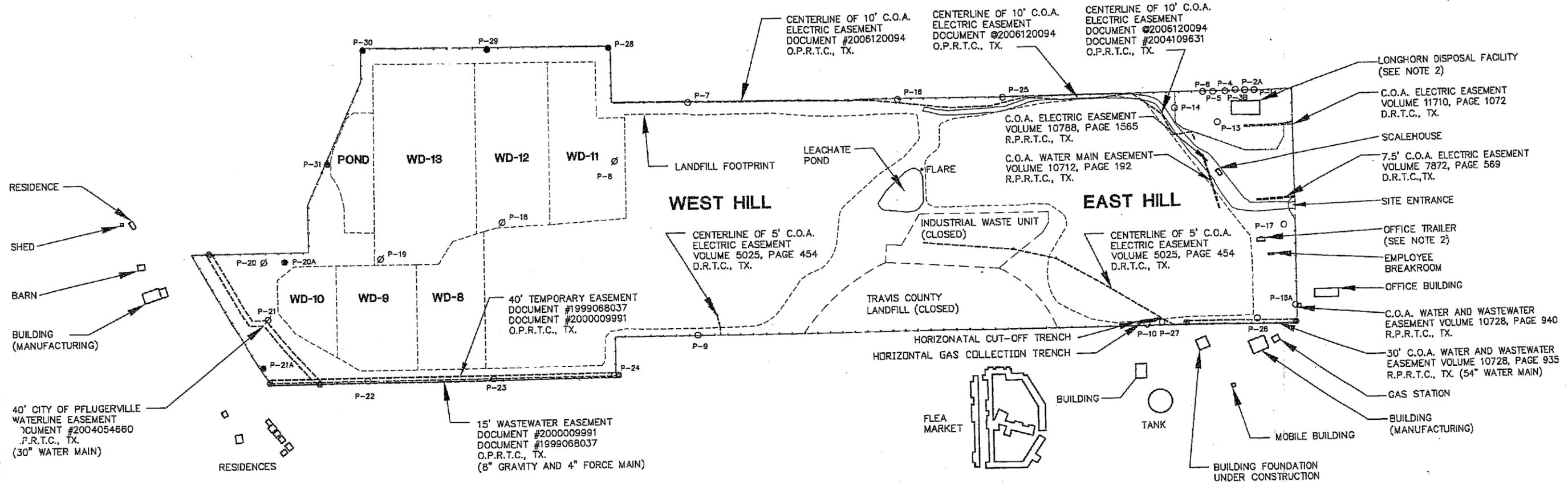
**LIST OF ATTACHMENTS**

- |               |   |
|---------------|---|
| Attachment 1  | Exhibit APP-202 at Tech. Complete 3169 (Fig. ATT6-2, Gas Probe Location Map) and Tech. Complete 3172 (Fig. ATT6-5, Gas Probe Spacing between East and West Hills)   |
| Attachment 2  | Selections from Texas Department of Health, Municipal Solid Waste Management Regulations (Apr. 1977)  |
| Attachment 3  | Selections from Texas Department of Health, Municipal Solid Waste Management Regulations (Nov. 1980)  |
| Attachment 4  | Selections from Texas Department of Health, Municipal Solid Waste Management Regulations, Volume 1 (Apr. 1985)  |
| Attachment 5  | Exhibit APP-202 at Tech. Complete 1481 (Fig. ATT4-17, Interpretive Geologic Cross Section H-H')   |
| Attachment 6  | Exhibit APP-202 at Tech. Complete 2400 (Fig. 2-1, Boring and Well Location Map)   |
| Attachment 7  | Exhibit APP-202 at Tech. Complete 2433 (Boring Log Hole No. MW-99-24); Tech. Complete 2438 (Boring Log Hole No. MW-99-25); Tech. Complete 2439 (Boring Log Hole No. MW-99-26); and Tech. Complete 2446 (Boring Log Hole No. MW-99-31) |
| Attachment 8  | Exhibit APP-202 at Tech. Complete 1677 (Log of Boring MW-32)  |
| Attachment 9  | Exhibit APP-202 at Tech. Complete 2403 (Boring Log Hole GP-99-3); Tech. Complete 2427 (Boring Log Hole No. GP-99-27); and Tech. Complete 2434 (Boring Log Hole No. B-99-33)   |
| Attachment 10 | Exhibit APP-202 at Tech. Complete 2335 (Fig. 4B, Recommended Monitoring Well Locations)   |
| Attachment 11 | Exhibit APP-202 at Tech. Complete 615 (Fig. ATT2-2, Post-Development Drainage Plan)   |

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 CHIEF CLERK'S OFFICE  
 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

- Attachment 12 Exhibit TJFA 23 (Not Admitted) – Applied Materials, Inc. Ground Water Sampling Data
- Attachment 13 Transcript of the Hearing on the Merits, Volume 6 at 1295 ln.25 – 1296 ln.25 (Cross Exam (by Bryan Moore) of Robert S. Kier, Ph.D., P.G.) (Apr. 3, 2009)
- Attachment 14 Transcript of the Hearing on the Merits, Volume 7 at 1317 ln.25 – 1323 ln.23 (Cross Exam (by Bryan Moore) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009)
- Attachment 15 Transcript of the Hearing on the Merits, Volume 7 at 1334 ln.25 – 1337 ln.19 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009)
- Attachment 16 Transcript of the Hearing on the Merits, Volume 7 at 1343 ln.11 – 1344 ln.5 (Cross Exam (by Annalynn Cox) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009)
- Attachment 17 Transcript of the Hearing on the Merits, Volume 7 at 1391 ln.15 – 1392 ln.19 and 1394 ln.16 – 1395 ln.2 (Cross Exam (by Jim Blackburn) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009)
- Attachment 18 Transcript of the Hearing on the Merits, Volume 7 at 1466 ln.20 – 1469 ln.9 (Redirect Exam (by Erich Birch) of Robert S. Kier, Ph.D., P.G.) (Apr. 6, 2009)
- Attachment 19 Exhibit TJFA 30 (Not Admitted) – Severn Trent, STL Denver, “Analytical Report” (Nov. 8, 2004)
- Attachment 20 Exhibit TJFA 207 (Not Admitted) – Selections from Transcript of Oral and Videotaped Deposition of Willis Rutledge Fusilier, Jr. (June 25, 2002), at 001-014; Selections from Transcript of Oral and Videotaped Deposition of Dwight Pittman (June 19, 2002), at 015-022; Selections from Oral and Videotaped Deposition of Jane Witheridge, (June 5, 2002), at 023-027; Selections from Oral and Videotaped Deposition of Johnny Williams (June 19, 2002).
- Attachment 21 Revised Proposed Order

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**LEGEND**

- PERMIT BOUNDARY
- x-x- FENCE
- LANDFILL FOOTPRINT
- EASEMENT
- EXISTING GAS PROBE
- ⊙ EXISTING GAS PROBE TO BE ABANDONED
- PROPOSED GAS PROBE
- ▲ GAS PROBE INSTALLATION PENDING TCEQ MODIFICATION APPROVAL
- ⊙ UTILITY TRENCH GAS VENT (SEE NOTE 3)

**NOTES**

1. EASEMENT DATA PROVIDED BY SAM, INC. (SURVEYING, AERIAL MAPPING, AND ENGINEERING).
2. CONTINUOUS MONITORING WILL BE CONDUCTED IN ON-SITE STRUCTURES.
3. SEE DETAIL 2 ON SHEET ATT6-4 FOR UTILITY TRENCH GAS VENT.
4. THE LIMITS OF THE INDUSTRIAL WASTE UNIT AND TRAVIS COUNTY LANDFILL ARE SHOWN AS APPROXIMATE.



Tech. Complete 3169



INTENDED FOR PERMITTING PURPOSES ONLY

2008 REVISIONS	DATE	BY	DESCRIPTION
1	02/08	CEI	RESPONSE TO TECHNICAL NOO DATED APRIL 3, 2007
2	03/07	LAL	CHAPTER 330 RULE REVISION UPDATE
3	09/08	CEI	RESPONSE TO SECOND TECHNICAL NOO
4	12/08	CEI	RESPONSE TO FIRST TECHNICAL NOO

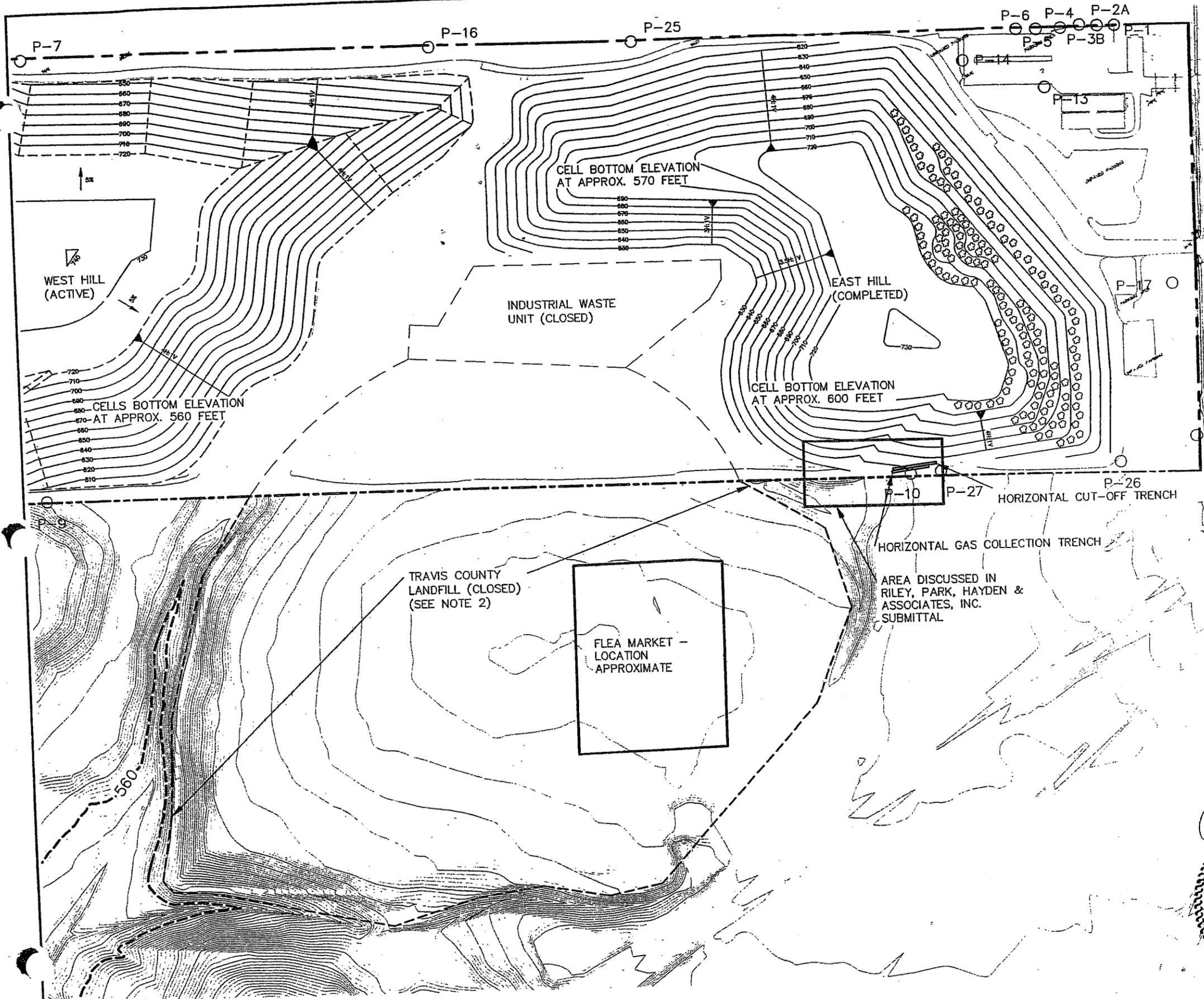
**Goldier Associates**  
 800 Century Plaza Drive, Suite 100  
 Houston, TX 77073  
 Tel: (281) 821-4070  
 Fax: (281) 821-4070

**WASTE MANAGEMENT**

MUNICIPAL SOLID WASTE EXPANSION APPLICATION  
 PERMIT MSW-2480  
 AUSTIN COMMUNITY RECYCLING AND DISPOSAL FACILITY  
 TRAVIS COUNTY, TEXAS

**GAS PROBE LOCATION MAP**

DATE: JUNE 2008  
 SCALE: AS SHOWN  
 SHEET NO.: 033-4651-ATT6-2 REV2  
 FIGURE NUMBER: ATT6-2

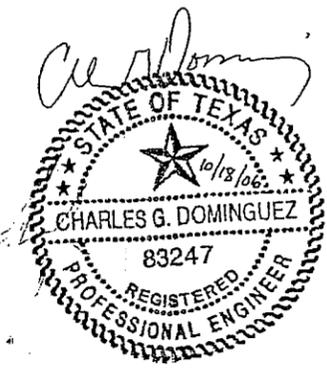


**LEGEND**

- PERMIT BOUNDARY
- 560-FOOT CONTOUR
- CLOSED UNIT BOUNDARY
- EXISTING GAS PROBE

**NOTES**

1. TOPOGRAPHY INSIDE PERMIT BOUNDARY COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED MAY 4, 2004. FINAL COVER CONTOURS FOR WEST AND EAST HILLS OBTAINED FROM DRAINAGE PLAN DATED DECEMBER 12, 2002 AND SEPTEMBER 30, 2003, RESPECTIVELY. ALL OTHER TOPOGRAPHY WAS OBTAINED FROM CITY OF AUSTIN, GIS.
2. THE LIMITS OF THE CLOSED TRAVIS COUNTY LANDFILL ARE SHOWN APPROXIMATE AND FOR ILLUSTRATION PURPOSES ONLY.



Technically Complete  
3172

INTENDED FOR PERMITTING PURPOSES ONLY

DATE	BY	DESCRIPTION
03/05/06	LAJ	CHAPTER 330 RULE REVISION UPDATE
03/05/06	LAJ	DATE
03/05/06	LAJ	DATE

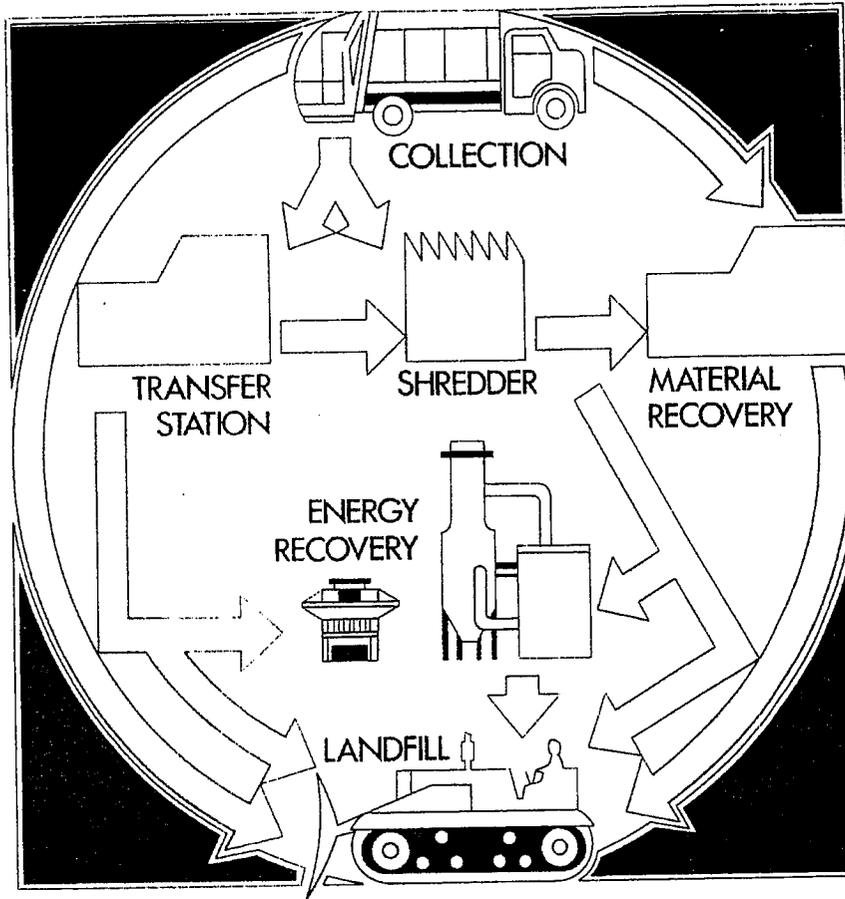


PERMIT MUNICIPAL SOLID WASTE EXPANSION APPLICATION  
PERMIT MSW-2480  
AUSTIN COMMUNITY RECYCLING AND DISPOSAL FACILITY  
TRAVIS COUNTY, TEXAS

GAS PROBE SPACING BETWEEN EAST AND WEST HILLS

DATE	BY	DESCRIPTION
03/05/06	LAJ	DATE
03/05/06	LAJ	DATE
03/05/06	LAJ	DATE

FIGURE NUMBER  
**ATT6-5**



# **Municipal Solid Waste Management Regulations**

April 1977

Texas Department of Health

The Texas Department of Health Resources became the Texas Department of Health by Acts of the 65th Texas Legislature, effective August 29, 1977, Article 4418g, V.T.C.S. Where the term Texas Department of Health Resources appears hereafter in these regulations, it shall be construed to mean the Texas Department of Health.

Adopted by the Texas Board of Health Resources: March 26, 1977

Effective Date: April 20, 1977

These regulations supersede the January 1976 Edition of the "Municipal Solid Waste Management Regulations" published by the Texas Department of Health Resources.

## F-2 Operational Standards for Type I, II and III Sites

### F-2.1 Fire Protection

An adequate supply of water under pressure at the site or an adequate stockpile of earth reasonably close to the disposal area shall be provided, or there shall be a nearby organized fire department providing service when called. Accidental fires shall be promptly extinguished. The Department may approve alternate methods for fire protection.

### F-2.2 Unloading of Municipal Solid Waste

Unloading of solid waste shall be confined to as small an area as practical. An attendant shall be on duty during operating hours and during special site utilization to direct unloading of solid waste, or appropriate signs shall be posted to indicate where vehicles are to unload. Uncontrolled access and dumping of unauthorized materials shall be prevented.

### F-2.3 Control of Windblown Material

A portable fence or other suitable means shall be employed to confine windblown materials from unloading, spreading and compaction operations to the smallest area practical. A water source and necessary equipment may be required for dust control or for wetting deposited solid waste. It shall be the responsibility of the site operator to collect and return to the disposal site all windblown materials as necessary to minimize unhealthy, unsafe, or unsightly conditions.

### F-2.4 Ground and Surface Water Protection

Prior to depositing any solid waste in any disposal area or excavation, and in accordance with paragraph e(4)(c) of Subsection E-3.3 when applicable, the site operator shall notify the Department that the disposal area or excavation has been checked and lined as necessary to ensure that sides and bottom are sufficiently impermeable as required by these regulations or permit special provisions. Subsequent to such notification, Regional personnel of the Department may inspect the site and advise the site operator if the site is considered adequate to receive solid waste.

Solid waste shall not be placed in unconfined waters which are subject to free movement on the surface, in the ground, or within a larger body of water.

The site shall be protected from flooding by any nearby streams with suitable levees constructed to provide protection from a 50-year frequency flood.

Suitable water diversion methods shall be provided to divert the flow of uncontaminated runoff or other surface water away from the active disposal area to minimize contact between the water and solid waste. Rainfall runoff within the landfill area that has become contaminated by solid waste, or other polluted waters, shall not be discharged from the site unless the site operator has furnished the Department evidence that such discharge is authorized by the Texas Water Quality Board. Water which has come in contact with solid wastes may be used for firefighting, dust control or compaction of active fill areas.

### F-2.5 Disposal of Mixed and Special Wastes (Class I Industrial Solid Waste and Nonhazardous Waste)

The Department does not regulate the acceptability of industrial or municipal solid waste by its point of origin. Municipal, agricultural, or industrial waste can contain hazardous material and therefore the Department regulates such wastes in relationship to the degree of hazard the waste will create in specific municipal solid waste collection, handling, storage, or disposal activities. Class I industrial solid waste, as defined in Subsection A-4.13, may be accepted at a municipal solid waste site only if special provisions for such disposal and special handling procedures are approved by the Department. Radioactive materials are not authorized for disposal at municipal solid waste disposal sites. Instructions for their disposal will be provided by the Department upon request. Mixed and special wastes as defined in Subsection A-4.9 and A-4.12, respectively, may be accepted subject to the following provisions:

- a. Water treatment plant sludges and sludges from secondary wastewater treatment plants containing 10% to 100% solids by weight or volume, may be placed on the working face along with municipal solid waste and covered with soil or municipal solid waste. At the option of the site operator, grease and grit trap wastes may be accepted at Type I sites provided the liquid content does not exceed the local condition requirement established by the site operator and the waste is mixed with the municipal solid waste without interfering with the requirement to bury all waste on the day of acceptance. Prior approval by the Department is required for acceptance of such wastes at Type II and III sites. Other sludges may be disposed of only if special provisions are made and approved by the Department. Any sludges or trap wastes accepted for disposal should be applied at the top of the working face to allow maximum dispersion and absorption, and consequently more rapid biochemical degradation.
- b. Dead animals and slaughterhouse wastes mixed with municipal solid waste shall be covered with a minimum of two feet of earth promptly upon receipt.
- c. Minor amounts of Class I industrial solid wastes may be accepted at Type I sites which have a permit from or have filed a permit application with the Texas Department of Health Resources without special Department approval if all of the following conditions are met:
  - (1) The Class I industrial solid waste is incidental to (an estimated 5% or less by weight or volume) and commingled in the same containers with the municipal solid waste at the point where the waste is generated.
  - (2) The Class I industrial solid waste will not in itself or in combination with municipal solid waste significantly increase the danger of fire or endanger

- (3) operating personnel during any phase of collection, storage, transportation or disposal.  
The Type I municipal solid waste site accepting the waste is in compliance with the operational requirements contained in this subsection F-2 with specific regard to daily coverage and has adequate provisions for the protection of natural waters in the State.
- d. Significant amounts of Class I industrial solid wastes, which are in excess of an estimated 5% by weight or volume of the total combined waste during any phase of collection, handling, storage, transportation or disposal shall not be accepted by or deposited in a municipal solid waste disposal site unless prior written approval has been obtained from the Texas Department of Health Resources. Requests for approval to accept Class I industrial solid wastes shall be submitted to the Texas Department of Health Resources by the municipal solid waste disposal site operator and must include:
  - (1) A letter of certification from the producer or generator of the waste containing a complete description of the chemical and physical characteristics of each waste and the quantity and rate at which they are produced.
  - (2) An operational plan, prepared by the site operator, outlining in detail the proposed collection, handling, storage and disposal procedures including:
    - (a) Description of collection equipment and the frequency of collections.
    - (b) Handling safeguards, personal protective equipment and emergency equipment which will be provided to minimize potential danger to the site operating personnel and the surrounding environment.
    - (c) Contingency plans for effective action to minimize danger in the event of accidental spills.
    - (d) Names and technical qualification of site management and site operating personnel.
    - (e) Record-keeping and reporting methods necessary to conform with Texas Water Quality Board Order Number 75-1125-1, "Industrial Solid Waste Management Regulations".

F-2.6 Disposal of Hazardous Wastes  
Hazardous wastes shall not be accepted for disposal at any solid waste facility without prior written approval of the Department.

F-2.7 Disposal of Large Items  
Special provisions shall be made for the disposal of large, heavy, or

- bulky items that cannot be incorporated in the regular spreading, compaction and covering operations.
- F-2.8 Open Burning  
Open burning of solid waste is under the jurisdiction of the Texas Air Control Board and must have specific approval of that Board.
- F-2.9 Vector Control  
Conditions favorable to the production of vectors shall be minimized through proper compaction and covering procedures. Approved pesticides shall be employed for vector control when necessary.
- F-2.10 Wet-Weather Operations  
All-weather roads shall be provided within the site to the unloading area designated for wet-weather operations.
- F-2.11 Salvage and Reclamation  
Salvaging shall not be allowed to interfere with prompt sanitary disposal of solid waste or create public health nuisances. All salvaged materials shall be removed from the site at such intervals as necessary to prevent excessive accumulation of the material at the site. Scavenging shall not be permitted.
- F-2.12 Gas Control  
Decomposition gases shall not be allowed to migrate laterally from the landfill site to endanger occupants of adjacent properties. Any structures subsequently constructed on the landfill site should contain provisions for the venting of decomposition gases to preclude their accumulation in explosive or toxic concentrations beneath or within the structures.
- F-2.13 Compaction, Intermediate Cover and Final Cover  
Solid waste shall be spread and compacted evenly by repeated passages of suitable compaction equipment. Each layer of solid waste shall be thoroughly compacted to a thickness of approximately two (2) feet. Unless a lesser frequency of cover has been authorized by the Department, all solid waste deposited each day shall be completely covered with a minimum of six inches of well-compacted earthen material not previously mixed with garbage, trash, or other solid waste to prevent insect and rodent problems and blowing waste materials. Maximum allowable frequencies of cover for the various types of landfills are prescribed in Subsection D-3. A final cover of at least two feet of earthen material, compacted in layers of no more than 12 inches, shall be placed over the entire surface of each completed portion of the fill within 30 days after completion unless inclement weather would prevent the application of dry cover material. The top six inches of final cover shall consist of a suitable topsoil which will sustain the growth of vegetation.  
The final cover gradient should not exceed 4 percent to prevent the erosion of cover material which shall be graded and compacted to prevent the ponding of water on the landfill surface and minimize infiltration of water into the landfill. Side slopes should be less than 1 vertical to 3 horizontal. Erosion on intermediate and final cover shall be

repaired by restoring the cover material and grading and compacting it as necessary to prevent ponding of water.

F-2.14

Odor and Air Pollution Control

Any ponded water at the site shall be controlled to avoid its becoming a source of obnoxious odors. In the event objectionable odors do occur, appropriate measures, such as chemical treatment, shall be taken.

All applicable Texas Air Control Board regulations concerning air pollution control shall be observed.

F-2.15

Site Completion and Closure Procedures

At least 60 days prior to completion of disposal operations or abandonment of a site, the site operator shall notify the Department and provide a closure plan and schedule. The Department will conduct a final inspection of the site to ensure proper closure. After the site has been properly closed and if the site is Type I, Type II or Type III, the site operator shall prepare an "Affidavit to the Public" and cause the same to be filed in the Deed Records in the Office of the County Clerk of the county in which the site is located. The affidavit shall include a legal description of the property on which the site is located and shall specify the area actually filled with solid waste. A certified copy shall be obtained from the County Clerk and filed with the Department (see Appendix D for a suggested format for the affidavit required by this section). If the site is of a type other than I, II or III, the owner of the land and the operator of the site shall execute a sworn statement containing the same information as that which is required in the aforementioned affidavit and file the said instrument with the Department.

Following receipt of the appropriate instrument, i.e., a certified copy of the "Affidavit to the Public" or the sworn statement, and an inspection report indicating satisfactory closure of the site, the Department Director will acknowledge the termination of operations and closure of the site.

F-3

Operational Standards for Type IV Sites

F-3.1 Fire Protection

An adequate supply of water under pressure at the site or an adequate stockpile of earth reasonably close to the disposal area shall be provided, or there shall be a nearby organized fire department providing service when called. Accidental fires shall be promptly extinguished.

The Department may approve alternate methods of fire protection.

F-3.2

Unloading of Municipal Solid Waste

Every load of waste brought to the site shall be examined at the site entrance. Only brush or construction-demolition waste shall be accepted at the site. Garbage, liquids, sludges, paints, solvents, putrescibles, and hazardous or toxic wastes shall not be allowed.

Unloading of waste shall be confined to as small an area as practical. The site shall be closed and locked, and its use prohibited, when a supervisor is not on duty.

F-3.3 Control of Windblown Material

It shall be the responsibility of the site operator to collect and return to

the disposal site all windblown materials as necessary to minimize unhealthy, unsafe, or unsightly conditions.

Ground and Surface Water Protection

Prior to depositing any solid waste in any disposal area or excavation, and in accordance with paragraph e (4) (c) of Subsection E-3.3 when applicable, the site operator shall notify the Department that the disposal area or excavation has been checked and lined as necessary to ensure that sides and bottom are sufficiently impermeable as required by these regulations or permit special provisions. Subsequent to such notification, Regional personnel of the Department may inspect the site and advise the site operator if the site is considered adequate to receive solid waste. Solid waste shall not be placed in unconfined waters which are subject to free movement on the surface, in the ground, or within a larger body of water.

The site shall be protected from flooding by any nearby streams with suitable levees constructed to provide protection from a 50-year frequency flood.

Suitable water diversion methods shall be provided to divert the flow of uncontaminated runoff or other surface water away from the active disposal area to minimize contact between the water and solid waste.

Rainfall runoff within the landfill area that has become contaminated by solid waste, or other polluted waters, shall not be discharged from the site unless the site operator has furnished the Department evidence that such discharge is authorized by the Texas Water Quality Board. Water which has come in contact with solid wastes may be used for firefighting, dust control or compaction of active fill areas.

F-3.5 Open Burning

Open burning of solid waste is under the jurisdiction of the Texas Air Control Board and must have specific approval of that Board.

F-3.6 Vector Control

Conditions favorable to the production or harboring of insects, rodents, and snakes shall be minimized by effective compaction and earth covering. Approved pesticides shall be employed for vector control when necessary.

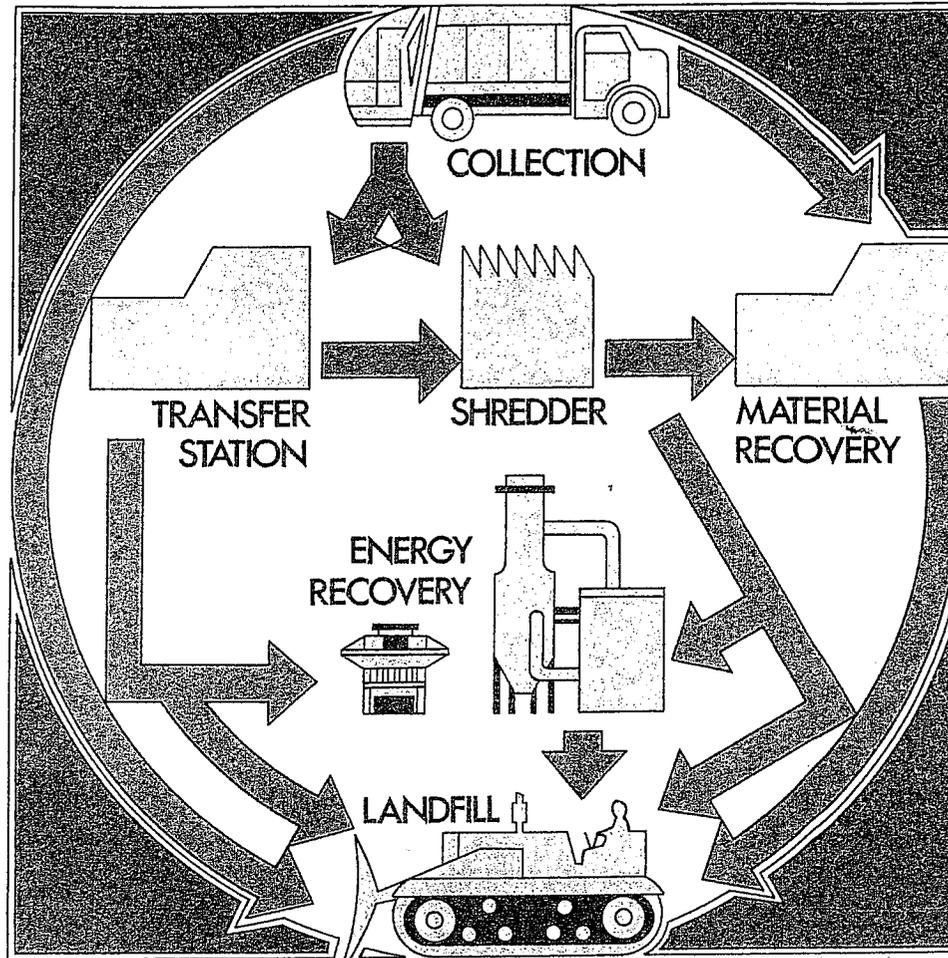
F-3.7 Wet-Weather Operation

All-weather roads shall be provided within the site to the unloading area designated for wet-weather operations.

F-3.8 Compaction, Intermediate Cover and Final Cover

All wastes deposited shall be compacted with suitable compaction equipment as frequently as necessary to minimize voids and covered with a minimum of six (6) inches of well-compacted earthen material as frequently as necessary to minimize windblown waste materials and to eliminate the harborage of insects, rodents and snakes. Where insects, rodents and snakes are in evidence, they should be exterminated by the use of approved pesticides prior to covering deposited waste to ensure that they are not driven to neighboring populated areas when the landfill harborage is eliminated. A final cover of at least two feet of earthen material, compacted in layers of no more than 12 inches, shall

# TEXAS DEPARTMENT OF HEALTH



## MUNICIPAL SOLID WASTE MANAGEMENT REGULATIONS

Requirements for Solid Waste, Including Hazardous Waste

November 1980

Adopted by the Texas Board of Health: September 27, 1980

Effective Date: November 19, 1980

These regulations supersede the April 1977 Edition of the "Municipal Solid Waste Management Regulations" published by the Texas Department of Health. They are published in loose-leaf format for filing in a standard three-ring binder. In the future, minor revisions will be made by issuance and substitution of only the sheets affected.

## SECTION F

## Operational Standards for Solid Waste Land Disposal Sites

F-1 General Requirements

The Site Development Plan, consisting of the design, Site Operating Plan and related data, submitted in support of a permit application, as modified by permit special provisions, becomes an operational requirement of the permit and any significant deviation from the plan without prior approval of the Department is a violation of this section. If at any time during the life of the site the permittee becomes aware of any condition in the Site Development Plan which makes it impractical to keep the site in compliance with this section without modification of the plan, the permittee shall submit to the Department a revised plan prior to implementation of any necessary deviation. In the event that a necessary deviation is the result of unforeseen circumstances and there is insufficient time to prepare and submit a revised plan, the permittee shall immediately contact the Department by telephone or telegram and obtain interim authorization pending the submission and review of the revised plan. Interim authorization shall not exceed 30 days during which time the revised plan shall be prepared and submitted to the Department.

F-2 Operational Standards for Type I, II and III SitesF-2.1 Fire Protection

An adequate supply of water under pressure at the site or an adequate stockpile of earth reasonably close to the disposal area shall be provided, or there shall be a nearby organized fire department providing service when called. The Department may approve alternate methods for fire protection. Accidental fires shall be promptly extinguished. The potential for accidental fires shall be minimized by the application and compaction of soil or other suitable material over disposed solid waste at frequent intervals as prescribed in Subsection F-2.14, below, so as to reduce the risk of fires.

F-2.2 Unloading of Municipal Solid Waste

Unloading of solid waste shall be confined to as small an area as practical. An attendant shall be on duty during operating hours and during special site utilization to direct unloading of solid waste, or appropriate signs shall be posted to indicate where vehicles are to unload. Uncontrolled access and dumping of unauthorized materials shall be prevented.

F-2.3 Control of Windblown Material

A portable fence or other suitable means shall be employed to confine windblown materials from unloading, spreading and compaction operations to the smallest area practical. A water source and necessary equipment may be required for

dust control or for wetting deposited waste. It shall be the responsibility of the site operator to collect and return to the disposal site all windblown materials as necessary to minimize unhealthy, unsafe or unsightly conditions.

F-2.4 Ground and Surface Water Protection

A site shall not be operated in such a manner that groundwater is contaminated.

- a. At least seven (7) days prior to depositing any solid waste in any disposal area or excavation, the site operator shall notify the Department that a soil evaluation has been performed and that the area or excavation complies with the minimum standards which are prescribed in Subsection E-2.3e(4) of these regulations. Where sufficient impermeability does not occur in the native soils, man-made compacted clay liners or some other means of protecting natural waters shall be provided, and prior to depositing solid waste in such area or excavation, the site operator shall show or demonstrate in his notification to the Department that the installed liner or other corrective measures taken will provide adequate protection. Following receipt of such notification, regional personnel of the Department may inspect the site and advise the site operator if the site is considered adequate to receive solid waste.
- b. Solid waste shall not be placed in unconfined waters which are subject to free movement on the surface, in the ground, or within a larger body of water.
- c. If Departmental inspections or evaluation deem it necessary, monitor wells and/or resistivity surveys may be required to monitor groundwater quality.
- d. The site shall be protected from flooding by any nearby streams with suitable levees constructed to provide protection from a 100-year frequency flood and to prevent the washout of solid waste from the site.
- e. Suitable water diversion methods shall be provided to divert the flow of uncontaminated runoff or other surface water away from active disposal areas to minimize contact between the water and solid waste.
- f. Rainfall runoff within the landfill area that has become contaminated by solid waste, or other polluted waters, shall not be discharged from the site unless the site operator has furnished the Department evidence that such discharge is authorized by the Texas Department of Water Resources.

Water which has come in contact with solid wastes may be used for firefighting, dust control or compaction of active fill areas.

F-2.5 Disposal of Mixed and Special Wastes, Including Class I Industrial Nonhazardous Solid Waste

Mixed wastes (municipal and industrial) may be accepted for disposal at a municipal solid waste disposal site except that Class I industrial nonhazardous solid waste, as defined in Subsection A-5.2, may be accepted at a municipal solid waste site only if special provisions for such disposal and special handling procedures are approved by the Department. Radioactive materials are not authorized for disposal at municipal solid waste disposal sites. Instructions for their disposal will be provided by the Department upon request. Mixed and special wastes as defined in Subsections A-5.19 and A-5.48, respectively, may be accepted subject to the following provisions:

- a. Water treatment plant sludges and stabilized sludges from secondary wastewater treatment plants containing 10% to 100% solids, in such quantities as may adequately handled by the site operator, may be placed on the working face along with municipal solid waste and covered with soil or municipal solid waste. Because vacuum trucks with pumpable liquids containing less than 10% solids cannot be readily inspected to determine the characteristics of the waste or mixtures of waste and since all water from any source contributes to the production of leachate, such vehicles shall not be allowed to discharge at municipal solid waste disposal sites unless it can be shown that there is no reasonable alternative. Grease and sand trap wastes can and should be pretreated to a consistency which would not require vacuum truck transportation. Septic tank sludges should be disposed of in permitted wastewater treatment plants where adequate capacity exists. Before any municipal solid waste site accepts vacuum truck wastes, the site operator shall submit a written request to the Texas Department of Health outlining the availability or lack of availability of pretreatment facilities; a quality control program which assures no chemical wastes will be accepted, including the possibilities of such wastes mixed with or masked by grease trap or septic tank wastes; on-site handling procedures; and quantities of both vacuum truck wastes and available "dry waste" for absorption. Other sludges may be disposed of only if special provisions are made and approved by the Department. Any sludges or trap wastes accepted for disposal should be applied at the top of the working face to allow maximum dispersion and absorption, and consequently more rapid biochemical degradation.

- b. Dead animals and slaughterhouse wastes mixed with municipal solid waste shall be covered with a minimum of two feet of earth promptly upon receipt.
- c. Minor amounts of Class I industrial nonhazardous solid wastes may be accepted at Type I sites which have a permit from or have filed a permit application with the Texas Department of Health without special Department approval if all of the following conditions are met:
  - (1) The Class I industrial nonhazardous solid waste is routinely collected with municipal solid waste and does not exceed an estimated 5% by weight or volume at the source. This exemption does not apply to industrial hazardous waste unless exempted under the rules of the Texas Department of Water Resources.
  - (2) The Class I industrial nonhazardous solid waste will not in itself or in combination with municipal solid waste significantly increase the danger of fire or endanger operating personnel during any phase of collection, storage, transportation or disposal.
  - (3) The Type I municipal solid waste site accepting the waste is in compliance with the operational requirements contained in this Subsection F-2 with specific regard to daily coverage and has adequate provisions for the protection of natural waters in the State.
- d. Significant amounts of Class I industrial nonhazardous solid wastes, which are in excess of an estimated 5% by weight or volume of the total combined waste during any phase of collection, handling, storage, transportation, or disposal shall not be accepted by or deposited in a municipal solid waste disposal site unless prior written approval has been obtained from the Texas Department of Health. Requests for approval to accept Class I industrial nonhazardous solid wastes shall be submitted to the Texas Department of Health by the municipal solid waste disposal site operator and must include:
  - (1) A letter or certification from the producer or generator of the waste containing a complete description of the chemical and physical characteristics of each waste, a statement that the waste is not a hazardous waste, and the quantity and rate at which they are produced and/or disposed.
  - (2) An operational plan, prepared by the site operator, outlining in detail the proposed

collection, handling, storage and disposal procedures including:

- (a) Description of collection equipment and the frequency of collections.
  - (b) Handling safeguards, personal protective equipment and emergency equipment which will be provided to minimize potential danger to the site operating personnel and the surrounding environment.
  - (c) Contingency plans for effective action to minimize danger in the event of accidental spills.
  - (d) Names and technical qualifications of site management and site operating personnel.
  - (e) Record-keeping and reporting methods necessary to conform with the Texas Department of Water Resources "Rules of the Texas Water Development Board Pertaining to Industrial Solid Waste Management," (Rules 156.22.01.001-.014).
- e. Class I industrial nonhazardous solid wastes shall not be accepted for disposal at a Type II or III site without written approval from the Department. Prior to such approval, the site operator shall comply with all the requirements prescribed for Type I sites in this Subsection F-2.5.

F-2.6 Disposal of Hazardous Wastes

Hazardous wastes shall not be accepted at a municipal solid waste disposal facility except in accordance with Section L of these regulations.

F-2.7 Disposal of Large Items

Special provisions shall be made for the disposal of large, heavy, or bulky items that cannot be incorporated in the regular spreading, compaction and covering operations.

F-2.8 Open Burning

Open burning of solid waste is under the jurisdiction of the Texas Air Control Board and shall have specific approval of that Board.

F-2.9 Vector Control

Conditions favorable to the production of vectors shall be minimized through proper compaction and covering

procedures. Approved pesticides shall be employed for vector control when necessary.

F-2.10 Wet-Weather Operations

All-weather roads shall be provided within the site to the unloading area(s) designated for wet weather operations.

F-2.11 Salvage and Reclamation

Salvaging shall not be allowed to interfere with prompt sanitary disposal of solid waste or create public health nuisances. All salvaged materials shall be removed from the site at such intervals as necessary to prevent excessive accumulation of the material at the site. Pesticide containers shall not be salvaged. These containers shall be crushed and rendered unusable upon receipt. Class I industrial waste and hazardous waste received at the disposal site shall not be salvaged or given away without prior written approval from the Department. Scavenging shall not be permitted.

F-2.12 Endangered Species Protection

The facility and the operation of the facility shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species as defined in Subsection E-2.3e(7).

F-2.13 Gas Control

Methane and other decomposition gases shall not be allowed to migrate laterally from the landfill site so as to endanger structures or occupants of adjacent properties. Any structures subsequently constructed on the landfill site should contain provisions for the venting of decomposition gases to preclude their accumulation in explosive or toxic concentrations beneath or within the structures. The concentration of methane generated by the solid waste site should not exceed 25 percent of its lower explosive limit in on-site structures (excluding gas control or recovery system components) and its lower explosive limit at the property boundary. The "lower explosive limit" is the lowest percent by volume of a mixture of methane which will propagate a flame in air at 25°C and atmospheric pressure.

F-2.14 Compaction, Intermediate Cover and Final Cover

- a. Solid waste shall be spread and compacted evenly by repeated passages of suitable compaction equipment. Each layer of solid waste shall be thoroughly compacted to a thickness of approximately two (2) feet.

- b. Unless a lesser frequency of cover has been authorized by the Department, all solid waste deposited each day shall be completely covered with a minimum of six inches of well-compacted earthen material not previously mixed with garbage, trash, or other solid waste to prevent insect and rodent problems and blowing waste materials. Maximum allowable frequencies of cover for the various types of landfills are prescribed in Subsection D-2.
- c. A final cover of at least two feet of earthen material, compacted in layers of no more than 12 inches, shall be placed over the entire surface of each completed portion of the fill within 30 days after completion unless inclement weather would prevent the application of dry cover material. The top six inches of final cover shall consist of a suitable topsoil which will sustain the growth of vegetation.
- d. The final cover gradient on top of the fill shall not normally exceed 4 percent (4 feet vertical to 100 feet horizontal) to prevent the erosion of cover material which shall be graded and compacted to prevent the ponding of water on the landfill surface and minimize infiltration of water into the landfill.
- e. Side slopes of the final cover shall not exceed a 25 percent grade (1 vertical to 4 horizontal)
- f. Erosion on intermediate and final cover shall be repaired by restoring the cover material and grading and compacting it as necessary to prevent ponding of water.

F-2.15 Odor and Air Pollution Control

- a. Any ponded water at the site shall be controlled to avoid its becoming a source of obnoxious odors. In the event objectionable odors do occur, appropriate measures, such as chemical treatment, shall be taken.
- b. All applicable Texas Air Control Board regulations concerning air pollution control shall be observed.

F-2.16 Site Completion and Closure Procedures

- a. At least 60 days prior to completion of disposal operations or abandonment of a site, the site operator shall notify the Department and provide a closure plan and schedule. The Department will conduct a final inspection of the site to ensure proper closure.
- b. Concrete markers shall be installed to mark the boundaries of the landfill site. If the actual fill

area is considerably less than the total site area, additional markers shall be placed to outline the limits of the fill area. These latter markers shall be tied in to one or more of the boundary markers by a survey performed by a registered professional engineer or surveyor. The location of all markers shall be shown on a site plan filed with the "Affidavit to the Public", described below.

- c. When fill operations have been conducted which have raised the final elevation higher than 10 feet above natural ground, the site operator shall submit a report to the Department indicating that a survey made after final grading of the site verifies that final contours and elevation are in accordance with the site plans as approved in the permit. The final survey shall be performed under the direct (on-site) supervision of a registered professional engineer or surveyor and the report shall be signed and sealed by the engineer or surveyor, as appropriate. The report will include as an attachment a landfill completion plan properly annotated to reflect the as-built conditions of the site. Contours shall be shown at no greater than five-foot intervals.
- d. After the site has been determined by the Department to be properly closed, the site operator shall prepare an "Affidavit to the Public" and cause the same to be filed in the Deed Records in the office of the County Clerk of the county in which the site is located. The affidavit shall include a legal description of the property on which the site is located and a site plan which shall specify the area actually filled with solid waste.
- e. A certified copy of the "Affidavit to the Public" shall be obtained from the County Clerk and filed with the Department (see Appendix D for a suggested format for the affidavit required by this section.)
- f. Following receipt of the above-required documents, as applicable, and an inspection report from the Department's regional office indicating satisfactory closure of the site, the Department will acknowledge the termination of operations and closure of the site.
- g. Post-Closure Maintenance

For the first year after closure, the site operator shall periodically inspect his closed site and correct as necessary any problems associated with erosion, vegetative growth, leachate or methane migration, subsidence and ponding of water on the site. If any of these problems persist for longer than the first year, the site operator shall be

responsible for their correction until the Department determines that the problem areas have been adequately resolved.

F-3 Operational Standards for Type IV Sites

F-3.1 Fire Protection

An adequate supply of water under pressure at the site or an adequate stockpile of earth reasonably close to the disposal area shall be provided, or there shall be a nearby organized fire department providing service when called. Accidental fires shall be promptly extinguished. The Department may approve alternate methods of fire protection.

F-3.2 Unloading of Municipal Solid Waste

Every load of waste brought to the site shall be examined at the site entrance. Only brush and/or construction-demolition waste shall be accepted at the site. Garbage, liquids, sludges, paints, solvents, putrescibles, and hazardous or toxic wastes shall not be allowed. Unloading of waste shall be confined to as small an area as practical. The site shall be closed and locked, and its use prohibited, when a supervisor is not on duty.

F-3.3 Control of Windblown Material

It shall be the responsibility of the site operator to collect and return to the disposal site all windblown materials as necessary to minimize unhealthy, unsafe, or unsightly conditions.

F-3.4 Ground and Surface Water Protection

The requirements contained in Subsection F-2.4 are applicable to all Type IV sites.

F-3.5 Endangered Species Protection

The facility and the operation of the facility shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species as defined in Subsection E-2.3e(7).

F-3.6 Open Burning

Open burning of solid waste is under the jurisdiction of the Texas Air Control Board and must have specific approval of that Board.

F-3.7 Vector Control

Conditions favorable to the production or harboring of insects, rodents, and snakes shall be minimized by

effective compaction and earth covering. Approved pesticides shall be employed for vector control when necessary.

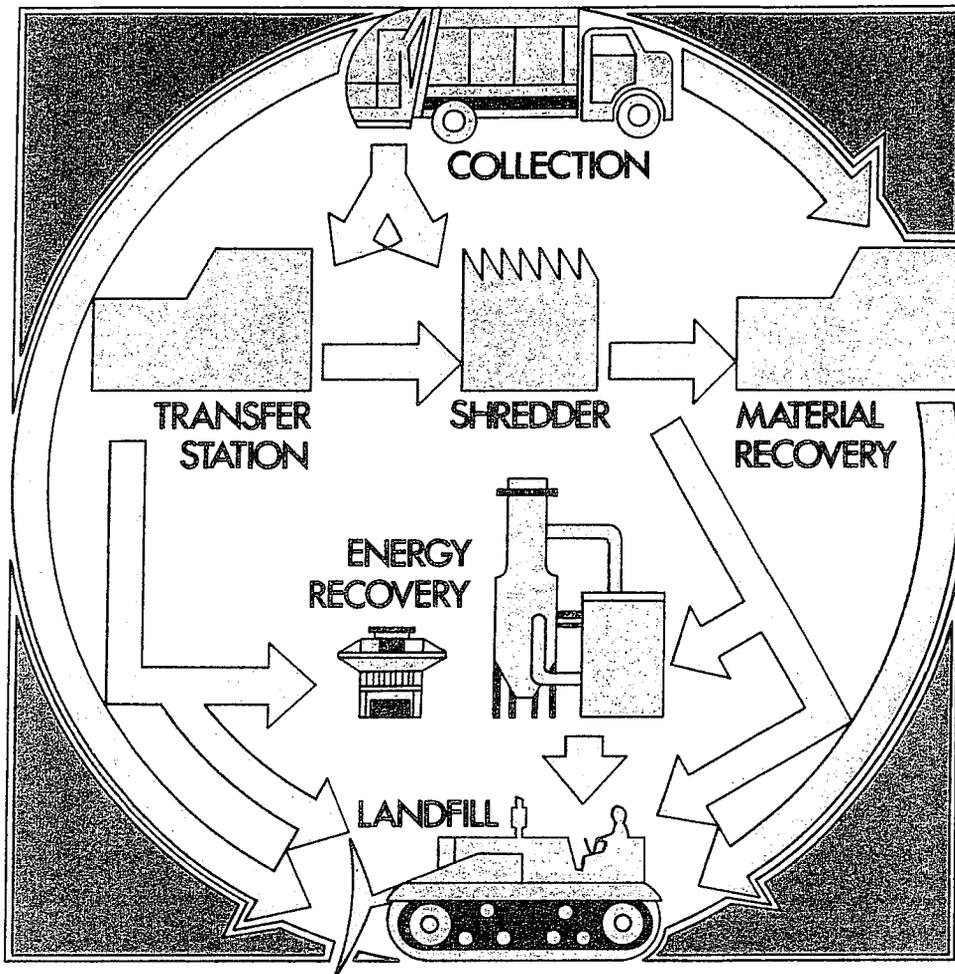
F-3.8 Wet-Weather Operation

All-weather roads shall be provided within the site to the unloading area designated for wet-weather operations.

F-3.9 Compaction, Intermediate Cover and Final Cover

- a. All wastes deposited shall be compacted with suitable compaction equipment as frequently as necessary to minimize voids and covered with a minimum of six (6) inches of well-compacted earthen material at least monthly to minimize windblown waste materials and to eliminate the harborage of insects, rodents and snakes. More frequent coverage may be required by the Department if site inspections indicate such need due to excessive windblown material, excessively large waste cells which could pose a significant fire hazard, or other conditions which could pose a hazard to health or the environment. Where insects, rodents and snakes are in evidence, they should be exterminated by the use of approved pesticides prior to covering deposited waste to ensure that they are not driven to populated areas when the landfill harborage is eliminated.
- b. A final cover of at least two feet of earthen material, compacted in layers of no more than 12 inches, shall be placed over the entire surface of each completed portion of the fill within 30 days after completion unless inclement weather would prevent the application of dry cover material. The top six inches of final cover shall consist of a suitable topsoil which will sustain the growth of vegetation.
- c. The final cover gradient on top of the fill should not normally exceed 4 percent (4 feet vertical to 100 feet horizontal) to prevent the erosion of cover material which shall be graded and compacted to prevent the ponding of water on the landfill surface and minimize infiltration of water into the landfill.
- d. Side slopes of the final cover shall not exceed a 25 percent grade (1 vertical to 4 horizontal).
- e. Erosion on intermediate and final cover shall be repaired by restoring the cover material and grading and compacting it as necessary to prevent ponding of water.

# Texas Department of Health



## MUNICIPAL SOLID WASTE MANAGEMENT REGULATIONS

**Requirements for Solid Waste, Excluding Hazardous Waste**

**Volume One of Two Volumes**

## Municipal Solid Waste Management Regulations

### Volume 1: General and Nonhazardous Solid Waste Regulations

This volume contains those sections of the Texas Department of Health's municipal solid waste management rules which deal with the nonhazardous portion of the municipal waste stream. Rules governing hazardous waste under the department's jurisdiction are contained in Volume 2: Hazardous Waste Management.

Rules in this volume incorporate revisions adopted by the Texas Board of Health on June 18, 1983, which have an effective date of July 12, 1983.

In the future, minor revisions will be made by issuing substitution pages.

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## SUBCHAPTER F. Operational Standards for Solid Waste Land Disposal Sites.

## General.

**§325.111 General Requirements.** The approved Site Development Plan, consisting of the design, Site Operating Plan, and related data, becomes an operational requirement, and any significant deviation from the plan without prior approval of the department is a violation of this subchapter.

(1) If at any time during the life of the site the site operator becomes aware of any condition in the approved Site Development Plan which necessitates a change to accommodate new technology or improved methods or which makes it impractical to keep the site in compliance other than those covered in §325.56 of this title (relating to Revocation or Amendment of a Permit), the site operator shall submit to the department a revised plan. Such proposed changes to the approved Site Development Plan do not require a permit amendment but must be approved by the department prior to their implementation.

(2) In the event that a necessary deviation is the result of unforeseen circumstances and there is insufficient time to prepare and submit a revised plan, the site operator shall immediately contact the bureau by telephone or telegram and obtain interim authorization pending the submission and review of the revised plan. Interim authorization shall be in writing and shall not exceed 30 days during which time the revised plan shall be prepared and submitted to the bureau.

(3) All drawings or other sheets prepared for revisions to a Site Development Plan or other previously approved documents, which may be required by this subchapter, shall be submitted in triplicate and should be no larger than 8 1/2 x 11 inches and shall not exceed 15 x 22 inches so that they can be reproduced by normal office copy machines. However, standard-sized drawings folded to 8 1/2 x 11 inches may be submitted or required if their reduction would render them illegible. All revised drawings shall be signed and sealed by the registered professional engineer responsible for their preparation. Bound plans and/or reports shall be signed and sealed by the engineer, preferably on the first page.

**§325.112 Meetings and Inspections Prior to Constructing and Opening New Facilities.**

(a) Preconstruction conference. When the bureau has determined during application processing that a preconstruction conference is necessary to ensure a common understanding of the requirements of the Site Development Plan, these rules, and any special provisions of the permit, the permittee shall be so advised in the letter transmitting the permit. In that event, the permittee

shall contact the bureau to establish a date, time, and place where department representatives can meet with the permittee and his design engineer. Any permittee not so advised may at his option request such a meeting anytime during the construction phase of the site. If appropriate, the design engineer shall be accompanied by a geotechnical engineer and/or engineering geologist, and if the permittee is not to be the on-site operator, the appropriate operating or management personnel shall attend the meeting.

(b) Preopening inspection. After all significant initial construction has been completed and prior to accepting any solid waste, the site operator shall contact the bureau and establish a date for representatives of the department to inspect the site in the company of the permittee, the design engineer, the geotechnical engineer and/or engineering geologist, and the proposed on-site operator for assurance that the site has been developed in accordance with the approved Site Development Plan. The site shall not accept solid waste until the department has confirmed in writing that all applicable submissions required by the permit, the approved Site Development Plan, and these regulations have been received and found acceptable, and that construction is in compliance with the approved Site Development Plan.

**§325.113 Effect of Updated Regulations on Existing Sites.**

It is not the department's intent to require implementation of changes to existing facilities which are not technically feasible or practical due to the current status of site development. The permittee shall review §§325.111-325.154 of this title (relating to Operational Standards for Solid Waste Land Disposal Sites) to determine operational changes and submissions required by these updated regulations. Permits issued under past regulations remain valid for the period of time specified in the permit. Permittees for sites serving a population equivalent of 5,000 persons or more shall submit a report to the bureau prior to January 1, 1984, addressing those changed standards which are technically feasible at the stage of construction and operation of the facility and justification for not incorporating any remaining changes required by these regulations. The report shall include a time schedule for implementing any operational changes not implemented as of January 1, 1984, and for completing any required submissions not already submitted as of January 1, 1984. Possible submissions in addition to a revised Site Development Plan may be required by §325.122 of this title (relating to Soil and Liner Quality Control) or by

§325.152 of this title (relating to Site Completion and Closure Procedures). The necessity of this possible submission must be addressed in the report referred to above. When changes to the existing approved Site Development Plan, closure/completion plan, or soil and liner quality control plan are not required and changes to these plans are not contemplated, a short statement to that effect is required by January 1, 1984. Upon approval of submis-

sions required by this section, implementation plans and time schedules shall be implemented by the permittee. The permittee should also review §325.53 of this title (relating to Duration and Limits of Permits), §325.54 of this title (relating to Permits Issued Under Previous Regulations), and §325.55 of this title (relating to Transfer of Permits/Applications/Property Ownership and Name Changes) for other submissions which may be required.

## Standards for Protection of Ground and Surface Waters.

**§325.121 General Liner Requirements and Alternatives.**

(a) The minimum acceptable protection is a layer of soil in each disposal trench, excavation, or area that is at least equivalent to three feet of soil having a maximum coefficient of permeability of  $1 \times 10^{-7}$  cm/sec unless some other means of protection is approved by the department; or

(b) When soil liner thicknesses of less than three feet are proposed as equivalents, a protective cover of at least one foot of soil in addition to the liner shall be used. This protective cover may be of on-site material and does not have to meet a coefficient of permeability requirement. If the coefficient of permeability of the liner soil is  $1 \times 10^{-7}$  cm/sec or less, the liner thickness shall not be less than one foot in compacted thickness under density-controlled construction prior to placement of the protective cover. If the plasticity index of the liner soil is less than 15 and the liquid limit is less than 30, the equivalency liner rule does not apply and the soil liner shall be not less than three feet in compacted thickness.

(c) Consideration will be given to proposals for alternatives which will provide equivalent or greater protection of the waters in the state.

(1) A man-made liner other than compacted clay soils (i.e. asphalt, polymeric membranes, concrete, bentonite slurry or admixture, etc.) may be utilized only after the site operator has demonstrated the alternate method will provide the required protection of waters in the state and has received approval from the department to implement such alternate procedures.

(2) As an aid in determining if lining of trenches or fill areas will be required, the bureau will, upon request, calculate the potential percolation of precipitation into deposited solid waste and the potential for leachate generation using the water-balance method based on rainfall, evapotranspiration, and soils data as described in the U.S. Environmental Protection Agency's report SW-168 entitled "Use of Water Balance Method for Predicting Leachate Generation from Solid Waste Disposal Sites" or other improved procedures for evaluation in combination with other site-specific data. The site operator must provide the required site data for use in calculating and evaluating the water balance. This data must be accompanied by a proposed revision of the Site Development Plan to incorporate the appropriate changes in the operation of the site. Revisions shall address intermediate cover frequencies; cover material quality and thickness for both intermediate and final cover applications; proposed final slopes and grades; provisions for assuring that ponding water over deposited waste will not occur either in the intermediate stages or final stages of

the site development; provisions for a top soil that will support vegetation; and a proposed form of vegetative cover with a plan for initiating and maintaining this vegetative cover. Guidance from the bureau should be sought as to the specific information necessary to accomplish the calculations. Once the information is provided by the site operator, the bureau will perform and evaluate the water-balance calculations for the site in question as well as the proposed revisions to the Site Development Plan. The evaluation results will be provided to the operator with notification of approval or disapproval of the revised Site Development Plan.

**§325.122 Soil and Liner Quality Control.**

(a) The site operators of sites serving a population equivalent of 5,000 or more, or where lining is required by permit special provision, shall have on file with the bureau an approved Soil and Liner Quality Control Plan (SLQCP) for each site required to submit Soil and Liner Evaluation Reports (SLER) by subsection (b) of this section.

(b) The site operators of sites serving a population equivalent of 5,000 or more, or where lining is required by permit special provision, shall submit to the bureau a Soil and Liner Evaluation Report (SLER) in triplicate (including all attachments) for each disposal trench, excavation, or area as outlined in the SLQCP at least 14 days prior to depositing any solid waste in the trench, excavation, or disposal area unless alternate means for protecting ground waters have been approved by the bureau.

(1) The SLQCP shall be adequately described and illustrated to provide operating personnel all necessary procedural guidance for assuring continuous compliance with this subsection.

(2) The SLQCP shall provide the engineer or geologist who prepares the SLER's for the site the guidance needed for testing and reporting procedures for the SLER's.

(3) The SLQCP shall include specifications and construction methods employing good engineering practices for both the evaluation of existing soils and the compaction of clay soils to form a liner under each of the four potential conditions described in subparagraphs (A), (B), (C), and (D) of this paragraph, and provide for soil and liner quality control testing frequencies and procedures as described in subparagraph (E) of this paragraph.

(A) Lining of complete trenches. The liner details shall be depicted on cross sections of a typical trench showing the slope, widths, and thicknesses for

compaction lifts.

(B) Lining of permeable zones. Typical cross sections shall be provided for those instances in which overexcavation of permeable zones and backfilling with impermeable clay may be necessary.

(C) Scarification and recompaction. Proposed procedures shall be shown when only scarification and recompaction are required for impermeable soils with zones containing fissures, cracks, or joints.

(D) Lining below static groundwater levels. Procedures to be followed when excavations, trenches, or disposal areas extend into or have the potential to extend into the groundwater are provided in clauses (i) - (iv) of this subparagraph.

(i) If groundwater is encountered in the disposal excavations, or in cases where excavations extend below the seasonal highwater table, the equivalent of one foot of compacted clay liner for every two feet of static water head encountered shall be used as a basis for construction of a liner between the deposited solid waste and the groundwater. The total thickness of the liner shall consist of a base material which provides the equivalent protection of three feet of soil with a permeability of not more than  $1 \times 10^{-7}$  cm/sec, a liquid limit of not less than 30, a plasticity index of not less than 15, and a percent passing a 200 mesh sieve (-200) of not less than 30, plus an additional thickness of other material that will provide a combined total weight equal to one foot of compacted clay for every two feet of static water head.

(ii) Pressure release systems may be used to reduce the amount of the liner support construction.

(iii) In no case shall the thickness of the liner or liner-barrier combination be less than three feet when groundwater is encountered at or within three feet of the bottom of the excavation or if excavations extend below the seasonal highwater table.

(iv) The shearing resistance of the lining material may not be considered as justification for reducing liner thickness.

(E) Soil and liner quality control testing frequencies and procedures.

(i) For circumstances where constructed lining may not be required or needed, the SLQCP shall include specific details on preparation measures required for in situ soils prior to their receipt of wastes.

(ii) All field sampling and testing, both during construction and after completion of lining as well as verification of in situ soils, shall be performed by a registered professional engineer experienced in geotechnical engineering or a geologist having a college

degree in geology with no less than four years experience in engineering geology, or under their direct supervision.

(iii) The amount of compaction shall be expressed as a percentage of standard Proctor density, which has been proven by soils laboratory testing to provide coefficient of permeability of  $1 \times 10^{-7}$  cm/sec or less.

(iv) For constructed liners, the SLQCP shall define the frequency of testing for each of the test procedures listed in subclauses (I) - (V) of this clause. These frequencies shall be expressed in numbers of tests per specific area of liner per lift or specific thickness of liner unless an alternate is approved by the bureau.

(I) Coefficient of permeability.

(II) Sieve analysis.

(III) Atterberg limits.

(IV) Density.

(V) Thickness verification.

(v) Unless otherwise approved by the department, any soil tests accomplished for in situ soils shall be performed according to the standards in subclauses (I) - (V) of this clause.

(I) Permeability Tests. Permeability tests should be run on tap water and not distilled water. All test data must be submitted on permeability tests regardless of test method used.

(-a-) Constant Head—ASTM D2434,

or

(-b-) Falling Head—Appendix VII of the Corps of Engineers' Manual EM, 1110-21906, November 30, 1970, Laboratory Soils Testing.

(-c-) Undisturbed soil samples tested for the coefficient of permeability will be oriented on both the horizontal axis (for soils which will constitute the sidewalls of an excavation) and on the vertical axis (for soils which will constitute the trench or area bottom).

(II) Sieve analysis and hydrometer analysis. Number 4, #10, #40, #200, -200, and hydrometer analysis on -200 fraction ASTM D422.

(III) Atterberg Limits. ASTM D423 and D424.

(IV) Moisture - Density Relations. ASTM D698.

(V) Moisture Content. ASTM D2216.

(vi) All soils bounded within the following ranges of values shall be tested in a soils laboratory for the coefficient of permeability. All soils below the ranges of values stated are very sandy and will require lining, while those soils which exceed the range of values are high in clay and do not require additional testing to prove their adequacy for sanitary landfill purposes. The physical parameters stated in this clause are to be considered as

guidelines for soil sample testing. Engineering judgement must be used on those samples which exhibit some but not all of the boundary limits stated.

Plasticity Index	15 to 25
Liquid Limit	30 to 50
Percent Passing	
200 Mesh Sieve (-200)	30 to 50

(vii) Permeability tests for proving the suitability of soils to be used in constructing clay liners must also be accomplished in the laboratory using the procedures and guidance of clauses (v) and (vi) of this subparagraph. Field quality control must be provided by field density tests based on predetermined moisture density curves unless an alternate plan is approved by the department.

(4) Unless alternate construction procedures are approved by the department in writing, all constructed liners shall be keyed into an underlying formation of sufficient strength to ensure stability of the constructed lining.

(5) Any deviation from an approved SLQCP must have prior approval from the department; therefore, each SLER must be prepared in accordance with the approved SLQCP.

(c) The bureau shall be provided sufficient documentation to assure that the potential for contamination of waters in the state is minimized. If after review by the bureau it is determined that the SLER is incomplete or that the test data provided are insufficient to support the evaluation conclusions, additional test data or other information may be required and use of the trench or disposal area will not be allowed until such additional data are received and approved. All SLER's must be signed, and where applicable, sealed by the individual performing the evaluation and counter-signed by the site operator or his authorized representative.

**§325.123 Miscellaneous Standards for the Protection of Ground and Surface Waters.**

(a) Solid waste shall not be placed in unconfined waters which are subject to free exchange with ground and surface waters.

(b) The department may require monitor wells and/or resistivity surveys to monitor groundwater quality and/or movement when such is deemed necessary.

(c) Prior to placing solid waste in any area within a floodplain, the site operator must construct levees to protect the site from a 100-year frequency flood. Levee design and construction procedures shall be in accordance with TDWR requirements when applicable or shall be approved by the department. The minimum freeboard will

be two feet unless otherwise required. Until levees are constructed, any area within a solid waste disposal facility that is subject to flooding shall be clearly marked by means of permanent posts not more than 300 feet apart or closer if necessary to retain visual continuity, which extend at least six feet above ground level.

(d) Suitable drainage structures shall be provided to divert the flow of rainfall runoff or other surface water away from active disposal areas.

(e) Rainfall water within the landfill area that has come in contact with solid waste and other polluted waters shall not be discharged without prior specific approval of TDWR.

**§325.124 Groundwater Protection Systems.**

(a) Facilities required to have groundwater monitoring programs and initiating operation on or after the effective date of these regulations, shall provide for obtaining and analyzing four background groundwater samples from all monitor wells. The first sample shall be taken prior to the disposal of solid waste at the site. Background values shall be established from samples collected at least once during each of the four calendar quarters of a two-year period. For sites permitted after the effective date of these rules, the two-year period shall start as of the date of permit issuance; while for sites permitted prior to the effective date of these rules, the two-year period shall start as of the effective date of these rules. Sites where approved background groundwater sampling and testing has been previously accomplished, new background monitoring and testing shall not be required. Samples from any monitor well shall not be collected for at least 45 days following collection of a previous sample, unless a replacement sample is necessary. At least one sample per well must be collected and submitted to a laboratory for analysis prior to the deposition of any solid waste on-site. In addition to the two groups of parameters listed in paragraphs (1) and (2) below, each well sample analysis shall include four replicate determinations for Total Organic Carbon (TOC) content and the groundwater elevation (MSL) at the time the sample was collected.

(1) Heavy metals:

Arsenic	Copper	Mercury
Barium	Iron	Selenium
Cadmium	Lead	Silver
Chromium	Manganese	Zinc

## (2) Non-heavy metals:

Calcium	Total Dissolved Solids
Magnesium	Phenolphthalein Alkalinity as CaCO <sub>3</sub>
Sodium	Alkalinity as CaCO <sub>3</sub>
Carbonate	Hardness as CaCO <sub>3</sub>
Bicarbonate	pH
Sulphate	Specific Conductance
Chloride	Anion-Cation Balance
Fluoride	Groundwater Elevation (MSL)
Nitrate (as N)	

(b) All sites required to do groundwater monitoring shall sample at 12-month intervals, unless more frequent determinations are specified by the department. Sites required to do the background analyses specified in subsection (a) of this section shall not initiate these annual sampling procedures until the four background samplings and analyses have been completed. The following indicator parameters in addition to or in coordination with any requirements that may be specified in the permit or approved Site Development Plan shall be determined for each monitoring well. With written concurrence from the department, these parameters may be substituted for those parameters specified in earlier permits.

- (1) TOC (four replicates per sample)
- (2) Iron
- (3) Manganese

## (4) pH

(5) Chloride (in appropriate cases)

(6) Groundwater Elevation (MSL)

(7) Specific Conductance or Total Dissolved Solids (Either one may be selected, but consistency from one report to the next is mandatory unless the prior approval of the department is obtained in writing.)

(c) Once every fourth year all sites required to monitor groundwater will sample and analyze for the non-heavy metals group of parameters specified in subsection (a) of this section in addition to the indicator parameters specified in subsection (b) of this section.

(d) Within 45 days after completion of each sampling, the owner/operator shall submit a report to the bureau containing results of the analyses. These reports shall be submitted to the bureau on forms provided by the bureau.

(e) All samples shall be collected and preserved in accordance with guidelines of the department.

(f) Additional sampling and testing may be required by the department upon review of the analyses submitted.

(g) The groundwater monitoring program specified in this section does not apply to any facility permitted by the department under the provisions of §§325.271 - 325.350 of this title (relating to Hazardous Waste Management).

## Operational Standards for Types I, II, III, and IV Sites.

**§325.131. Fire Protection.** An adequate stockpile of earth reasonably close to the active disposal area and sufficient on-site equipment for movement of that earth shall be provided at Type I and Type IV sites. A nearby fire department providing service when called or water under pressure shall be considered adequate for Type II and Type III sites. The department may approve alternate methods of fire protection. Accidental fires shall be promptly extinguished. The potential for accidental fires shall be minimized by proper compaction and earth cover as prescribed in §325.150 of this title (relating to Compaction, Intermediate Cover, and Final Cover).

**§325.132. Unloading.** Unloading of solid waste shall be confined to as small an area as practical. An attendant shall be on duty during operating hours at Type I and IV sites to direct unloading of solid waste. At Type II and III sites, where an attendant is not provided, appropriate signs must be used to indicate where vehicles are to unload. The use of forced access lanes, identified by ditches, dikes, fences, or other means, may be used in lieu of signs and may be required by the department for the prevention of indiscriminate dumping where signs and/or other methods have proven ineffective.

**§325.133. Access Control.** Uncontrolled access and dumping of unauthorized materials shall be prevented. For Type IV sites, waste unloading shall be closely monitored to assure that only allowable wastes are accepted. See §325.42 of this title (relating to Types of Municipal Solid Waste Sites) for information concerning allowable wastes. Any unauthorized wastes shall be removed from the site and taken to an approved disposal facility. For Type I, II, or III sites, only brush and/or construction-demolition wastes free from other solid wastes shall be deposited in areas designated to receive brush and/or construction-demolition wastes.

**§325.134. Control of Windblown Material.** Windblown material shall be collected and returned to the active disposal area as necessary to minimize unhealthy, unsafe, or unsightly conditions. A portable fence or other suitable means shall be employed to confine windblown material resulting from unloading, spreading, and compaction operations to the smallest area practical.

**§325.135. Industrial Wastes.**

(a) Class I industrial solid waste is required to be manifested and municipal solid waste site operators shall not accept such wastes without prior written approval as provided for under §325.137 of this title (relating to Disposal of Class I Wastes).

(b) Class II industrial solid waste, except special wastes as defined in §325.5 of this title (relating to Defini-

tions of Terms and Abbreviations), may be accepted at any Type I, II, or III solid waste site provided the acceptance of such waste does not interfere with site operation.

(c) Class III industrial solid waste may be disposed of at a Type I, II, III, or IV solid waste site provided the acceptance of such waste does not interfere with site operation.

**§325.136. Disposal of Special Wastes.**

(a) Disposal of special wastes not specifically provided for under subsection (b) of this section, requires prior written approval from the bureau.

(1) Approvals will be waste specific/site specific and will be granted only to appropriate sites operating in general compliance with these regulations, not including Type IV sites.

(2) Requests for approval to accept special wastes other than those hauled in vacuum trucks shall be submitted to the bureau by the site operator and must include, but are not limited to:

(A) A letter from the generator providing a complete description of the chemical and physical characteristics of each waste, a statement as to whether or not each waste is a Class I waste as defined in §325.5 of this title (relating to Definitions of Terms and Abbreviations), and the quantity and rate at which each waste is produced and/or the expected frequency of disposal.

(B) An operational plan containing the proposed procedures for handling each waste and listing available protective equipment for operating personnel and on-site emergency equipment.

(C) A contingency plan outlining responsibility for containment and cleanup of any accidental spills occurring during the delivery and/or disposal operation.

(3) Prior to allowing vacuum trucks to discharge wastes at a municipal solid waste disposal site, the site operator shall have a bureau-approved written quality control plan, which assures that there is no reasonable probability that the receipt of vacuum truck wastes would cause an adverse effect on the public health or the environment.

(A) Vacuum trucks, as used in this section, refers to any vehicles which transport liquid and semi-solid wastes to a solid waste disposal site.

(B) The quality control plan shall assure adequate control over the waste stream to minimize the possibility of accepting unauthorized wastes by providing for:

(i) A system that clearly establishes:

(I) The identity and telephone number of each generator;

(II) The type and quantity of waste obtained from each generator;

(III) The total quantity of waste making up each load; and

(IV) The identity of the responsible hauler.

(ii) A system by which the hauler verifies that the information provided with each load is true and correct to the best of his knowledge.

(iii) A system by which the site operator checks the information provided by the hauler to include:

(I) Spot checks of at least 10% of the generators; and

(II) Comparison of actual load volumes with the reported volume for each load.

(C) The quality control plan shall provide for:

(i) Protection for groundwaters including:

(I) Handling procedures to minimize any potential increase in leachate production; and

(II) Lining of any designated vacuum truck waste ponds.

(ii) Procedures to maintain operational compliance of the site by:

(I) Preventing vector breeding;

(II) Preventing obnoxious odors;

(III) Requiring trucks to arrive at such a time during the day, week, or month to assure adequate waste exists for absorption of the vacuum truck wastes in the active working face; and

(IV) Timely application of intermediate cover.

(D) The quality control plan shall indicate the anticipated frequency of accepting vacuum trucks, the volume of waste necessary to absorb the vacuum truck waste when received, and a method to assure that the volume of waste will be adequate at the time the vacuum truck arrives.

(E) The quality control plan shall provide for procedures to be followed in the event a vacuum truck is turned away from the site as a result of inaccurate or falsified information. The incident must be reported to the appropriate local agency or entity for enforcement action.

(F) A trip ticket, an example of which is shown in §325.906 of this title (relating to Appendix F — Form for Vacuum Truck Trip Ticket), should be used by all haulers to document the type and quantity of waste being delivered. Such trip tickets should be made out in triplicate in order that the hauler and the local governing agency or entity may have copies, while the site operator retains the original for at least one year from the date of

receipt. If such a trip ticket is used, the retention of a copy of the trip ticket from a hauler who is turned away from the site should be a part of the plan.

(4) The bureau may on its own issue approval without a written request; however, in such cases the site operator is not required to accept the waste.

(5) The bureau may revoke authorization to accept a special waste if site operation does not maintain general compliance with these rules or conditions imposed in the authorization to accept a special waste.

(6) If required by the bureau, a site accepting special wastes shall submit to the bureau a monthly summary of special wastes received. This report shall be submitted by the 10th day of the month following the month the waste was received. Reports shall be submitted on forms provided by the bureau. Failure to file required reports in a timely manner shall be a violation of these rules.

(b) Receipt of the following special wastes do not require written authorization from the department for acceptance provided the waste is handled in accordance with the noted provisions for each waste.

(1) Infectious and pathological wastes from laboratories, research facilities, and health and veterinary facilities may be accepted at a Type I municipal solid waste site without further written approval if the wastes are double-bagged in plastic bags not less than 1.5 mil thick each and conspicuously marked. The waste shall not be commingled with routine solid waste, but shall be segregated for special collection and transportation. The wastes shall be covered with three feet of other solid waste or two feet of soil immediately upon receipt.

(2) Dead animals and/or slaughterhouse waste may be accepted at a Type I, II, or III municipal solid waste site without further approval provided the carcasses and/or slaughterhouse waste are disposed of in accordance with the following:

(A) For Type I sites - Waste shall be covered by three feet of other solid waste or two feet of soil immediately upon receipt.

(B) For Type II and III sites - Waste shall be covered by at least two feet of soil immediately upon receipt.

(3) Water supply treatment plant sludges containing a minimum of 10% solids, which are not hauled in vacuum trucks, may be accepted at a Type I, II, or III municipal solid waste site.

(4) Stabilized sludges from domestic wastewater treatment plants containing a minimum of 10% solids, which are not hazardous and are not hauled in vacuum trucks, may be accepted at a Type I, II, or III municipal

solid waste site. Quantities shall be limited to that which can be adequately handled at the site without creating odor problems and shall be placed on the working face along with other solid waste and covered with soil or solid waste on the day received.

(5) Unstabilized sludges from domestic wastewater treatment plants may be accepted at a Type I municipal solid waste site without further written authority when the sludge is:

(A) Composed of at least 10% solids and is hauled in other than vacuum trucks (for vacuum truck wastes see subsection (a)(3) of this section.);

(B) Placed on the working face along with other municipal solid waste;

(C) Covered at the end of the working day with at least six inches of soil; and

(D) Determined to be nonhazardous.

(6) Friable asbestos waste may be accepted at a Type I site in accordance with the procedures in subparagraphs (A) - (G) of this paragraph.

(A) The site operator contemplating acceptance of friable asbestos waste shall notify the regional director of environmental and consumer health protection in the appropriate department regional office or the Surveillance and Enforcement Division of the bureau in Austin.

(B) Delivery of the friable asbestos waste to the site shall be coordinated with the on-site supervisor so the waste will arrive at a time it can be properly handled and covered.

(C) Friable asbestos waste shall be accepted at the site only in a wetted condition and in tightly closed and unruptured containers or bags as approved by the TACB.

(D) The bags or containers holding the friable asbestos waste shall be placed below natural grade level. Where this is not possible or practical, provisions shall be made to ensure that the waste will not be subject to future exposure through erosion or weathering of the intermediate and/or final cover.

(E) The bags or containers holding the friable asbestos waste shall be carefully unloaded and placed in the final disposal location rather than dumped. They shall be covered immediately with 12 inches of clean earthen material or three feet of solid waste containing no asbestos. Care shall be exercised in the application of the cover so that the bags or containers will not be ruptured.

(F) A contingency plan in the event of accidental spills (ruptured bags or containers) shall be prepared prior to accepting friable asbestos wastes. The plan shall specify the person(s) responsible and the procedure for

collection and disposal of the spilled material.

(G) Friable asbestos waste of industrial origin must be treated as a Class I waste. See §325.137 of this title (relating to Disposal of Class I Wastes).

(7) Nonfriable asbestos may be accepted for disposal at any municipal solid waste landfill provided the wastes are placed on the active working face and covered in accordance with these regulations. Under no circumstances shall any material containing nonfriable asbestos be placed on any surface or roadway which is subject to vehicular traffic or disposed of by any other means by which the material could be crumbled into a friable state.

(8) Empty containers which have been used for pesticides, herbicides, fungicides, or rodenticides may be disposed of in accordance with subparagraphs (A) and (B) of this paragraph.

(A) These containers may be disposed of at a Type I, II, or III site provided:

(i) The containers are triple-rinsed prior to receipt at the site;

(ii) The containers are rendered unusable prior to or upon receipt at the site; and

(iii) The containers are covered by the end of the same working day they are received.

(B) Those containers for which triple-rinsing is not feasible or practical (paper bags, etc.) may be disposed of provided either of the disposal procedures listed in clauses (i) and (ii) of this subparagraph is followed:

(i) The waste is placed in the active disposal area and covered with at least three feet of municipal solid waste; or

(ii) The waste is placed in a specially designated area and covered with at least two feet of compacted soil.

(C) Salvaging and/or scavenging of the containers shall not be allowed under any circumstances.

#### §325.137. Disposal of Class I Wastes.

(a) Approvals to accept Class I wastes will be waste specific/site specific and will be granted only to appropriate sites that are operating in general compliance with these regulations, not including Type IV sites.

(b) Requests for approval to accept Class I solid wastes shall be submitted to the bureau by the site operator and shall include, but are not limited to:

(1) A letter from the generator providing a complete description of the chemical and physical characteristics of the waste, a statement as to whether or not the waste is a hazardous waste as defined in §325.5

of this title (relating to Definitions of Terms and Abbreviations), and the quantity and rate at which the waste is produced and/or the expected frequency of disposal.

(2) An operational plan containing the proposed procedures for handling the waste and listing of available protective equipment for operating personnel and on-site emergency equipment.

(3) A contingency plan outlining responsibility for containment and cleanup of any accidental spills occurring during the delivery and/or disposal operation.

(c) The department may issue approval without a written request; however, in such cases the site operator is not required to accept the waste.

(d) The written concurrence of TDWR is required for a municipal solid waste facility to accept a Class I industrial solid waste. This concurrence shall be sought by the department and not the site operator.

(e) Any approval to accept a Class I waste is subject to the site operating in general compliance with these rules and any specific conditions required under the letter(s) of authorization. Failure to operate the site in compliance with these rules or any special conditions imposed by the bureau shall be justifiable grounds for the bureau to revoke its authorization to accept a Class I waste.

(f) Any shipment of a Class I waste shall be accompanied by a manifest (waste shipping-control ticket) as required by the Texas Department of Water Resources (TDWR). The site operator or his designated representative shall sign the manifest for any authorized shipments of Class I waste. The site operator shall not accept or sign for shipments of Class I waste for which authorization to accept has not been granted by the bureau. The site operator shall retain the disposal site copy of the manifest for a period of three years. This time period is automatically extended if an enforcement action is pending by the bureau.

(g) A site which accepts any Class I waste shall submit to the bureau a written report of Class I waste received. This report shall be submitted by the 10th day of the month following the month the waste was received. Reports shall be submitted on forms provided by the bureau and shall include all information required by the bureau. Failure to file such reports in a timely manner shall constitute a violation of these rules.

**§325.138. Easement Protection.** All pipeline and utility easements shall be clearly marked with posts which extend at least six feet above ground level, spaced at intervals no greater than 300 feet. No solid waste disposal shall occur within such easements and associated required buf-

fer zones and in no case shall solid waste disposal occur within 25 feet of the centerline of any utility line or pipe unless otherwise authorized by the department. Where on-site access roads, drainageways, or levees cross such easements, the site operator is responsible for obtaining the concurrence of the easement owner.

**§325.139. Boundary Buffer Zones.** Unless otherwise authorized by the department, a minimum separating distance of 50 feet shall be maintained between disposal operations and the boundary of the site to allow area for visual screening, surface drainage facilities, flood protection facilities, and a safety margin for methane gas and leachate migration. In no case shall this zone be narrower than that necessary to provide safe passage for fire-fighting or other emergency vehicles. The department encourages the establishment of a greenbelt along the property line. In all cases, the site boundaries as defined in the permit shall be clearly marked. If the site boundaries are not fenced, posts which extend at least six feet above ground level shall be placed at each corner and along each boundary at intervals no greater than 300 feet. The site operator of each existing unpermitted site shall submit a property description of the site and mark the boundaries in accordance with this section.

**§325.140. Materials Along Route to Site.**

(a) The site operator shall authorize only persons operating vehicles which comply with the following requirements to dispose of waste at the site.

(1) All vehicles and equipment used for the collection and transportation of municipal solid waste shall be constructed, operated, and maintained to prevent loss of liquid or solid waste material and to minimize health and safety hazards to solid waste management personnel and the public.

(2) Collection vehicles and equipment shall be maintained in a sanitary condition to preclude odors and fly breeding.

(3) Collection vehicles not constructed with an enclosed transport body shall use other devices such as nets or tarpaulins to preclude accidental spillage.

(b) Where the site operator fails to enforce these requirements, he shall be responsible for prompt cleanup of all waste materials spilled along and within the rights-of-way of all public access roads serving the site.

**§325.141. Screening of Deposited Waste.** Screening shall be provided to minimize the visibility of deposited waste materials where the department determines a need for such screening or where permit or design requirements so dictate.

**§325.142. Disposal of Large Items.** Special provisions shall be made for the disposal of large, heavy, or bulky items which cannot be incorporated in the regular spreading, compaction, and covering operations.

**§325.143. Burning.** Burning of solid waste is under the jurisdiction of, and shall have specific approval of, TACB.

**§325.144. Vector Control.** Conditions favorable to the production or harboring of vectors shall be minimized through proper compaction and covering procedures. Approved chemical controls shall be employed when necessary.

**§325.145. Site Access Roads.**

(a) All-weather roads shall be provided within the site to the unloading area(s) designated for wet-weather operation. The tracking of mud and trash onto public roadways from the site shall be minimized.

(b) Dust from on-site and other access roadways shall be prevented from becoming a nuisance to surrounding areas. A water source and necessary equipment or other approved means of dust control shall be provided.

**§325.146 Salvaging and Scavenging.** Salvaging shall not be allowed to interfere with prompt sanitary disposal of solid waste or to create public health nuisances. All salvaged materials shall be removed from the site at such intervals as necessary to prevent an excessive accumulation of the material at the site. Class I and special wastes received at the disposal site as authorized by §325.136 of this title (relating to Disposal of Special Wastes) and §325.137 of this title (relating to Disposal of Class I Wastes) shall not be salvaged without prior written approval from the department. Pesticide, fungicide, rodenticide, and herbicide containers shall not be salvaged. Scavenging shall not be allowed.

**§325.147 Endangered Species Protection.** The facility and the operation of the facility shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species as defined in §325.5 of this title (relating to Definitions of Terms and Abbreviations).

**§325.148 Gas Control.** Methane and other decomposition gases shall not be allowed to migrate laterally from the landfill site so as to endanger structures, vegetation, or occupants of adjacent properties. Any structures subsequently constructed on the landfill site should contain provisions for the venting of decomposition gases to preclude their accumulation in explosive or toxic concen-

trations beneath or within the structures. The concentration of methane generated by the solid waste site should not exceed 25% of its lower explosive limit in on-site structures (excluding gas control or recovery system components) and it shall not exceed its lower explosive limit at the property boundary. The lower explosive limit is the lowest percent by volume of a mixture of methane which will propagate a flame in air at or above 25°C and atmospheric pressure.

**§325.149 Abandoned Oil and Water Wells.**

(a) The site operator shall immediately notify the bureau in writing of the location of any and all existing abandoned water wells situated within the site upon such discovery during the course of site development. The site operator shall, within 30 days of such a discovery, provide the bureau with written certification that all such wells have been capped, plugged, and closed in accordance with all applicable rules and regulations of TDWR.

(b) The site operator shall immediately notify the bureau in writing of the location of any and all existing abandoned on-site crude oil or natural gas wells upon such a discovery during the course of site development. The site operator shall, within 30 days of such a discovery, provide the bureau with written certification that all such wells have been properly closed and plugged in accordance with all applicable rules and regulations of the Railroad Commission of Texas.

**§325.150. Compaction, Intermediate Cover, and Final Cover.**

(a) For Type I sites serving a population equivalent of 5,000 people or more, solid waste shall be spread and compacted evenly by repeated passages of suitable compaction equipment, such that each layer of solid waste is thoroughly compacted to a thickness of approximately two feet. For Type I sites serving a population equivalent of less than 5,000 people and Type II, III, and IV sites, all wastes deposited shall be compacted with suitable compaction equipment as frequently as necessary to minimize voids.

(b) Intermediate cover shall be six inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste to prevent the blowing of waste materials and to prevent insect and rodent problems. Cover frequencies shall be as outlined in §325.42 of this title (relating to Types of Municipal Solid Waste Sites) unless some other cover frequency is stipulated by the department.

(1) Except as provided in paragraph (2) of this subsection, intermediate cover shall be applied as follows:

(A) Where daily cover is required, all solid

waste deposited each day shall be provided with intermediate cover by the end of the working day.

(B) Where a seven-day cover frequency is allowed, all solid waste deposited each week shall be covered with intermediate cover at the end of the last working day of each week.

(C) Where a 30-day cover frequency is allowed, all solid waste deposited shall be covered at intervals of no greater than 30 days. It is recommended that this cover be applied at approximately the same time each month, such as the first week, last week, etc.

(D) All waste deposited in areas within Type I, II, or III sites designated to receive only brush and/or construction-demolition waste shall be covered with intermediate cover every 30 days. It is recommended that this cover be applied at the same time each month, such as the first week, last week, etc.

(2) Where the TACB has granted authorization to burn, the department may allow greater time periods between intermediate cover applications. For Type II, III, or IV sites or any specifically designated special-use areas, more frequent coverage may be required by the department if site inspections indicate such need due to excessive windblown material, excessively large waste cells which could pose a significant fire hazard, or other conditions which could pose a hazard to health or the environment. Where insects, rodents, and/or snakes are in evidence, they should be exterminated by the use of approved pesticides, rodenticides, trapping, etc., prior to covering deposited waste to ensure that they are not driven to populated areas when the landfill harborage is eliminated. The site operators of disposal sites near airports may be required to apply intermediate cover at more frequent intervals and take other precautions when it appears that the site is contributing to air navigation safety problems.

(c) The entire surface of each completed portion of the fill shall be provided with final cover within 30 days unless inclement weather would prevent the application of any cover material.

(1) The final cover shall consist of no less than two feet of soil.

(A) The first 1 1/2 feet or more of cover, see paragraph (2) of this subsection, shall be of clayey soil of classification SC or CL, as defined in the 'Unified Soils Classification System' developed by the U.S. Army Corps of Engineers, compacted in layers of no more than six inches to help minimize the water infiltration potential. A classification CH soil may be used; however, this soil may experience excessive cracking and must therefore be covered by at least 12 inches of topsoil to help in retaining moisture. Other types of soil may be used with prior

approval.

(B) The final six inches of cover shall be of suitable topsoil which will sustain the growth of vegetation, and shall be seeded or sodded during the first growing season following application of final cover to help minimize erosion.

(2) Side slopes of all aboveground disposal areas (aerial fills) shall not exceed a 25% grade (four feet horizontal to one foot vertical). The final cover for the top portion of a landfill shall have a minimum gradient of 2.0% and shall not exceed 6.0%, but shall possess a sufficient minimum grade to preclude ponding of surface water when total fill height and expected subsidence are taken into consideration. Side slopes in excess of 25% will not be authorized without controlled drainage such as flumes, diversion terraces, spillways, or other acceptable methods. Disposal of solid waste above natural ground level is prohibited unless pursuant to an engineering Site Development Plan approved by the department. Requests for changes to previously approved engineering Site Development Plans or new engineering Site Development Plans submitted in support of requests for aerial fills will be processed in accordance with §325.111 of this title (relating to General Requirements). Technical guidelines for design of aerial fills are available from the department.

(3) Final cover shall be applied in accordance with the approved site closure/completion plan required by subsection (b) of §325.152 of this title (relating to Site Completion and Closure Procedures).

(4) Erosion of cover shall be repaired by restoring the cover material, grading, compacting, and seeding it as necessary. Such periodic inspections and restorations are required during the site operational life and for a minimum of five years after closure.

(d) The on-site ponding of water upgradient of deposited waste shall be prevented, unless the department is assured that such ponding does not pose a potential leachate generation threat.

#### **§325.151. Odor and Air Pollution Control.**

(a) Any ponded water at the site shall be controlled to avoid its becoming a source of obnoxious odors. In the event objectionable odors do occur, appropriate measures, such as chemical treatment, shall be taken to alleviate the condition.

(b) All applicable TACB regulations concerning air pollution control shall be observed.

#### **§325.152. Site Completion and Closure Procedures.**

(a) At least one year prior to completion of disposal operations or abandonment of a site, the site operator

shall notify the bureau and provide an updated closure schedule for the cessation of waste acceptance and completion of the closure of the site.

(b) An approved landfill closure/completion plan shall be on file with the bureau for each land disposal site serving a population equivalent of 5,000 or more. The closure/completion plan shall portray the proposed final contours, establishing side slopes and top grades, and proposed surface drainage features. Protective measures for any areas subject to flooding by a 100-year frequency flood shall be described. Requests to amend approved closure plans shall be submitted with all necessary supporting data to the bureau no less than 60 days prior to implementation of closure procedures. Written approval by the department is mandatory before the site operator may proceed with the implementation of a closure/completion plan for a site.

(c) The site operator shall cause an Affidavit to the Public to be prepared and filed in the deed records in the office of the county clerk of the county in which the site is located. The affidavit shall include a legal description of the property on which the site is located and may include a site plan, specifying the area actually filled with solid waste. The affidavit shall also include a notice that any future owner or user of the site should consult with the department prior to planning or initiating any activity involving the disturbance of the landfill cover or monitoring system. See §325.904 of this title (relating to Appendix D—Affidavit to the Public) to obtain a suggested format for the affidavit required by this subsection.

(d) The site operator shall obtain a certified copy of the Affidavit to the Public from the county clerk and file it with the bureau.

(e) Following receipt of the documents required in subsections (a) - (d) of this section, as applicable, and an inspection report from the department's regional office reporting proper closure of the site, the bureau will acknowledge the termination of operations and closure of the site.

**§325.153. Post-Closure Maintenance.** For at least the first five years after closure, the site operator shall maintain the right-of-entry and periodically inspect his closed site and correct as necessary any problems associated with erosion of cover material, vegetative growth, leachate or methane migration, and subsidence or ponding of water on the site. If any of these problems persist for longer than the first five years, the site operator shall be respon-

sible for their correction until the department determines the problems have been adequately resolved.

**§325.154. Post-Closure Use of Landfilled Areas.**

(a) Because of the potential hazard to public health, groundwater, and the environment if closed landfilled areas are disturbed, the department retains regulatory control over any activities which may affect the integrity of the landfill cover, drainage, liners, or monitoring system. Activities such as relocating waste from a closed landfill, extracting materials for energy, or material and gas recovery shall not be undertaken unless prior approval is obtained from the department.

(b) Although departmental approval is not necessary for post-closure uses of landfills, the department believes the information found in paragraphs (1)-(8) of this subsection should be considered.

(1) Enclosed ground level and underground structures should be avoided due to the potential for explosive concentrations of methane gas.

(2) Examples of uses for landfills not requiring enclosures are agricultural lands, parks, playgrounds, golf courses, and open parking or storage areas.

(3) The ponding of water, excessive irrigation, or plowing to a depth below the topsoil should not be allowed unless there is assurance that percolation of moisture into the buried waste will not occur.

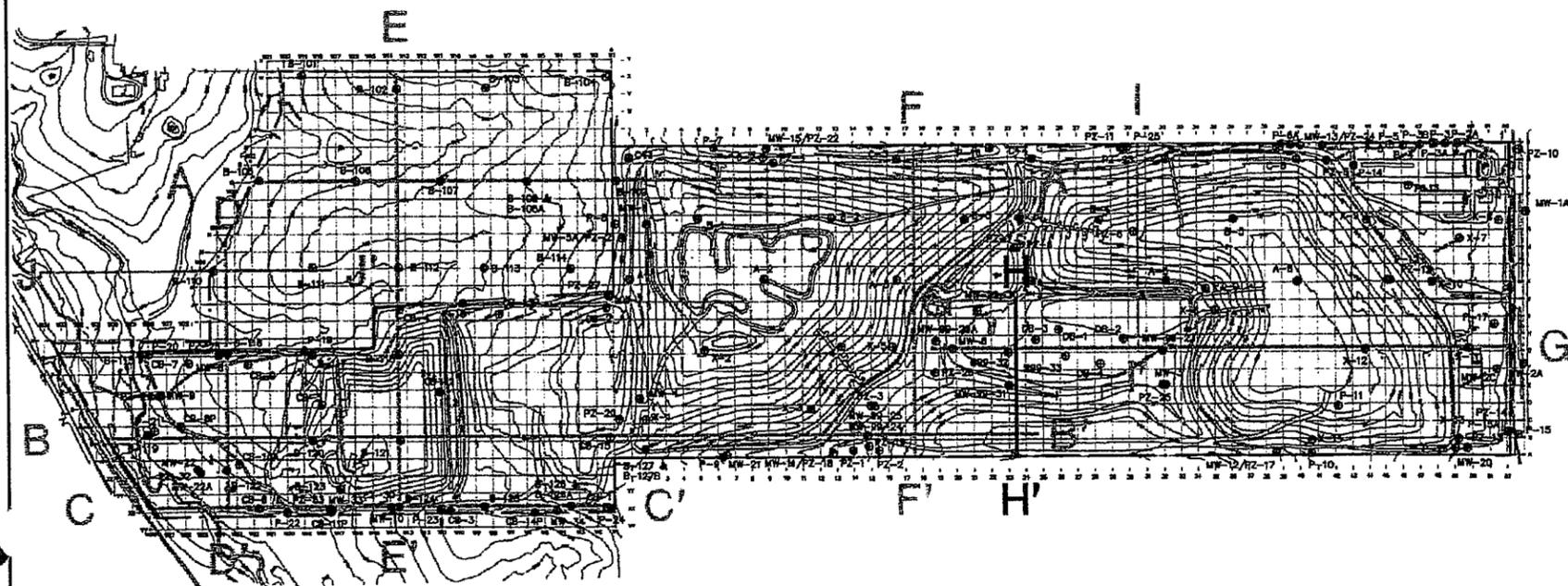
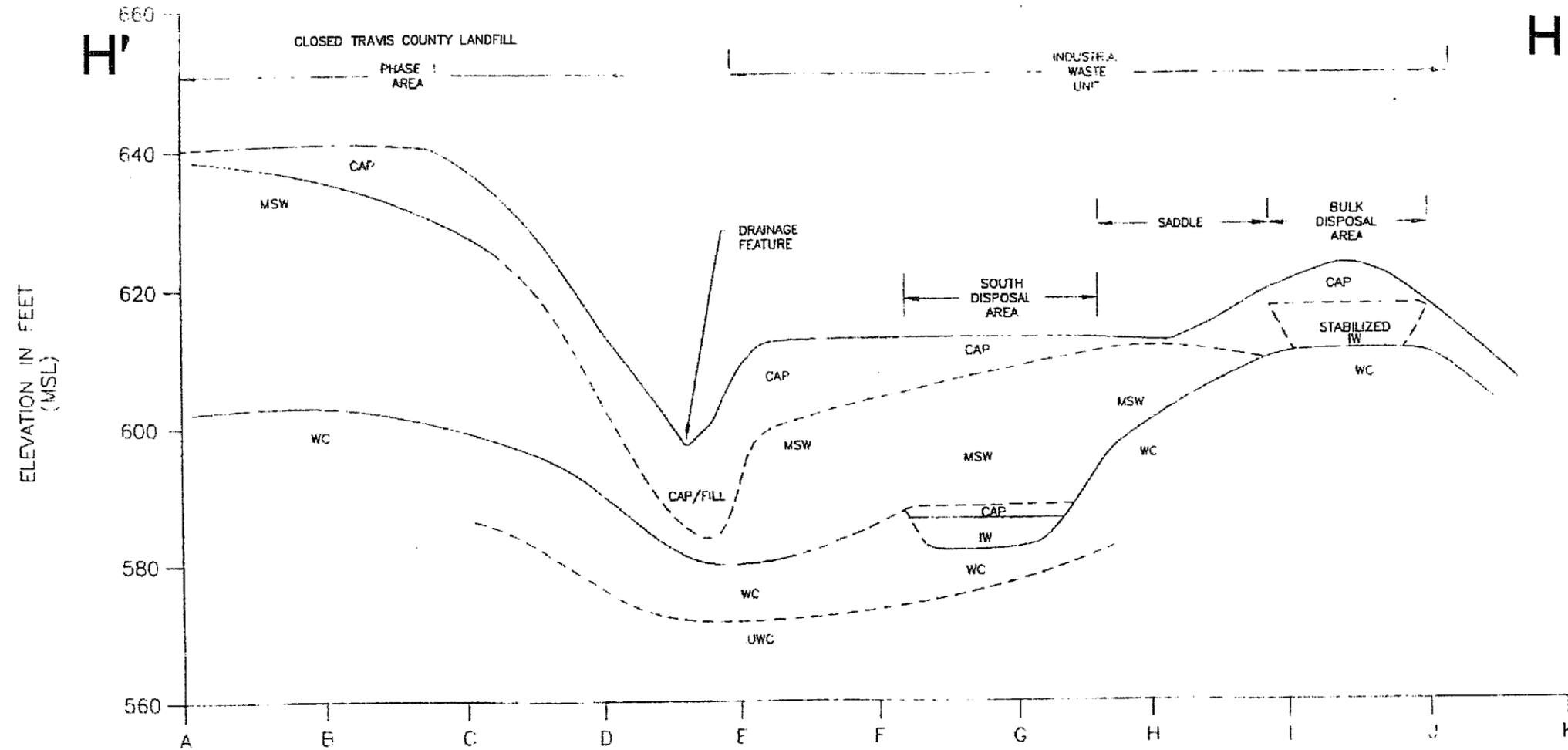
(4) Concentrated loadings should be avoided to prevent uneven settlement.

(5) If enclosed structures are built, means must be provided for natural ventilation to prevent the accumulation of the potentially explosive methane gas. An example would be structures which use an open first level for parking, etc., to allow natural ventilation.

(6) The effectiveness of landfill cover and the bottom liner or barrier must not be disturbed when structures are built, particularly when pilings are used.

(7) Consultation with the department may be desirable prior to initiating certain activities to determine the types of wastes deposited, depth of waste cells, previous maintenance problems, etc.

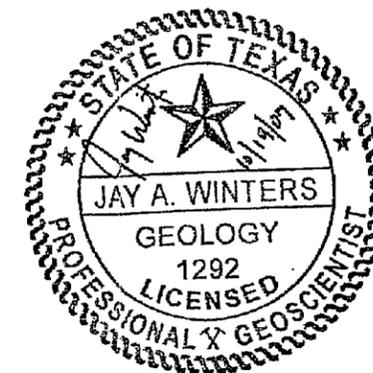
(8) Such things as underground utilities that cross one or both of the site boundaries should be avoided. If they cannot, a properly located and gravel-packed gas vent should be placed at each property boundary crossed to prevent methane gas migration along the pipeline, etc., to off-site structures.



**DETAIL**  
**KEY MAP**  
SCALE: NOT TO SCALE

**NOTES**

1. BASED ON INFORMATION PROVIDED IN REPORT ENTITLED "SITE INVESTIGATION REPORT, CLOSED INDUSTRIAL WASTE UNIT, AUSTIN COMMUNITY LANDFILL, AUSTIN, TEXAS", DATED JULY 24, 2000.



Technically Complete  
1481

INTENDED FOR PERMITTING PURPOSES ONLY

NO.	DATE	DESCRIPTION
1	08/08	CHAPTER 530 RULE REVISION UPDATE
2	05/07	RESPONSE TO TECHNICAL HQ DATED APRIL 3, 2007
3	06/07	RESPONSE TO TECHNICAL HQ DATED JULY 2, 2007
4	10/07	RESPONSE TO TECHNICAL HQ DATED SEPTEMBER 24, 2007

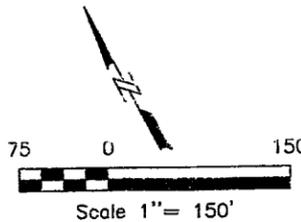
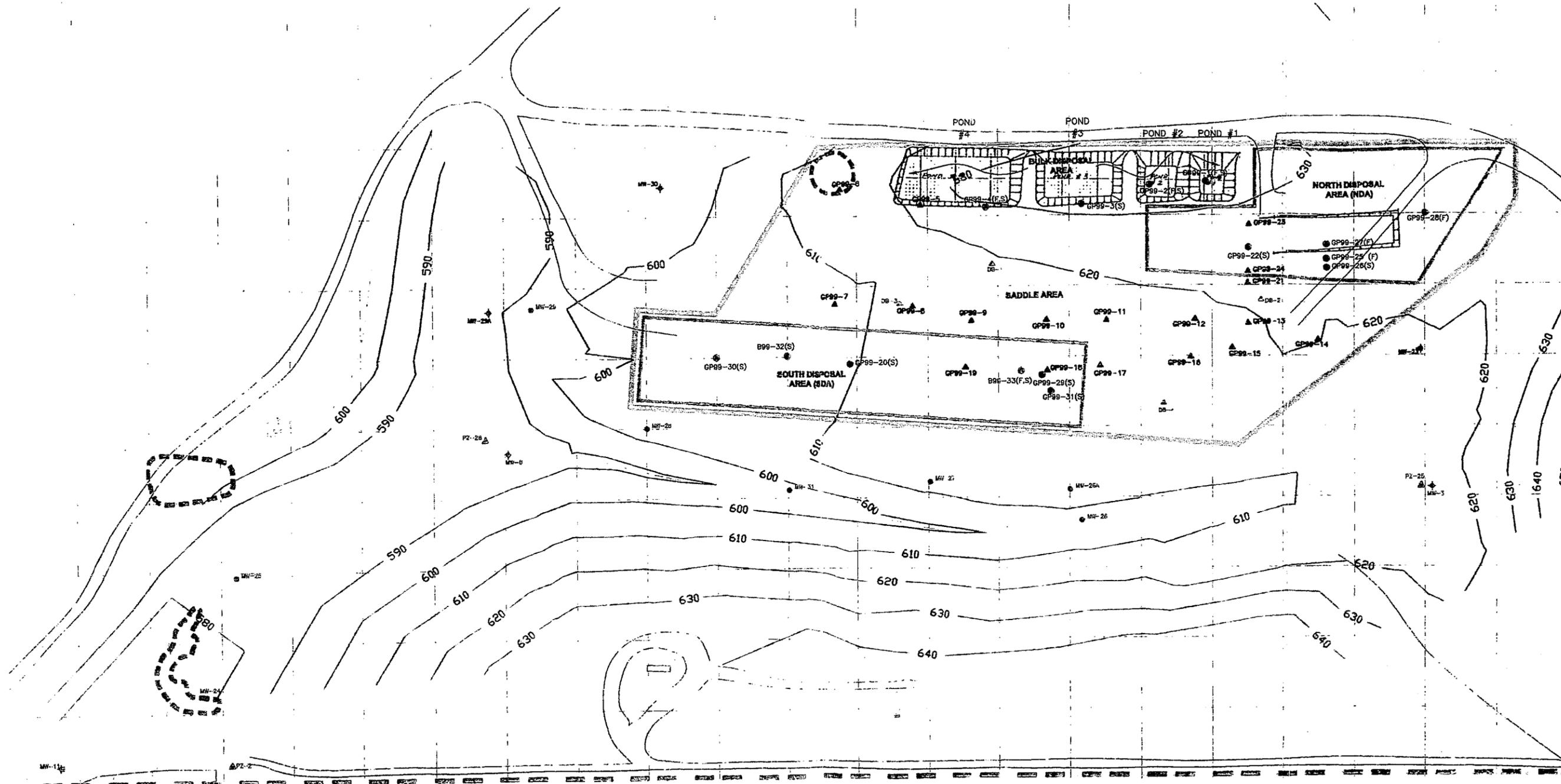


MUNICIPAL SOLID WASTE EXPANSION APPLICATION  
PERMIT MSW-2490  
AUSTIN COMMUNITY RECYCLING AND DISPOSAL FACILITY  
TRAVIS COUNTY, TEXAS

INTERPRETIVE GEOLOGIC CROSS SECTION H-H'

NO.	DATE	DESCRIPTION
1	03/06	AS SHOWN
2	03/06	033-981
3	03/06	033-981-ATT4-17 REV3

FIGURE NUMBER  
**ATT4-17**



LEGEND	
	MW GW MONITORING WELL (EXISTING)
	PZ- PIEZOMETER (EXISTING)
	MW- INVESTIGATION WELL
	MW- SOIL BORING
	GEOPROBE PIEZOMETER FOR FLUID SAMPLING, BASED ON SATURATED LOCATIONS
	B- DEEP BORING
	B- GEOPROBE BORING
	BULK LIQUID DISPOSAL AREAS - WIMBERLY 1972 & AERIAL PHOTOGRAPHS
	2000 TOPOGRAPHIC SURFACE
	1998 SURFACE IMPROVEMENTS
	PROPERTY BOUNDARY
	DRAINAGE FEATURE
	CLOSED INDUSTRIAL WASTE UNIT BOUNDARY (FROM SURVEY DATED 1986)
	AREA OF UNKNOWN OR SUSPECTED INDUSTRIAL WASTE MANAGEMENT, FEBRUARY 4, 1973

WASTE MANAGEMENT OF TEXAS, INC.  
 AUSTIN COMMUNITY LANDFILL  
 WASMN-04198-500

CURRENT DATE | 053100 | CADD FILE | SAMPLE LOC.

Technically Complete  
 2400

**BORING AND WELL LOCATION MAP**

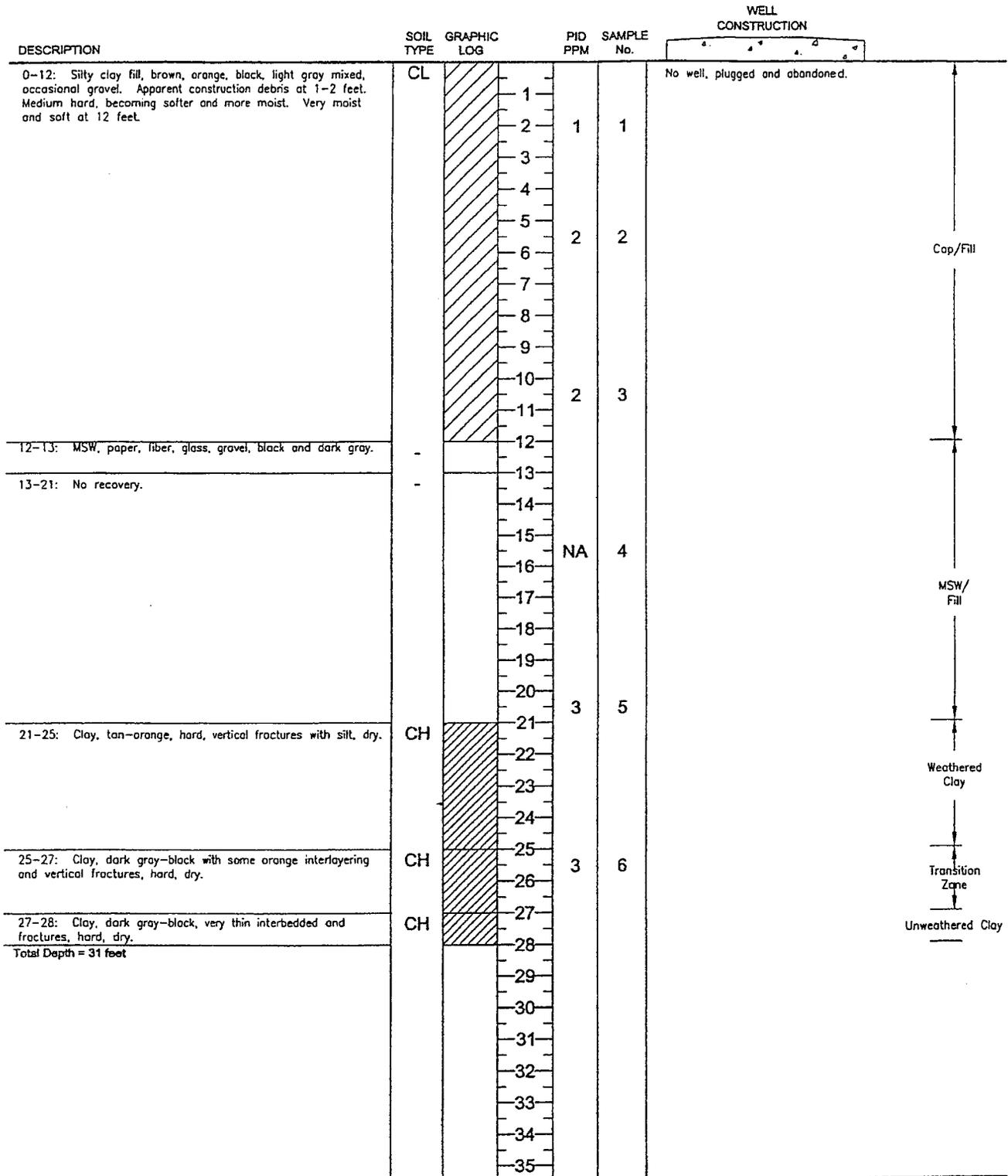
**FIGURE 2-1**



**HOLE No.**  
**MW-99-25**

**PROJECT:** Waste Management of Texas  
**DRILL RIG:** Hollow Stem Rotary  
**HOLE DIA:** 8.25"  
**LOCATION:** -  
**PROJECT #:** WASMN-04198-400

**DATE DRILLED:** 1/4/00  
**LOGGED BY:** B. Crone  
**SAMPLER:** B. Crone  
**DRILLER:** ETL  
**TOTAL DEPTH:** 28'



# HOLE No. MW-99-26

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/6/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 18'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	DEPTH (ft)	PID PPM	SAMPLE No.	WELL CONSTRUCTION
0-12: Clay, orange, gray, and black mottling and layers. Soft, slightly moist, small roots, sandy silt in fractures.	CL		0-12			Cap/Fill
			1			
			2	3	1	
			3			
			4			
			5			
			6	2	2	
			7			
			8			
			9			
			10			
			11	2	3	
12-15: Slight chemical odor at 12-15 feet. Pieces of wood and plastic mixed with clay (MSW).	CL		12-15			MSW/Fill
			12			
			13			
15-18: MSW (paper, plastic, plywood, wood, fiber, cardboard, styrofoam). MSW very soft and crumbly, leachate odor, water in hole, gray, leachate odor. Water accumulating in borehole.	CL		15-18			MSW/Fill
			14			
			15			
			16	1	4	
			17			
			18			
			19			
			20			
			21			
			22			
			23			
			24			
			25			
			26			
			27			
			28			
			29			
			30			
			31			
			32			
			33			
			34			
			35			

Total Depth = 18 feet

# HOLE No. MW-99-31

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/6/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 30'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	DEPTH (ft)	PID PPM	SAMPLE No.	WELL CONSTRUCTION
0-18: Silty clay to clay, brown, light gray, dark gray, orange mottled, very hard and dry at top. Becomes softer and moister with depth, slight leachate odor at 8 feet. Black inclusions and some small gravel (1/8 inch) at 12-13 feet, leachate odor. Moist at 18 feet, slightly leachate odor.	CL		1			
			2	1	1	
			3			
			4			
			5			
			6	1	2	
			7			
			8			
			9			
			10			
			11	1	3	
			12			
			13			
			14			
			15			
			16	1	4	
			17			
			18-20.5: MSW layer at 19 feet. Pieces of roofing shingles and plywood, leachate odor, roots, moist.	CL		
20.5-23: Clay, light gray with orange mottling, moist.	CH		19			
			20			
			21	1	5	
23-28: No recovery till 28 feet. Clay, dark gray with orange layer 1 inch thick.	CH		22			
			23			
			24			
			25			
			26	1	6	
			27			
28-30: Clay, dark gray, very hard and dry.	CH		28			
			29			
			30			
Total Depth = 30 feet			31			
			32			
			33			
			34			
			35			

4198/loge/mw23-33



consulting  
scientists and  
engineers

# LOG OF BORING MW-32

(Page 1 of 1)

Austin Community Landfill  
9900 Giles Road  
Austin, TX 78754

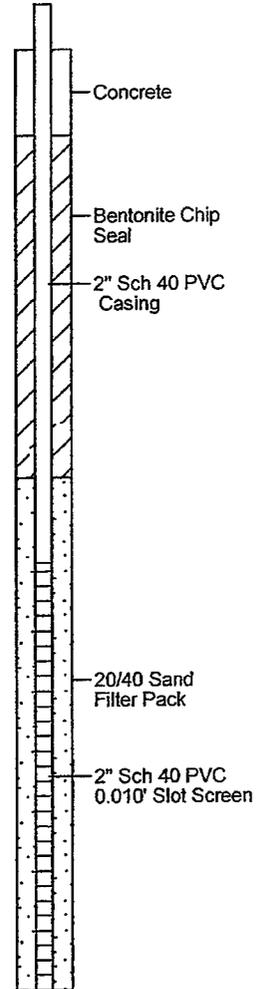
Date : 8/13/02  
Borehole Diameter : 8.0"  
Drilling Method : Hollow Stem Auger  
Sampling Method : 3" x 2" split spoon  
Geologist : Patrick Lennberg, MFG

Drilling Company : GPI  
Driller/License No. : Amador Hinojosa/2897M  
Top of Casing Elev. : 585.66  
Northing : 96,870.998  
Easting : 48,503.162

Project No. 020334

Depth in Feet	Surf. Elev. 582.73	DESCRIPTION	USCS	GRAPHIC	Recovery (ft/ft)	PID (ppmv)	REMARKS
0	582	(0-4.5) - CLAY, CH, Olive (5Y 5/4) grading to very dk. gray (5Y 3/1), dry, firm to hard, med. toughness, med. plasticity; trace Cc nodules; SBC.	CL/CH		1/2	0.0	
					1.5/2	0.0	
5	577	(4.5-10) CLAY, CH, brn-yellow (10YR 6/6) mottled with lt gray, moist, firm, high dry strength, high toughness, high plasticity, slickensided, trace calcareous nodules; SBC.	CH		2/2	0.0	
					2/2	0.0	
					2/2	0.0	
10	572	(10-12) DEBRIS, black mottled with dk brn, moist with some wood debris throughout; SBC.			2/2	0.0	
					2/2	0.0	
					2/2	0.0	
15	567	(12-17) CLAY, CH, gray (2.5Y 6/1) mottled with a lt. olive brn. (2.5Y 5/6), moist, firm, high toughness, high plasticity, slickensided, trace calcareous nodules; GBC	CH		2/2	0.0	
					2/2	0.0	
					2/2	0.0	
20	562	(17-19) CLAY, CH, lt. olive brn. (2.5Y 5/6) mottled with a gray (2.5Y 6/1), moist, firm, high toughness, high plasticity, slickensided, trace calcareous nodules; GBC	CH		2/2	0.0	
		(19-20) CLAY, CH, dk. olive gray (5Y 3/2), moist, firm, med toughness, med. plasticity, homogenous; SBC	CH		2/2	0.0	weathered
		(20-22) CLAYSTONE, CH, dk. olive gray (5Y 3/2), dry, hard to very hard, crystallized fractures, trace iron nodules; BCNE.	CH		2/2	0.0	unweathered
		TD = 22 ft					

Well: MW-32  
Elev.: 585.66



Well Construction:  
4" x 5' Aluminum protective casing - 2.3' stick-up above pad  
+3.0-12' BGS - Riser, 2" Sch 40 PVC, FJT  
12-22' BGS - Screen, 2" Sch 40 PVC, 0.010' slot, FJT  
2-10' BGS - Pure Gold Medium bentonite chips

10-22' BGS - Unimin 20/40 silica sand  
~4.5 gallons of water added to hydrate bentonite  
Well Development:

PID calibrated to 100 ppm Isobutylene

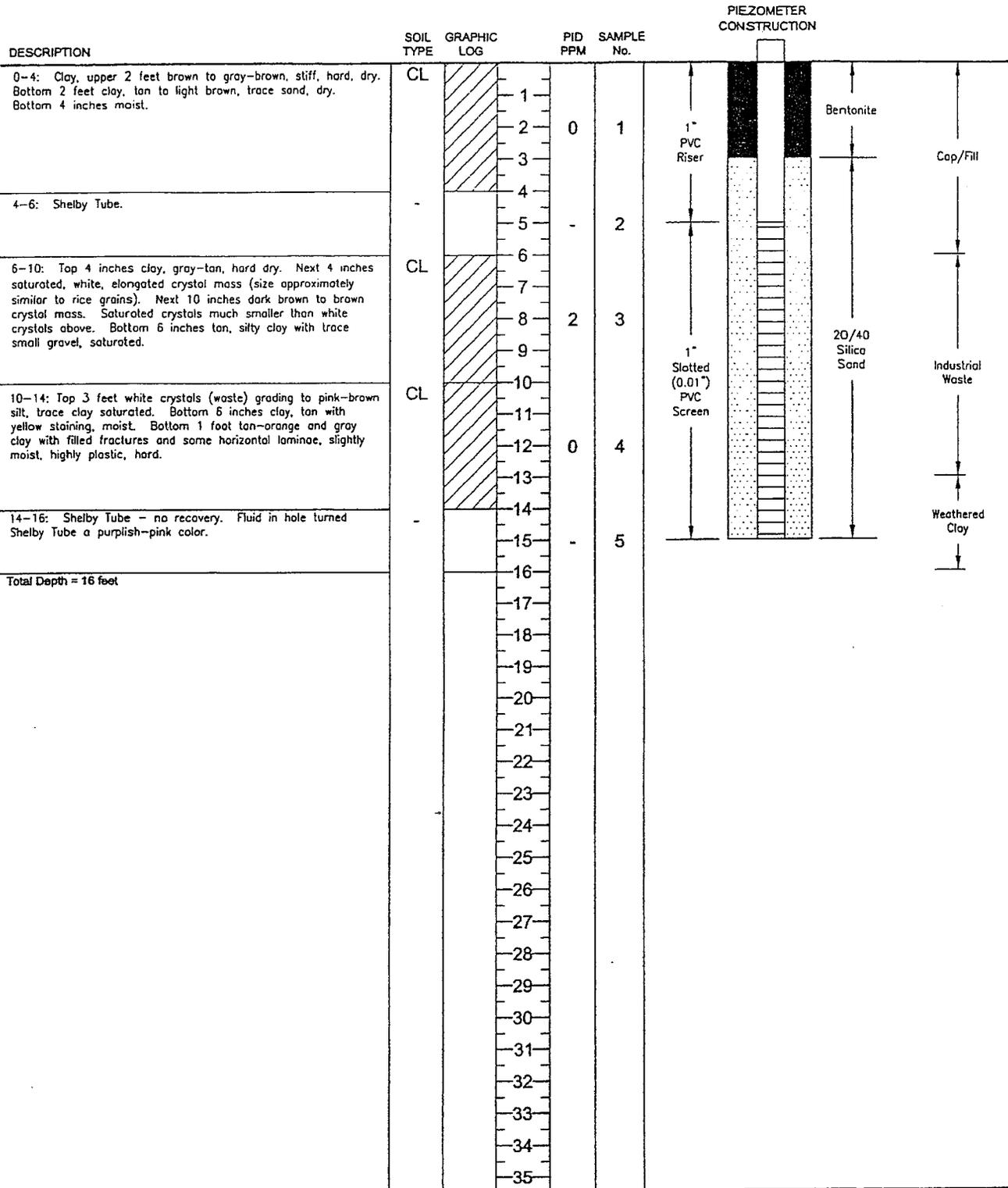
Technically Complete  
1677

01-12-2005 J:\020334\Boring log\borings\MW-32.bor

# HOLE No. GP-99-3

PROJECT: Waste Management of Texas  
 DRILL RIG: Geoprobe  
 HOLE DIA: 3"  
 LOCATION: Bulk Storage Area  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 12/2/99  
 LOGGED BY: M. Riggle  
 SAMPLER: M. Riggle  
 DRILLER: E TTL  
 TOTAL DEPTH: 16'





# HOLE No. B-99-33

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/13/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 38'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	DEPTH (ft)	PID PPM	SAMPLE No.	WELL CONSTRUCTION	
						Inner Diameter (in)	Outer Diameter (in)
0-5: Silty clay, brown, gray, orange mottled. Dry, hardness > 5, occasional gravel, trace sand. At 4 feet have 3-inch layer sandy gravel. At 5 feet have 2 inch layer black wood fiber.	CL		1				
			2	2	1		
			3				
			4				
			5				
5-11: Clay fill, brown, orange, gray mottled, hardness = 2.5, slightly moist, occasional gravel (1 inch), occasional plastic, 2-inch layer of gravel at 9 feet.	CL		6	4	2		Cap/Fill
			7				
			8				
			9				
			10				
11-25.5: MSW - plastic, cardboard, glass, wood, plywood, paper, fiber, brick mixed with very little clay, wet and saturated, leachate odor.	CL		11	4	3		MSW/Fill
			12				
			13				
			14				
			15				
			16	9	4		
			17				
			18				
			19				
			20				
25.5-28.5: Clay, brown-orange with light gray mottling, dry, hardness > 5, no odor. Clay is 2 inches in diameter twisted inside 4-inch barrel.	CL		21	4	5		Cap/Fill
			22				
			23				
			24				
			25				
			26	100	6		
			27				
28.5-38: Twisted plastic sheeting. Powdery, silty, sandy-size substance. Chemical odor, partially wet and sticky.	-		28				Industrial Waste
			29				
			30				
			31	NA	7		
			32				
			33				
			34				
			35				

\*198/loge/mw23-33

**HOLE No.**  
**B-99-33**

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/13/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 38'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	PID PPM	SAMPLE No.	WELL CONSTRUCTION	
Total Depth = 38 feet			450	8	<div style="text-align: right; margin-right: 20px;">Industrial Waste</div>	
						36
						37
						38
						39
						40
						41
						42
						43
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						64
						65
						66
						67
						68
						69
						70



# HOLE No. MW-99-25

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/4/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 28'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	DEPTH (ft)	PID PPM	SAMPLE No.	WELL CONSTRUCTION	
0-12: Silty clay fill, brown, orange, black, light gray mixed, occasional gravel. Apparent construction debris at 1-2 feet. Medium hard, becoming softer and more moist. Very moist and soft at 12 feet.	CL		1-12			No well, plugged and abandoned.	
			1	1	1		
			2	2	2		
			3				
			4				
			5	2	2		
			6				
			7				
			8				
			9				
			10	2	3		
			11				
12-13: MSW, paper, fiber, glass, gravel, black and dark gray.	-		12-13			MSW/ Fill	
13-21: No recovery.	-		13-21				
			14				
			15	NA	4		
			16				
			17				
			18				
			19				
			20				
			21	3	5		
21-25: Clay, tan-orange, hard, vertical fractures with silt, dry.	CH		21-25				Weathered Clay
			22				
			23				
			24				
			25				
25-27: Clay, dark gray-black with some orange interlayering and vertical fractures, hard, dry.	CH		25-27	3	6	Transition Zone	
			26				
			27				
27-28: Clay, dark gray-black, very thin interbedded and fractures, hard, dry.	CH		27-28			Unweathered Clay	
Total Depth = 31 feet			28				
			29				
			30				
			31				
			32				
			33				
			34				
			35				

4198/cap/mw23-33

# HOLE No. MW-99-26

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/6/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 18'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	DEPTH	PID PPM	SAMPLE No.	WELL CONSTRUCTION
0-12: Clay, orange, gray, and black mottling and layers. Soft, slightly moist, small roots, sandy silt in fractures.	CL		1			Cop/Fill
			2	3	1	
			3			
			4			
			5			
			6	2	2	
			7			
			8			
			9			
			10			
			11	2	3	
12-15 : Slight chemical odor at 12-15 feet. Pieces of wood and plastic mixed with clay (MSW).	CL		12			
			13			
			14			
15-18: MSW (paper, plastic, plywood, wood, fiber, cardboard, styrofoam). MSW very soft and crumbly, leachate odor, water in hole, gray, leachate odor. Water accumulating in borehole.	CL		15			MSW/ Fill
			16	1	4	
			17			
			18			
			19			
			20			
			21			
			22			
			23			
			24			
			25			
			26			
			27			
			28			
			29			
			30			
			31			
			32			
			33			
			34			
			35			

Total Depth = 18 feet

**HOLE No.**  
**MW-99-31**

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/6/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 30'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	DEPTH	PID PPM	SAMPLE No.	WELL CONSTRUCTION
<p>0-18: Silty clay to clay, brown, light gray, dark gray, orange mottled, very hard and dry at top. Becomes softer and moister with depth, slight leacheate odor at 8 feet. Black inclusions and some small gravel (1/8 inch) at 12-13 feet, leacheate odor. Moist at 18 feet, slightly leacheate odor.</p>	CL		1			<p>Cap/Fill</p>
			2	1	1	
			3			
			4			
			5			
			6	1	2	
			7			
			8			
			9			
			10			
			11	1	3	
			12			
			13			
			14			
			15			
			16	1	4	
			17			
			18-20.5: MSW layer at 19 feet. Pieces of roofing shingles and plywood, leacheate odor, roots, moist.	CL		
			19			
20.5-23: Clay, light gray with orange mottling, moist.	CH		21	1	5	<p>Weathered Clay</p>
			22			
			23			
23-28: No recovery till 28 feet. Clay, dark gray with orange layer 1 inch thick.	CH		24			<p>Unweathered Clay</p>
			25	1	6	
			26			
			27			
			28			
28-30: Clay, dark gray, very hard and dry.	CH		29			
			30			
Total Depth = 30 feet			31			
			32			
			33			
			34			
			35			

4198/logo/mw23-33



consulting  
scientists and  
engineers

# LOG OF BORING MW-32

(Page 1 of 1)

Austin Community Landfill  
9900 Giles Road  
Austin, TX 78754

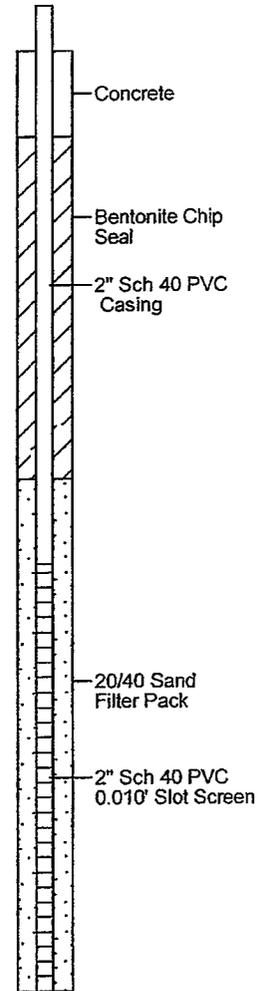
Date : 8/13/02  
Borehole Diameter : 8.0"  
Drilling Method : Hollow Stem Auger  
Sampling Method : 3" x 2' split spoon  
Geologist : Patrick Lennberg, MFG

Drilling Company : GPI  
Driller/License No. : Amador Hinojosa/2897M  
Top of Casing Elev. : 585.66  
Northing : 96,870.998  
Easting : 48,503.162

Project No. 020334

Depth in Feet	Surf. Elev. 582.73	DESCRIPTION	USCS	GRAPHIC	Recovery (ft/ft)	PID (ppmv)	REMARKS
0	582	(0-4.5) - CLAY, CH, Olive (5Y 5/4) grading to very dk. gray (5Y 3/1), dry, firm to hard, med. toughness, med. plasticity; trace Cc nodules; SBC.	CL/CH		1/2 1.5/2	0.0 0.0	
5	577	(4.5-10) CLAY, CH, brn-yellow (10YR 6/6) mottled with lt gray, moist, firm, high dry strength, high toughness, high plasticity, slickensided, trace calcareous nodules; SBC.	CH		2/2 2/2 2/2	0.0 0.0 0.0	
10	572	(10-12) DEBRIS, black mottled with dk brn, moist with some wood debris throughout; SBC.			2/2	0.0	
15	567	(12-17) CLAY, CH, gray (2.5Y 6/1) mottled with a lt. olive brn. (2.5Y 5/6), moist, firm, high toughness, high plasticity, slickensided, trace calcareous nodules; GBC	CH		2/2 2/2	0.0 0.0	
20	562	(17-19) CLAY, CH, lt. olive brn. (2.5Y 5/6) mottled with a gray (2.5Y 6/1), moist, firm, high toughness, high plasticity, slickensided, trace calcareous nodules; GBC	CH		2/2	0.0	
		(19-20) CLAY, CH, dk. olive gray (5Y 3/2), moist, firm, med toughness, med. plasticity, homogenous; SBC	CH		2/2	0.0	weathered
		(20-22) CLAYSTONE, CH, dk. olive gray (5Y 3/2), dry, hard to very hard, crystallized fractures, trace iron nodules; BCNE.	CH		2/2	0.0	unweathered
		TD = 22 ft					

Well: MW-32  
Elev.: 585.66



Well Construction:  
4" x 5' Aluminum protective casing - 2.3' stick-up above pad  
+3.0-12' BGS - Riser, 2" Sch 40 PVC, FJT  
12-22' BGS - Screen, 2" Sch 40 PVC, 0.010' slot, FJT  
2-10' BGS - Pure Gold Medium bentonite chips

10-22' BGS - Unimin 20/40 silica sand  
~4.5 gallons of water added to hydrate bentonite  
Well Development:

PID calibrated to 100 ppm Isobutylene

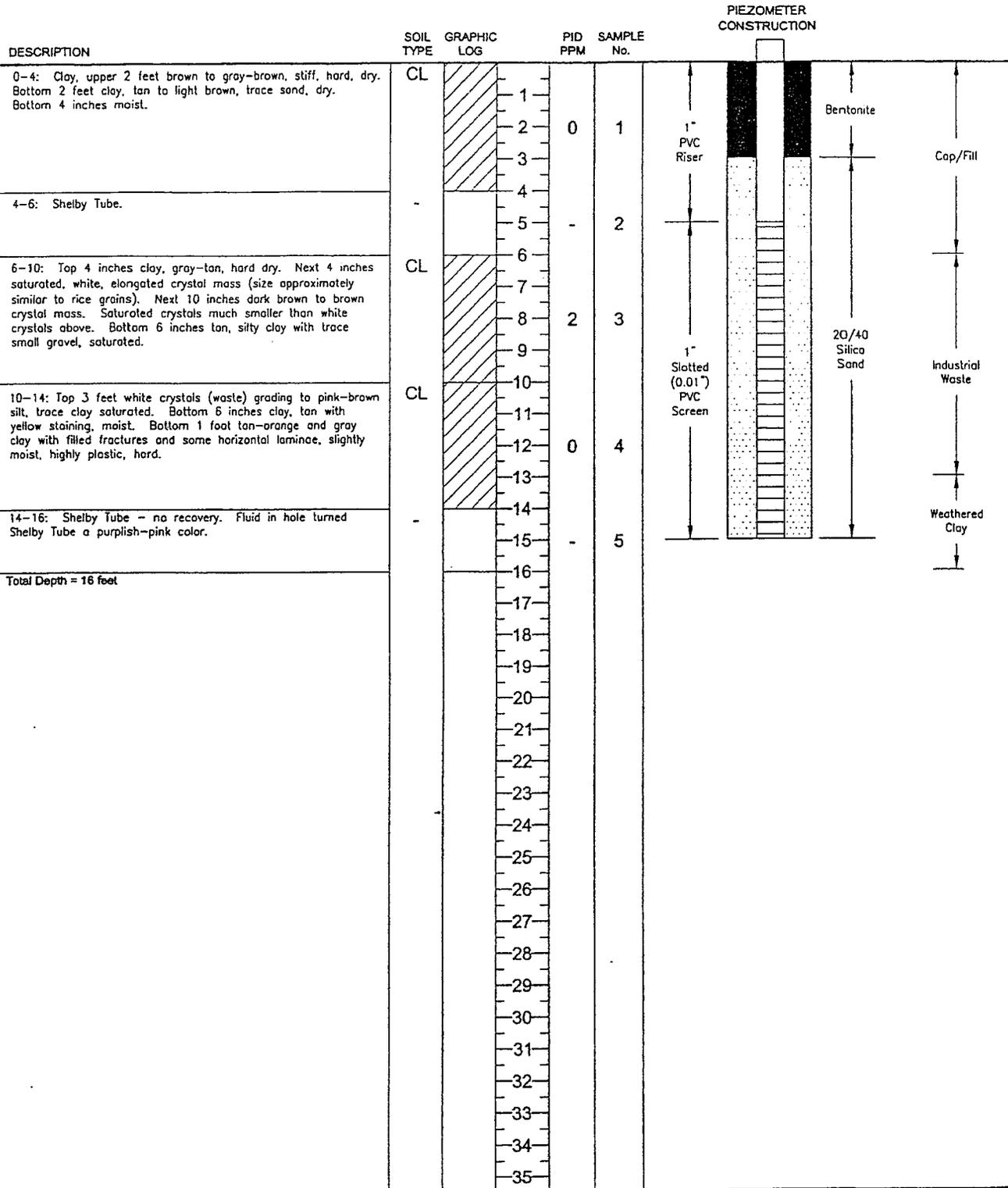
Technically Complete  
1677

01-12-2005 J:\020334\borings\logs\borings\MW-32.bor

# HOLE No. GP-99-3

PROJECT: Waste Management of Texas  
 DRILL RIG: Geoprobe  
 HOLE DIA: 3"  
 LOCATION: Bulk Storage Area  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 12/2/99  
 LOGGED BY: M. Riggle  
 SAMPLER: M. Riggle  
 DRILLER: E TTL  
 TOTAL DEPTH: 16'





# HOLE No. B-99-33

PROJECT: Waste Management of Texas  
 DRILL RIG: Hollow Stem Rotary  
 HOLE DIA: 8.25"  
 LOCATION: -  
 PROJECT #: WASMN-04198-400

DATE DRILLED: 1/13/00  
 LOGGED BY: B. Crone  
 SAMPLER: B. Crone  
 DRILLER: E TTL  
 TOTAL DEPTH: 38'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	DEPTH (ft)	PID PPM	SAMPLE No.	WELL CONSTRUCTION
0-5: Silty clay, brown, gray, orange mottled. Dry, hardness > 5, occasional gravel, trace sand. At 4 feet have 3-inch layer sandy gravel. At 5 feet have 2 inch layer black wood fiber.	CL		1			
			2	2	1	
			3			
			4			
5-11: Clay fill, brown, orange, gray mottled, hardness = 2.5, slightly moist, occasional gravel (1 inch), occasional plastic, 2-inch layer of gravel at 9 feet.	CL		5	4	2	Cap/Fill
			6			
			7			
			8			
11-25.5: MSW - plastic, cardboard, glass, wood, plywood, paper, fiber, brick mixed with very little clay, wet and saturated, leachate odor.	CL		11	4	3	MSW/Fill
			12			
			13			
			14			
			15	9	4	
			16			
			17			
			18			
			19			
			20	4	5	
			21			
			22			
25.5-28.5: Clay, brown-orange with light gray mottling, dry, hardness > 5, no odor. Clay is 2 inches in diameter twisted inside 4-inch barrel.	CL		25	100	6	Cap/Fill
			26			
			27			
			28			
28.5-38: Twisted plastic sheeting. Powdery, silty, sandy-size substance. Chemical odor, partially wet and sticky.	-		29			Industrial Waste
			30	NA	7	
			31			
			32			
			33			
			34			
			35			
			35			

\*198/10pe/mw23-33

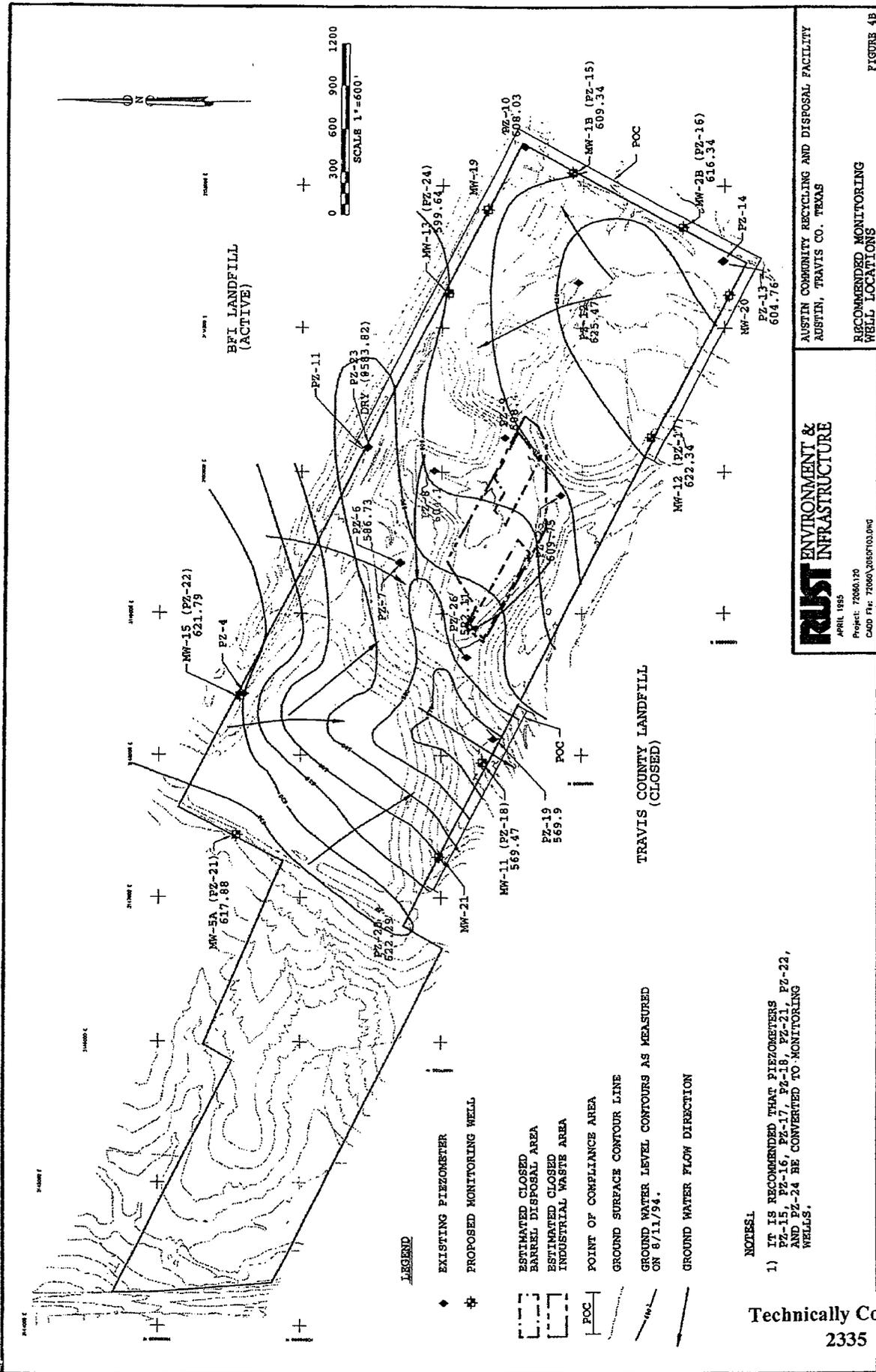
**HOLE No.**  
**B-99-33**

PROJECT: Waste Management of Texas  
DRILL RIG: Hollow Stem Rotary  
HOLE DIA: 8.25"  
LOCATION: -  
PROJECT #: WASMN-04198-400

DATE DRILLED: 1/13/00  
LOGGED BY: B. Crone  
SAMPLER: B. Crone  
DRILLER: E TTL  
TOTAL DEPTH: 38'



DESCRIPTION	SOIL TYPE	GRAPHIC LOG	PID PPM	SAMPLE No.	WELL CONSTRUCTION	
Total Depth = 38 feet			450	8		
						36
						37
						38
						39
						40
						41
						42
						43
						44
						45
						46
						47
						48
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						68
						69
						70



**LEGEND**

- ◆ EXISTING PIEZOMETER
- ⊕ PROPOSED MONITORING WELL
- ESTIMATED CLOSED BARREL DISPOSAL AREA
- ESTIMATED CLOSED INDUSTRIAL WASTE AREA
- POINT OF COMPLIANCE AREA
- GROUND SURFACE CONTOUR LINE
- GROUND WATER LEVEL CONTOURS AS MEASURED ON 8/11/94.
- GROUND WATER FLOW DIRECTION

**NOTES:**

1) IT IS RECOMMENDED THAT PIEZOMETERS PZ-15, PZ-16, PZ-17, PZ-18, PZ-21, PZ-22, AND PZ-24 BE CONVERTED TO MONITORING WELLS.

Technically Complete  
2335

**TRUST ENVIRONMENT & INFRASTRUCTURE**

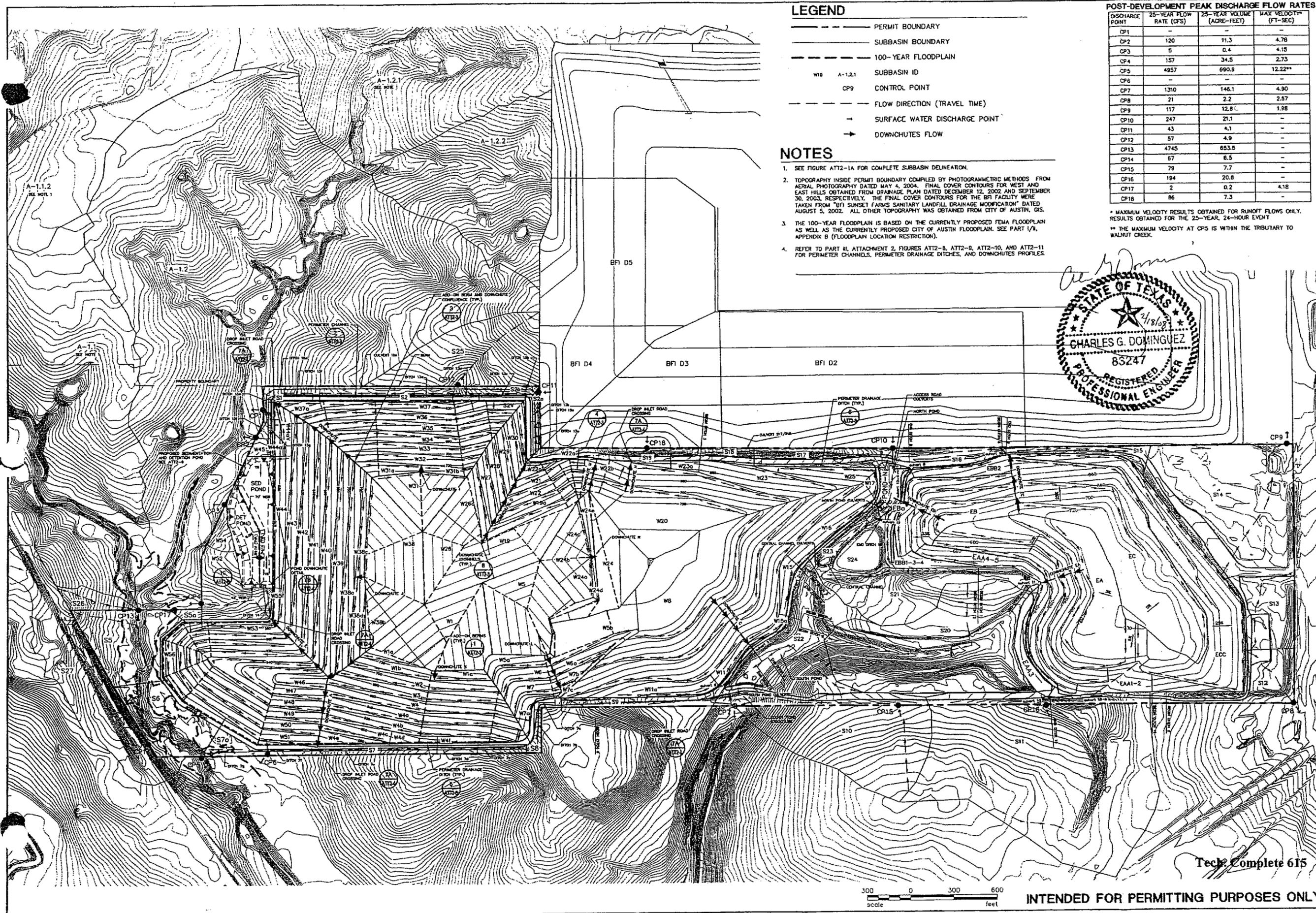
APRIL 1995  
Project: 72060.120  
CAD File: 72060\205103.DWG

AUSTIN COMMUNITY RECYCLING AND DISPOSAL FACILITY  
AUSTIN, TRAVIS CO. TEXAS

RECOMMENDED MONITORING  
WELL LOCATIONS

FIGURE 4B

P:\033-465\001\Drawings\952008 Revision\ATT2\4651-ATT2-002 REV 6.dwg, 2/20/2008 10:45:49 AM, 1:1



**LEGEND**

- PERMIT BOUNDARY
- SUBBASIN BOUNDARY
- 100-YEAR FLOODPLAIN
- w10 A-1.2.1 SUBBASIN ID
- CP9 CONTROL POINT
- FLOW DIRECTION (TRAVEL TIME)
- SURFACE WATER DISCHARGE POINT
- DOWNCHUTES FLOW

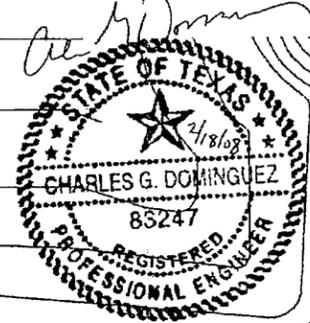
**NOTES**

1. SEE FIGURE ATT2-1A FOR COMPLETE SUBBASIN DELINEATION.
2. TOPOGRAPHY INSIDE PERMIT BOUNDARY COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED MAY 4, 2004. FINAL COVER CONTOURS FOR WEST AND EAST HILLS OBTAINED FROM DRAINAGE PLAN DATED DECEMBER 12, 2002 AND SEPTEMBER 30, 2003, RESPECTIVELY. THE FINAL COVER CONTOURS FOR THE BFI FACILITY WERE TAKEN FROM "019 SUNSET FABRIC SANITARY LANDFILL DRAINAGE MODIFICATION" DATED AUGUST 5, 2002. ALL OTHER TOPOGRAPHY WAS OBTAINED FROM CITY OF AUSTIN, GIS.
3. THE 100-YEAR FLOODPLAIN IS BASED ON THE CURRENTLY PROPOSED FEMA FLOODPLAIN AS WELL AS THE CURRENTLY PROPOSED CITY OF AUSTIN FLOODPLAIN. SEE PART 1/A, APPENDIX B (FLOODPLAIN LOCATION RESTRICTION).
4. REFER TO PART 1/A, ATTACHMENT 2, FIGURES ATT2-8, ATT2-9, ATT2-10, AND ATT2-11 FOR PERIMETER CHANNELS, PERIMETER DRAINAGE DITCHES, AND DOWNCHUTES PROFILES.

**POST-DEVELOPMENT PEAK DISCHARGE FLOW RATES**

DISCHARGE POINT	25-YEAR FLOW RATE (CFS)	25-YEAR VOLUME (ACRE-FEET)	MAX VELOCITY* (FT-SEC)
CP1	-	-	-
CP2	120	11.3	4.78
CP3	5	0.4	4.15
CP4	157	34.5	2.73
CP5	4957	690.8	12.22**
CP6	-	-	-
CP7	1310	146.1	4.90
CP8	21	2.2	2.57
CP9	117	12.6	1.98
CP10	247	21.1	-
CP11	43	4.1	-
CP12	57	4.9	-
CP13	4745	653.5	-
CP14	67	6.5	-
CP15	79	7.7	-
CP16	194	20.8	-
CP17	2	0.2	4.18
CP18	86	7.3	-

\* MAXIMUM VELOCITY RESULTS OBTAINED FOR RUNOFF FLOWS ONLY. RESULTS OBTAINED FOR THE 25-YEAR, 24-HOUR EVENT  
 \*\* THE MAXIMUM VELOCITY AT CP5 IS WITHIN THE TRIBUTARY TO WALNUT CREEK.



NO.	DATE	DESCRIPTION
1	06/07	RESPONSE TO TECHNICAL MOD DATED JULY 2, 2007
2	06/07	RESPONSE TO TECHNICAL MOD DATED APRIL 3, 2007
3	06/07	CHAPTER 330 RULE TECHNICAL MOD
4	03/08	CHAPTER 330 RULE TECHNICAL MOD
5	12/05	RESPONSE TO FIRST TECHNICAL MOD



MUNICIPAL SOLID WASTE EXPANSION APPLICATION  
 PERMIT MSW-2480  
 AUSTIN COMMUNITY RECYCLING AND DISPOSAL FACILITY  
 TRAVIS COUNTY, TEXAS

POST-DEVELOPMENT DRAINAGE PLAN

NO.	DATE	DESCRIPTION
1	JUN 2006	AS SHOWN
2	033-4651	4651-ATT2-002 REV 6

FIGURE NUMBER  
**ATT2-2**



INTENDED FOR PERMITTING PURPOSES ONLY

Sheet Complete 615



**GRAVES DOUGHERTY HEARON & MOODY**

A PROFESSIONAL CORPORATION

Peter D. Kennedy  
512.480.5764  
512.536.9908 (fax)  
pkennedy@gdhm.com

MAILING ADDRESS:  
401 Congress Avenue, Suite 2200  
Austin, TX 78701

March 9, 2009

Mr. Eric Birch  
Law Office of Eric Birch  
11003 Centennial Trail  
Austin, TX 78726 1408

via Hand Delivery

Re: *In re: Application of BFI Waste Management,*  
SOAH Docket No. 582-08-2178  
TECQ Docket No. 2007-1774-MSW

Dear Mr. Birch:

Enclosed please find ground water testing reports received by Applied Materials, Inc., with regard to test wells on its facility in Austin, Texas.

Applied Materials is producing these documents voluntarily, with the understanding that it would be subpoenaed to do so if it did not provide them voluntarily. Please note that these documents are Applied Materials' proprietary information and should not be used or disclosed for any purpose other than the above-captioned proceeding.

I have also enclosed a records affidavit by the custodian of these documents at Applied Materials.

I am sending contemporaneously a copy of these documents to counsel for BFI.

Sincerely,

GRAVES, DOUGHERTY, HEARON & MOODY  
A Professional Corporation

By: \_\_\_\_\_

Peter D. Kennedy

PDK/ntk  
Enclosures

TJFA - 23

TJFA-082484

March 9, 2009

Page 2

cc: Paul G. Gosselink  
John E. Carlson  
816 Congress Avenue, Suite 1900  
Austin, Texas 78701  
(*via* Hand Delivery)

TJFA-082485

**AFFIDAVIT**

Before me, the undersigned, personally appeared William Nichols, who, being by me duly sworn, deposed as follows:

My name is William Nichols. I am of sound mind, capable of making this affidavit, and personally acquainted with the facts herein stated:

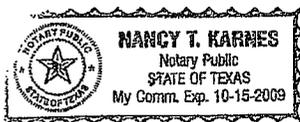
I am the Manager, Environmental/Industrial Hygiene, for Applied Materials, Inc., in Austin, Texas. I am a custodian of records of Applied Materials, Inc., for groundwater testing results conducted at Applied Material's Austin facility.

Attached to this Affidavit are 2 disks containing electronic documents. The electronic documents contained on these disks were received by Applied Materials, Inc., from Shaw Environmental and URS, respectively. Also attached to this Affidavit are copies of records received by Applied Materials, Inc., from PBS&J and Espey, Houston. The attached documents were generated by the respective companies in response to Applied Materials' request for groundwater testing at its facility in Austin, Texas. These documents, or their paper equivalents, are kept by Applied Materials in the regular course of business, and it was the regular course of business of Applied Materials for an employee of Applied materials to receive and store these documents. The records attached hereto are the original or exact duplicates of the originals.

William W. Nichols  
Affiant

SWORN TO AND SUBSCRIBED before me on the <sup>th</sup> 24 day of February, 2009.

Nancy T. Karnes  
Notary Public, State of Texas



Notary's Printed Name:

Nancy T. Karnes

My commission expires:

10/15/09

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)

Parameter (mg/l)	GW Class 3		Monitoring Well 1A <sup>(1)</sup>									
	Res PCL (2)	C/I PCL (2)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
<b>Volatiles Organics</b>												
1,1-Dichloroethene	0.70	0.70	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichloroethane	0.50	0.50	<0.00006	<0.00006	<0.00006	<0.00006	<0.0003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
2-Butanone (MEK)	1,500	4,400	<0.002	<0.002	<0.002	0.0033	<0.005	<0.0008	0.397	<0.005	<0.005	<0.005
Acetone	2,200	6,600	<0.001	<0.001	<0.001	0.0073	0.0073J	0.00085J	0.0351	<0.005	0.0143J	<0.005
Acrylonitrile	0.17	0.38	<0.0005	<0.0005	<0.0005	0.0063	<0.0015	<0.0002	---	---	---	---
Benzene	0.50	0.50	<0.00005	0.00012	<0.00007	0.00011	<0.0002	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Carbon disulfide	240	730	<0.00009	0.00048	<0.00009	<0.00006	<0.0004	<0.0004	<0.0005	<0.005	<0.005	<0.005
Chloromethane	7.0	16	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	0.00035J	<0.0003	<0.0003	<0.0003
Chloroform	24	73	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	70	70	<0.00005	<0.00005	<0.00005	<0.00005	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Methylene chloride	0.50	0.50	<0.00005	0.0000573	<0.00005	<0.00005	<0.00025	<0.0004	<0.0025	<0.0025	<0.0025	<0.0025
Styrene	10	10	<0.0002	<0.0002	<0.0002	0.00019	0.00039J	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Tetrahydrofuran	12	27	<0.002	0.00289	<0.002	<0.002	---	<0.0006	---	---	---	---
Toluene	100	100	0.000412J	<0.0001	<0.0001	0.0018	0.0018J	0.00041J	0.00087J	<0.0007	0.00311	<0.0007
m,p-Xylene	1,000	1,000	0.000131J	<0.0001	<0.0001	<0.0001	<0.0006	<0.0008	<0.0006	<0.0006	<0.0006	<0.0006
<b>Semivolatile Organics</b>												
Aniline	16	36	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0044	<0.001	<0.001	<0.001	<0.001
Bis(2-ethylhexyl)phthalate	0.60	0.60	0.00164	0.00164	<0.001	<0.001	<0.002	0.0011J	<0.002	<0.002	<0.002	<0.002
Caprolactam	1,200	3,700	<0.004	<0.004	<0.004	0.013	---	<0.0042	---	---	---	---
Diethyl phthalate	2,000	5,800	<0.0002	<0.0002	<0.0002	<0.0002	<0.004	<0.0011	<0.004	<0.004	<0.004	<0.004
2-Methylphenol	120	370	nd	nd	nd	<0.0005	<0.001	0.0044J	<0.001	<0.001	<0.001	<0.001
Phenol	730	2,200	0.0294	<0.0004	<0.0004	<0.0004	<0.002	0.003J	<0.002	<0.002	<0.002	<0.002
Total Organic Halogens	na	na	0.041	<0.019	0.056	0.043	<0.0005	0.112	---	---	---	---
Total Dissolved Solids	na	na	5,020	7,450	7,580	6,420	7,700	9,090	7,270	5,590	3,530	8,220
Total Organic Carbon	na	na	2.07	1.59	0.41	1.80	0.59J	0.65J	---	---	---	---
<b>Metals</b>												
Arsenic	1.0	1.0	<0.0025	0.00579	0.0039	0.0051	0.0043J	<0.0031	0.00397J	<0.002	<0.002	<0.002
Barium	200	200	0.0215	0.0219	0.0250	0.0420	0.0183	0.024J	0.0264	0.0213	0.0168	0.0137
Cadmium	0.50	0.50	<0.00037	<0.00028	<0.00034	<0.00034	<0.0003	<0.0005	<0.0003	<0.0003	<0.0003	<0.0003
Calcium	na	na	367	623	556	604	625	577	610	376	376	627
Chromium	10	10	0.0024	<0.00094	0.0050	0.0031	0.0021J	0.0035J	0.00465J	0.0468	0.0411	<0.002
Iron	na	na	<0.0125	0.0594	0.084	1.1	<0.05	0.16	0.865	0.0616J	0.145	0.0531J
Lead	1.5	1.5	0.0054	<0.0017	<0.0029	0.03	0.00143	0.0085	0.0477	0.00362	0.00539	0.0029
Magnesium	na	na	98.1	170	162	154	177	159	154	90.5	96.6	186

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)

Parameter (mg/l)	GW <sub>Class 3</sub>		Monitoring Well 1A <sup>(1)</sup>									
	Res PCL <sup>(2)</sup>	GW <sub>Class 3</sub> C/I PCL <sup>(2)</sup>	Feb 03	Jul 03	Apr 04	Dec 04	Step 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
Manganese	110	1,000	0.00037	0.015	0.0037	0.0079	0.0199	0.013J	0.00794J	<0.00008	0.0116	0.0214
Mercury	0.20	0.20	<0.00006	0.000063	<0.00006	<0.00002	<0.00008	0.000083J	<0.00008	<0.00008	<0.00008	<0.00008
Potassium	na	na	5.98	10.8	16.4	17.3	11.1	15.3	8.15	5.22	5.73	11.7
Selenium	5.0	5.0	0.142	0.172	0.180	0.240	0.150	0.130	0.090	0.0392	0.0355	0.121
Sodium	na	na	1,060	1,550	1,480	1,320	1,550	1,560	1,470	1,040	1,060	1,590
Zinc	730	2,200	<0.0079	<0.0010	<0.0052	0.072	<0.002	0.024	0.238	0.0102	0.0136	0.00292J
Inorganics												
Alkalinity, total	na	na	157	184	189	148	189	179	138	145	167	200
Chloride	na	na	1,330	1,790	1,990	1,790	2,420	2,100	2,570	1,680	939	2,480
Nitrate-N	1,000	1,000	1.8	0.338	1.0	1.7	0.51	0.97	0.544	0.633	--	0.659
Nitrite-N	100	100	nd	nd	nd	nd	<5.0	<0.43	--	<1.0	--	--
Sulfate	na	na	1,780	2,220	2,460	2,290	2,660	2,190	2,500	1,770	1,240	2,780

<sup>(1)</sup> Monitoring well MW-1A was installed in August 1993 as a replacement well for MW-1, which was destroyed sometime after the April 1991 sampling event.

<sup>(2)</sup> GW<sub>Class 3</sub> PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use.

J = Estimated concentration detected above the SDL and below the RL.  
 --- = Not Analyzed  
 nd = Not Detected  
 na = Not Applicable

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW <sub>Chas-3</sub>		Monitoring Well RW-2A											
	Res PCL (l)	CJ PCL (l)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Feb 07-Dup	Aug 07	Mar 08	Aug 08	
<b>Volatile Organics</b>														
1,1-Dichloroethane	0.70	0.70	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
1,2-Dichloroethane	0.50	0.50	<0.00006	<0.00006	<0.00006	<0.00006	<0.0003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
2-Butanone (MEK)	1,500	4,400	<0.002	<0.002	<0.002	0.0026	0.0024J	0.0272	<0.005	<0.005	<0.005	<0.005	<0.005	
Acetone	2,200	6,600	<0.001	<0.001	<0.001	0.015	0.043J	0.226	0.055	0.055	<0.005	<0.005	<0.005	
Acrylonitrile	0.17	0.38	<0.0005	<0.0005	<0.0005	0.0067	<0.0015	<0.0015	—	—	—	—	—	
Benzene	0.50	0.50	<0.0005	<0.0005	<0.0005	<0.0007	<0.0003	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Carbon disulfide	240	730	<0.0009	0.00275	<0.0009	<0.0006	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Chloromethane	7.0	16	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Chloroform	24	73	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Ethylbenzene	70	70	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Methylene chloride	0.50	0.50	0.000567J	0.000762	<0.0005	<0.0005	<0.0005	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Styrene	10	10	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Tetrahydrofuran	12	27	<0.002	0.00791	<0.002	<0.002	<0.0006	<0.0006	—	—	—	—	—	
Toluene	100	100	0.00613	<0.0001	<0.0001	0.0015	0.0015J	0.0057J	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	
m&p-Xylene	1,000	1,000	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	
<b>Semivolatile Organics</b>														
Aniline	16	36	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0044	<0.001	<0.001	<0.001	<0.001	<0.001	
Bis(2-ethylhexyl)phthalate	0.60	0.60	0.00183	0.00174	0.0016	0.36	<0.002	<0.0005	<0.002	<0.002	0.0034J	<0.002	<0.002	
Caprolactam	1,200	3,700	0.0058J	<0.004	<0.004	<0.004	—	0.035J	—	—	—	—	—	
Diethyl phthalate	2,000	5,800	<0.0002	<0.0002	<0.0002	<0.0002	<0.004	<0.0008	<0.004	<0.004	<0.004	<0.004	<0.004	
2-Methylphenol	120	370	nd	nd	nd	<0.0005	<0.001	<0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	
Phenol	730	2,200	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	<0.0010	<0.002	<0.002	<0.002	<0.002	<0.002	
Total Organic Halogens	na	na	<0.048	<0.019	0.034	0.044	<0.0005	0.074	—	—	—	—	—	
Total Dissolved Solids	na	na	9,280	9,150	9,270	10,100	9,450	8,980	9,290	9,280	9,320	9,760	9,310	
Total Organic Carbon	na	na	0.072	1.12	0.57	1.2	0.7J	<0.17	—	—	—	—	—	
<b>Metals</b>														
Arsenic	1.0	1.0	<0.00416	0.00413	0.0046	0.0035	<0.002	<0.0031	0.00353J	0.00271J	<0.002	0.0028J	<0.002	
Barium	200	200	0.0228	0.0297	0.033	0.032	0.0242	0.02J	0.0244	0.0242	0.0237	0.0205	0.0215	
Cadmium	0.50	0.50	<0.00037	<0.00028	<0.00034	<0.00034	<0.0003	<0.0005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Calcium	na	na	874	913	787	851	873	777	944	976	864	804	868	
Chromium	10	10	<0.00078	<0.00094	0.0027	<0.0015	<0.002	<0.0017	<0.002	<0.002	<0.002	<0.002	<0.002	
Iron	na	na	0.082J	0.474	1.6	0.32	0.583	0.5	0.177	0.226	0.55	0.327	0.211	
Lead	1.5	1.5	0.014	<0.00185	<0.0029	0.047	0.0079J	0.0096J	0.0146	0.016	0.0127	0.0125	0.00584	
Magnesium	na	na	229	261	235	219	219	238	226	237	214	186	212	
Manganese	110	110	0.108	0.115	0.087	0.07	0.0584	0.1	0.0329	0.0383	0.0604	0.0442	0.0532	
Mercury	0.20	0.20	<0.00006	0.000099	0.000062	0.000029	<0.00008	0.000064J	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 -AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW Class 3		Monitoring Well MW-2A											
	Res PCL (1)	GW Class 3 C/I PCL (2)	Sampling Date	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Feb 07-Dup	Aug 07	Mar 08	Aug 08
Potassium	na	na	10.5	12.3	21.1	19.2	9.58	18.5	9.7	10.6	9.71	7.74	7.74	9.9
Selenium	5.0	5.0	0.0422	0.0233	0.029	0.039	0.00884	0.015	0.017	0.015	0.0037J	0.011	0.011	0.00871
Sodium	na	na	1799	1,340	1,760	2,150	1,790	1,860	1,930	2,070	1,660	1,700	1,700	1,740
Zinc	730	2,200	<0.0158	0.00278	0.033	0.018	<0.002	0.00274J	0.00274J	0.00463J	0.0424	0.0147	0.0147	0.00376J
Inorganics														
Alkalinity, total	na	na	252	226	232	216	227	262	225	224	236	229	229	238
Chloride	na	na	3,450	3,350	3,120	3,780	3,640	3,130	4,080	3,750	3,550	3,510	3,510	3,050
Nitrate-N	1,000	1,000	2.66	0.436	0.45	0.99	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.153J
Nitrite-N	100	100	nd	nd	nd	nd	<10	<0.43	—	—	<1	—	—	—
Sulfate	na	na	2,290	2,180	2,150	2,320	2,240	2,570	2,570	2,170	2,160	2,290	2,290	2,120

(1) Monitoring well MW-2A was installed in December 2002 as a replacement well for MW-1, which was destroyed sometime after the July 2002 sampling event.

(2) GW Class 3 PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use.

J = Estimated concentration detected above the SDL and below the RL.

— = Not Analyzed

nd = Not Detected

na = Not Applicable

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW Class 3		Monitoring Wells MW-3A(1)										
	Res PCL (g)	CJ PCL (g)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Sep 05-Dup	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
<b>Volatiles Organics</b>													
1,1-Dichloroethene	0.70		<0.0001	<0.0001	0.00056J	<0.0001	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichloroethane	0.50		<0.00006	<0.00006	<0.00006	<0.00006	<0.0003	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
2-Butanone (MEK)	1,500	4,400	<0.002	<0.001	0.0038J	<0.002	<0.005	<0.005	<0.0008	0.567	<0.005	<0.005	<0.005
Acetone	2,200	6,600	<0.001	<0.001	<0.001	0.0022	<0.005	<0.0008	<0.0015	0.0155	<0.005	<0.005	<0.005
Acrylonitrile	0.17	0.38	<0.0005	<0.0005	<0.0005	0.00005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzene	0.50	0.50	<0.00005	0.000159	<0.00005	0.000083	<0.0002	<0.0003	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Carbon disulfide	240	730	<0.00009	0.000248	<0.00009	<0.00006	<0.0005	<0.0004	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005
Chloroethane	7.0	16	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0004	<0.0004	0.00041J	<0.0003	<0.0003	<0.0003
Chloroform	24	73	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	70	70	<0.00005	<0.00005	<0.00005	<0.00005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Methylene chloride	0.50	0.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0004	<0.0004	<0.0025	<0.0025	<0.0025	<0.0025
Styrene	10	10	<0.0002	<0.0002	<0.0002	<0.0002	0.00033J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tetrahydrofuran	12	27	<0.002	<0.002	<0.002	0.0053	<0.0002	<0.0006	<0.0006	<0.0002	<0.0002	<0.0002	<0.0002
Toluene	100	100	0.000723	<0.0001	<0.0001	0.00041	0.00094J	<0.0007	<0.0004	<0.0007	<0.0007	<0.0007	<0.0007
m,p-Xylene	1,000	1,000	0.00196	<0.0001	<0.0001	<0.0001	<0.0005	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
<b>Semivolatile Organics</b>													
Aniline	16	36	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0044	<0.001	<0.001	<0.001	<0.001
Bis(2-ethylhexyl)phthalate	0.60	0.60	0.00392	0.00189	0.0016	<0.001	<0.002	0.0024J	<0.0005	0.002J	<0.002	<0.002	<0.002
Caprolactam	1,200	3,700	<0.0002	<0.0002	0.00051J	<0.004	<0.004	<0.0042	<0.0008	<0.004	<0.004	<0.004	<0.004
Diethyl phthalate	2,000	5,800	<0.0002	<0.0002	0.00088J	<0.0002	<0.0002	<0.0002	<0.0011	<0.001	<0.001	<0.001	<0.001
2-Methylphenol	120	370	nd	nd	nd	<0.0005	<0.001	<0.001	<0.0011	<0.001	<0.001	<0.001	<0.001
Phenol	730	2,200	0.0211	<0.0004	0.025	<0.0004	<0.002	<0.0010	<0.0010	<0.002	<0.002	<0.002	<0.002
Total Organic Halogens	na	na	0.095	<0.019	0.081	0.069	<0.0005	<0.0005	0.078	<0.0005	<0.0005	<0.0005	<0.0005
Total Dissolved Solids	na	na	3,490	9,000	9,350	6,320	9,370	9,320	9,140	8,230	8,710	11,000	9,520
Total Organic Carbon	na	na	0.928	1.08	0.5	0.6	<0.3	<0.3	<0.17	<0.3	<0.17	<0.3	<0.17
<b>Metals</b>													
Arsenic	1.0	1.0	<0.00251	0.00533	0.004	0.0036	0.0023J	<0.002	<0.0031	<0.002	<0.002	<0.002	<0.002
Barium	200	200	0.00781	0.0182	0.017	0.02	0.0153	0.0154	0.017J	0.0968	0.0965	0.0214	0.0254
Cadmium	0.50	0.50	<0.00037	<0.00028	<0.00034	<0.00034	<0.0003	<0.0003	<0.0005	<0.0003	<0.0003	<0.0003	<0.0003
Calcium	na	na	825	910	849	767	890	907	790	972	891	863	866
Chromium	10	10	0.00082J	<0.00094	<0.00015	<0.00015	<0.0002	<0.0002	<0.00017	0.00383J	<0.0002	<0.0002	<0.0002
Iron	na	na	0.0707J	<0.0165	<0.022	0.30	0.648	0.62J	0.082J	0.255	0.218	0.252	0.294
Lead	1.5	1.5	0.0728	0.0035	0.014	0.022	0.00122	0.00981	0.0051	0.00425	0.0134	0.00622	0.00446
Magnesium	na	na	212	258	272	220	265	267	261	206	175	266	222
Manganese	110	1,000	0.057	0.128	0.036	0.053	0.123	0.0597	0.065	0.0275	0.0477	0.0589	0.0523
Mercury	0.20	0.20	<0.00006	<0.00006	<0.00006	<0.000018	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW <sub>Class 3</sub>		Monitoring Wells MW-3A <sup>(1)</sup>											
	Res PCL <sup>(2)</sup>	GW <sub>Class 3</sub> C/P PCL <sup>(2)</sup>	Jul 03	Apr 04	Dec 04	Sep 05	Sep 05-Dup	Mar 05	Feb 07	Aug 07	Mar 08	Aug 08		
Potassium	na	na	11.0	20.9	16.9	4.47	10.3	18.5	8.55	7.91	11.2	9.09		
Selenium	5.0	5.0	0.0137	0.026	0.0049	0.0076	0.0124	0.0055	0.0166	0.0057J	0.0047BJ	0.00204J		
Sodium	na	na	1,800	1,760	1,760	1,670	1,730	1,720	1,680	1,420	1,680	1,620		
Zinc	730	2,200	<0.001	<0.0052	0.0083	<0.002	0.0346	0.0036J	0.0205	0.00707	0.00274J	<0.002		
<b>Inorganics</b>														
Alkalinity, total	na	na	209	212	213	209	208	259	194	185	205	187		
Chloride	na	na	3,510	3,460	3,270	3,650	3,620	3,020	3,400	3,360	3,980	3,530		
Nitrate-N	1,000	1,000	0.139	<0.320	<1	<0.1	<0.1	<0.027	<0.1	<0.1	—	<0.1		
Nitrite-N	100	100	nd	nd	nd	<10	<10	<0.43	—	<1	—	<1		
Sulfate	na	na	2,120	2,090	2,380	2,150	2,200	2,000	2,290	1,960	2,200	2,030		

<sup>(1)</sup> Monitoring well MW-3A was installed in August 1993 as a replacement well for MW-3, which was destroyed sometime after the August 1991 sampling event.

<sup>(2)</sup> GW<sub>Class 3</sub> PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use.

J = Esitrated concentration detected above the SDL and below the RL.

— = Not Analyzed

nd = Not Detected

na = Not Applicable

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW Case 3		Monitoring Well MW-4											
	Res PCL (2)	GW Case 3 C/I PCL (3)	Sampling Date	Mar 05	Mar 06	Mar 06-Dup	Feb 07	Aug 07	Aug 07-Dup	Mar 08	Aug 08			
<b>Volatiles Organics</b>														
1,1-Dichloroethene	0.70	0.70	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	
1,2-Dichloroethane	0.50	0.50	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	
2-Butanone (MEK)	1,500	4,400	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	
Acetone	2,200	6,600	<0.001	<0.001	0.0052	<0.005	0.00773	0.014	0.0026	0.0675	0.0675	0.0675	0.0675	
Acrylonitrile	0.17	0.38	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0015	<0.0015	<0.0002	<0.0002	<0.0002	<0.0002	
Benzene	0.50	0.50	0.0000984	0.0000984	<0.00005	<0.00005	<0.00005	<0.0003	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002	
Carbon disulfide	240	730	<0.00009	<0.00009	<0.00006	<0.00006	<0.00006	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	
Chloromethane	7.0	16	<0.002	<0.002	<0.002	<0.002	<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	
Chloroform	24	73	<0.002	<0.002	<0.002	<0.002	<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	
Ethylbenzene	70	70	0.00029J	0.00029J	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	
Methylene chloride	0.50	0.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Styrene	10	10	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0004	<0.0004	<0.0025	<0.0025	<0.0025	<0.0025	
Tetrahydrofuran	12	27	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0003	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002	
Toluene	100	100	0.587	<0.0001	<0.0001	<0.0001	<0.0006	0.0044	0.001	<0.0007	<0.0007	<0.0007	<0.0007	
m&p-Xylene	1,000	1,000	0.00083J	<0.0001	<0.0001	<0.0001	<0.0006	<0.0008	<0.0008	<0.0006	<0.0006	<0.0006	<0.0006	
<b>Semivolatile Organics</b>														
Aniline	16	36	<0.0005	<0.0005	<0.0005	<0.001	0.022	0.022	0.00959J	<0.001	<0.001	<0.001	<0.001	
Bis(2-ethylhexyl)phthalate	0.60	0.60	<0.001	<0.001	<0.001	<0.002	<0.0005	<0.0005	<0.0005	<0.002	<0.002	<0.002	<0.002	
Caprolactam	1,200	3,700	0.00714	0.013	0.056	<0.0002	<0.0042	0.012	0.012	<0.004	<0.004	<0.004	<0.004	
Diethyl phthalate	2,000	5,800	<0.0002	<0.0002	<0.0002	<0.0002	<0.0008	<0.0008	<0.0008	<0.004	<0.004	<0.004	<0.004	
2-Methylphenol	120	370	nd	nd	nd	<0.0005	<0.0011	<0.0011	<0.0011	<0.001	<0.001	<0.001	<0.001	
Phenol	730	2,200	0.0223	<0.0004	<0.0004	<0.0004	<0.0010	<0.0010	<0.0010	<0.002	<0.002	<0.002	<0.002	
<b>Total Organic Halogens</b>	na	na	0.079	0.079	0.059	<0.0005	0.039	0.083	0.083	<0.0007	<0.0007	<0.0007	<0.0007	
<b>Total Dissolved Solids</b>	na	na	9,539	9,520	9,560	9,279	9,530	10,100	10,100	9,740	9,740	9,740	9,740	
<b>Total Organic Carbon</b>	na	na	0.868	0.95	0.72	0.523	<0.17	<0.17	<0.17	<0.002	<0.002	<0.002	<0.002	
<b>Metals</b>														
Arsenic	1.0	1.0	<0.00251	0.00378	0.004	<0.002	0.0034J	<0.00017	<0.00017	<0.002	<0.002	<0.002	<0.002	
Barium	200	200	0.00488	0.0148	0.017	0.0152	0.016	0.018	0.018	0.0168	0.0168	0.0168	0.0168	
Cadmium	0.50	0.50	<0.00037	<0.00028	<0.00034	<0.00034	<0.0005	<0.0005	<0.0005	<0.0003	<0.0003	<0.0003	<0.0003	
Calcium	na	na	861	922	776	734	760	708	708	784	784	784	784	
Chromium	10	10	<0.00078	<0.00094	<0.0017	<0.0015	<0.0017	<0.0017	<0.0017	<0.002	<0.002	<0.002	<0.002	
Iron	na	na	0.119	0.196	0.67	0.2	0.634	0.13	0.13	1.62	1.62	1.62	1.62	
Lead	1.5	1.5	0.00898J	0.00416	0.0097	0.026	0.0127	0.026J	0.026J	0.0785	0.0785	0.0785	0.0785	
Magnesium	na	na	210	235	213	189	172	171	171	192	192	192	192	
Manganese	110	1,000	0.0869	0.105	0.084	0.11	0.123	0.11	0.026	0.052	0.052	0.052	0.052	
Mercury	0.20	0.20	<0.00006	0.000061	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00008	<0.00008	<0.00008	<0.00008	
Potassium	na	na	4.02J	7.39	12.5	10.6	4.63	9.1	9.1	4.78	4.78	4.78	4.78	
Selenium	5.0	5.0	0.00773J	<0.0016	<0.0025	0.0034	<0.002	<0.002	<0.002	0.0149	0.0149	0.0149	0.0149	
Sodium	na	na	1,980	2,080	1,930	2,280	2,008	2,100	2,100	2,300	2,300	2,300	2,300	

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW <sub>Class 3</sub> Res PCL (2)	GW <sub>Class 3</sub> CII PCL (2)	Monitoring Well MW-4											
			Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Aug 07-Dup	Mar 08	Aug 08	
Zinc	730	2,200	<0.0158	0.0447	0.12	0.028	<0.002	0.023	0.023	0.519	0.0053	0.00768	0.00592	<0.002
<b>Inorganics</b>														
Alkalinity, total	na	na	223	222	219	213	223	259	276	224	225	225	217	220
Chloride	na	na	3,680	3,310	3,250	3,580	3,240	3,230	3,010	3,540	3,220	3,250	3,380	3,290
Nitrate-N	1,000	1,000	1.66	0.0747	<0.320	0.31	<0.1	<0.027	<0.027	<0.1	<0.1	<0.1	---	<0.1
Nitrite-N	100	100	nd	nd	nd	nd	<10	<0.43	<0.43	---	<1	<1	---	<1
Sulfate	na	na	2240	2,160	2,320	2,660	2,590	2,070	2,270	2,950	2,690	2,610	2,730	2,660

(1) GW<sub>Class 3</sub> PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use.

--- = Not Analyzed

J = Estimated concentration detected above the SDL and below the RL.

nd = Not Detected

na = Not Applicable

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW Class 3		Monitoring Well MW-5									
	Res PCL (a)	C1 PCL (b)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
<b>Volatile Organics</b>												
1,1-Dichloroethene	0.70	0.70	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichloroethane	0.50	0.50	<0.00006	<0.00006	<0.00006	<0.00006	<0.00003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
2-Butanone (MEK)	1,500	4,400	<0.002	<0.002	<0.002	<0.002	<0.002	0.0011J	<0.0003	<0.0003	<0.0003	<0.0003
Acetone	2,200	6,600	<0.001	<0.001	<0.001	<0.001	0.002J	0.016	<0.005	<0.005	<0.005	<0.005
Acrylonitrile	0.17	0.38	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0015	0.032J	<0.005	<0.005	<0.005
Benzene	0.50	0.50	0.0000923J	0.000446	<0.00005	<0.00005	<0.00009	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Carbon disulfide	240	730	<0.00009	0.000371	<0.00009	0.00049	<0.0002	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005
Chloroform	7.0	16	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Chloromethane	24	73	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	70	70	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Methylene chloride	0.50	0.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Styrene	10	10	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Tetrahydrofuran	12	12	<0.0002	<0.0002	<0.0002	<0.0002	0.00032J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Toluene	100	100	<0.00025	<0.0002	<0.0002	0.025	<0.0002	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
m&p-Xylene	100	100	0.000825	<0.0001	<0.0001	0.00086	0.0019J	0.0064J	<0.0007	<0.0007	<0.0007	<0.0007
o-Xylene	1,000	1,000	0.00047J	<0.0001	<0.0001	<0.0001	<0.0006	<0.0008	<0.0007	<0.0007	<0.0007	<0.0007
<b>Semivolatile Organics</b>												
Aniline	16	36	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001
Bis(2-ethylhexyl)phthalate	0.60	0.60	0.00181J	0.00567	0.00163B	<0.0005	<0.0001	<0.0044	<0.001	<0.001	<0.001	<0.001
Caprolactam	1,200	3,700	0.043	0.0199	<0.004	0.087	0.011	0.002J	0.022J	0.0184	<0.001	<0.001
Diethyl phthalate	2,000	5,800	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0008	<0.0008	<0.0004	<0.0004	<0.0004
2-Methylphenol	120	370	nd	nd	nd	<0.0005	<0.001	<0.0011	<0.001	<0.001	<0.001	<0.001
Phenol	730	2,200	<0.0004	0.000483	<0.0004	<0.0004	<0.0002	<0.0010	<0.002	<0.002	<0.002	<0.002
Total Organic Halogens	na	na	<0.048	<0.019	0.03	0.635	<0.0005	0.078	<0.0005	<0.0005	<0.0005	<0.0005
Total Dissolved Solids	na	na	10,469	10,500	10,400	11,700	10,300	9,590	10,500	9,660	10,200	11,100
Total Organic Carbon	na	na	1.64	1.05	0.49	2.0	1.43	0.56J	<0.0002	<0.0002	<0.0002	<0.0002
<b>Metals</b>												
Arsenic	1.0	1.0	<0.00251	0.00488	<0.0023	0.0028	<0.002	0.0044J	0.00344J	<0.002	<0.002	<0.002
Barium	200	200	0.00293	0.0128	0.011	0.014	0.0109	0.011J	0.0148	0.0162	0.0158	0.0121
Cadmium	0.50	0.50	<0.00037	<0.00028	<0.00034	<0.00034	<0.0003	0.0012J	0.000754	<0.0003	<0.0003	0.00386J
Calcium	na	na	812	834	744	748	749	715	794	739	831	760
Chromium	10	10	<0.00078	<0.00094	<0.0015	<0.0015	<0.002	<0.0017	<0.002	<0.002	<0.002	<0.002
Iron	na	na	<0.0125	0.154	<0.022	0.21	0.063J	0.15	0.45	0.57	0.6855J	0.173
Lead	1.5	1.5	0.0125	0.00201	0.0029	0.035	0.0117	0.012	0.0126	0.00693	0.00254	0.00443
Magnesium	na	na	262	297	275	277	248	270	277	232	250	267
Manganese	110	1,000	0.0153	0.0236	0.0091	0.022	0.0269	0.013J	0.0214	0.0201	0.00812J	0.0157
Mercury	0.20	0.20	<0.00006	<0.00006	<0.00006	<0.00006	<0.00008	0.00081J	<0.00008	<0.00008	<0.00008	<0.00008
Potassium	na	na	11.5	15.2	29.0	25.3	13.3	14.3	11.1	11.1	11.1	14.6
Selenium	na	na	0.0468	0.0152	0.04	0.037	0.0403	0.03	0.0317	0.0457J	0.0403	0.0228
Sodium	na	na	2,220	2,260	2,080	2,560	1,970	2,230	2,230	2,020	2,230	2,160

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW <sub>Class 3</sub> Res PCL (2)	GW <sub>Class 3</sub> C/I PCL (2)	Monitoring Well MW-5									
			Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
Zinc	730	2,200	<0.0158	0.0572	<0.0052	0.011	0.0044J	0.05	0.021	0.0288	0.00547	0.0063
Inorganics												
Alkalinity, total	na	na	275	264	269	267	268	308	275	239	219	264
Chloride	na	na	3,660	3,820	3,510	4,470	3,770	3,380	4,080	4,150	3,590	3,880
Nitrate-N	1,000	1,000	2.18	0.238	2.2	0.29	0.25J	0.56	0.182	<0.1	—	0.435
Nitrite-N	100	100	nd	nd	nd	nd	<10	<0.43	—	<1	—	<1
Sulfate	na	na	2,660	2,700	2,840	3,060	2,700	2,520	2,930	3,010	2,680	2,690

(2) GW<sub>Class 3</sub> PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use.  
 — = Not Analyzed  
 J = Estimated concentration detected above the SDL and below the RL.  
 nd = Not Detected  
 na = Not Applicable

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW <sub>Case 3</sub>		Monitoring Well MW-6A (1)											
	Res PCL (2)	C/I PCL (2)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08		
<b>Volatiles Organics</b>														
1,1-Dichloroethane	0.70	0.70	NS	NS	<0.0001	<0.0001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002		
1,2-Dichloroethane	0.50	0.50	NS	NS	<0.00006	<0.00006	<0.0003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003		
2-Butanone (MEK)	1,500	4,400	NS	NS	<0.002	<0.002	<0.005	<0.0008	0.105	<0.005	<0.005	<0.005		
Acetone	2,200	6,600	NS	NS	0.0072	0.0072	<0.005	<0.0008	0.00546J	0.0102J	<0.005	<0.005		
Acrylonitrile	0.17	0.38	NS	NS	<0.0005	<0.0005	—	<0.0016	—	—	—	—		
Benzene	0.50	0.50	NS	NS	<0.00005	<0.00007	<0.0002	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002		
Carbon disulfide	24	73	NS	NS	<0.00009	0.00029	<0.0003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003		
Chloroethane	7.0	16	NS	NS	<0.0002	<0.0002	<0.0003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003		
Chloroform	240	730	NS	NS	<0.0002	<0.0002	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005		
Ethylbenzene	70	70	NS	NS	<0.00005	<0.00005	<0.0003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003		
Methylene chloride	0.50	0.50	NS	NS	<0.00005	<0.00005	<0.00025	<0.0004	<0.00025	<0.00025	<0.00025	<0.00025		
Styrene	10	10	NS	NS	<0.0002	<0.0002	<0.0002	<0.0003	<0.0002	0.0007J	<0.0002	<0.0002		
Tetrahydrofuran	12	27	NS	NS	<0.002	<0.002	—	<0.0006	—	—	—	—		
Toluene	100	100	NS	NS	<0.0001	0.0013	<0.0007	<0.0004	<0.0007	0.0035J	0.0020J	<0.0007		
m&p-Xylene	1,000	1,000	NS	NS	<0.0001	<0.0001	<0.0006	<0.0008	<0.0006	<0.0006	<0.0006	<0.0006		
<b>Semi-volatile Organics</b>														
Aniline	16	36	NS	NS	<0.0005	<0.0005	<0.001	<0.0044	<0.001	<0.001	<0.001	<0.001		
Bis(2-ethylhexyl)phthalate	0.60	0.60	NS	NS	<0.001	<0.001	<0.002	0.0056J	<0.002	<0.002	<0.002	<0.002		
Caprolactam	1,200	3,700	NS	NS	0.036	0.036	—	<0.0042	—	—	—	—		
Diethyl phthalate	2,000	5,800	NS	NS	<0.0002	<0.0002	<0.004	<0.0008	<0.004	<0.004	<0.004	<0.004		
2-Methylphenol	120	370	NS	NS	nd	<0.0005	<0.001	<0.0011	<0.001	<0.001	<0.001	<0.001		
Phenol	730	2,200	NS	NS	<0.0004	<0.0004	<0.002	<0.0010	<0.002	<0.002	<0.002	<0.002		
Total Organic Halogens	na	na	NS	NS	0.062	0.043	<0.0005	0.064	—	—	—	—		
Total Dissolved Solids	na	na	NS	NS	5,650	6,540	2,260	2,560	2,040	2,040	2,800	2,260		
Total Organic Carbon	na	na	NS	NS	0.95	0.92	1.53	0.63	—	—	—	—		
<b>Metals</b>														
Arsenic	1.0	1.0	NS	NS	0.0054EJ	0.0073	0.0032J	<0.0031	0.00498J	0.00259J	0.00217J	<0.002		
Barium	200	200	NS	NS	0.043	0.029	0.0366	0.031J	0.0582	0.0284	0.0332	0.0346		
Cadmium	0.50	0.50	NS	NS	<0.00034	<0.00034	<0.0003	<0.0005	0.000427J	<0.0003	<0.0003	<0.0003		
Calcium	na	na	NS	NS	583	4/1	167	227	172	242	205	171		
Chromium	10	10	NS	NS	0.0022	<0.0015	<0.002	<0.0017	<0.002	<0.002	<0.002	<0.002		
Iron	na	na	NS	NS	0.11	0.18	0.14	0.19	0.194	0.0894J	0.0676J	<0.05		
Lead	1.5	1.5	NS	NS	<0.0029	0.028	0.00264	<0.0009	0.0097	0.000317J	0.000767J	0.00108		
Magnesium	na	na	NS	NS	171	120	44.5	61.2	51.8	60.1	56.3	45.2		
Manganese	110	1,000	NS	NS	0.02	0.011	0.0118	0.022	0.0764	0.112	0.055	0.0458		
Mercury	0.20	0.20	NS	NS	<0.00006	<0.000018	<0.00008	0.000065J	<0.00008	<0.00008	<0.00008	<0.00008		
Potassium	na	na	NS	NS	21.2	10	2.71	5.3	3.32	4.78	3.29	3.04		
Selenium	5.0	5.0	NS	NS	0.013	0.0045	0.00841	0.01	0.00737	0.00309J	0.00393J	0.00335J		
Sodium	na	na	NS	NS	1,180	864	429	561	481	616	544	443		

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	Monitoring Well MW-6A (1)											
	GW <sub>Class 3</sub> Res. PCL (2)	GW <sub>Class 3</sub> C/I PCL (2)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
Zinc	730	2,200	NS	NS	0.026	0.013	0.0134	0.0075J	0.0287	<0.002	0.0031J	<0.002
Inorganics												
Alkalinity, total	na	na	NS	NS	192	245	295	323	277	334	307	325
Chloride	na	na	NS	NS	934	1,018	473	492	387	292	516	408
Nitrate-N	1,000	1,000	NS	NS	3.90	2.0	1.55	2.8	2.22	0.336J	—	0.315J
Nitrite-N	100	100	NS	NS	nd	nd	<0.1	<0.43	—	<0.1	—	<0.1
Sulfate	na	na	NS	NS	2,460	2,440	831	786	800	864	1,190	840

(1) Monitoring well MW-6A was installed in October 2003 as a replacement well for MW-6, which was consistently dry.  
 (2) GW<sub>Class 3</sub> PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use  
 J = Estimated concentration detected above the SDL and below the RL  
 — = Not Analyzed  
 nd = Not Detected  
 na = Not Applicable

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW Case 3		Monitoring Well MW-7									
	Res. PCL (2)	GW Case 3 C/L PCL (2)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
<b>Volatile Organics</b>												
1,1-Dichloroethane	0.70	0.70	<0.0001	<0.0001	0.00059J	<0.0001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichloroethane	0.50	0.50	<0.00006	<0.00006	<0.00006	<0.00006	<0.0004	<0.0004	<0.0003	<0.0003	<0.0002	<0.0003
2-Butanone (MEK)	1,500	4,400	<0.002	<0.002	0.35	0.31	<0.0008	<0.0008	0.0143J	<0.005	<0.005	<0.005
Acetone	2,200	6,600	<0.001	<0.001	<0.001	0.049	<0.0015	<0.0015	<0.005	<0.005	<0.005	<0.005
Acrylonitrile	0.17	0.38	<0.0005	<0.0005	0.0012J	0.015	<0.0015	<0.0015	<0.002	<0.002	<0.002	<0.002
Benzene	0.50	0.50	<0.00005	<0.00005	<0.00005	0.00028	<0.0005	<0.0005	<0.005	<0.005	<0.005	<0.005
Carbon disulfide	240	730	<0.00009	0.000225	<0.00009	0.00086	<0.0002	<0.0004	<0.0003	<0.0003	<0.0002	<0.0003
Chloromethane	7.0	16	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chloroform	24	73	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	70	70	<0.00005	<0.00005	<0.00005	<0.00005	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Methylene chloride	0.50	0.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Styrene	10	10	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Tetrahydrofuran	12	27	<0.0002	<0.0002	<0.0002	0.00036J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Toluene	100	100	<0.0002	0.05	0.22	0.00057J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
m&p-Xylene	1,000	1,000	<0.0001	<0.0001	<0.0001	0.00036	0.00071J	<0.0004	<0.0007	<0.0007	<0.0007	<0.0007
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
<b>Semivolatile Organics</b>												
Aniline	16	36	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0044	<0.001	<0.001	<0.001	<0.001
Bis(2-ethylhexyl)phthalate	0.60	0.60	<0.0015	0.00422	0.0017	<0.0013	<0.002	0.00123J	<0.002	<0.002	<0.002	<0.002
Caprolactam	1,200	3,700	<0.004	<0.004	<0.004	0.0059	<0.004	0.0058J	<0.004	<0.004	<0.004	<0.004
Diethyl phthalate	2,000	5,800	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
2-Methylphenol	120	370	nd	nd	nd	<0.0005	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Phenol	730	2,200	<0.0004	<0.0004	<0.0004	<0.0004	<0.002	<0.0010	<0.002	<0.002	<0.002	<0.002
Total Organic Halogens	na	na	<0.019	<0.019	0.031	0.097	<0.0005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
Total Dissolved Solids	na	na	9,480	9,480	9,999	9,950	9,400	10,100	8,630	6,470	7,820	135
Total Organic Carbon	na	na	1.23	1.23	0.75	0.62	<0.3	0.18J	<0.3	<0.3	<0.3	<0.3
<b>Metals</b>												
Arsenic	1.0	1.0	<0.00251	<0.0023	0.00345J	0.0084	<0.002	<0.0037	0.00215J	<0.002	<0.002	<0.002
Barium	200	200	0.00327	0.0156	0.012	0.019	0.0121	0.011J	0.0163	0.0218	0.0175	0.022
Cadmium	0.50	0.50	<0.00037	<0.00028	<0.00034	<0.00034	0.00056J	<0.0005	<0.0003	<0.0003	<0.0003	<0.0003
Calcium	na	na	761	722	786	675	795	688	705	446	630	268
Chromium	10	10	<0.00078	<0.00084	<0.0015	0.0019	<0.002	<0.0017	<0.002	<0.002	<0.002	<0.002
Iron	na	na	0.0674J	0.0292	0.22	0.27	0.091J	<0.035	0.103	<0.05	<0.05	<0.05
Lead	1.5	1.5	0.0131	<0.00165	<0.0029	0.03	0.0336	<0.0034	0.00382	0.00394J	0.00136	0.00422J
Magnesium	na	na	230	264	273	199	274	248	202	124	175	70.6
Manganese	110	1,000	0.0337	0.0442	0.059	0.015	0.0128	0.040	0.00495J	<0.003	<0.003	<0.003
Mercury	0.20	0.20	<0.00006	0.000065	<0.00006	<0.000018	<0.00008	<0.00003	<0.00008	<0.00008	<0.00008	<0.00008
Potassium	na	na	10.0	11.9	24.8	16.5	14.4	22.9	9.92	9.62	8.29	9.11
Selenium	5.0	5.0	0.0472	0.0353	0.029	0.011	0.039	0.036	0.043	0.0282	0.0321	0.0119
Sodium	na	na	1,960	1,860	2,030	2,170	2,180	2,060	1,850	1,210	1,670	757

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Continued)

Parameter (mg/l)	GW <sub>Class 3</sub>		GW <sub>Class 3</sub>		Monitoring Well MW-7									
	Res PCL (1)	2,200	GW <sub>Class 3</sub> C/I PCL (2)	na	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
Zinc	730	na	<0.0158	0.006801	<0.0052	0.0091	0.0346	0.021	0.00433J	0.0102	0.00355J	0.00416J		
Inorganics														
Alkalinity, total	na	na	281	272	268	252	274	326	254	203	230	78.9		
Chloride	na	na	3,280	2,410	3,380	3,220	3,190	2,780	2,820	2,060	2,600	22		
Nitrate-N	1,000	1,000	3.35	1.69	0.91	0.63	1.45	1.8	0.923	1.03	—	1.97		
Nitrite-N	100	100	nd	nd	nd	nd	<10	<0.43	—	<1	—	<1		
Sulfate	na	na	2,640	2,110	2,640	3,150	2,790	2,400	2,630	1,880	2,550	6.54		

(1) GW<sub>Class 3</sub> PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use.  
 — = Not Analyzed  
 J = Estimated concentration detected above the SDL and below the RL.  
 nd = Not Detected  
 na = Not Applicable

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Concluded)

Parameter (mg/l)	Monitoring Well MW-8											
	GW CWS-3		Sampling Date									
	Res PCL (%)	Cl/PCL (%)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08
<b>Volatile Organics</b>												
1,1-Dichloroethane	0.70	0.70	<0.0001	<0.0001	0.00066J	<0.0001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
1,2-Dichloroethane	0.50	0.50	0.00019J	<0.00006	<0.00006	<0.00006	<0.0003	0.0012	0.00258	0.00054J	0.00357	0.00103
2-Butanone (MEK)	1,500	4,400	<0.002	<0.002	0.49	0.67	<0.005	<0.0008	<0.005	<0.005	<0.005	<0.005
Acetone	2,200	6,600	<0.001	<0.001	<0.001	0.032	<0.005	0.0011J	0.00953J	0.00953J	0.00953J	<0.005
Acrylonitrile	0.17	0.38	<0.0005	<0.0005	0.0015J	<0.0005	<0.0002	<0.0015	—	—	—	—
Benzene	0.50	0.50	0.000217J	0.000193	0.00098J	<0.0007	<0.0002	<0.0003	0.00033J	<0.0002	0.00041J	<0.0002
Carbon disulfide	240	730	<0.00009	0.000515	<0.00009	<0.0006	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005
Chloroethane	7.0	16	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Chloroform	24	73	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Ethylbenzene	70	70	0.00019J	0.0000903	0.0002J	<0.0005	<0.0003	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Methylene chloride	0.50	0.50	<0.00005	<0.00005	<0.00005	<0.00005	<0.00025	<0.0004	<0.0003	<0.0003	<0.0003	<0.0003
Methyl tert-butyl ether	24	73	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0025	<0.0025	<0.0025	<0.0025
Styrene	10	10	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0003	0.000610J	<0.0003	<0.0003	<0.0003
Tetrahydrofuran	12	27	<0.002	<0.002	0.007	0.15	0.0025J	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Toluene	100	100	0.00240J	<0.0001	0.0016J	0.026	<0.0007	<0.0004	<0.0007	0.00167J	0.00104J	<0.0007
m,p-Xylene	1,000	1,000	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	<0.0008	<0.0006	<0.0006	<0.0006	<0.0006
<b>Semi-volatile Organics</b>												
Aniline	16	36	<0.0005	<0.0005	<0.0005	0.00058	<0.001	<0.0044	<0.001	<0.001	<0.001	<0.001
Bis(2-ethylhexyl)phthalate	0.60	0.60	0.00125J	0.000397	0.0075JE	<0.0013	0.0452	0.0021J	0.0094	0.0058	0.154	<0.002
Caprolactam	1,200	3,700	0.0108	0.0201	<0.004	<0.004	<0.004	0.054	—	—	—	—
Diethyl phthalate	2,000	5,800	<0.0002	<0.0002	0.00025J	<0.0002	<0.0002	<0.0008	<0.004	<0.004	<0.004	<0.004
2-Methylphenol	120	370	nd	nd	nd	<0.0005	<0.001	<0.0011	<0.001	<0.001	<0.001	<0.001
Phenol	730	2,200	<0.0004	0.00149	0.0021J	<0.0004	<0.002	<0.0010	<0.002	<0.002	<0.002	<0.002
Total Organic Halogens	na	na	<0.048	<0.019	0.034	0.668	<0.0005	0.048	—	—	—	—
Total Dissolved Solids	na	na	10,600	10,400	10,500	10,700	10,600	10,500	10,100	10,100	9,740	10,900
Total Organic Carbon	na	na	0.94	0.91	1.5	2.0	<0.3	0.66J	—	—	—	—
<b>Metals</b>												
Arsenic	1.0	1.0	<0.00251	0.00695	0.00575J	0.0078	0.0036J	<0.0031	<0.002	<0.002	0.00248J	<0.002
Barium	200	200	0.00403	0.0133	0.014	0.018	0.0151	0.018J	0.0191	0.0182	0.0158	0.0158
Cadmium	0.50	0.50	<0.00037	<0.00028	<0.00034	<0.00034	<0.0003	<0.0005	<0.0003	<0.0003	<0.0003	0.00055J
Calcium	na	na	0.46	806	803	764	790	747	891	780	896	768
Chromium	10	10	<0.00078	<0.00094	<0.0015	0.0024	<0.002	<0.0017	<0.002	<0.002	<0.002	<0.002
Iron	na	na	0.0305J	<0.0165	0.37	0.61	0.079J	0.26	0.158	0.545	1.4	0.344
Lead	1.5	1.5	0.0168	<0.00165	<0.0029	0.0038	0.00523	0.0067	0.00476	0.00361	0.00248	0.00425
Magnesium	na	na	256	294	275	265	263	239	241	231	276	261
Manganese	110	1,000	0.00328	0.015	0.015	0.015	0.0159	0.026	0.119	0.0335	0.0847	0.029
Mercury	0.20	0.20	<0.00006	<0.00008	<0.00006	<0.000018	<0.00008	<0.00003	<0.00008	<0.00008	<0.00008	<0.00008
Potassium	na	na	12.4	14.3	28.9	26	15.6	21.9	11.3	11.4	13.2	15.6

TABLE 3  
ANALYTICAL DATA SUMMARY  
(FEBRUARY 2003 - AUGUST 2008)  
(Concluded)

Parameter (mg/l)	GW <sub>Class 3</sub>		Monitoring Well MW-8											
	Res PCL (g)	GW <sub>Class 3</sub> C/I PCL (g)	Feb 03	Jul 03	Apr 04	Dec 04	Sep 05	Mar 06	Feb 07	Aug 07	Mar 08	Aug 08		
Selenium	5.0	5.0	0.234	0.225	0.48	0.046	0.133	0.073	0.0173	0.0107	0.00261	0.0784		
Sodium	na	na	2,230	2,110	2,140	2,600	2,230	2,250	2,410	2,200	2,450	2,040		
Zinc	730	2,200	<0.0158	<0.001	<0.0052	0.0067	<0.002	0.026	0.00588	0.28	0.135	0.0227		
<b>Inorganics</b>														
Alkalinity, total	na	na	255	250	264	279	254	383	347	325	316	255		
Chloride	na	na	3,660	4,010	4,500	4,470	3,960	3,410	3,800	3,770	3,930	3,410		
Nitrate-N	1,000	1,000	3.4	1.45	2.5	0.26	0.83	<0.027	<0.1	<0.1	---	0.778		
Nitrite-N	100	100	nd	nd	nd	nd	<10	<0.43	---	<1	---	<1		
Sulfate	na	na	2,570	2,800	2,550	2,980	2,650	2,370	2,460	2,450	2,660	2,210		

(g) GW<sub>Class 3</sub> PCL = Tier 1 groundwater ingestion PCL for Class 3 groundwater based on commercial/industrial land use.  
 --- = Not Analyzed  
 J = Estimated concentration detected above the SDL and below the RL.  
 nd = Not Detected  
 na = Not Applicable

TABLE 4  
HISTORICAL ANALYTICAL DATA SUMMARY  
(AUGUST 1990 - JULY 2002)

Parameter (mg/l)	Monitoring Well MW-1 and MW-1A <sup>(1)</sup>										
	Aug 90	Nov 90	Apr 91	Aug 91	Apr 93	May 94	Nov 94	Jun 95	Dec 95	Jun 96	Jan 97
Volatile Organics	ND <sup>(2)</sup>	---	---	---	---	---	---	---	ND <sup>(3)</sup>	---	---
Semivolatile Organics	ND <sup>(2)</sup>	---	---	---	---	---	---	---	ND <sup>(3)</sup>	---	---
Total Organic Halogens	---	---	---	---	---	<0.005	<0.005	0.006	---	<0.005	0.013
Total Dissolved Solids	---	10,000	11,000	---	---	9,900	8,700	8,300	8,500	5,960	6,760
Total Organic Carbon	---	1.9	<1	---	---	<1	<1	<1	---	6.2	2.9
Arsenic	0.025	<0.02	<0.002	---	---	0.01	<0.001	0.007	<0.001	<0.001	0.002
Barium	0.14	0.08	0.06	---	---	0.022	0.063	0.043	0.017	0.014	0.015
Cadmium	0.035	<0.03	0.007	---	---	0.019	<0.01	<0.01	<0.01	<0.02	<0.01
Calcium	---	---	---	---	---	---	---	---	---	---	---
Chromium	<0.3	<0.3	<0.05	---	---	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Iron	0.28	0.58	0.061	---	---	5.2	14	0.49	0.12	0.31	0.45
Lead	1.9	<0.3	<0.05	---	---	0.006	0.008	0.002	0.006	<0.001	<0.001
Magnesium	---	---	---	---	---	---	---	---	---	---	---
Manganese	3.8	0.28	0.13	---	---	0.24	0.31	0.032	0.018	<0.01	<0.01
Mercury	0.0023	<0.002	<0.0002	---	---	<0.0002	<0.0002	<0.0002	0.0012	<0.0002	0.0035
Potassium	---	---	---	---	---	---	---	---	---	---	---
Selenium	0.07	<0.01	0.019	---	---	---	---	---	---	---	---
Silver	0.074	0.056	0.083	---	---	<0.002	<0.002	0.094	0.063	0.054	0.087
Sodium	---	---	---	---	---	---	---	---	---	---	---
Zinc	0.16	---	---	---	---	---	---	---	---	---	---
Alkalinity, total	---	240	190	---	---	0.081	0.021	0.094	<0.01	<0.02	0.02
Chloride	---	3,700	4,100	---	---	350	660	190	180	88	150
Nitrate/Nitrite-N	---	---	---	---	---	3,300	3,300	3,900	3,560	3,620	9,190
Sulfate	---	---	---	---	---	0.17	0.055	0.067	0.879	0.389	1.05
						2,100	1,900	1,500	2,970	1,500	1,100

<sup>(1)</sup> Monitoring well MW-1A was installed in August 1993 as a replacement well for MW-1, which was dewatered sometime after the April 1991 sampling event.

<sup>(2)</sup> 40 CFR 264 Appendix IX constituents.

<sup>(3)</sup> EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.

<sup>(4)</sup> EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.

--- = Not Analyzed

ND = Not Detected

TABLE 4  
HISTORICAL ANALYTICAL DATA SUMMARY  
(AUGUST 1990 - JULY 2002)

Parameter (mg/l)	Monitoring Well MW-1 and MW-1A <sup>(1)</sup>									
	Dec 97	Jun 98	Dec 98	Jul 99	Dec 99	Jul 00	Jan 01	Aug 01	Jan 02	Jul 02
Volatile Organics	—	ND <sup>(2)</sup>	ND <sup>(2)</sup>	—	—	—	ND <sup>(2)</sup>	—	—	ND <sup>(2)</sup>
Semivolatile Organics	—	ND <sup>(2)</sup>	ND <sup>(2)</sup>	—	—	—	ND <sup>(2)</sup>	—	—	ND <sup>(2)</sup>
Total Organic Halogens	0.008	—	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Dissolved Solids	6,540	7,270	7,470	8,750	8,680	8,220	5,320	8,280	6,400	6,230
Total Organic Carbon	7	—	<1	2.5	3.7	1.6	1.8	1.95	4.94	7.87
Arsenic	0.004	0.004	0.081	0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001
Barium	0.637	0.013	0.024	0.016	0.018	0.026	0.055	<0.01	0.044	0.026
Cadmium	<0.01	<0.01	0.013	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	—	—	563	751	791	647	393	671	512	628
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	0.2	0.18	1.3	0.07	0.25	0.08	<0.05	0.11	0.069	0.074
Lead	<0.001	<0.001	<0.001	<0.005	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	—	—	172	220	243	230	103	124	158	187
Manganese	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury	<0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium	—	—	13	14.6	20.7	14.7	9.48	14.2	13.2	14.5
Selenium	<0.002	0.152	0.008	0.023	0.018	0.048	0.017	0.009	0.031	0.008
Silver	—	—	—	—	—	—	—	—	—	—
Sodium	—	—	1,570	1,870	1,890	1,810	1,138	1,510	1,500	1,660
Zinc	0.035	<0.01	0.028	0.068	0.038	0.013	<0.01	<0.01	0.022	0.022
Alkalinity, total	96	130	180	210	210	180	120	200	150	200
Chloride	2,220	808	2,330	2,860	3,070	2,670	1,520	2,760	1,860	2,540
Nitrate/Nitrite-N	1.02	0.754	1.25	0.436	0.203	1.23	0.787	0.337	0.588	0.449
Sulfate	2,040	2,470	2,410	1,730	2,780	2,610	2,180	2,670	2,010	2,950

(1) Monitoring well MW-1A was installed in August 1993 as a replacement well for MW-1, which was destroyed sometime after the April 1991 sampling event.  
(2) 40 CFR 264 Appendix IX constituents.

(3) EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.

(4) EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.

— = Not Analyzed  
ND = Not Detected

TABLE 4  
HISTORICAL DATA SUMMARY  
(AUGUST 1990 - JULY 2002)  
(Continued)

Parameter (mg/l)	Monitoring Well MW-2											
	Aug 90	Nov 90	Apr 91	Aug 91	Apr 93	May 94	Nov 94	Jun 95	Dec 95	Jun 96	Jan 97	
Volatile Organics	ND <sup>(1)</sup>	---	---	---	---	---	---	---	ND <sup>(3)</sup>	---	---	
Semivolatile Organics	ND <sup>(2)</sup>	---	---	---	---	---	---	---	---	---	---	
Total Organic Halogens	---	---	---	---	---	---	---	---	---	---	---	
Total Dissolved Solids	---	8,900	9,200	7,700	9,200	8,800	9,000	8,500	8,900	9,450	8,370	
Total Organic Carbon	---	1.4	<1	<1	4.3	<1	<1	33	---	1.6	3.4	
Arsenic	<0.002	<0.02	<0.002	0.009	<0.001	0.009	<0.001	0.015	<0.001	0.025	0.004	
Barium	0.075	<0.05	0.058	0.032	0.11	0.016	0.036	0.066	0.016	0.091	0.027	
Cadmium	<0.03	<0.03	0.021	0.013	0.011	0.016	<0.01	<0.01	<0.01	<0.02	<0.01	
Calcium	---	---	---	---	---	---	---	---	---	---	---	
Chromium	<0.3	<0.3	0.12	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	0.1	<0.05	
Iron	0.88	<0.3	2.8	0.38	47	0.84	2.6	7.11	2	45	6.72	
Lead	0.58	<0.3	<0.05	0.19	0.02	<0.001	0.002	0.009	0.004	0.022	<0.001	
Magnesium	---	---	---	---	---	---	---	---	---	---	---	
Manganese	<0.05	0.22	0.52	0.2	0.52	0.07	0.072	0.3	0.24	0.704	0.225	
Mercury	0.0038	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0048	0.0007	<0.0002	0.0008	
Potassium	---	---	---	---	---	---	---	---	---	---	---	
Selenium	0.025	<0.01	0.015	<0.002	0.007	0.018	<0.002	0.003	<0.002	0.009	<0.002	
Silver	0.058	0.066	0.064	0.027	<0.002	---	---	---	---	---	---	
Sodium	---	---	---	---	---	---	---	---	---	---	---	
Zinc	<0.05	---	---	0.05	0.17	0.042	0.18	0.18	0.036	0.166	<0.02	
Alkalinity, total	---	270	210	270	260	250	310	380	230	260	210	
Chloride	---	2,900	3,700	3,400	3,100	2,900	3,200	4,600	4,240	6,940	274	
Nitrate/Nitrite-N	---	---	---	0.53	<0.01	0.029	0.34	0.28	<0.01	0.38	0.287	
Sulfate	---	---	---	---	---	2,000	1,900	1,400	2,770	2,090	1,000	

(1) 40 CFR 264 Appendix IX constituents.

(2) EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents

(3) EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.

--- = Not Analyzed

ND = Not Detected

TABLE 4  
HISTORICAL DATA SUMMARY  
(AUGUST 1990 - JULY 2002)  
(Continued)

Parameter (mg/l)	Monitoring Well MW-2									
	Dec 97	Jun 98	Dec 98	Jul 99	Dec 99	Jul 00	Jan 01	Aug 01	Jan 02	Jul 02
Volatiles Organics	---	ND <sup>(3)</sup>	ND <sup>(3)</sup>	---	---	---	---	---	---	ND <sup>(3)</sup>
Semivolatile Organics	---	ND <sup>(3)</sup>	ND <sup>(3)</sup>	---	---	---	---	---	---	ND <sup>(3)</sup>
Total Organic Halogens	0.028	---	0.034	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	<0.005
Total Dissolved Solids	8,120	8,190	8,400	9,240	8,720	8,870	7,230	---	---	9,290
Total Organic Carbon	4	---	<1	<1	2.3	1.3	<1	<1	<1	15.2
Arsenic	0.018	0.005	0.025	<0.001	<0.001	<0.001	0.004	---	---	<0.001
Barium	0.021	0.016	0.029	<0.01	0.015	0.017	0.019	---	---	0.028
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	---	---	<0.005
Calcium	---	---	869	960	943	861	734	---	---	868
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	---	---	<0.01
Iron	1.53	1.02	2.48	0.41	6.18	1.6	0.43	---	---	3.27
Lead	0.045	<0.001	0.0014	<0.001	<0.001	<0.001	<0.001	---	---	<0.001
Magnesium	---	---	209	244	244	220	150	---	---	236
Manganese	0.256	0.164	0.05	0.11	0.125	0.064	0.037	---	---	0.113
Mercury	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	---	---	<0.0002
Potassium	---	---	11.6	12.8	16.5	9.94	6.76	---	---	12.1
Selenium	0.022	0.167	<0.002	<0.002	0.002	0.006	<0.002	---	---	<0.002
Silver	---	---	---	---	---	---	---	---	---	---
Sodium	---	---	1,660	1,820	1,730	1,660	1,484	---	---	1,770
Zinc	0.03	0.06	0.045	0.058	0.032	0.013	<0.01	---	---	0.024
Alkalinity, total	150	200	230	240	220	200	150	---	---	230
Chloride	2,930	1,090	2,800	3,200	3,210	3,040	2,520	---	---	2,820
Nitrate/Nitrite-N	0.075	0.047	0.16	0.117	<0.01	<0.01	0.318	---	---	0.232
Sulfate	1,550	1,730	2,150	1,560	2,260	2,520	2,210	---	---	2,520

(2) 40 CFR 264 Appendix IX constituents.

(3) EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.

(4) EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.

--- = Not Analyzed

ND = Not Detected

TABLE 4  
 HISTORICAL ANALYTICAL DATA SUMMARY  
 (AUGUST 1990 - JULY 2002)  
 (Continued)

Parameter (mg/l)	Monitoring Wells MW-3 and MW-3A <sup>(1)</sup>										
	Aug 90	Nov 90	Apr 91	Aug 91	Apr 93	May 94	Nov 94	Jun 95	Dec 95	Jun 96	Jan 97
Volatiles Organics	ND <sup>(2)</sup>	---	---	---	---	---	---	---	ND <sup>(3)</sup>	---	---
Semivolatile Organics	ND <sup>(2)</sup>	---	---	---	---	---	---	---	ND <sup>(3)</sup>	---	---
Total Organic Halogens	---	---	---	---	---	<0.005	<0.005	0.009	---	<0.005	<0.005
Total Dissolved Solids	---	9,200	9,700	7,800	---	9,300	7,800	8,100	7,900	8,110	7,190
Total Organic Carbon	---	<1	<1	<1	---	<1	<1	98	---	6.4	2.4
Arsenic	<0.002	<0.002	<0.002	0.008	---	<0.001	<0.001	0.006	<0.001	0.002	0.002
Barium	0.12	0.065	0.041	0.032	---	0.021	0.051	0.023	0.012	0.013	0.029
Cadmium	<0.03	0.16	0.009	<0.005	---	0.011	<0.01	<0.01	<0.01	<0.002	<0.01
Calcium	---	---	---	---	---	---	---	---	---	---	---
Chromium	<0.3	<0.3	<0.05	<0.05	---	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05
Iron	0.6	<0.3	0.096	<0.05	---	0.43	0.76	0.39	0.16	0.87	0.94
Lead	0.28	0.8	0.21	0.093	---	<0.001	<0.001	0.001	0.002	0.032	<0.001
Magnesium	---	---	---	---	---	---	---	---	---	---	---
Manganese	2.1	0.24	0.12	0.1	---	0.053	0.023	0.052	0.031	0.044	0.026
Potassium	<0.0002	<0.002	<0.0002	<0.0002	---	<0.0002	<0.0002	<0.0002	0.0013	<0.0002	<0.0002
Selenium	0.037	<0.01	<0.002	0.012	---	---	---	---	---	---	---
Silver	0.07	0.056	0.09	0.058	---	0.13	0.04	<0.002	<0.002	0.04	0.017
Sodium	---	---	---	---	---	---	---	---	---	---	---
Zinc	<0.05	---	---	---	---	---	---	---	---	---	---
Alkalinity, total	---	---	---	0.028	---	0.038	0.15	0.086	0.015	<0.02	<0.02
Chloride	---	230	230	250	---	230	180	240	240	250	260
Chloride	---	3,200	3,800	3,600	---	3,500	2,500	4,200	2,700	6,470	2,280
Nitrate/Nitrite-N	---	---	---	0.67	---	0.68	0.92	0.082	0.316	0.398	0.105
Sulfate	---	---	---	---	---	2,300	2,100	1,400	2,450	1,780	2,200

<sup>(1)</sup> Monitoring well MW-3A was installed in August 1993 as a replacement well for MW-3, which was destroyed sometime after the August 1991 sampling event.

<sup>(2)</sup> 40 CFR 264 Appendix IX constituents.

<sup>(3)</sup> EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.

<sup>(4)</sup> EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.

--- = Not Analyzed

ND = Not Detected

TABLE 4  
 HISTORICAL ANALYTICAL DATA SUMMARY  
 (AUGUST 1988 - JULY 2002)  
 (Continued)

Parameter (mg/l)	Monitoring Wells MW-3 and MW-3A <sup>(1)</sup>									
	Dec 97	Jun 98	Dec 98	Jul 99	Dec 99	Jul 00	Jan 01	Aug 01	Jan 02	Jul 02
Volatile Organics	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(4)</sup>	---	---	---	ND <sup>(3)</sup>	---	---	ND <sup>(3)</sup>
Semivolatile Organics	---	---	---	---	---	---	---	---	---	---
Total Organic Halogens	0.017	---	ND <sup>(4)</sup>	---	---	---	ND <sup>(3)</sup>	---	---	ND <sup>(3)</sup>
Total Organic Halogens	0.017	---	0.144	<0.005	0.014	<0.005	ND <sup>(3)</sup>	<0.005	<0.005	ND <sup>(3)</sup>
Total Dissolved Solids	6,490	9,670	9,290	7,480	7,910	7,290	7,980	8,940	9,220	9,100
Total Organic Carbon	<1	---	<1	3.1	6.4	2.8	<1	2.25	1.45	5.85
Arsenic	0.006	0.006	0.018	<0.001	<0.001	<0.001	0.005	0.005	<0.001	<0.001
Barium	0.013	0.012	0.013	<0.01	0.012	0.011	0.011	<0.01	0.039	0.015
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	---	---	900	792	816	886	715	727	799	980
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	0.49	0.06	0.4	<0.05	0.14	0.06	<0.05	0.09	0.084	0.384
Lead	0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	---	---	264	201	218	193	195	122	226	348
Manganese	0.063	0.051	0.04	0.017	0.032	0.018	0.018	0.028	0.019	0.078
Mercury	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium	---	---	12.9	9.03	17.5	10.3	10.7	10.8	14.4	15.9
Selenium	0.015	0.039	<0.002	<0.002	<0.002	0.006	<0.002	<0.002	<0.002	<0.002
Silver	---	---	---	---	---	---	---	---	---	---
Sodium	---	---	1,770	1,560	1,580	1,430	1,568	1,220	1,770	1,960
Zinc	0.013	0.019	0.019	0.085	0.04	0.032	<0.01	<0.01	0.052	<0.01
Alkalinity, total	82	200	230	260	240	250	220	220	210	220
Chloride	1,950	1,430	3,270	2,640	2,810	2,380	2,690	2,830	4,000	2,940
Nitrate/Nitrite-N	0.087	0.076	0.036	0.095	0.03	0.09	<0.01	<0.01	<0.01	0.055
Sulfate	1,520	1,930	2,330	2,310	2,050	2,720	2,530	2,150	2,010	2,470

<sup>(1)</sup> Monitoring well MW-3A was installed in August 1993 as a replacement well for MW-3, which was destroyed sometime after the August 1991 sampling event.

<sup>(2)</sup> 40 CFR 264 Appendix IX constituents.

<sup>(3)</sup> EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.

<sup>(4)</sup> EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.

--- = Not Analyzed

ND = Not Detected

TABLE 4  
 HISTORICAL ANALYTICAL DATA SUMMARY  
 (AUGUST 1990 - JULY 2002)  
 (Continued)

Parameter (mg/l)	Monitoring Well MW-4												
	Dec 95	Jun 96	Jan 97	Dec 97	Jun 98	Dec 98	Jul 99	Dec 99	Jul 00	Jan 01	Aug 01	Jan 02	Jul 02
Volatile Organics	ND <sup>(3)</sup>	---	---	---	ND <sup>(3)</sup>	ND <sup>(4)</sup>	---	---	---	ND <sup>(3)</sup>	---	---	ND <sup>(3)</sup>
Semivolatile Organics	ND <sup>(3)</sup>	---	---	---	ND <sup>(3)</sup>	ND <sup>(4)</sup>	---	---	---	ND <sup>(3)</sup>	---	---	ND <sup>(3)</sup>
Total Organic Halogens	---	<0.005	<0.005	<0.005	---	<0.005	<0.005	0.009	<0.005	<0.005	0.011	<0.005	<0.005
Total Dissolved Solids	9,500	9,610	9,410	9,290	9,560	9,900	10,200	8,300	10,400	9,740	10,800	9,920	10,600
Total Organic Carbon	---	6.4	2.4	3.8	---	<1	2.9	3.4	<1	<1	2.16	<1	2.53
Arsenic	<0.001	<0.001	0.009	0.009	0.003	0.019	0.002	<0.001	<0.001	0.002	<0.001	<0.001	<0.001
Barium	0.041	0.024	0.025	0.019	0.016	0.021	0.013	0.014	0.013	0.015	<0.01	0.013	0.013
Cadmium	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	---	---	---	---	---	839	1020	1010	905	794	917	838	574
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	0.63	0.23	1.9	0.32	0.34	0.4	0.12	0.29	0.19	0.08	0.19	0.34	0.24
Lead	0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	0.002	<0.001	0.0012	<0.001	<0.001	<0.001
Magnesium	---	---	---	---	---	204	251	239	246	205	143	247	256
Manganese	0.12	0.26	0.14	0.77	0.08	0.07	0.096	0.062	0.086	0.084	0.085	0.087	0.077
Mercury	0.0007	<0.0002	<0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium	---	---	---	---	---	10.4	9.03	12.4	9.02	9.1	9.6	11	10.4
Selenium	<0.002	0.0048	<0.002	0.0154	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silver	---	---	---	---	---	---	---	---	---	---	---	---	---
Sodium	---	---	---	---	---	2,140	2,210	2,210	2,040	2,022	1,750	2,200	2,170
Zinc	0.02	<0.02	<0.02	0.021	0.012	0.037	0.095	0.047	0.031	<0.01	<0.01	0.022	<0.01
Alkalinity, total	200	220	190	160	210	220	220	220	210	210	210	220	210
Chloride	4,240	4,800	331	3,800	1,360	3,390	3,840	3,830	3,600	3,440	3,910	3,740	3,480
Nitrate/Nitrite-N	0.507	0.328	0.106	0.096	0.034	<0.01	0.045	<0.01	<0.01	0.169	<0.01	2.04	0.042
Sulfate	2,590	617	560	1,610	1,920	2,400	1,500	2,270	2,660	2,640	2,230	2,240	2,690

<sup>(3)</sup> EPA SW-846 methods 8240/8280 and 8270 volatile and semivolatile organic constituents.

<sup>(4)</sup> EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.

--- = Not Analyzed  
 ND = Not Detected

TABLE 4  
HISTORICAL ANALYTICAL DATA SUMMARY  
(AUGUST 1990 - JULY 2002)  
(Continued)

Parameter (mg/l)	Monitoring Well MW-5													
	Dec 95	Jun 96	Jan 97	Dec 97	Jun 98	Dec 98	Jul 99	Dec 99	Jul 00	Jan 01	Aug 01	Jan 02	Jul 02	
Volatiles Organics	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(4)</sup>								
Semivolatile Organics	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(4)</sup>								
Total Organic Halogens	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(3)</sup>	ND <sup>(4)</sup>								
Total Dissolved Solids	11,000	11,100	10,400	10,300	10,600	10,800	11,100	10,600	11,000	10,600	11,200	10,700	11,300	
Total Organic Carbon	—	7.2	3.8	<1	—	<1	<1	2.3	<1	<1	1.15	1.04	12.8	
Arsenic	<0.001	0.006	0.005	0.007	0.011	0.014	0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	
Berilium	0.05	0.03	0.037	0.042	0.012	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.013	
Cadmium	0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	
Calcium	—	—	—	—	—	852	953	934	889	735	852	833	856	
Chromium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	
Iron	0.57	3.11	1.77	0.38	0.19	0.10	<0.05	0.115	<0.05	<0.05	0.08	0.29	0.20	
Lead	0.003	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001	
Magnesium	—	—	—	—	—	289	311	318	317	260	156	328	333	
Manganese	0.055	0.14	0.042	0.021	0.024	0.013	0.012	0.013	0.011	<0.01	<0.01	0.019	0.035	
Mercury	0.0007	<0.0002	0.0003	<0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Potassium	—	—	—	—	—	16.9	18.4	22.8	19.8	18.5	17.7	21.8	17.7	
Selenium	0.009	0.014	0.016	0.038	0.036	<0.002	<0.002	0.003	0.008	<0.002	<0.002	<0.002	<0.002	
Silver	—	—	—	—	—	—	—	—	—	—	—	—	—	
Sodium	—	—	—	—	—	2,470	2,470	2,280	2,330	2,328	2,080	2,600	2,550	
Zinc	0.035	<0.02	<0.02	0.018	0.104	0.034	0.057	0.03	0.05	<0.01	<0.01	0.038	<0.01	
Alkalinity, total	260	280	250	140	250	280	270	260	250	260	260	250	250	
Chloride	4,340	8,430	382	4,190	1,500	3,840	3,900	3,640	3,900	3,650	3,580	3,930	3,670	
Nitrate/Nitrite-N	0.641	0.353	0.339	1.12	0.686	0.784	0.254	0.156	0.229	0.342	0.303	0.095	0.12	
Sulfate	3,310	1,590	813	2,060	1,920	2,660	1,860	2,810	2,740	2,970	2,650	2,860	3,050	

<sup>(3)</sup> EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.  
<sup>(4)</sup> EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.  
 — = Not Analyzed  
 ND = Not Detected

TABLE 4  
 HISTORICAL ANALYTICAL DATA SUMMARY  
 (AUGUST 1990 - JULY 2002)  
 (Continued)

Parameter (mg/l)	Monitoring Well MW-7							
	Jul 99	Dec 99	Jul 00	Jan 01	Aug 01	Jan 02	Jul 02	
Volatile Organics	ND <sup>(3)</sup>							
Semivolatile Organics	ND <sup>(3)</sup>							
BTEX		<0.001 <sup>(6)</sup>	ND <sup>(3)</sup>					
Total Petroleum Hydrocarbons		<1	<0.2	<2	<2	<5	<5	
Total Organic Halogens		0.024	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Dissolved Solids	9,910	9,630	10,500	9,650	9,990	9,680	9,940	9,940
Total Organic Carbon	1.4	4.4	<1	<1	1.24	7.92	5.82	5.82
Arsenic	0.003	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001
Barium	0.041	0.016	0.020	0.012	<0.01	0.010	0.014	0.014
Cadmium	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	888	890	771	710	723	728	880	880
Chromium	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	0.062	0.331	0.203	0.056	0.032	0.162	0.319	0.319
Lead	<0.001	0.001	<0.001	0.0021	<0.001	<0.001	<0.001	<0.001
Magnesium	279	292	271	240	139	272	333	333
Manganese	0.19	0.095	0.057	0.032	0.041	0.038	0.060	0.060
Mercury	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Potassium	17.7	22.3	15.5	16.2	17	21.4	17.7	17.7
Selenium	<0.002	0.0024	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Sodium	2,200	2,090	2,100	2,105	1,670	2,200	2,460	2,460
Zinc	0.073	0.033	0.012	0.018	0.015	0.059	0.014	0.014
Alkalinity, total	280	260	230	270	270	280	270	270
Chloride	3,490	3,260	3,290	3,130	3,350	3,360	3,220	3,220
Nitrate/Nitrite-N	0.62	0.572	0.499	0.547	0.627	0.729	0.068	0.068
Sulfate	1,870	2,650	2,840	3,030	2,750	2,630	3,170	3,170

<sup>(3)</sup> EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.  
<sup>(4)</sup> EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.  
<sup>(5)</sup> Total BTEX concentration includes benzene, toluene, ethylbenzene, and xylene. See laboratory report for individual constituent concentration.  
 --- = Not Analyzed  
 ND = Not Detected

TABLE 4  
 HISTORICAL ANALYTICAL DATA SUMMARY  
 (AUGUST 1990 - JULY 2002)  
 (Concluded)

Parameter (mg/l)	Monitoring Well MW-8						
	Jul 99	Dec 99	Jul 00	Jan 01	Aug 01	Jan 02	Jul 02
Volatiles Organics	ND <sup>(3)</sup>						ND <sup>(3)</sup>
Semivolatile Organics	ND <sup>(3)</sup>						ND <sup>(3)</sup>
BTEX							
Total Petroleum Hydrocarbons		0.0023 <sup>(4)</sup>	<0.001 <sup>(5)</sup>	<0.001 <sup>(5)</sup>	0.0021 <sup>(5)</sup>	<0.001 <sup>(5)</sup>	ND <sup>(3)</sup>
Total Organic Halogens		<1	<0.2	<2	<2	<5	
Total Dissolved Solids	<0.005	0.017	<0.005	<0.005	<0.005	<0.005	<0.005
Total Organic Carbon	11,200	10,700	11,100	10,700	11,400	11,500	11,500
Arsenic	<1	2.5	2.7	1.2	2.16	1.85	9.68
Barium	0.003	<0.001	<0.001	0.003	<0.001	<0.001	<0.001
Cadmium	0.033	0.027	0.023	0.017	0.012	0.012	0.025
Calcium	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	963	967	866	804	867	774	929
Iron	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	0.404	1.56	1.02	0.179	0.279	0.102	2.36
Magnesium	<0.001	<0.001	<0.001	0.0017	0.0016	<0.001	<0.001
Manganese	302	291	305	262	143	290	338
Mercury	0.046	0.129	0.039	0.016	0.019	0.010	0.076
Potassium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium	20.1	23.3	17.1	18.8	19	21.4	19.4
Sodium	0.0098	0.0051	0.0056	<0.002	<0.002	0.0067	<0.002
Zinc	2,440	2,230	2,320	2,359	1,880	2,410	2,510
Alkalinity, total	0.069	0.039	0.043	<0.01	<0.01	0.032	0.018
Chloride	250	260	260	250	260	270	240
Nitrate/Nitrite-N	4,340	3,990	3,670	3,790	3,770	4,060	3,830
Sulfate	0.532	0.299	0.355	0.397	0.519	0.405	0.143
	2,600	2,540	2,880	2,920	2,500	2,670	3,210

<sup>(3)</sup> EPA SW-846 methods 8240/8260 and 8270 volatile and semivolatile organic constituents.  
<sup>(4)</sup> EPA SW-846 methods 8260 and 8270 volatile and semivolatile organic constituents plus top ten constituents not on laboratory target compound list.  
<sup>(5)</sup> Total BTEX concentration includes benzene, toluene, ethylbenzene, and xylene. See laboratory report for individual constituent concentration  
 --- = Not Analyzed  
 ND = Not Detected

1 top of it.

2 Q Let's skip over a page to Page 20 of your  
3 prefiled testimony, Dr. Kier.

4 On Line 16, you state that the available  
5 evidence indicates that groundwater contamination has  
6 escaped the current permit boundary of the ACL. Do  
7 you see that?

8 A Yes, sir.

9 Q Your review of groundwater data for the  
10 Austin Community Recycling and Disposal Facility was  
11 limited to data that were obtained early in the year  
12 2000 or earlier. Correct?

13 A That's as far as I went; yes, sir.

14 Q So you quit looking at the facility's  
15 groundwater data in the early part of 2000. Right?

16 A I think it was actually slightly before that.

17 Q So you haven't reviewed hardly any of the  
18 facility's groundwater data from this decade, have  
19 you, Dr. Kier?

20 A No, sir.

21 Q For purposes of this case, you just went back  
22 and reviewed the memos that you previously wrote.  
23 Correct?

24 A That is correct.

25 Q If the ACRD facility did have a release of

1 contaminants at any time in the history of that  
2 facility, wouldn't you expect that that release would  
3 be continual today?

4 A I think it probably is, but that's an  
5 assumption, since I haven't looked at the data.

6 MR. MOORE: Object as nonresponsive.

7 MR. BIRCH: Your Honor, it was  
8 responsive to his question.

9 JUDGE SCUDDAY: Well, reask your  
10 question.

11 Q (BY MR. MOORE) Dr. Kier, if the Austin  
12 Community Recycling and Disposal Facility did have a  
13 release of contaminants at any time in the history of  
14 that facility, wouldn't you expect that release to be  
15 continual to date?

16 A I expect it probably is.

17 JUDGE SCUDDAY: Okay. So the answer is  
18 yes.

19 Q (BY MR. MOORE) So you wouldn't expect that  
20 the Austin Community Recycling and Disposal Facility  
21 would somehow repair itself from the time that waste  
22 was first placed there until today, would you?

23 A No, sir. The constituents might change some  
24 and the chemistry might change some, but I wouldn't  
25 expect it to repair itself.

1 it's on similar materials.

2 Q With respect to the color of the unweathered  
3 Taylor, would you describe it as more of a tan color  
4 near the surface that transitions into a reddish color  
5 with depth?

6 A I remember reading that and wished I hadn't  
7 phrased it exactly that way. The tan is the typical  
8 color of the weathered Taylor, absent the dark soil on  
9 top if it's been eroded away.

10 The transition to the reddish is the  
11 long fractures and cracks. It's an oxidation of iron  
12 in various hydration states along the fractures and  
13 cracks.

14 Q Now, let's move down to the unweathered  
15 Taylor, Dr. Kier. The unweathered Taylor is virtually  
16 impermeable, isn't it?

17 A Yes, sir.

18 Q The unweathered Taylor is an aquiclude as  
19 that is used in TCEQ's municipal solid waste  
20 regulations. Correct?

21 A Yes, sir.

22 Q And an aquiclude neither passes or stores  
23 large quantities of water. Correct?

24 A Correct, even over time.

25 Q All right. Dr. Kier, let's move to Page 57

1 of your prefiled testimony. I direct your attention  
2 to the question that's presented to you on Line 18.  
3 And here you're discussing your hypothesis that  
4 contamination originating from the Austin Community  
5 Recycling and Disposal Facility has made its way under  
6 the BFI facility and under Giles Road and then under  
7 Applied Materials' facility. Correct?

8 A Correct.

9 Q You believe that your hypothesis is validated  
10 by the PBS&J report that you've included in TJFA 209.  
11 Correct?

12 A I believe we talked about that in my  
13 deposition, and you used the term "validated." I said  
14 in my prefiled it appears -- which appeared to  
15 validate. Of course, scientists like to equivocate at  
16 times. So I wouldn't say it absolutely validates, but  
17 I would say it gives strong support.

18 Q The PBS&J report concerns a July 2002  
19 sampling event at the Applied Materials site.  
20 Correct?

21 A Yes, sir.

22 Q And this wasn't the first groundwater  
23 sampling event that Applied Materials conducted at  
24 their property, was it?

25 A No, it wasn't, nor the last.

1 Q And this was the 18th semi-annual sampling  
2 event that Applied Materials had conducted. Correct?

3 A That's what they said, yes.

4 Q Applied Materials is an equipment  
5 manufacturing company. Right?

6 A That's my understanding.

7 Q And you don't know why Applied Materials is  
8 monitoring groundwater beneath its facility, do you?

9 A No. They would not answer when I asked.

10 Q The analysis of the samples obtained from the  
11 July 2002 sampling event at the Applied Materials site  
12 tentatively identified some semivolatile organic  
13 compounds or SVOCs. Right?

14 A That is correct.

15 Q And because of the sensitive nature of their  
16 identification, the compounds are referred to as  
17 tentatively identified compounds or TICs. Right?

18 A Yes.

19 Q No volatile organic compounds were detected  
20 in the Applied Materials 2002 sampling event, were  
21 they?

22 A Not in that sampling event.

23 Q In terms of mobility in groundwater, VOCs are  
24 more mobile than SVOCs. Correct?

25 A In general.

1 Q PBS&J did not conclude that the TICs were  
2 definitely present in the groundwater collected from  
3 the Applied Materials site, did they?

4 A Not definitely, no, sir. You can't do that  
5 with TICs.

6 Q You can't say, can you, with any degree of  
7 certainty that the TICs were definitely present in the  
8 groundwater collected from the Applied Materials site,  
9 can you?

10 A No, sir. TICs by their very nature are  
11 library searches to look for matches with peaks and  
12 estimated quantification indicated by those peaks by  
13 the -- and all laboratories have access to this.

14 But as a TIC, neither can you prove the  
15 definite occurrence of that compound nor the definite  
16 concentration. What you, in essence, prove is that  
17 semivolatiles are present.

18 Q Dr. Kier, let's turn to Page 60 of your  
19 prefiled testimony. There on Line 7 of your prefiled  
20 testimony on Page 60 you contend -- I'm sorry,  
21 Dr. Kier. I've got you -- I cited you the wrong page.

22 A Excuse me. I thought my answer there was  
23 quite nice.

24 (Laughter)

25 Q (BY MR. MOORE) Okay. I cited you to the

1 wrong line of Page 60. I wanted to point you to  
2 Line 8 of Page 60 of your prefiled testimony. There  
3 you state that the Austin Community Recycling and  
4 Disposal Facility is the only other possible source of  
5 the TICs that were identified in the July 2002  
6 groundwater samples taken from the Applied Materials  
7 facility.

8 Dr. Kier, you can't rule out the BFI  
9 Sunset Farms facility as a potential source of SVOCs,  
10 can you?

11 A Not absolutely, no.

12 Q And you don't know if industrial wastes were  
13 ever disposed of at the BFI facility, do you?

14 A I have no records that indicate they were or  
15 were not.

16 Q You also can't rule out the closed Travis  
17 County landfill as a potential source of SVOCs, can  
18 you?

19 A Again, there are no records I'm aware of that  
20 indicate they were or were not.

21 MR. MOORE: I'm going to object as  
22 nonresponsive. Dr. Kier --

23 JUDGE SCUDDAY: Reask it.

24 MR. MOORE: Okay.

25 Q (BY MR. MOORE) I'll reask the question,

1 Dr. Kier. The question to you is, you can't rule out  
2 the closed Travis County landfill as a potential  
3 source of SVOCs, can you?

4 A No. Based on what I know, I cannot.

5 Q You don't know if industrial wastes were ever  
6 disposed of at the closed Travis County landfill, do  
7 you?

8 A I do not know that.

9 Q Dr. Kier, let's turn to -- well, let's stay  
10 on Page 60 of your prefiled testimony. I want to  
11 point you down to Line 23 of that testimony.

12 There you state that you were told by  
13 the Chief Environmental Officer that Applied Materials  
14 did not use chlorinated hydrocarbons. Chlorinated  
15 hydrocarbons aren't the only source of SVOCs, are  
16 they, Dr. Kier?

17 A No, sir.

18 Q Dr. Kier, let's turn to Exhibit 209. Just to  
19 be clear, Dr. Kier, I refer to Exhibit 209. We're  
20 looking at Exhibit TJFA 209. Correct?

21 A Correct.

22 Q If you would, please turn to Page 5 of that  
23 exhibit. Here on Page 5, PBS&J makes some  
24 recommendations to further investigate the presence of  
25 the TICs that were identified in the July 2002

1 sampling event. Correct?

2 A It would shorten -- without reading the whole  
3 page, if you kind of pointed me to where you're  
4 talking about.

5 Q The first paragraph that follows the "Dear  
6 Ashay," the last sentence of that paragraph. I'll  
7 read it allowed. "Due to the detection of relatively  
8 high total organic carbon levels and tentatively  
9 identified compounds within the semivolatile organic  
10 range as well as MW-1A, MW-2 and MW-5a, the following  
11 was recommended to further investigate the presence of  
12 TICs." Correct, Dr. Kier?

13 A Correct.

14 Q And the first thing that they recommend is a  
15 TCEQ file review. Correct?

16 A Correct.

17 Q And the second thing that they recommend is  
18 resampling of the monitoring wells to confirm the  
19 results of the July 2002 sampling event. Correct?

20 A Correct.

21 Q And, to your knowledge, PBS&J never carried  
22 out either of these recommendations, did they?

23 A Not to my knowledge.

24 Q All right. Dr. Kier, I would like to go the  
25 next exhibit and those that you offer, and that's TJFA

1                   Thus, the Subtitle D liner system,  
2 whatever it may be, is not designed to prevent all  
3 releases. If you look at the release capability of  
4 even what's called the Subtitle D liner default with a  
5 flexible membrane liner or a geomembrane over two feet  
6 of impacted clay, that will not prevent all releases.

7                   It's designed to minimize them. Now --  
8 and then you have a detection monitoring system. Do  
9 you want me to quit there or go further?

10           Q       That's fine. Let me ask you about the 249D  
11 permit amendment application for the Austin Community  
12 Recycling and Disposal Facility. Have you reviewed  
13 the application that Waste Management filed?

14           A       Yes. Maybe not every part of it, but most  
15 parts.

16           Q       And do you believe, based on your review,  
17 that this application complies with the TCEQ's MSW  
18 rules?

19           A       No, I do not.

20           Q       And why not?

21           A       Well, I stated, I believe, at the beginning  
22 of my prefiled testimony.

23           Q       And that would be starting on Page 20?

24           A       Yes.

25           Q       And let me just ask you a couple of

1 questions. There is -- I think you list about 10 or  
2 so reasons in here. A couple of them all seem -- or a  
3 couple of them seem to focus on the industrial waste  
4 unit and the fact that the waste that are buried there  
5 appear to be a threat.

6 A Appear to be what?

7 Q Appear to be an ongoing threat --

8 A Oh, threat. Excuse me.

9 Q -- to the health and the environment. And  
10 can you please explain what exactly you're referring  
11 to when you state that you have concerns about the  
12 industrial waste unit and how that is deficient in  
13 meeting the MSW rules?

14 A All right. The industrial wastes that were  
15 placed there, based on all the information available,  
16 were placed in bulk form in a number of unlined  
17 pits -- just simply pits excavated in the soil -- the  
18 weathered clay -- the weathered Taylor -- with the  
19 presumption that it was sufficiently impermeable to  
20 prevent their release which was strictly based on  
21 laboratory tests -- and we can come back to that if  
22 you need to -- and with no knowledge of the effect of  
23 the materials placed there on the clay structures in  
24 its permeability.

25 The presumption was that it would

1 evaporate. In addition, there were drummed wastes  
2 which were buried in unlined trenches. It appears  
3 based on one aerial photography that the drums were  
4 stacked too high in a trench excavated by a bulldozer  
5 with no liner at all.

6 Those would have contained liquids,  
7 perhaps some solids, but semi-solids or viscous  
8 material. The number of drums is stated to be more  
9 than 21,000. Clearly, we do not know the exact  
10 number. Oh, I didn't finish.

11 All right. Throughout the history of  
12 monitoring the IWU, there has been a reoccurrence of  
13 indications of release of the compounds that might  
14 have been placed in the industrial waste unit to the  
15 facility boundary, and, in my opinion, all the way  
16 across Applied Materials.

17 By the way, I now have all the Applied  
18 Materials data through August of 2008. So there's  
19 strong indications of release going eastward and  
20 releases going along the unnamed tributary to Walnut  
21 Creek and heading across the old county landfill and  
22 ultimately into the Colorado River.

23 Q And are the documents that are contained in  
24 TJFA-203 and 204 and 205, which were attached to your  
25 prefiled testimony, are these the documents that you

1 have reviewed that are the basis for your testimony?

2 A Largely. But I may have reviewed more  
3 documents, and document review continued up until last  
4 night.

5 Q And you stated that you have concerns that  
6 the industrial waste unit is continuing beyond the  
7 property of the Waste Management landfill.

8 Do you have concerns that it's going  
9 into any of the lakes or tributaries in the area?

10 A Well, tributary, yes, Walnut Creek -- the  
11 tributary to Walnut Creek. I've forgotten the name of  
12 the tributary that runs across Applied Materials, but  
13 all of them leave that tributary discharges into -- we  
14 can call it Decker Lake or Lake Walter E. Long,  
15 depending on how old you are.

16 And at this point we know it's made it  
17 completely across Applied Materials to their southern  
18 boundary or as close to it as we have monitoring  
19 wells. We don't have anything after that.

20 Q What would be the effect if it reaches the  
21 lake, Walter E. Long?

22 A I don't know if I could give you all the  
23 effects that the lake is used; although, it's a  
24 cooling pond -- or a lake for a power plant for the  
25 City of Austin power plant.

1 Q And did he prepare any reports that you  
2 reviewed?

3 A I did review his prefiled testimony, yes,  
4 ma'am.

5 Q Did he summarize his review of that data to  
6 you?

7 A Some off and on during the course of his  
8 work, we would talk. To be truthful, his office door  
9 is two doors down. So it's not like we don't run into  
10 each other fairly frequently.

11 Q Why exactly do you believe that the  
12 groundwater under the Austin Community landfill has  
13 been contaminated?

14 A That's a big question.

15 Q Okay.

16 A Did you want me to --

17 Q Have you seen any evidence of contamination?

18 A Yes, ma'am.

19 Q And what evidence have you seen?

20 A I have seen evidence of contamination at the  
21 landfill through the entire period that I examined and  
22 particularly in the first six wells installed as part  
23 of the municipal solid waste program.

24 There were two wells prior to that  
25 installed in the early '80s which may have been

1 installed by one of the state agencies, but I don't  
2 have their locations.

3 So those wells all indicated  
4 contamination. There's contamination indicated on the  
5 Applied Materials tract from 1990 through August 2008,  
6 and there's contamination indicated in the analyses  
7 done for what's called the "Voluntary Monitoring  
8 Program" by the Austin Waste Management for the city  
9 of Austin of the industrial waste unit through -- and  
10 I would have to look to see what date it was. I  
11 just -- that was this weekend's work.

12 Q You mentioned the first six monitoring wells  
13 that were installed, are they still being monitored?

14 A No.

15 Q And what is the significance of those wells  
16 not still being monitored, in your opinion?

17 A Well, some of it's innocuous. Some of it is  
18 probably not. The original 1A and 2A were  
19 unfortunately installed in the right-of-way for Giles  
20 Road. So they had to be moved. Therefore, we went to  
21 1B and 2B on the property boundary.

22 Then when Giles Road was widened, they  
23 were again in the right-of-way. So they had to be  
24 moved again. Only we have 2C and not 1C. Now, that's  
25 for that one.

1           A       Not that I've been able to discern from the  
2 documents I've reviewed.

3           Q       And that's based on documentation as opposed  
4 to opinion?

5           A       Yes, sir.

6           Q       Now, did I understand your testimony to be  
7 that it is your opinion that hazardous constituents  
8 are migrating out of the Waste Management site?

9           A       Yes, based on the analytical data I have  
10 reviewed.

11          Q       And is that true with regard to the Applied  
12 Materials site as well as the drainage ditch flowing  
13 to the south?

14          A       Yes.

15          Q       Now, the documentary basis for the Applied  
16 Materials is the report done by PBS&J?

17          A       That would be one part of it.

18          Q       What would be the other part?

19          A       Okay. I personally inspected analytical data  
20 at Applied Materials. I was allowed to review all of  
21 the analytical data up to the time that I wrote my  
22 report, which would be, roughly, 1998. I was not  
23 allowed to take copies, but I was allowed to  
24 personally review it.

25                   So I have actually seen all of the

1 analytical data up through about 1998. Then we would  
2 add the PBS&J report. And since then, Applied  
3 Materials sent the attorneys all the analytical data  
4 that has ever been taken, as far as I know, from the  
5 monitoring wells at Applied Materials up through  
6 August of 2008.

7 Q Now --

8 JUDGE SCUDDAY: That's the -- where you  
9 think release is to the east to the Applied Materials?

10 A That's correct.

11 Q (BY MR. BLACKBURN) With regard to the  
12 Applied Materials site, there were TICs -- T-I-Cs that  
13 were detected. I believe you've testified to that in  
14 some of the cross-examination this morning. Do you  
15 recall the TICs?

16 A Yes.

17 Q And I believe those TICs were identified  
18 tentatively as semivolatiles. Is that correct?

19 A Correct.

20 Q And you talked about matching crests or  
21 peaks. Could you describe what you meant when you  
22 were testifying about "matching peaks"?

23 A All right.

24 Q First of all, was that referring to a gas --

25 A Yes, gas chromatograph-mass spectrometer.

1 produce what it sees as the analytical results.

2 And you might say, "Well, that would be  
3 variable," but it's all tested using EPA standards.  
4 So it's all matched to those EPA standards.

5 Q So would it be fair to say that where there  
6 are tentatively identified compounds -- or TICs --  
7 that there was a chemical that caused a peak and the  
8 question becomes the identification of what caused the  
9 peak?

10 A That is correct.

11 Q So there's no question that there was a  
12 constituent that was detected. The question is just  
13 what it is?

14 A And it's absolute concentration. That's what  
15 I said in my prefiled testimony.

16 Q Now, I'm coming from the perspective of  
17 citizens living around this site. Does the appearance  
18 of semivolatiles in the groundwater beneath Applied  
19 Materials raise any -- give any basis of concern for  
20 citizens living nearby?

21 A Yes.

22 Q Why?

23 A Well, in that they found below Applied  
24 Materials -- and now I know they replaced Monitoring  
25 Well 6 which didn't have water and they have one that

1 **does -- that it extends virtually all the way across**  
2 **Applied Materials.**

3 MR. MOORE: I'm going to object now,  
4 Your Honor, to this line of testimony, because, if you  
5 will recall, we struggled over whether Exhibit 209  
6 comes in as a report from PBS&J of the groundwater  
7 beneath the Applied Materials site.

8 The only reason that it came in is  
9 because you determined that the deposition or written  
10 questions proves up the regularly-kept business  
11 records exception. We don't have that for any other  
12 data from Applied Materials, and this witness is now  
13 testifying about data that he's reviewed after filing  
14 his prefiled testimony in this case.

15 And that data hasn't been offered.  
16 There is no indication that there's a regularly-kept  
17 business record exception for that data, and the  
18 witness is now attempting to disclose it through  
19 testimony in this case.

20 MR. BLACKBURN: May I respond, Your  
21 Honor?

22 JUDGE SCUDDAY: Yes.

23 MR. BLACKBURN: It seems to me that if  
24 there is evidence that the witness has in their head,  
25 they can answer a question that I asked about a basis

1 detailed his answer is regarding the documentation.  
2 That's what I'm talking about. And that's kind of  
3 where we got in earlier on one of other questioners.  
4 There was some documentation that wasn't in the  
5 record.

6 MR. BIRCH: Well, Your Honor, the  
7 questions won't be very detailed.

8 JUDGE SCUDDAY: Thank you.

9 MR. MOORE: And, Your Honor, just to be  
10 clear, I mean, there's an objection there, too, and  
11 that is beyond the scope of the cross-examination of  
12 course. That's what we were coming back to.

13 JUDGE SCUDDAY: I know. Go ahead.

14 Q (BY MR. BIRCH) Dr. Kier, when we discussed  
15 earlier about there being no VOCs and SVOCs, do you  
16 recall that from your review of the Applied Materials  
17 records?

18 A With respect to the PBS&J report, I think  
19 that's where the question was.

20 Q Have you seen other documentation that would  
21 suggest perhaps there are VOCs and semi-VOCs on the  
22 Applied Materials property?

23 MR. MOORE: And that's where my  
24 objection beyond the scope of cross-examination comes  
25 in, Judge.

1 JUDGE SCUDDAY: All right. With the  
2 previous understanding where we're going on this, I  
3 will allow -- contingently allow the testimony. Go  
4 ahead.

5 Q (BY MR. BIRCH) And so in review of that  
6 additional data, it has suggested that there are --  
7 these additional -- are these volatile organic  
8 compounds and semi-volatile organic compounds, were  
9 they identified in wells that were upgradient of the  
10 Applied Materials facility?

11 A Yes.

12 Q Now, Mr. Blackburn I think asked you a  
13 question about whether your -- the evidence of  
14 off-site contamination might impact residents in the  
15 area or neighbors in the area. Do you recall that?

16 A Yes.

17 Q And is this some of the evidence that would  
18 show you that perhaps there are -- there are threats  
19 to residents or neighbors in the area?

20 A Yes.

21 Q And if this contamination was to continue --  
22 I think you may have mentioned Decker Lake. Do you  
23 recall that?

24 A Yes.

25 Q And that would be a possible end point for

1 this contamination at some point?

2 MR. MOORE: Objection, leading.

3 JUDGE SCUDDAY: Sustained.

4 Q (BY MR. BIRCH) If this contamination  
5 continues across the Applied Materials site, is it  
6 possible that it could end up in the Decker Lake?

7 A Yes.

8 Q And are you familiar with the Danskin  
9 triathlon?

10 A Yes.

11 JUDGE SCUDDAY: With the what?

12 MR. BIRCH: Danskin Triathlon.

13 JUDGE SCUDDAY: Okay.

14 A Personally.

15 Q (BY MR. BIRCH) Personally?

16 A Yes.

17 Q And do you know that approximately -- how  
18 many women, 2 or 3,000 women -- or do you know how  
19 many women swim in that race in June of each year.

20 MR. MOORE: I'm going to object to that  
21 as leading as well.

22 JUDGE SCUDDAY: Well, I'll accept the  
23 fact that women swim in the lake.

24 (Laughter)

25 MR. MOORE: I think you can take

1 judicial notice of that one, too, Judge, and we can  
2 move on.

3 JUDGE SCUDDAY: All right. Go ahead.

4 Q (BY MR. BIRCH) Dr. Kier, the women swimming  
5 in the lake, would they potentially be impacted if  
6 these contaminants continue to move across the Applied  
7 Materials property?

8 A Well, they would be contacted by whatever is  
9 in the lake, yes.

10 Q And, Dr. Kier, I have an easy question for  
11 you. If you could turn to your deposition, if it's  
12 still up there, on Page 175. I hope it's an easy  
13 question.

14 Have you got that page in front of you  
15 Dr. Kier?

16 A Yes.

17 Q Do you recall earlier when Mr. Moore asked  
18 you about the quote -- I think he asked you a question  
19 starting on Line 4. Do you see that? And his  
20 question was: "I've asked for your opinion which  
21 wells in the currently-permitted groundwater  
22 monitoring network are capable of monitoring the  
23 industrial waste unit?" And you said that would be  
24 the only one. Do you see that?

25 A Not on Page 175, but maybe I'm looking at the



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## ANALYTICAL REPORT

Project No. Site 155

Austin Community LF

Lot #: D4J210361

Industrial Waste Unit

Tim Champagne

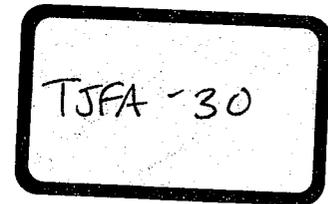
Waste Management Inc  
9708 Giles Road  
Austin, TX 78754

Cc: Robert Alford (PDF also)

STL DENVER

  
Rachelle Delimont  
Project Manager

November 8, 2004



Lot #: D4J210361

## Case Narrative

Enclosed is the report for seven samples received at STL Denver laboratory on October 21, 2004. The results included in this report have been reviewed for compliance with STL Denver's Laboratory Manual. The test results shown in this report meet all requirements of NELAC and any exceptions are noted below. STL Denver is NELAP approved for all parameters reported.

This report may include data with reporting limits (RLs) less than STL Denver's standard reporting limit. These data and reporting limits are being used specifically to meet the needs of this project. Note that, data are not customarily reported to these levels without qualifiers, because they are inherently less reliable and potentially less defensible than the latest industry standards require. Please contact STL Denver for more details.

Dilution factors and footnotes have been provided to assist in the interpretation of the results. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interferences or analytes present at concentrations above the linear calibration curve, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

STL Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. A summary of quality control parameters is provided below.

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## Quality Control Summary for Lot D4J210361

### Sample Receiving

- The cooler temperatures upon receipt at the Denver laboratory were 4.0°C and 5.5°C.
- All sample bottles were received in acceptable condition.

### Holding Times

- All analyses were within holding times.

### Method Blanks

- Methylene chloride was detected in the Method Blank for prep batch 4306481 below the project established reporting limit. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.
- All other Method Blanks were within established control limits.

### Laboratory Control Samples

- All Laboratory Control Samples were within established control limits.

Lot #: D4J210361

#### **Matrix Spike (MS) and Matrix Spike Duplicate (MSD)**

- The method required MS/MSD could not be performed for Method 8270C due to insufficient sample volume, however, a LCS/LCSD pair was analyzed to demonstrate method precision.
- The Matrix Spike and Matrix Spike Duplicate performed on an unrelated sample exhibited an MS recovery outside control limits for Mercury Method 245.1. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.
- All other MS and MSD samples were within established control limits.

#### **Organics**

- The values for the analytes 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by Method 8260B analysis have been evaluated down to STL's Method Detection Limits. The analytes DBCP and EDB were found to be non-detect at or above 0.47 ug/L and 0.18 ug/L respectively for all samples.
- The analysis by Method 8260B for sample PZ-31 was performed at a dilution due to the high presence of target compounds. The dilution factor has been applied to the MDL to provide the lowest possible RL. The MDL can be found in the corresponding Method Blank.

#### **Metals**

- The Calibration Blank result is greater than the project requested reporting limit for Selenium by Method 200.7. The requested reporting limit for Selenium is below STL's standard reporting limit and, therefore, no corrective action has been taken for this anomaly. It must be noted that results reported below STL's standard reporting limit may result in false positive/false negative results, less accurate quantitation and potential misidentification at the lower concentrations. Additionally, all associated samples are non-detect.

## EXECUTIVE SUMMARY - Detection Highlights

D4J210361

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>PZ-31 10/20/04 08:50 001</b>				
Barium	840	7.4	ug/L	MCAWW 200.7
Arsenic	37	10	ug/L	MCAWW 200.7
1,2,4-Trichloro- benzene	22	10	ug/L	SW846 8270C
1,4-Dioxane	750	380	ug/L	SW846 8260B
Methylene chloride	5.5 B	1.4	ug/L	SW846 8260B
<b>MW-32 10/20/04 09:50 002</b>				
Nickel	54	40	ug/L	MCAWW 200.7
Barium	36	7.4	ug/L	MCAWW 200.7
Arsenic	10	10	ug/L	MCAWW 200.7
<b>MW-29A 10/20/04 10:45 003</b>				
Barium	16	7.4	ug/L	MCAWW 200.7
<b>PZ-26 10/20/04 11:40 004</b>				
Barium	8.9	7.4	ug/L	MCAWW 200.7
1,4-Dioxane	200	200	ug/L	SW846 8260B
<b>MW-01X 10/20/04 005</b>				
Barium	10	7.4	ug/L	MCAWW 200.7
1,4-Dioxane	210	200	ug/L	SW846 8260B

TETR-0013896

## PREPARATION METHODS SUMMARY

D4J210361

<u>PREPARATION DESCRIPTION</u>	<u>PREPARATION METHOD</u>	<u>ANALYTICAL METHOD</u>
Acid Digestion for Total Recoverable Metals	MCAWW 200.7	MCAWW 200.7
Acid Digestion for Total Recoverable Metals	MCAWW 200.8	MCAWW 200.8
Continuous Liquid-Liquid Extraction	SW846 3520C	SW846 8270C
Mercury Sample Preparation	MCAWW 245.1	MCAWW 245.1
Purge and Trap Volatile Organics	SW846 5030B	SW846 8260B
25 mL Purge-and-Trap	SW846 5030B/826	SW846 8260B

### References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

## ANALYTICAL METHODS SUMMARY

D4J210361

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
ICP-Mass Spectrometry ICP-Mass Spectrometry	MCAWW 200.8
Mercury (Manual Cold Vapor Technique)	MCAWW 245.1
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7
Volatile Organics by GC/MS	SW846 8260B

### References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

TETR-0013898

## METHOD / ANALYST SUMMARY

D4J210361

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
MCAWW 200.7	Lynn-Anne Trudell	6645
MCAWW 200.8	Thomas Lill	6929
MCAWW 245.1	Janice S. Collins	011668
SW846 8260B	Jason Reinhardt	013454
SW846 8260B	Joann Peterson	011674
SW846 8270C	Barbara Sullivan	001128
SW846 8270C	Rwanda Todea	005716

### References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

TETR-0013899

# SAMPLE SUMMARY

D4J210361

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GT7LA	001	PZ-31	10/20/04	08:50
GT7LF	002	MW-32	10/20/04	09:50
GT7LH	003	MW-29A	10/20/04	10:45
GT7LK	004	PZ-26	10/20/04	11:40
GT7LM	005	MW-01X	10/20/04	
GT7LP	006	FB01	10/20/04	12:20
GT7LR	007	TRIP BLANK	10/20/04	

## NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TETR-0013900

Waste Management, Inc.

Client Sample ID: PZ-31

GC/MS Volatiles

Lot-Sample #....: D4J210361-001 Work Order #....: GT7LA1AA Matrix.....: WATER  
 Date Sampled....: 10/20/04 08:50 Date Received...: 10/21/04  
 Prep Date.....: 10/29/04 Analysis Date...: 10/29/04  
 Prep Batch #....: 4306481 Analysis Time...: 23:37  
 Dilution Factor: 6.66

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	5.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.1	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.1	ug/L
1,1-Dichloroethane	ND	1.5	ug/L
1,2-Dichloropropane	ND	1.2	ug/L
1,4-Dioxane	750	380	ug/L
Ethylbenzene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	5.5 B	1.4	ug/L
Styrene	ND	1.0	ug/L
Tetrachloroethene	ND	1.7	ug/L
Toluene	ND	1.0	ug/L
Trichloroethene	ND	1.1	ug/L
1,2,3-Trichloropropane	ND	2.2	ug/L
Xylenes (total)	ND	2.7	ug/L
2-Butanone (MEK)	ND	13	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	116	(73 - 118)
1,2-Dichloroethane-d4	108	(62 - 128)
4-Bromofluorobenzene	103	(78 - 118)
Toluene-d8	104	(77 - 117)

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Waste Management, Inc.

Client Sample ID: MW-32

GC/MS Volatiles

Lot-Sample #...: D4J210361-002 Work Order #...: GT7LF1AA Matrix.....: WATER  
Date Sampled...: 10/20/04 09:50 Date Received...: 10/21/04  
Prep Date.....: 10/29/04 Analysis Date...: 10/30/04  
Prep Batch #...: 4306481 Analysis Time...: 00:27  
Dilution Factor: 1

Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	5.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	116	(73 - 118)
1,2-Dichloroethane-d4	115	(62 - 128)
4-Bromofluorobenzene	105	(78 - 118)
Toluene-d8	104	(77 - 117)

Waste Management, Inc.

Client Sample ID: MW-29A

GC/MS Volatiles

Lot-Sample #...: D4J210361-003 Work Order #...: GT7LH1AA Matrix.....: WATER  
 Date Sampled...: 10/20/04 10:45 Date Received...: 10/21/04  
 Prep Date.....: 10/29/04 Analysis Date...: 10/30/04  
 Prep Batch #...: 4306481 Analysis Time...: 00:53  
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	116	(73 - 118)
1,2-Dichloroethane-d4	112	(62 - 128)
4-Bromofluorobenzene	101	(78 - 118)
Toluene-d8	103	(77 - 117)

Waste Management, Inc.

Client Sample ID: PZ-26

GC/MS Volatiles

Lot-Sample #...: D4J210361-004 Work Order #...: GT7LK1AA Matrix.....: WATER  
 Date Sampled...: 10/20/04 11:40 Date Received...: 10/21/04  
 Prep Date.....: 10/29/04 Analysis Date...: 10/30/04  
 Prep Batch #...: 4306582 Analysis Time...: 04:11  
 Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	5.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,4-Dioxane	200	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	111	(73 - 118)
1,2-Dichloroethane-d4	124	(62 - 128)
4-Bromofluorobenzene	97	(78 - 118)
Toluene-d8	92	(77 - 117)

Waste Management, Inc.

Client Sample ID: MW-01X

GC/MS Volatiles

Lot-Sample #....: D4J210361-005    Work Order #....: GT7LM1AA    Matrix.....: WATER  
 Date Sampled...: 10/20/04    Date Received...: 10/21/04  
 Prep Date.....: 10/29/04    Analysis Date...: 10/30/04  
 Prep Batch #....: 4306582    Analysis Time...: 04:34  
 Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,4-Dioxane	210	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	110	(73 - 118)
1,2-Dichloroethane-d4	121	(62 - 128)
4-Bromofluorobenzene	96	(78 - 118)
Toluene-d8	93	(77 - 117)

Waste Management, Inc.

Client Sample ID: FB01

GC/MS Volatiles

Lot-Sample #....: D4J210361-006 Work Order #....: GT7LP1AA Matrix.....: WATER  
 Date Sampled...: 10/20/04 12:20 Date Received...: 10/21/04  
 Prep Date.....: 10/29/04 Analysis Date...: 10/30/04  
 Prep Batch #....: 4306582 Analysis Time...: 04:57  
 Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Benzene	ND	5.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	115	(73 - 118)
1,2-Dichloroethane-d4	126	(62 - 128)
4-Bromofluorobenzene	101	(78 - 118)
Toluene-d8	100	(77 - 117)

Waste Management, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D4J210361-007    Work Order #...: GT7LR1AA    Matrix.....: WATER  
Date Sampled...: 10/20/04    Date Received...: 10/21/04  
Prep Date.....: 10/29/04    Analysis Date...: 10/30/04  
Prep Batch #...: 4306582    Analysis Time...: 05:20  
Dilution Factor: 1

Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	5.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Methylene chloride	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	109	(73 - 118)
1,2-Dichloroethane-d4	123	(62 - 128)
4-Bromofluorobenzene	96	(78 - 118)
Toluene-d8	97	(77 - 117)

Waste Management, Inc.

Client Sample ID: PZ-31

GC/MS Semivolatiles

Lot-Sample #...: D4J210361-001 Work Order #...: GT7LA1AT Matrix.....: WATER  
Date Sampled...: 10/20/04 08:50 Date Received...: 10/21/04  
Prep Date.....: 10/22/04 Analysis Date...: 10/29/04  
Prep Batch #...: 4296605 Analysis Time...: 21:42  
Dilution Factor: 1  
Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Dibenzofuran	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
Pentachlorobenzene	ND	10	ug/L
o-Toluidine	ND	10	ug/L
1,2,4-Trichloro- benzene	22	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	69	(33 - 106)
Phenol-d5	68	(40 - 105)
Nitrobenzene-d5	69	(48 - 108)
2-Fluorobiphenyl	69	(39 - 93 )
2,4,6-Tribromophenol	69	(31 - 122)
Terphenyl-d14	65	(20 - 123)

Waste Management, Inc.

Client Sample ID: MW-32

GC/MS Semivolatiles

Lot-Sample #....: D4J210361-002 Work Order #....: GT7LF1AT Matrix.....: WATER  
Date Sampled...: 10/20/04 09:50 Date Received...: 10/21/04  
Prep Date.....: 10/22/04 Analysis Date...: 11/04/04  
Prep Batch #....: 4296605 Analysis Time...: 16:31  
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Dibenzofuran	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
Pentachlorobenzene	ND	10	ug/L
o-Toluidine	ND	10	ug/L
1,2,4-Trichloro- benzene	ND	10	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	73	(33 - 106)
Phenol-d5	75	(40 - 105)
Nitrobenzene-d5	72	(48 - 108)
2-Fluorobiphenyl	70	(39 - 93 )
2,4,6-Tribromophenol	76	(31 - 122)
Terphenyl-d14	73	(20 - 123)

TETR-0013909

Waste Management, Inc.

Client Sample ID: MW-29A

GC/MS Semivolatiles

Lot-Sample #....: D4J210361-003    Work Order #....: GT7LH1AT    Matrix.....: WATER  
Date Sampled....: 10/20/04 10:45    Date Received...: 10/21/04  
Prep Date.....: 10/22/04    Analysis Date...: 11/04/04  
Prep Batch #....: 4296605    Analysis Time...: 16:57  
Dilution Factor: 1

Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Dibenzofuran	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
Pentachlorobenzene	ND	10	ug/L
o-Toluidine	ND	10	ug/L
1,2,4-Trichloro- benzene	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	65	{33 - 106}
Phenol-d5	70	{40 - 105}
Nitrobenzene-d5	65	{48 - 108}
2-Fluorobiphenyl	68	{39 - 93 }
2,4,6-Tribromophenol	78	{31 - 122}
Terphenyl-d14	75	{20 - 123}

Waste Management, Inc.

Client Sample ID: PZ-26

GC/MS Semivolatiles

Lot-Sample #....: D4J210361-004    Work Order #....: GT7LK1AT    Matrix.....: WATER  
 Date Sampled...: 10/20/04 11:40    Date Received...: 10/21/04  
 Prep Date.....: 10/22/04    Analysis Date...: 11/04/04  
 Prep Batch #....: 4296605    Analysis Time...: 17:24  
 Dilution Factor: 1  
 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Dibenzofuran	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
Pentachlorobenzene	ND	10	ug/L
o-Toluidine	ND	10	ug/L
1,2,4-Trichloro- benzene	ND	10	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	63	(33 - 106)
Phenol-d5	66	(40 - 105)
Nitrobenzene-d5	63	(48 - 108)
2-Fluorobiphenyl	64	(39 - 93 )
2,4,6-Tribromophenol	70	(31 - 122)
Terphenyl-d14	70	(20 - 123)

Waste Management, Inc.

Client Sample ID: MW-01X

GC/MS Semivolatiles

Lot-Sample #...: D4J210361-005    Work Order #...: GT71M1AT    Matrix.....: WATER  
Date Sampled...: 10/20/04    Date Received...: 10/21/04  
Prep Date.....: 10/22/04    Analysis Date...: 11/04/04  
Prep Batch #...: 4296605    Analysis Time...: 17:50  
Dilution Factor: 1

Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>
Dibenzofuran	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
Pentachlorobenzene	ND	10	ug/L
o-Toluidine	ND	10	ug/L
1,2,4-Trichloro- benzene	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
2-Fluorophenol	60	(33 - 106)
Phenol-d5	65	(40 - 105)
Nitrobenzene-d5	62	(48 - 108)
2-Fluorobiphenyl	62	(39 - 93 )
2,4,6-Tribromophenol	66	(31 - 122)
Terphenyl-d14	67	(20 - 123)

Waste Management, Inc.

Client Sample ID: FB01

GC/MS Semivolatiles

Lot-Sample #...: D4J210361-006 Work Order #...: GT7LP1AT Matrix.....: WATER  
Date Sampled...: 10/20/04 12:20 Date Received...: 10/21/04  
Prep Date.....: 10/22/04 Analysis Date...: 11/04/04  
Prep Batch #...: 4296605 Analysis Time...: 18:17  
Dilution Factor: 1  
Method.....: SW846 8270C

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Dibenzofuran	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
3-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
Pentachlorobenzene	ND	10	ug/L
o-Toluidine	ND	10	ug/L
1,2,4-Trichloro- benzene	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	71	(33 - 106)
Phenol-d5	75	(40 - 105)
Nitrobenzene-d5	70	(48 - 108)
2-Fluorobiphenyl	65	(39 - 93 )
2,4,6-Tribromophenol	73	(31 - 122)
Terphenyl-d14	81	(20 - 123)

Waste Management, Inc.

Client Sample ID: PZ-31

TOTAL Metals

Lot-Sample #...: D4J210361-001

Matrix.....: WATER

Date Sampled...: 10/20/04 08:50 Date Received...: 10/21/04

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>Prep Batch #...: 4295638</b>						
Cobalt	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AC
		Dilution Factor: 1		Analysis Time...: 13:57		
Antimony	ND	6.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AE
		Dilution Factor: 1		Analysis Time...: 13:57		
Zinc	ND	20	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AF
		Dilution Factor: 1		Analysis Time...: 13:57		
Vanadium	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AG
		Dilution Factor: 1		Analysis Time...: 13:57		
Selenium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AH
		Dilution Factor: 1		Analysis Time...: 13:57		
Lead	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AJ
		Dilution Factor: 1		Analysis Time...: 13:57		
Nickel	ND	40	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AK
		Dilution Factor: 1		Analysis Time...: 13:57		
Chromium	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AL
		Dilution Factor: 1		Analysis Time...: 13:57		
Cadmium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AM
		Dilution Factor: 1		Analysis Time...: 13:57		
Beryllium	ND	2.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AN
		Dilution Factor: 1		Analysis Time...: 13:57		
Barium	840	7.4	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AP
		Dilution Factor: 1		Analysis Time...: 13:57		
Arsenic	37	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LA1AQ
		Dilution Factor: 1		Analysis Time...: 13:57		
<b>Prep Batch #...: 4299202</b>						
Mercury	ND	0.20	ug/L	MCAWW 245.1	10/28-10/29/04	GT7LA1AR
		Dilution Factor: 1		Analysis Time...: 09:46		

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Waste Management, Inc.

Client Sample ID: PZ-31

TOTAL Metals

Lot-Sample #...: D4J210361-001

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 4299579						
Thallium	ND	2.0	ug/L	MCAWW 200.8	10/26-10/27/04	GT7LA1AD
		Dilution Factor: 1		Analysis Time..: 17:38		

Waste Management, Inc.

Client Sample ID: MW-32

TOTAL Metals

Lot-Sample #...: D4J210361-002

Matrix.....: WATER

Date Sampled...: 10/20/04 09:50 Date Received...: 10/21/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>Prep Batch #...: 4295638</b>						
Cobalt	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AC
		Dilution Factor: 1		Analysis Time...: 14:27		
Antimony	ND	6.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AE
		Dilution Factor: 1		Analysis Time...: 14:27		
Zinc	ND	20	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AF
		Dilution Factor: 1		Analysis Time...: 14:27		
Vanadium	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AG
		Dilution Factor: 1		Analysis Time...: 14:27		
Selenium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AH
		Dilution Factor: 1		Analysis Time...: 14:27		
Lead	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AJ
		Dilution Factor: 1		Analysis Time...: 14:27		
Nickel	54	40	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AK
		Dilution Factor: 1		Analysis Time...: 14:27		
Chromium	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AL
		Dilution Factor: 1		Analysis Time...: 14:27		
Cadmium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AM
		Dilution Factor: 1		Analysis Time...: 14:27		
Beryllium	ND	2.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AN
		Dilution Factor: 1		Analysis Time...: 14:27		
Barium	36	7.4	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AP
		Dilution Factor: 1		Analysis Time...: 14:27		
Arsenic	10	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LF1AQ
		Dilution Factor: 1		Analysis Time...: 14:27		
<b>Prep Batch #...: 4296567</b>						
Thallium	ND	2.0	ug/L	MCAWW 200.8	10/25-10/27/04	GT7LF1AD
		Dilution Factor: 1		Analysis Time...: 19:47		

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Waste Management, Inc.

Client Sample ID: MW-32

TOTAL Metals

Lot-Sample #...: D4J210361-002

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 4299202						
Mercury	ND	0.20	ug/L	MCAWW 245.1	10/28-10/29/04	GT7LF1AR
		Dilution Factor: 1		Analysis Time..: 09:48		

TETR-0013917

Waste Management, Inc.

Client Sample ID: MW-29A

TOTAL Metals

Lot-Sample #...: D4J210361-003

Matrix.....: WATER

Date Sampled...: 10/20/04 10:45 Date Received...: 10/21/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4295638						
Cobalt	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AC
		Dilution Factor: 1		Analysis Time...: 14:32		
Antimony	ND	6.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AE
		Dilution Factor: 1		Analysis Time...: 14:32		
Zinc	ND	20	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AF
		Dilution Factor: 1		Analysis Time...: 14:32		
Vanadium	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AG
		Dilution Factor: 1		Analysis Time...: 14:32		
Selenium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AH
		Dilution Factor: 1		Analysis Time...: 14:32		
Lead	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AJ
		Dilution Factor: 1		Analysis Time...: 14:32		
Nickel	ND	40	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AK
		Dilution Factor: 1		Analysis Time...: 14:32		
Chromium	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AL
		Dilution Factor: 1		Analysis Time...: 14:32		
Cadmium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AM
		Dilution Factor: 1		Analysis Time...: 14:32		
Beryllium	ND	2.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AN
		Dilution Factor: 1		Analysis Time...: 14:32		
Barium	16	7.4	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AP
		Dilution Factor: 1		Analysis Time...: 14:32		
Arsenic	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LH1AQ
		Dilution Factor: 1		Analysis Time...: 14:32		
Prep Batch #...: 4296567						
Thallium	ND	2.0	ug/L	MCAWW 200.8	10/25-10/27/04	GT7LH1AD
		Dilution Factor: 1		Analysis Time...: 19:59		

(Continued on next page)

Waste Management, Inc.

Client Sample ID: MW-29A

TOTAL Metals

Lot-Sample #...: D4J210361-003

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 4299202						
Mercury	ND	0.20	ug/L	MCAWW 245.1	10/28-10/29/04	GT7LH1AR
		Dilution Factor: 1		Analysis Time..: 09:50		

Waste Management, Inc.

Client Sample ID: PZ-26

TOTAL Metals

Lot-Sample #....: D4J210361-004

Matrix.....: WATER

Date Sampled....: 10/20/04 11:40 Date Received...: 10/21/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 4295638						
Cobalt	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AC
		Dilution Factor: 1		Analysis Time...: 14:37		
Antimony	ND	6.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AE
		Dilution Factor: 1		Analysis Time...: 14:37		
Zinc	ND	20	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AF
		Dilution Factor: 1		Analysis Time...: 14:37		
Vanadium	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AG
		Dilution Factor: 1		Analysis Time...: 14:37		
Selenium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AH
		Dilution Factor: 1		Analysis Time...: 14:37		
Lead	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AJ
		Dilution Factor: 1		Analysis Time...: 14:37		
Nickel	ND	40	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AK
		Dilution Factor: 1		Analysis Time...: 14:37		
Chromium	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AL
		Dilution Factor: 1		Analysis Time...: 14:37		
Cadmium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AM
		Dilution Factor: 1		Analysis Time...: 14:37		
Beryllium	ND	2.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AN
		Dilution Factor: 1		Analysis Time...: 14:37		
Barium	8.9	7.4	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AP
		Dilution Factor: 1		Analysis Time...: 14:37		
Arsenic	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LK1AQ
		Dilution Factor: 1		Analysis Time...: 14:37		
Prep Batch #....: 4296567						
Thallium	ND	2.0	ug/L	MCAWW 200.8	10/25-10/27/04	GT7LK1AD
		Dilution Factor: 1		Analysis Time...: 20:02		

(Continued on next page)

Waste Management, Inc.

Client Sample ID: PZ-26

TOTAL Metals

Lot-Sample #...: D4J210361-004

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 4299202 Mercury	ND	0.20	ug/L	MCAWW 245.1	10/28-10/29/04	GT7LK1AR
		Dilution Factor: 1		Analysis Time...: 09:52		

TETR-0013921

Waste Management, Inc.

Client Sample ID: MW-01X

TOTAL Metals

Lot-Sample #...: D4J210361-005

Matrix.....: WATER

Date Sampled...: 10/20/04

Date Received...: 10/21/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4295638						
Cobalt	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AC
		Dilution Factor: 1		Analysis Time...: 14:41		
Antimony	ND	6.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AE
		Dilution Factor: 1		Analysis Time...: 14:41		
Zinc	ND	20	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AF
		Dilution Factor: 1		Analysis Time...: 14:41		
Vanadium	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AG
		Dilution Factor: 1		Analysis Time...: 14:41		
Selenium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AH
		Dilution Factor: 1		Analysis Time...: 14:41		
Lead	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AJ
		Dilution Factor: 1		Analysis Time...: 14:41		
Nickel	ND	40	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AK
		Dilution Factor: 1		Analysis Time...: 14:41		
Chromium	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AL
		Dilution Factor: 1		Analysis Time...: 14:41		
Cadmium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AM
		Dilution Factor: 1		Analysis Time...: 14:41		
Beryllium	ND	2.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AN
		Dilution Factor: 1		Analysis Time...: 14:41		
Barium	10	7.4	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AP
		Dilution Factor: 1		Analysis Time...: 14:41		
Arsenic	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LM1AQ
		Dilution Factor: 1		Analysis Time...: 14:41		
Prep Batch #...: 4296567						
Thallium	ND	2.0	ug/L	MCAWW 200.8	10/25-10/27/04	GT7LM1AD
		Dilution Factor: 1		Analysis Time...: 20:06		

(Continued on next page)

Waste Management, Inc.

Client Sample ID: MW-01X

TOTAL Metals

Lot-Sample #...: D4J210361-005

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 4299202						
Mercury	ND	0.20	ug/L	MCAW 245.1	10/28-10/29/04	GT71M1AR
		Dilution Factor: 1		Analysis Time..: 09:53		

TETR-0013923

Waste Management, Inc.

Client Sample ID: FB01

TOTAL Metals

Lot-Sample #...: D4J210361-006

Matrix.....: WATER

Date Sampled...: 10/20/04 12:20 Date Received...: 10/21/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>Prep Batch #...: 4295638</b>						
Cobalt	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AC
		Dilution Factor: 1		Analysis Time...: 14:46		
Antimony	ND	6.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AE
		Dilution Factor: 1		Analysis Time...: 14:46		
Zinc	ND	20	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AF
		Dilution Factor: 1		Analysis Time...: 14:46		
Vanadium	ND	50	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AG
		Dilution Factor: 1		Analysis Time...: 14:46		
Selenium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AH
		Dilution Factor: 1		Analysis Time...: 14:46		
Lead	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AJ
		Dilution Factor: 1		Analysis Time...: 14:46		
Nickel	ND	40	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AK
		Dilution Factor: 1		Analysis Time...: 14:46		
Chromium	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AL
		Dilution Factor: 1		Analysis Time...: 14:46		
Cadmium	ND	5.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AM
		Dilution Factor: 1		Analysis Time...: 14:46		
Beryllium	ND	2.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AN
		Dilution Factor: 1		Analysis Time...: 14:46		
Barium	ND	7.4	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AP
		Dilution Factor: 1		Analysis Time...: 14:46		
Arsenic	ND	10	ug/L	MCAWW 200.7	10/22-10/23/04	GT7LP1AQ
		Dilution Factor: 1		Analysis Time...: 14:46		
<b>Prep Batch #...: 4296567</b>						
Thallium	ND	2.0	ug/L	MCAWW 200.8	10/25-10/27/04	GT7LP1AD
		Dilution Factor: 1		Analysis Time...: 20:17		

(Continued on next page)

Waste Management, Inc.

Client Sample ID: FB01

TOTAL Metals

Lot-Sample #...: D4J210361-006

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 4299202						
Mercury	ND	0.20	ug/L	MCAWW 245.1	10/28-10/29/04	GT7LP1AR
		Dilution Factor: 1		Analysis Time...: 09:55		

# QC DATA ASSOCIATION SUMMARY

D4J210361

## Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 200.7		4295638	4295367
	WATER	MCAWW 245.1		4299202	4299193
	WATER	SW846 8260B		4306481	4306291
	WATER	SW846 8270C		4296605	
	WATER	MCAWW 200.8		4299579	4299369
002	WATER	MCAWW 200.7		4295638	4295367
	WATER	MCAWW 245.1		4299202	4299193
	WATER	SW846 8260B		4306481	4306291
	WATER	SW846 8270C		4296605	
	WATER	MCAWW 200.8		4296567	4296323
003	WATER	MCAWW 200.7		4295638	4295367
	WATER	MCAWW 245.1		4299202	4299193
	WATER	SW846 8260B		4306481	4306291
	WATER	SW846 8270C		4296605	
	WATER	MCAWW 200.8		4296567	4296323
004	WATER	MCAWW 200.7		4295638	4295367
	WATER	MCAWW 245.1		4299202	4299193
	WATER	SW846 8260B		4306582	4306351
	WATER	SW846 8270C		4296605	
	WATER	MCAWW 200.8		4296567	4296323
005	WATER	MCAWW 200.7		4295638	4295367
	WATER	MCAWW 245.1		4299202	4299193
	WATER	SW846 8260B		4306582	4306351
	WATER	SW846 8270C		4296605	
	WATER	MCAWW 200.8		4296567	4296323
006	WATER	MCAWW 200.7		4295638	4295367
	WATER	MCAWW 245.1		4299202	4299193
	WATER	SW846 8260B		4306582	4306351
	WATER	SW846 8270C		4296605	
	WATER	MCAWW 200.8		4296567	4296323
007	WATER	SW846 8260B		4306582	4306351

TETR-0013926

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4J210361  
 MB Lot-Sample #: D4K010000-481

Work Order #...: GV1NK1AA

Matrix.....: WATER

Analysis Date...: 10/29/04  
 Dilution Factor: 1

Prep Date.....: 10/29/04  
 Prep Batch #...: 4306481

Analysis Time...: 14:50

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Benzene	ND	0.17	ug/L	SW846 8260B
Chlorobenzene	ND	0.13	ug/L	SW846 8260B
Chloroethane	ND	0.18	ug/L	SW846 8260B
Chloroform	ND	0.17	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	0.15	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	0.16	ug/L	SW846 8260B
1,1-Dichloroethane	ND	0.22	ug/L	SW846 8260B
1,2-Dichloropropane	ND	0.18	ug/L	SW846 8260B
1,4-Dioxane	ND	57	ug/L	SW846 8260B
Ethylbenzene	ND	0.12	ug/L	SW846 8260B
Trichlorofluoromethane	ND	0.24	ug/L	SW846 8260B
Methylene chloride	0.53	0.21	ug/L	SW846 8260B
Styrene	ND	0.14	ug/L	SW846 8260B
Tetrachloroethane	ND	0.26	ug/L	SW846 8260B
Toluene	ND	0.15	ug/L	SW846 8260B
Trichloroethene	ND	0.16	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	0.33	ug/L	SW846 8260B
Xylenes (total)	ND	0.41	ug/L	SW846 8260B
2-Butanone (MEK)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	102	(73 - 118)
1,2-Dichloroethane-d4	100	(62 - 128)
4-Bromofluorobenzene	98	(78 - 118)
Toluene-d8	115	(77 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4J210361      Work Order #...: GV1NK1AC      Matrix.....: WATER  
 LCS Lot-Sample#: D4K010000-481  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4306481      Analysis Time...: 14:25  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Benzene	81	(75 - 120)	SW846 8260B
Chlorobenzene	89	(78 - 118)	SW846 8260B
Toluene	94	(78 - 118)	SW846 8260B
Trichloroethene	82	(79 - 122)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	98	(73 - 118)
1,2-Dichloroethane-d4	93	(62 - 128)
4-Bromofluorobenzene	103	(78 - 118)
Toluene-d8	115	(77 - 117)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4J210361      Work Order #...: GV1NK1AC      Matrix.....: WATER  
 LCS Lot-Sample#: D4K010000-481  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4306481      Analysis Time...: 14:25  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
Benzene	10.0	8.09	ug/L	81	SW846 8260B
Chlorobenzene	10.0	8.88	ug/L	89	SW846 8260B
Toluene	10.0	9.38	ug/L	94	SW846 8260B
Trichloroethene	10.0	8.16	ug/L	82	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	98	(73 - 118)
1,2-Dichloroethane-d4	93	(62 - 128)
4-Bromofluorobenzene	103	(78 - 118)
Toluene-d8	115	(77 - 117)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

**MATRIX SPIKE SAMPLE EVALUATION REPORT**

**GC/MS Volatiles**

Client Lot #...: D4J210361      Work Order #...: GVJER1AC-MS      Matrix.....: WATER  
 MS Lot-Sample #: D4J260250-003      GVJER1AD-MSD  
 Date Sampled...: 10/25/04 10:30      Date Received...: 10/26/04  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4306481      Analysis Time...: 16:03  
 Dilution Factor: 20

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Benzene	93	(75 - 120)			SW846 8260B
	99	(75 - 120)	6.2	(0-21)	SW846 8260B
Chlorobenzene	96	(78 - 118)			SW846 8260B
	95	(78 - 118)	0.69	(0-20)	SW846 8260B
Toluene	99	(78 - 118)			SW846 8260B
	97	(78 - 118)	1.8	(0-22)	SW846 8260B
Trichloroethene	92	(79 - 122)			SW846 8260B
	101	(79 - 122)	9.2	(0-23)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	112	(73 - 118)
	112	(73 - 118)
1,2-Dichloroethane-d4	101	(62 - 128)
	106	(62 - 128)
4-Bromofluorobenzene	106	(78 - 118)
	98	(78 - 118)
Toluene-d8	107	(77 - 117)
	100	(77 - 117)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4J210361      Work Order #...: GVJER1AC-MS      Matrix.....: WATER  
 MS Lot-Sample #: D4J260250-003      GVJER1AD-MSD  
 Date Sampled...: 10/25/04 10:30      Date Received...: 10/26/04  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4306481      Analysis Time...: 16:03  
 Dilution Factor: 20

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Benzene	ND	200	186	ug/L	93		SW846 8260B
	ND	200	198	ug/L	99	6.2	SW846 8260B
Chlorobenzene	ND	200	191	ug/L	96		SW846 8260B
	ND	200	190	ug/L	95	0.69	SW846 8260B
Toluene	ND	200	197	ug/L	99		SW846 8260B
	ND	200	194	ug/L	97	1.8	SW846 8260B
Trichloroethene	ND	200	184	ug/L	92		SW846 8260B
	ND	200	202	ug/L	101	9.2	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	112	(73 - 118)
	112	(73 - 118)
1,2-Dichloroethane-d4	101	(62 - 128)
	106	(62 - 128)
4-Bromofluorobenzene	106	(78 - 118)
	98	(78 - 118)
Toluene-d8	107	(77 - 117)
	100	(77 - 117)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D4J210361  
 MB Lot-Sample #: D4K010000-582

Work Order #...: GV1XT1AA  
 Prep Date.....: 10/29/04  
 Prep Batch #...: 4306582

Matrix.....: WATER

Analysis Time...: 20:16

Analysis Date...: 10/29/04  
 Dilution Factor: 1

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Benzene	ND	0.17	ug/L	SW846 8260B
Chlorobenzene	ND	0.13	ug/L	SW846 8260B
Chloroethane	ND	0.18	ug/L	SW846 8260B
Chloroform	ND	0.17	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	0.15	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	0.16	ug/L	SW846 8260B
1,1-Dichloroethane	ND	0.22	ug/L	SW846 8260B
1,2-Dichloropropane	ND	0.18	ug/L	SW846 8260B
Ethylbenzene	ND	0.12	ug/L	SW846 8260B
Trichlorofluoromethane	ND	0.24	ug/L	SW846 8260B
Methylene chloride	ND	0.21	ug/L	SW846 8260B
Styrene	ND	0.14	ug/L	SW846 8260B
Tetrachloroethene	ND	0.26	ug/L	SW846 8260B
Toluene	ND	0.15	ug/L	SW846 8260B
Trichloroethene	ND	0.16	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	0.33	ug/L	SW846 8260B
1,4-Dioxane	ND	57	ug/L	SW846 8260B
Xylenes (total)	ND	0.41	ug/L	SW846 8260B
2-Butanone (MEK)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	108	(73 - 118)
1,2-Dichloroethane-d4	124	(62 - 128)
4-Bromofluorobenzene	95	(78 - 118)
Toluene-d8	93	(77 - 117)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D4J210361      Work Order #...: GV1XT1AC      Matrix.....: WATER  
 LCS Lot-Sample#: D4K010000-582  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4306582      Analysis Time...: 19:52  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Benzene	101	(75 - 120)	SW846 8260B
Chlorobenzene	93	(78 - 118)	SW846 8260B
Toluene	94	(78 - 118)	SW846 8260B
Trichloroethene	94	(79 - 122)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	113	(73 - 118)
1,2-Dichloroethane-d4	127	(62 - 128)
4-Bromofluorobenzene	99	(78 - 118)
Toluene-d8	96	(77 - 117)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: D4J210361      Work Order #....: GV1XT1AC      Matrix.....: WATER  
 LCS Lot-Sample#: D4K010000-582  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #....: 4306582      Analysis Time...: 19:52  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
Benzene	10.0	10.1	ug/L	101	SW846 8260B
Chlorobenzene	10.0	9.27	ug/L	93	SW846 8260B
Toluene	10.0	9.41	ug/L	94	SW846 8260B
Trichloroethene	10.0	9.41	ug/L	94	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Dibromofluoromethane	113	(73 - 118)
1,2-Dichloroethane-d4	127	(62 - 128)
4-Bromofluorobenzene	99	(78 - 118)
Toluene-d8	96	(77 - 117)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: D4J210361      Work Order #....: GT7KP1CG-MS      Matrix.....: WATER  
 MS Lot-Sample #: D4J210353-001      GT7KP1CH-MSD  
 Date Sampled....: 10/20/04 10:45      Date Received...: 10/21/04  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #....: 4306582      Analysis Time...: 22:48  
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	95	{75 - 120}			SW846 8260B
	94	{75 - 120}	1.3	{0-21}	SW846 8260B
Chlorobenzene	92	{78 - 118}			SW846 8260B
	87	{78 - 118}	5.6	{0-20}	SW846 8260B
Toluene	92	{78 - 118}			SW846 8260B
	86	{78 - 118}	6.7	{0-22}	SW846 8260B
Trichloroethene	91	{79 - 122}			SW846 8260B
	90	{79 - 122}	1.4	{0-23}	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	113	{73 - 118}
	111	{73 - 118}
1,2-Dichloroethane-d4	128	{62 - 128}
	125	{62 - 128}
4-Bromofluorobenzene	97	{78 - 118}
	92	{78 - 118}
Toluene-d8	95	{77 - 117}
	90	{77 - 117}

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D4J210361      Work Order #...: GT7KP1CG-MS      Matrix.....: WATER  
 MS Lot-Sample #: D4J210353-001      GT7KP1CH-MSD  
 Date Sampled...: 10/20/04 10:45      Date Received...: 10/21/04  
 Prep Date.....: 10/29/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4306582      Analysis Time...: 22:48  
 Dilution Factor: 1

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Benzene	ND	10.0	9.50	ug/L	95		SW846 8260B
	ND	10.0	9.38	ug/L	94	1.3	SW846 8260B
Chlorobenzene	ND	10.0	9.17	ug/L	92		SW846 8260B
	ND	10.0	8.67	ug/L	87	5.6	SW846 8260B
Toluene	ND	10.0	9.18	ug/L	92		SW846 8260B
	ND	10.0	8.58	ug/L	86	6.7	SW846 8260B
Trichloroethene	ND	10.0	9.14	ug/L	91		SW846 8260B
	ND	10.0	9.01	ug/L	90	1.4	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	113	(73 - 118)
	111	(73 - 118)
1,2-Dichloroethane-d4	128	(62 - 128)
	125	(62 - 128)
4-Bromofluorobenzene	97	(78 - 118)
	92	(78 - 118)
Toluene-d8	95	(77 - 117)
	90	(77 - 117)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D4J210361  
 MB Lot-Sample #: D4J220000-605

Work Order #...: GVCVA1AA

Matrix.....: WATER

Analysis Date...: 10/29/04  
 Dilution Factor: 1

Prep Date.....: 10/22/04

Analysis Time...: 16:08

Prep Batch #...: 4296605

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
2,4-Dimethylphenol	ND	4.0	ug/L	SW846 8270C
2-Methylphenol	ND	0.90	ug/L	SW846 8270C
Dibenzofuran	ND	0.60	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	1.0	ug/L	SW846 8270C
Hexachlorobenzene	ND	0.80	ug/L	SW846 8270C
2-Methylnaphthalene	ND	0.80	ug/L	SW846 8270C
Naphthalene	ND	0.80	ug/L	SW846 8270C
1,2,4-Trichloro- benzene	ND	0.90	ug/L	SW846 8270C
o-Toluidine	ND	2.0	ug/L	SW846 8270C
3-Methylphenol	ND	0.80	ug/L	SW846 8270C
Pentachlorobenzene	ND	2.0	ug/L	SW846 8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	67	(33 - 106)
Phenol-d5	68	(40 - 105)
Nitrobenzene-d5	63	(48 - 108)
2-Fluorobiphenyl	61	(39 - 93)
2,4,6-Tribromophenol	57	(31 - 122)
Terphenyl-d14	70	(20 - 123)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**LABORATORY CONTROL SAMPLE EVALUATION REPORT**

**GC/MS Semivolatiles**

Client Lot #...: D4J210361      Work Order #...: GVCVA1AC      Matrix.....: WATER  
 LCS Lot-Sample#: D4J220000-605  
 Prep Date.....: 10/22/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4296605      Analysis Time...: 16:33  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
2,4-Dinitrotoluene	77	(50 - 111)	SW846 8270C
1,2,4-Trichloro- benzene	65	(42 - 94)	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	68	(55 - 95)
Phenol-d5	69	(58 - 97)
Nitrobenzene-d5	66	(55 - 100)
2-Fluorobiphenyl	66	(40 - 93)
2,4,6-Tribromophenol	63	(51 - 107)
Terphenyl-d14	72	(49 - 111)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D4J210361      Work Order #...: GVCVA1AC      Matrix.....: WATER  
 LCS Lot-Sample#: D4J220000-605  
 Prep Date.....: 10/22/04      Analysis Date...: 10/29/04  
 Prep Batch #...: 4296605      Analysis Time...: 16:33  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
2,4-Dinitrotoluene	100	77.3	ug/L	77.	SWB46 8270C
1,2,4-Trichloro- benzene	100	65.3	ug/L	65	SWB46 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	68	(55 - 95)
Phenol-d5	69	(58 - 97)
Nitrobenzene-d5	66	(55 - 100)
2-Fluorobiphenyl	66	(40 - 93)
2,4,6-Tribromophenol	63	(51 - 107)
Terphenyl-d14	72	(49 - 111)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: D4J210361

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D4J210000-638 Prep Batch #....: 4295638						
Cobalt	ND	0.91	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AA
		Dilution Factor: 1 Analysis Time...: 13:27				
Antimony	ND	3.2	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AD
		Dilution Factor: 1 Analysis Time...: 13:27				
Zinc	ND	4.9	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AE
		Dilution Factor: 1 Analysis Time...: 13:27				
Vanadium	ND	2.4	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AF
		Dilution Factor: 1 Analysis Time...: 13:27				
Selenium	ND	3.3	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AG
		Dilution Factor: 1 Analysis Time...: 13:27				
Lead	ND	1.5	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AH
		Dilution Factor: 1 Analysis Time...: 13:27				
Nickel	ND	2.0	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AJ
		Dilution Factor: 1 Analysis Time...: 13:27				
Chromium	ND	1.2	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AK
		Dilution Factor: 1 Analysis Time...: 13:27				
Cadmium	ND	0.38	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AL
		Dilution Factor: 1 Analysis Time...: 13:27				
Beryllium	ND	0.83	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AM
		Dilution Factor: 1 Analysis Time...: 13:27				
Barium	ND	2.1	ug/L	MCAWW 200.7	10/22-10/23/04	GT7VM1AN
		Dilution Factor: 1 Analysis Time...: 13:27				

(Continued on next page)

CAUSE NO. 97-12163

TEXAS DISPOSAL SYSTEMS ) IN THE DISTRICT COURT  
LANDFILL, INC. )  
VS. ) TRAVIS COUNTY, TEXAS  
WASTE MANAGEMENT, INC., )  
WASTE MANAGEMENT OF )  
TEXAS, INC., and DONALD )  
MARTIN ) 126<sup>TH</sup> JUDICIAL DISTRICT

\*\*\*\*\*

ORAL AND VIDEOTAPED DEPOSITION OF  
WILLIS RUTLEDGE FUSILIER, JR.

JUNE 25, 2002

\*\*\*\*\*

CONDENSED TRANSCRIPT AND KEYWORD INDEX

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STIPULATIONS

ORAL DEPOSITION(S) OF: Willis "Rusty" Fusilier

The attorneys for all the parties present stipulate and agree to the following checked items:

1. Objections:

- Texas Rules of Civil Procedure.
- Federal Rules of Civil Procedure.
- Other: \_\_\_\_\_

2. Delivery for signature and changes:

The witness, or the witness's attorney, will return the signed deposition to the court reporter within 20 days of the date of submission. If the original of the deposition is not signed, or made available, an unsigned copy may be used as though signed.

- The original transcript will be submitted to the witness's attorney.
- The original transcript will be submitted to the witness at the following address: \_\_\_\_\_

Signature waived.

The attorney asking the first question will be responsible for the timely payment of all costs in connection with the original deposition transcript.

I hereby agree to the above and foregoing marked items and request that AcuScribe Court Reporters furnish me with the items checked below. Unless otherwise requested, I will receive copies of all exhibits. My firm and I will be responsible for the timely payment of any original or copies and/or exhibits as indicated below that I may request. I agree that if I am an out-of-city client and/or have made no prior credit arrangement with AcuScribe Court Reporters, the transcript(s) stated above may be delivered on a COD basis. If any indebtedness due and owing is not paid as agreed, the undersigned agrees to pay reasonable attorneys fees, plus all costs of collection and all other costs and expenses which may be incurred by Acuscribe Court Reporters relative to collection of the indebtedness due and owing, whether suit be instituted or not.

Executed this the 25th day of June, 20    

[Signature] Attorney for: \_\_\_\_\_

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[Signature] Attorney for: Defendant

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( 1 ) NO. 97-12163  
 ( 2 ) TEXAS DISPOSAL SYSTEMS ) IN THE DISTRICT COURT  
 ( 3 ) LANDFILL, INC. )  
 ( 4 ) Plaintiff: )  
 ( 5 ) VS. ) TRAVIS COUNTY, TEXAS  
 ( 6 ) WASTE MANAGEMENT, INC. )  
 ( 7 ) WASTE MANAGEMENT OF TEXAS, )  
 ( 8 ) INC and DONALD MARTIN, )  
 ( 9 ) Defendants. ) 126TH JUDICIAL DISTRICT  
 (10)  
 (11)  
 (12) \*\*\*\*\*  
 (13) ORAL AND VIDEOTAPED DEPOSITION OF  
 (14) WILLIS RUTLEDGE FUSILIER, JR.  
 (15) JUNE 25, 2002  
 (16) \*\*\*\*\*  
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( 1 ) ORAL AND VIDEOTAPED DEPOSITION OF  
 ( 2 ) WILLIS RUTLEDGE FUSILIER, JR. produced as a witness  
 ( 3 ) at the instance of the Plaintiff, and duly sworn was  
 ( 4 ) taken in the above-styled and numbered cause on the  
 ( 5 ) 25th of June, 2002, from 9:16 a.m. to 11:30 a.m. and  
 ( 6 ) from 12:35 p.m. to 5:50 p.m., before GERRI C. BARKER,  
 ( 7 ) CSR, in and for the State of Texas, reported by  
 ( 8 ) machine shorthand, at the offices of Jackson Walker,  
 ( 9 ) L.L.P., 100 Congress Avenue, Suite 1100, Austin,  
 (10) Texas, pursuant to the Texas Rules of Civil Procedure  
 (11) and the provisions stated on the record or attached  
 (12) hereto  
 (13)  
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( 1 ) A P P E A R A N C E S  
 ( 2 )  
 ( 3 ) FOR THE PLAINTIFF-  
 ( 4 ) Mr. James A. Hemphill  
 ( 5 ) GEORGE & DONALDSON, L.L.P.,  
 ( 6 ) 114 West Seventh Street  
 ( 7 ) Suite 1100  
 ( 8 ) Austin, Texas 78701  
 ( 9 ) FOR THE DEFENDANTS, WASTE MANAGEMENT OF TEXAS,  
 (10) INC. and WASTE MANAGEMENT HOLDINGS, INC.  
 (11)  
 (12) Mr. John K. Edwards  
 (13) JACKSON WALKER, L.L.P.,  
 (14) 1100 Louisiana Street  
 (15) Suite 4200  
 (16) Houston Texas 77002  
 (17) ALSO PRESENT.  
 (18) Mr. Gary Newton  
 (19) Dr. Robert Kier  
 (20) Mr. Keith Calcote  
 (21) Mr. Jesse Perez, Videographer  
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8644-18645-18646-18647-18648-18649-18650-18651-18652-18653-18654-18655-18656-18657-18658-18659-18660-18661-18662-18663-18664-18665-18666-18667-18668-18669-18670-18671-18672-18673-18674-18675-18676-18677-18678-18679-18680-18681-18682-18683-18684-18685-18686-18687-18688-18689-18690-18691-18692-18693-18694-18695-18696-18697-18698-18699-18700-18701-18702-18703-18704-18705-18706-18707-18708-18709-18710-18711-18712-18713-18714-18715-18716-18717-18718-18719-18720-18721-18722-18723-18724-18725-18726-18727-18728-18729-18730-18731-18732-18733-18734-18735-18736-18737-18738-18739-18740-18741-18742-18743-18744-18745-18746-18747-18748-18749-18750-18751-18752-18753-18754-18755-18756-18757-18758-18759-18760-18761-18762-18763-18764-18765-18766-18767-18768-18769-18770-18771-18772-18773-18774-18775-18776-18777-18778-18779-18780-18781-18782-18783-18784-18785-18786-18787-18788-18789-18790-18791-18792-18793-18794-18795-18796-18797-18798-18799-18800-18801-18802-18803-18804-18805-18806-18807-18808-18809-18810-18811-18812-18813-18814-18815-18816-18817-18818-18819-18820-18821-18822-18823-18824-18825-18826-18827-18828-18829-18830-18831-18832-18833-18834-18835-18836-18837-18838-18839-18840-18841-18842-18843-18844-18845-18846-18847-18848-18849-18850-18851-18852-18853-18854-18855-18856-18857-18858-18859-18860-18861-18862-18863-18864-18865-18866-18867-18868-18869-18870-18871-18872-18873-18874-18875-18876-18877-18878-18879-18880-18881-18882-18883-18884-18885-18886-18887-18888-18889-18890-18891-18892-18893-18894-18895-18896-18897-18898-18899-18900-18901-18902-18903-18904-18905-18906-18907-18908-18909-18910-18911-18912-18913-18914-18915-18916-18917-18918-18919-18920-18921-18922-18923-18924-18925-18926-18927-18928-18929-18930-18931-18932-18933-18934-18935-18936-18937-18938-18939-18940-18941-18942-18943-18944-18945-18946-18947-18948-18949-18950-18951-18952-18953-18954-18955-18956-18957-18958-18959-18960-18961-18962-18963-18964-18965-18966-18967-18968-18969-18970-18971-18972-18973-18974-18975-18976-18977-18978-18979-18980-18981-18982-18983-18984-18985-18986-18987-18988-18989-18990-18991-18992-18993-18994-18995-18996-18997-18998-18999-19000-19001-19002-19003-19004-19005-19006-19007-19008-19009-19010-19011-19012-19013-19014-19015-19016-19017-19018-19019-19020-19021-19022-19023-19024-19025-19026-19027-19028-19029-19030-19031-19032-19033-19034-19035-19036-19037-19038-19039-19040-19041-19042-19043-19044-19045-19046-19047-19048-19049-19050-19051-19052-19053-19054-19055-19056-19057-19058-19059-19060-19061-19062-19063-19064-19065-19066-19067-19068-19069-19070-19071-19072-19073-19074-19075-19076-19077-19078-19079-19080-19081-19082-19083-19084-19085-19086-19087-19088-19089-19090-19091-19092-19093-19094-19095-19096-19097-19098-19099-19100-19101-19102-19103-19104-19105-19106-19107-19108-19109-19110-19111-19112-19113-19114-19115-19116-19117-19118-19119-19120-19121-19122-19123-19124-19125-19126-19127-19128-19129-19130-19131-19132-19133-19134-19135-19136-19137-19138-19139-19140-19141-19142-19143-19144-19145-19146-19147-19148-19149-19150-19151-19152-19153-19154-19155-19156-19157-19158-19159-19160-19161-19162-19163-19164-19165-19166-19167-19168-19169-19170-19171-19172-19173-19174-19175-19176-19177-19178-19179-19180-19181-19182-19183-19184-19185-19186-19187-19188-19189-19190-19191-19192-19193-19194-19195-19196-19197-19198-19199-19200-19201-19202-19203-19204-19205-19206-19207-19208-19209-19210-19211-19212-19213-19214-19215-19216-19217-19218-19219-19220-19221-19222-19223-19224-19225-19226-19227-19228-19229-19230-19231-19232-19233-19234-19235-19236-19237-19238-19239-19240-19241-19242-19243-19244-19245-19246-19247-19248-19249-19250-19251-19252-19253-19254-19255-19256-19257-19258-19259-19260-19261-19262-19263-19264-19265-19266-19267-19268-19269-19270-19271-19272-19273-19274-19275-19276-19277-19278-19279-19280-19281-19282-19283-19284-19285-19286-19287-19288-19289-19290-19291-19292-19293-19294-19295-19296-19297-19298-19299-19300-19301-19302-19303-19304-19305-19306-19307-19308-19309-19310-19311-19312-19313-19314-19315-19316-19317-19318-19319-19320-19321-19322-19323-19324-19325-19326-19327-19328-19329-19330-19331-19332-19333-19334-19335-19336-19337-19338-19339-19340-19341-19342-19343-19344-19345-19346-19347-19348-19349-19350-19351-19352-19353-19354-19355-19356-19357-19358-19359-19360-19361-19362-19363-19364-19365-19366-19367-19368-19369-19370-19371-19372-19373-19374-19375-19376-19377-19378-19379-19380-19381-19382-19383-19384-19385-19386-19387-19388-19389-19390-19391-19392-19393-19394-19395-19396-19397-19398-19399-19400-19401-19402-19403-19404-19405-19406-19407-19408-19409-19410-19411-19412-19413-19414-19415-19416-19417-19418-19419-19420-19421-19422-19423-19424-19425

EXHIBITS (CONTINUED)		
NO.	DESCRIPTION	PAGE
18	Soil Liner Evaluation Report for Recompact Soil Liner, Cell MD-4	272
19	Fax cover page from Emmett to Mr. Fusilier, with attachments	278
20	Handwritten memorandum from Mr. Fusilier to Johnny, with attachment	279
21	Audit Response Report	281

(1) preparation for your deposition today?  
 (2) A. Yes.  
 (3) Q. Okay. Do you recall what documents you reviewed?  
 (4) A. The affidavit that I signed regarding the documents that we produced.  
 (5) Q. Okay.  
 (6) A. Or not produced.  
 (7) Q. Any other documents that you reviewed in preparation for your deposition today?  
 (8) A. The - I guess it's actually the deposition notice, I'm not sure what it's called. I did review that.  
 (9) Q. Okay. Anything else?  
 (10) A. Not that I recall.  
 (11) Q. All right. Mr. Fusilier, what is your position with Waste Management of Texas?  
 (12) A. My title is compliance manager.  
 (13) Q. And how long have you had that title?  
 (14) A. Two years.  
 (15) Q. Now, I want to go backwards through your employment history from two years ago. What was your job before you became compliance manager and who did you work for?  
 (16) A. Prior to that, I worked for SCS Engineers.

(1) THE VIDEOGRAPHER: We're on the record,  
 (2) June 25th, 2002. The time is approximately 9:16.  
 (3) This is the beginning of Tape 1.  
 (4) WILLIS RUTLEDGE FUSILIER, JR.,  
 (5) having been first duly sworn, testified as follows:  
 (6) EXAMINATION  
 (7) BY MR. HEMPHILL:  
 (8) Q. Could you state your name for the record,  
 (9) please, sir.  
 (10) A. Willis Rutledge Fusilier, Jr.  
 (11) Q. And Mr. Fusilier, do you go by any nicknames typically?  
 (12) A. Rusty.  
 (13) Q. And who is your employer?  
 (14) A. Waste Management of Texas.  
 (15) Q. Okay. Mr. Fusilier, my name is Jim Hemphill and I'm one of the lawyers for Texas Disposal Systems Landfill, Inc. in this case. Have you ever given a deposition in any case or any other matter before?  
 (16) A. No, sir.  
 (17) Q. Okay. I'll give you a quick background; then, on what the process is. It's a question and answer session, it's under oath, and it can be used in court as if you were testifying in court. Do you understand that?

(1) Q. SCS Engineers?  
 (2) A. Engineers, yes.  
 (3) Q. And what did you do for SCS?  
 (4) A. I was a project manager.  
 (5) Q. What sort of project did you work on?  
 (6) A. Landfill related projects.  
 (7) Q. Now, did you leave SCS in approximately 2000?  
 (8) A. Yes.  
 (9) Q. Okay. How long were you with SCS?  
 (10) A. A little less than two years.  
 (11) Q. Now, while you were at SCS, did you do any work for any Waste Management entity?  
 (12) A. Yes.  
 (13) Q. Okay. What sort of work would you do for Waste Management entities at SCS?  
 (14) A. Permit modifications, primarily.  
 (15) Q. Did you work on any landfills in Central Texas or San Antonio while you were at SCS?  
 (16) A. Yes.  
 (17) Q. Which one?  
 (18) A. Austin Community Landfill, Rosillo Creek Landfill.  
 (19) Q. And where is that second landfill?  
 (20) A. It's in San Antonio.  
 (21) Q. Okay.

(1) A. Yes, sir.  
 (2) Q. Okay. And the court reporter is taking down everything we say, and it's also being videotaped. And it would help if you could wait until I am finished with my question before you answer, and I will wait until you're finished with your answer before I ask the next question. That will make it easier on the court reporter. All right?  
 (3) A. All right.  
 (4) Q. Okay. And if at any time you can't hear me or if my questions don't make sense, it might become clear to you that I'm not an engineer and I might ask something that is unintelligible, please just let me know and I'll do my best to rephrase. All right?  
 (5) A. Okay.  
 (6) Q. Okay. Now, aside from employees of Waste Management, or lawyers from Waste Management, or your family, have you talked to anyone today - excuse me - before today about giving your deposition today, about the substance of what you might testify about?  
 (7) A. Not about the substance.  
 (8) Q. Have you discussed anything beyond just the fact that you're going to give a deposition today?  
 (9) A. No.  
 (10) Q. Okay. Have you reviewed any documents in

(1) A. Covet Gardens landfill.  
 (2) Q. Okay. We'll come back and talk about some of those things, but I want to go - continue going back in your employment history. Did you start at SCS in 1999?  
 (3) A. 1998, actually.  
 (4) Q. All right. And where were you employed immediately before SCS Engineers?  
 (5) A. With Waste Management.  
 (6) Q. And what was your title?  
 (7) A. District engineer, as I recall.  
 (8) Q. And how long did you do that for Waste Management?  
 (9) A. I was with - previously with them from 1988 to 1998.  
 (10) Q. 1988 to 1998?  
 (11) A. Yes, approximately ten years.  
 (12) Q. Okay. And what did you do before you went to Waste Management in 1988?  
 (13) A. I worked for the Texas Department of Health.  
 (14) Q. And when did you start that job?  
 (15) A. 1981.  
 (16) Q. You were there from '81 to '88?  
 (17) A. Yes.  
 (18) Q. And what did you do with the TDH?

- (1) Type I landfills that have accepted municipal solid
- (2) wastes into cells without synthetic liners after
- (3) Subtitle D's effective date, correct?
- (4) MR. EDWARDS: Objection; form.
- (5) THE WITNESS: Yes.
- (6) Q. (By Mr. Hemphill) Including the Austin
- (7) Community Landfill?
- (8) A. Yes.
- (9) Q. And including the Williamson County landfill?
- (10) A. Yes.
- (11) Q. Does that include Lacy Lakeview?
- (12) A. I'm not sure about that facility.
- (13) Q. Does it include Covell Gardens?
- (14) A. Go back to the basis of your question.
- (15) Q. Sure. A Type I municipal solid waste
- (16) landfill that accepted waste into sectors without
- (17) synthetic liners after Subtitle D became effective.
- (18) A. And you're asking specifically about Covell?
- (19) Q. Uh-huh.
- (20) A. And state the question again in terms of -
- (21) Q. Sure.
- (22) A. - just specific to Covell?
- (23) Q. Yeah. Did Covell accept waste into cells
- (24) without synthetic liners at anytime after Subtitle D
- (25) became effective?

- (1) A. No.
- (2) Q. So there weren't any currently working cells
- (3) in October of 1993 at Covell Gardens that were -
- (4) didn't have synthetic liners that remained open after
- (5) October of '93?
- (6) A. All the cells at Covell are lined with
- (7) synthetic liners.
- (8) Q. And there haven't been any opened cells - do
- (9) you know what I mean by opened cells?
- (10) A. Yes.
- (11) Q. There weren't any opened cells without
- (12) synthetic liners at the time Subtitle D became
- (13) effective at that landfill?
- (14) A. Yes, there were.
- (15) Q. Okay. And they were still accepting waste in
- (16) those cells until it became full?
- (17) A. And they had synthetic liners. I'm sorry,
- (18) maybe I misunderstood your question.
- (19) Q. Yeah. My question was, at the time
- (20) Subtitle D became effective -
- (21) A. Right.
- (22) Q. - were there any open cells at Covell Gardens
- (23) that didn't have synthetic liners?
- (24) A. Oh, no. I'm sorry. I misunderstood.
- (25) Q. Okay. I probably didn't communicate it very

- (1) well. I'm not an engineer and I'm not a landfill
- (2) professional, which should be painfully obvious by
- (3) now. Do you know who made the decision that all
- (4) post-Subtitle D cells at the Austin Community Landfill
- (5) would have some type of synthetic liner?
- (6) MR. EDWARDS: Objection; form.
- (7) THE WITNESS: No. I don't really recall
- (8) who made that decision.
- (9) Q. (By Mr. Hemphill) Was that a decision or a
- (10) policy of Waste Management of Texas?
- (11) A. I don't recall if it was a specific policy.
- (12) Q. Did anyone with Waste Management of Texas or
- (13) Waste Management Holdings or Waste Management, Inc.
- (14) ever say to you, in effect, after Subtitle D for
- (15) Type I municipal solid waste landfills, they're all
- (16) going to have synthetic liners?
- (17) A. I don't remember if anybody specifically told
- (18) me that.
- (19) Q. Do you have any understanding as to whether
- (20) you're authorized to approve a proposal for a Central
- (21) Texas landfill to seek approval of a new cell without
- (22) a synthetic liner?
- (23) A. I don't know if I'm authorized.
- (24) Q. Have you ever done it?
- (25) A. I'm sorry. Say - for a -

- (1) Q. Have you ever recommended the approval of a
- (2) new cell, post-Subtitle D, at a Type I municipal solid
- (3) waste landfill, that didn't have a synthetic liner?
- (4) A. Have I recommended approval?
- (5) Q. Uh-huh, in any way.
- (6) A. Of the - of the construction?
- (7) Q. Yes.
- (8) A. Not that I recall.
- (9) Q. Okay. Are you familiar with the area at the
- (10) Austin Community Landfill that was once an industrial
- (11) waste disposal site?
- (12) A. Yes.
- (13) Q. How did you first become familiar with that
- (14) area?
- (15) A. I don't recall.
- (16) Q. Okay. What have you done in connection with
- (17) anything involving the industrial waste disposal area
- (18) at the Austin Community Landfill, if anything? For
- (19) example, have you been involved in any potential
- (20) remediation plans for that area?
- (21) A. Yes.
- (22) Q. Okay. Any other types of projects that
- (23) you've worked on involving the old industrial waste
- (24) disposal area at Austin Community Landfill other than
- (25) remediation plans?

- (1) A. Preparation of some recent plans for capping
- (2) and groundwater monitoring.
- (3) Q. And when you say recent, how recent?
- (4) A. Within the past year.
- (5) Q. Any other projects related to the old
- (6) industrial waste area at the Austin Community Landfill
- (7) that you've been involved with other than those that
- (8) you have just mentioned?
- (9) A. I'm sure there is others. I just don't
- (10) recall at this time.
- (11) (Exhibit No. 1
- (12) (marked for identification.
- (13) Q. (By Mr. Hemphill) Mr. Fusilier, I'm handing
- (14) you what's been marked as Exhibit 1 to your
- (15) deposition. Do you recall if you've seen this
- (16) document before?
- (17) A. It looks familiar. I don't recall
- (18) specifically this document, but it looks familiar to a
- (19) document I have seen before.
- (20) Q. Okay. Who is ThermoRetec?
- (21) A. They're a consulting firm that Waste
- (22) Management of Texas hired.
- (23) Q. And do you recall any occasion in which Waste
- (24) Management of Texas retained ThermoRetec to do
- (25) consulting work on the old industrial waste area at

- (1) the Austin Community Landfill?
- (2) A. Pardon me? Please repeat that. I'm sorry.
- (3) Q. Sure. Are you familiar with - I'm sorry.
- (4) I talked over you, and I didn't mean to do that.
- (5) A. Go ahead.
- (6) Q. Are you familiar with any occasion in which
- (7) Waste Management of Texas retained ThermoRetec to do a
- (8) project connected with the old industrial waste area
- (9) at the Austin Community Landfill?
- (10) A. Yes.
- (11) Q. What was the nature of that project?
- (12) A. I believe - and I was absent from Waste at
- (13) the time, but I was there when report came out - that
- (14) it was an investigation to determine that the -
- (15) whether or not there were any impacts from the
- (16) industrial waste unit to the environment.
- (17) Q. Okay. Exhibit 1 shows a map of the
- (18) industrial waste area at the Austin Community
- (19) Landfill, correct?
- (20) A. Yes.
- (21) Q. Okay. And Exhibit 1 also indicates that
- (22) municipal solid waste at some point in the past was
- (23) disposed of on top of the industrial waste area,
- (24) correct?
- (25) A. It indicates that on the map.

(1) Q. Were you aware at any time during your –  
 (2) either of your tenures with Waste Management that at  
 (3) some point in the past municipal solid waste was  
 (4) deposited over the industrial waste area at the ACL?  
 (5) A. At some point, yes.  
 (6) Q. Okay. Do you know when municipal solid waste  
 (7) was deposited over the industrial waste area at the  
 (8) ACL?  
 (9) A. Not with any certainty.  
 (10) Q. Do you know if municipal solid waste was ever  
 (11) disposed of over the old industrial waste area at the  
 (12) ACL during Waste Management's ownership of the ACL?  
 (13) MR. EDWARDS: Objection; form.  
 (14) THE WITNESS: Not to the best of my  
 (15) knowledge.  
 (16) Q. (By Mr. Hemphill) Is it generally considered  
 (17) unacceptable to dispose of municipal solid waste over  
 (18) an area such as the industrial waste area at the ACL?  
 (19) MR. EDWARDS: Objection; form.  
 (20) THE WITNESS: I don't really know.  
 (21) Q. (By Mr. Hemphill) Okay. Are you aware of  
 (22) any particular environmental problems that might be  
 (23) caused by the disposal of municipal solid waste over  
 (24) the industrial waste area?  
 (25) MR. EDWARDS: Objection; form.

(1) THE WITNESS: Not – not personally.  
 (2) Q. (By Mr. Hemphill) Have you ever been told  
 (3) that it might cause any particular environmental  
 (4) problems?  
 (5) A. I don't recall being told that.  
 (6) Q. Okay. Do you have any belief as to whether  
 (7) it would cause any particular environmental problems?  
 (8) MR. EDWARDS: Objection; form.  
 (9) THE WITNESS: Not – no, not  
 (10) necessarily.  
 (11) Q. (By Mr. Hemphill) Okay. Are you aware of  
 (12) the disposal of industrial waste at the ACL in areas  
 (13) outside of the boundaries of the industrial waste area  
 (14) shown on Exhibit 1?  
 (15) A. No, I'm not aware.  
 (16) Q. Okay. Down at the bottom, on the legend,  
 (17) over on the right-hand side of the legend at the  
 (18) bottom, do you see where there is a dotted line and it  
 (19) says, area of unknown or suspected industrial waste  
 (20) management, February 14th, 1973?  
 (21) A. Yes, I see that.  
 (22) Q. And do you see the areas on the left side of  
 (23) the map around – between grid markers 14 and 15 and  
 (24) F and E?  
 (25) A. Yes.

(1) Q. And do you see that that, according to the  
 (2) legend, is an area of unknown or suspected industrial  
 (3) waste management?  
 (4) A. Yes. It matches the legend.  
 (5) Q. Okay. Do you know anything about the  
 (6) possible or suspected industrial waste disposal in  
 (7) that particular area?  
 (8) A. No, I don't.  
 (9) Q. Okay. How about the area below it, again,  
 (10) between 14 and 15 and between roughly B and D?  
 (11) A. No, I'm not aware of that, either.  
 (12) Q. Okay. Have you ever heard of something  
 (13) called Acid Pit 4 at the Austin Community Landfill?  
 (14) A. I'm not sure about – specifically about Acid  
 (15) Pit 4, but about acid pits, yes.  
 (16) Q. Okay. Do you recall being aware of the  
 (17) actual or potential existence of any kind of acid pits  
 (18) or acid disposal areas outside of the municipal – or,  
 (19) excuse me, outside of the old industrial waste  
 (20) disposal area shown on Exhibit 1?  
 (21) A. No.  
 (22) Q. What is the nature of the remediation plans  
 (23) that you've been involved with regarding the old  
 (24) industrial waste area at the Austin Community  
 (25) Landfill?

(1) A. Are you referring to a specific plan?  
 (2) Q. Any. You said, I believe, that you were  
 (3) involved in some remediation plans for the industrial  
 (4) waste area, correct?  
 (5) A. It was actually preliminary work plans that  
 (6) would have maybe led to remediation.  
 (7) Q. Okay. And when – when did those plans  
 (8) start?  
 (9) A. I believe in 1997, as best I can remember.  
 (10) Q. Okay. And who, if you can recall, raised the  
 (11) possibility of possible remediation of that area?  
 (12) A. I don't – I don't remember who brought that  
 (13) up initially.  
 (14) Q. Who was involved in the preliminary planning  
 (15) of potential remediation?  
 (16) A. Persons' names?  
 (17) Q. Yes. Uh-huh.  
 (18) A. Jim Nelson.  
 (19) Q. What was his position at the time?  
 (20) A. He was the landfill manager at that time.  
 (21) Q. Okay. Anyone else?  
 (22) A. Let me think. I believe Bob Barber.  
 (23) Q. And who is Mr. Barber?  
 (24) A. Mr. Barber was, I believe, a regional  
 (25) landfill manager at that time.

(1) Q. Who else do you recall being involved in  
 (2) that?  
 (3) A. Myself.  
 (4) Q. Anyone else?  
 (5) A. I can't think of anyone else at the moment.  
 (6) Q. What was – well, strike that. Was there a  
 (7) plan about how the remediation would take place, where  
 (8) the waste would be moved, if it would be moved, things  
 (9) like that, any specifics?  
 (10) MR. EDWARDS: Objection; form.  
 (11) THE WITNESS: No specifics. There was  
 (12) preliminary discussion, but I don't believe the plan  
 (13) was ever developed that far.  
 (14) Q. (By Mr. Hemphill) What was the preliminary  
 (15) discussion?  
 (16) A. I believe it was to remove the waste. That  
 (17) which was characteristically hazardous would be taken  
 (18) to a hazardous waste facility. Materials that were  
 (19) not characteristically hazardous and could be disposed  
 (20) on site would be disposed on site in a lined cell.  
 (21) Q. And then what would have been done with the  
 (22) old industrial waste area?  
 (23) A. I don't know.  
 (24) (Exhibit No. 2  
 (25) marked for identification.

(1) Q. (By Mr. Hemphill) I've handed you what the  
 (2) court reporter has marked as Exhibit 2 to your  
 (3) deposition. Do you recognize this as a general layout  
 (4) of cells at the Austin Community Landfill?  
 (5) A. Yes.  
 (6) Q. Okay. Was there any particular area or cell  
 (7) in which this preliminary plan of remediation of the  
 (8) industrial waste area, any particular cell or area  
 (9) that was designated as the potential recipient of the  
 (10) characteristically nonhazardous waste from the  
 (11) industrial waste area?  
 (12) A. Not on this drawing. It was the area that's  
 (13) in the vicinity of DV-2 and DV-3.  
 (14) Q. Okay.  
 (15) A. The cell designations are now different.  
 (16) Q. Okay. These are old cell designations,  
 (17) DV-2 and DV-3, on this exhibit?  
 (18) A. Yes.  
 (19) Q. Okay. And was a lined cell constructed in  
 (20) that area?  
 (21) A. Yes.  
 (22) Q. And has it been used since its construction?  
 (23) A. Yes.  
 (24) Q. And what has it been used for?  
 (25) A. Disposal of municipal waste.

(1) Q. No industrial waste other than -  
 (2) A. Industrial from -  
 (3) Q. No industrial waste disposed in that cell  
 (4) other than the types of industrial waste that are  
 (5) allowed to be accepted by a Type I municipal solid  
 (6) waste landfill without a special designation of a  
 (7) special sector?  
 (8) A. That's correct.  
 (9) Q. There are certain types of nonhazardous  
 (10) industrial waste that a municipal solid waste  
 (11) landfill, Type I, can accept that it must have a  
 (12) specially designated area for; is that right?  
 (13) A. Correct.  
 (14) Q. And there is no such area in the Austin  
 (15) Community Landfill?  
 (16) A. This area actually that we're referring to  
 (17) here was authorized to receive Class I nonhazardous  
 (18) wastes.  
 (19) Q. But it never did?  
 (20) A. No.  
 (21) Q. Okay.  
 (22) A. To the best of my knowledge.  
 (23) Q. Fair enough. And for purposes of reference,  
 (24) on Exhibit 2, the closed old industrial solid waste  
 (25) area would be directly beneath or to the south of the

(1) DIV-1, DIV-2, DIV-3 area approximately?  
 (2) A. Approximately, that's correct.  
 (3) Q. And then another area that's not marked on  
 (4) Exhibit 2 is what's known as the Phase I area; is that  
 (5) correct?  
 (6) A. Yes. There is a Phase I area.  
 (7) Q. And the Phase I area would be at the bottom  
 (8) or southern boundary of the landfill, correct?  
 (9) A. Correct.  
 (10) Q. Okay. And is it correct to say that for at  
 (11) least part of the Phase I area, there is no barrier  
 (12) between the Phase I area of the Austin Community  
 (13) Landfill and the old Travis County landfill to the  
 (14) south?  
 (15) MR. EDWARDS: Objection; form.  
 (16) THE WITNESS: Based on what other people  
 (17) have said, that appears to be true.  
 (18) Q. (By Mr. Hemphill) Okay. Now, do you recall  
 (19) ever reading a plan for maintenance improvements on  
 (20) the industrial waste area at the ACL that Dwight  
 (21) Pitman prepared in 1981?  
 (22) A. I don't recall for sure.  
 (23) (Exhibit No. 3  
 (24) (marked for identification.  
 (25) Q. (By Mr. Hemphill) I'm handing you what's

(1) marked as Exhibit 3 to your deposition. Do you recall  
 (2) seeing this before?  
 (3) A. I believe I have seen this before.  
 (4) Q. Okay. Were you ever involved in any efforts  
 (5) within Waste Management to determine whether the  
 (6) recommendations made in Exhibit 3 were followed  
 (7) through on?  
 (8) MR. EDWARDS: Objection; form.  
 (9) THE WITNESS: I'm sorry. Where are you?  
 (10) Q. (By Mr. Hemphill) For example, Page 3, at  
 (11) the top, says, Proposed Site Improvement Plan. Do you  
 (12) see that?  
 (13) A. Yes, I do.  
 (14) Q. And there are some things that are  
 (15) recommended there.  
 (16) A. No. I was not there at the time these  
 (17) activities would have occurred.  
 (18) Q. And you didn't do anything after you got to  
 (19) Waste Management to determine whether or not any of  
 (20) the recommendations that were made by Mr. Pitman were  
 (21) complied with?  
 (22) MR. EDWARDS: Objection; form.  
 (23) THE WITNESS: I don't recall if I did or  
 (24) not.  
 (25) Q. (By Mr. Hemphill) Okay. Now, between 1991

(1) and '98, during your first tenure at Waste Management,  
 (2) do you recall there being any leachate seeps or  
 (3) outbreaks from the old industrial waste area at the  
 (4) ACL?  
 (5) A. Yes.  
 (6) Q. Do you recall the frequency of such leachate  
 (7) seeps or outbreaks?  
 (8) A. No.  
 (9) Q. Do you recall whether this was a - you would  
 (10) characterize this as an ongoing problem at some point  
 (11) between 1988 and 1998?  
 (12) MR. EDWARDS: Objection; form.  
 (13) THE WITNESS: I will have to ask you to  
 (14) define ongoing.  
 (15) Q. (By Mr. Hemphill) Was it something that  
 (16) happened from time to time, or was it something that  
 (17) you believe was present over a period of time, more  
 (18) than a couple of weeks in a row?  
 (19) A. It happened on occasion, from time to time.  
 (20) Q. Okay. Were there any periods that you can  
 (21) recall of more than two weeks in a row when there  
 (22) continued to be problems with leachate outbreaks from  
 (23) the old industrial waste area at the ACL between '91  
 (24) and '98?  
 (25) A. That, I can't specifically recall.

(1) Q. Okay. Using either Exhibit 1 or Exhibit 2,  
 (2) whichever one is most convenient for you, do you  
 (3) recall the location of some of these leachate  
 (4) outbreaks?  
 (5) A. The only one I can actually remember in  
 (6) particular would have been over in this vicinity down  
 (7) here. I don't know how you want to - in the vicinity  
 (8) of - between F and E and 28, 29, probably in that -  
 (9) or it could have been from 28 to 30, somewhere in that  
 (10) vicinity.  
 (11) Q. Very good. And do you recall there being  
 (12) some sort of drainage feature going right to the south  
 (13) of the industrial waste area?  
 (14) A. Yes.  
 (15) Q. Okay. And that outbreak that you recall  
 (16) would have been on the industrial waste area side of  
 (17) the drainage feature?  
 (18) A. Yes.  
 (19) Q. Okay. And did you ever observe the volume of  
 (20) leachate actually reaching the drainage feature?  
 (21) A. I don't recall that it reached it, no.  
 (22) Q. You recall that it flowed down toward it, but  
 (23) not sure if it reached it or not? Is that fair?  
 (24) MR. EDWARDS: Objection; form.  
 (25) THE WITNESS: Yes.

(1) Q. (By Mr. Hemphill) Okay. Are you aware of  
 (2) any testing that was done on the constituents of that  
 (3) leachate?  
 (4) A. No, I'm not.  
 (5) Q. And just to be clear, is it your testimony  
 (6) that there might have been other locations of  
 (7) outbreaks that you don't remember -  
 (8) MR. EDWARDS: Objection; form.  
 (9) Q. - around the industrial waste area?  
 (10) A. That's possible.  
 (11) Q. Okay. Did you witness this particular area  
 (12) have a leachate outbreak once or more than once?  
 (13) A. More than once.  
 (14) Q. Can you recall approximately how many times  
 (15) you witnessed it?  
 (16) A. No, I can't.  
 (17) Q. Do you recall if it was more or less than  
 (18) ten?  
 (19) A. I don't recall.  
 (20) Q. Do you recall how it came to be that you saw  
 (21) that leachate outbreak? Were you at the ACL for some  
 (22) sort of inspection or on some other project, or how  
 (23) did you first become aware of it?  
 (24) MR. EDWARDS: Objection; form.  
 (25) THE WITNESS: I was conducting an

(1) inspection.  
 (2) Q. (By Mr. Hemphill) Okay. What sort of  
 (3) inspection?  
 (4) A. That, I don't recall.  
 (5) Q. Would you typically conduct some inspections  
 (6) that had as their goal, or as a goal, determination of  
 (7) environmental compliance with the ACL?  
 (8) MR. EDWARDS: Objection; form. Don't  
 (9) answer as to anything that was part of the auditing  
 (10) process internally. But you can respond otherwise.  
 (11) THE WITNESS: Please state the question  
 (12) again.  
 (13) Q. (By Mr. Hemphill) Sure. Were there  
 (14) occasions when you did inspections of the ACL, such as  
 (15) the one that you just referred to, that one of the  
 (16) objects of the inspection was to determine  
 (17) environmental compliance issues?  
 (18) MR. EDWARDS: Same instruction and  
 (19) objection.  
 (20) THE WITNESS: Can I clarify? Am I  
 (21) supposed to respond?  
 (22) MR. EDWARDS: You can answer his  
 (23) question only to the extent that you do not reveal  
 (24) anything done only through corporate policy or an  
 (25) internal audit.

(1) THE WITNESS: I guess I'm going to have  
 (2) to ask for a - I'm still a little confused on this  
 (3) now. Say again what it is you're -  
 (4) MR. EDWARDS: You can respond unless  
 (5) your response involves your undertaking activity  
 (6) that's only required by corporate policy. If it's  
 (7) required by law, you can respond.  
 (8) THE WITNESS: Okay. Okay. The answer  
 (9) would be yes then.  
 (10) Q. (By Mr. Hemphill) Okay. And what sort of  
 (11) inspections for environmental compliance that were  
 (12) required by law were you involved in?  
 (13) A. Storm water inspections.  
 (14) Q. Is that the ones that are called SWP3  
 (15) sometimes?  
 (16) A. Yes.  
 (17) Q. What does that stand for?  
 (18) A. Storm Water Pollution Prevention  
 (19) Plan, actually.  
 (20) Q. And the leachate outbreak that we have been  
 (21) discussing near the old industrial waste area, did you  
 (22) see that on one or more of your inspections pursuant  
 (23) to the SWP3 requirements?  
 (24) A. Yes.  
 (25) Q. ... Okay. Now, did you report that leachate seep

(1) to any regulators?  
 (2) A. I don't recall.  
 (3) Q. Are there certain circumstances in which such  
 (4) a leachate seep would not be required to be reported  
 (5) to regulators?  
 (6) A. Yes.  
 (7) Q. What circumstances?  
 (8) A. If there is not a release of reportable  
 (9) quantity.  
 (10) Q. Reportable quantity of contaminants or of  
 (11) leachate?  
 (12) A. Of contaminant.  
 (13) Q. And so a test of the constituents of the  
 (14) leachate would be necessary to determine whether or  
 (15) not it should be reported? Is that fair?  
 (16) A. If there was a release.  
 (17) Q. And would you consider this particular seep  
 (18) that we've been talking about to have been a release?  
 (19) A. No.  
 (20) Q. Why not?  
 (21) A. I didn't see that it reached the channel.  
 (22) Q. Did anyone ever tell that you it reached the  
 (23) channel?  
 (24) A. No.  
 (25) Q. Now, did you have any understanding as to

(1) what, if any, remediation or environmental protection  
 (2) efforts had been undertaken before you got to Waste  
 (3) Management regarding the old industrial waste area at  
 (4) the ACL?  
 (5) A. Please repeat the question.  
 (6) Q. Sure. Are you aware of any remediation or  
 (7) environmental protection efforts or measures that were  
 (8) undertaken before you started working for Waste  
 (9) Management with regard to the industrial waste area at  
 (10) the ACL?  
 (11) A. Yes.  
 (12) Q. What?  
 (13) A. I'm aware that a compacted clay wall was  
 (14) installed around a portion of the industrial waste  
 (15) unit.  
 (16) Q. Anything else?  
 (17) A. Based on reports, there were some activities,  
 (18) a cover placed over the industrial waste unit.  
 (19) Q. Was the - well, the clay walls that you  
 (20) talked about, do you know how deep they went around  
 (21) the industrial waste area?  
 (22) A. No, I don't - I don't recall how deep they  
 (23) were.  
 (24) Q. Okay. Do you recall how much cover was put  
 (25) on the industrial waste area in the time period before

(1) you started working for Waste Management?  
 (2) A. No, I don't - I don't recall specifically.  
 (3) Q. Now, you said you've been involved in the  
 (4) preparation of recent plans for capping and  
 (5) groundwater monitoring at the industrial waste area at  
 (6) the ACL, right?  
 (7) A. Yes.  
 (8) Q. Okay. What sort of capping?  
 (9) A. Placement of additional clay soils over the  
 (10) drum disposal units.  
 (11) Q. Is it your opinion that currently the amount  
 (12) of soil over the drum disposal units is inadequate for  
 (13) environmental protection?  
 (14) MR. EDWARDS: Objection form.  
 (15) THE WITNESS: My personal opinion? No.  
 (16) Q. (By Mr. Hemphill) Okay. Are you aware of  
 (17) anyone with Waste Management who is of the opinion  
 (18) that the current amount of cover over the barrel  
 (19) disposal areas is inadequate?  
 (20) MR. EDWARDS: Objection; form.  
 (21) THE WITNESS: I don't know.  
 (22) Q. (By Mr. Hemphill) Okay. What is your  
 (23) understanding as to why there is the preparation of  
 (24) plans for additional capping in the industrial waste  
 (25) area?

(1) A. To comply with terms of an agreement with the  
 (2) City of Austin.  
 (3) Q. Do you have any understanding as to how much  
 (4) capping is in place presently at the industrial waste  
 (5) area?  
 (6) A. No. I don't know at this time.  
 (7) Q. Are you aware of any additional capping being  
 (8) added since you first became involved with the ACL in  
 (9) 1991?  
 (10) A. No.  
 (11) Q. Are you aware of any type of remediation or  
 (12) environmental protection - well, let's strike that.  
 (13) Are you aware of any construction efforts at the ACL  
 (14) since you started working there, or with the ACL in  
 (15) 1991, regarding the industrial waste area, anything  
 (16) that's actually been built or constructed or added as  
 (17) caps or walls or anything like that since '91?  
 (18) A. No. I don't recall.  
 (19) Q. Do you recall any instances that you have  
 (20) observed the land over the old industrial waste area  
 (21) being excessively uneven or having excessive ponding,  
 (22) what you personally consider to be excessive?  
 (23) MR. EDWARDS: Objection; form.  
 (24) THE WITNESS: I have trouble with the  
 (25) term "excessive."

(1) Q. (By Mr. Hemphill) Okay. More than there  
 (2) should be, in your opinion.  
 (3) MR. EDWARDS: Objection; form.  
 (4) THE WITNESS: I have trouble with that,  
 (5) too.  
 (6) Q. (By Mr. Hemphill) Why?  
 (7) A. Because any ponding could be construed as  
 (8) being more than it should be.  
 (9) Q. Have you seen any ponding over the industrial  
 (10) waste area since 1991?  
 (11) A. Yes.  
 (12) Q. Did you find that ponding acceptable or  
 (13) unacceptable?  
 (14) MR. EDWARDS: Objection; form.  
 (15) THE WITNESS: Personally?  
 (16) Q. (By Mr. Hemphill) Yes.  
 (17) A. It's not acceptable.  
 (18) Q. Okay. Who, if anyone, did you communicate  
 (19) the fact of the ponding to?  
 (20) A. I don't recall specifically.  
 (21) Q. Who, if anyone, did you communicate your  
 (22) evaluation of the ponding to?  
 (23) A. Would have been to the landfill management,  
 (24) but I don't know specifically an individual.  
 (25) Q. What, if anything, did you recommend be done

(1) about that ponding?  
 (2) A. That, I don't recall.  
 (3) Q. What is the potential danger, if any, of  
 (4) ponding or potential adverse environmental impact of  
 (5) ponding over the industrial waste area?  
 (6) MR. EDWARDS: Objection; form.  
 (7) THE WITNESS: A potential for  
 (8) infiltration of water and breeding of mosquitoes.  
 (9) Q. (By Mr. Hemphill) And what possible impacts  
 (10) could stem from the potential infiltration of water?  
 (11) MR. EDWARDS: Objection; form.  
 (12) THE WITNESS: That would depend on the  
 (13) location of the ponding of the water and what was  
 (14) beneath it.  
 (15) Q. (By Mr. Hemphill) Okay. Over the industrial  
 (16) waste area.  
 (17) MR. EDWARDS: Objection; form.  
 (18) THE WITNESS: I don't know. Potential  
 (19) for leachate, I suppose.  
 (20) Q. (By Mr. Hemphill) Have there been any  
 (21) changes in groundwater monitoring procedures at the  
 (22) Austin Community Landfill that you're aware of since  
 (23) you first had involvement there in 1991?  
 (24) A. Any changes?  
 (25) Q. Uh-huh. Yes.

(1) A. Are you talking - can you be more specific  
 (2) on what types of changes?  
 (3) Q. Either location of monitoring, frequency of  
 (4) monitoring, or evaluation of constituents.  
 (5) A. Yes.  
 (6) Q. What changes have there been in any of those  
 (7) areas since '91?  
 (8) A. There has been changes in the design of the  
 (9) groundwater monitoring system, frequency of  
 (10) monitoring, and parameters.  
 (11) Q. Okay. So pretty much the whole thing has  
 (12) been revised since '91?  
 (13) MR. EDWARDS: Objection; form.  
 (14) THE WITNESS: In order to comply with  
 (15) Subtitle D requirements.  
 (16) Q. (By Mr. Hemphill) Fair enough. How many  
 (17) groundwater monitoring wells were there in 1991, if  
 (18) you recall, at the Austin Community Landfill?  
 (19) A. Six.  
 (20) Q. How many of those were at the perimeter of  
 (21) the facility?  
 (22) A. Four.  
 (23) Q. Where were the other two?  
 (24) A. In the vicinity of the industrial waste unit  
 (25) was one, and the other was to the southeast of the

(1) industrial waste unit.  
 (2) Q. In Phase I?  
 (3) A. No. Actually, it was - on Exhibit No. 1 -  
 (4) Q. Uh-huh.  
 (5) A. - It's near grid point EIII-2.  
 (6) Q. Oh, east. I'm sorry. And what grid point  
 (7) would the one near the old industrial waste site be?  
 (8) A. On grid Line 19 just below F, between E  
 (9) and F.  
 (10) Q. And is that one on 19 between E and F, does  
 (11) it - is it still shown on Exhibit 1?  
 (12) A. Yes.  
 (13) Q. Okay. And is the other one still shown on  
 (14) Exhibit 1?  
 (15) A. Yes.  
 (16) Q. And I'm sorry, where was that again?  
 (17) A. It's near the grid intersection EIII-2.  
 (18) Q. And is the one that appears to - it looks  
 (19) like it says maybe MW-3?  
 (20) A. That's correct.  
 (21) Q. Okay. And the other one is at - between  
 (22) E and F on 19, that's MW -  
 (23) A. 6.  
 (24) Q. - 6. Now, those were present in 1991,  
 (25) correct, MW-3 and MW-6?

(1) A. Yes.  
 (2) Q. Did they continue to be present through 1998?  
 (3) A. Yes.  
 (4) Q. In the same location without having been  
 (5) moved since 1991?  
 (6) A. Yes.  
 (7) Q. Okay. Are they still present today?  
 (8) A. Yes.  
 (9) Q. In the same location without having been  
 (10) moved?  
 (11) A. Yes.  
 (12) Q. Okay. Do you recall anytime between - well,  
 (13) strike that. Do you use the term "exceedences" with  
 (14) regard to groundwater monitoring?  
 (15) A. The term is used sometimes, although it's  
 (16) inappropriate and it's not a real word.  
 (17) Q. Okay. Well, that was my next question, is,  
 (18) does it have any meaning to you in the way it's used  
 (19) in the industry?  
 (20) A. Yes, if it's relative to some fixed limit.  
 (21) Q. And is it fair to say that it's generally  
 (22) used in the industry to indicate that some - the  
 (23) amount of some constituent is over some fixed limit?  
 (24) A. That would be an appropriate use for it.  
 (25) Q. Okay. Are you aware of any such exceedences

(1) at MW-3 at anytime since 1991?  
 (2) A. No, I'm not aware.  
 (3) Q. Are you aware of any such exceedences at MW-6  
 (4) at anytime since 1991?  
 (5) A. No, I can't recall.  
 (6) Q. Is it fair to say that for both of those  
 (7) wells, there might have been some exceedences, but you  
 (8) just can't recall any?  
 (9) MR. EDWARDS: Objection; form.  
 (10) Q. (By Mr. Hemphill) Or is it more fair to say  
 (11) that you don't believe there have been any?  
 (12) MR. EDWARDS: Objection; form.  
 (13) THE WITNESS: Just that I don't recall.  
 (14) Q. (By Mr. Hemphill) Okay. Now, along the -  
 (15) strike that. Let me start over. In 1991, of the four  
 (16) monitoring wells that were at the perimeter of the ACL  
 (17) boundaries at that time, were any of them along the  
 (18) southern boundary?  
 (19) A. No.  
 (20) Q. Now, in talking about your involvement in the  
 (21) preparation of recent plans for capping and  
 (22) groundwater monitoring of the industrial waste area,  
 (23) what sort of groundwater monitoring changes are being  
 (24) either considered or have been chosen?  
 (25) MR. EDWARDS: Objection; form.

- (1) does.  
 (2) Q. And that belief is based on what?  
 (3) A. Information available in records.  
 (4) Q. Okay. What type of information, groundwater  
 (5) monitoring -  
 (6) A. Groundwater monitoring.  
 (7) Q. Okay. Anything other than groundwater  
 (8) monitoring?  
 (9) A. That would be the primary one.  
 (10) Q. Okay. Because you don't know how deep the  
 (11) clay liners go, correct, around the industrial waste  
 (12) area?  
 (13) A. Do I know personally?  
 (14) Q. Yeah.  
 (15) A. No.  
 (16) Q. And that's a significant fact that you would  
 (17) want to know to evaluate whether or not the clay  
 (18) liners were effective in providing environmental  
 (19) protection? Fair?  
 (20) MR. EDWARDS: Objection; form.  
 (21) THE WITNESS: It would be a factor, yes.  
 (22) Q. (By Mr. Hemphill) Okay. Do you know what,  
 (23) if any, kind of bottom liners are present in the  
 (24) barrel disposal areas at the old industrial waste  
 (25) facility at the ACL?

- (1) A. Do I know?  
 (2) Q. Yeah.  
 (3) A. Not personally, other than what material is  
 (4) available in files.  
 (5) Q. What do you recall seeing from the material  
 (6) available in the files regarding the bottom liners?  
 (7) A. It's in situ clays.  
 (8) Q. And I'm sorry. I can't remember if I asked  
 (9) you this or not. Do you know how deep the barrel  
 (10) disposal area was excavated?  
 (11) A. No, I don't. I don't recall.  
 (12) Q. Do you have an opinion as to how deep the  
 (13) barrel disposal area would have to have been excavated  
 (14) to provide an adequate in situ bottom liner?  
 (15) MR. EDWARDS: Objection; form.  
 (16) THE WITNESS: No. I don't have an  
 (17) opinion about that.  
 (18) Q. (By Mr. Hemphill) Would you agree that there  
 (19) is a difference in the quality of an in situ bottom  
 (20) liner in the area of the Austin Community Landfill  
 (21) based on how deep the excavation is?  
 (22) A. I guess you will need to clarify what you  
 (23) mean by quality.  
 (24) Q. Sure. Would you agree that the effectiveness  
 (25) of a bottom liner, an in situ bottom liner at the ACL,

- (1) would vary depending on how deep the excavation goes?  
 (2) And by adequacy, I mean adequacy in protecting  
 (3) groundwater.  
 (4) MR. EDWARDS: Objection; form.  
 (5) Q. (By Mr. Hemphill) And protecting against  
 (6) lateral migration.  
 (7) MR. EDWARDS: Objection; form.  
 (8) THE WITNESS: In general terms.  
 (9) Q. (By Mr. Hemphill) Yes.  
 (10) A. Yes.  
 (11) Q. Okay. Do you recall the nature of any of the  
 (12) waste disposed of in the industrial waste area at the  
 (13) ACL, what constituents are in those areas?  
 (14) A. Not - not specifically.  
 (15) Q. Is it fair to say that your recollection is  
 (16) that some of the material might be characteristically  
 (17) hazardous and some characteristically nonhazardous?  
 (18) A. I couldn't hazard an opinion about that.  
 (19) Q. You just don't remember?  
 (20) A. Well, no. I couldn't make a decision on  
 (21) whether or not they're characteristically or not  
 (22) characteristically hazardous. That would have to be  
 (23) determined by exhuming, taking samples, and having  
 (24) those analyzed.  
 (25) Q. Okay. Do you recall whether or not any of

- (1) the materials that were disposed of there would be  
 (2) classified today as hazardous?  
 (3) A. I don't know for sure.  
 (4) Q. Is there anyone at Waste Management whose  
 (5) responsibility it is to have that knowledge?  
 (6) MR. EDWARDS: Objection; form.  
 (7) THE WITNESS: Not that I'm aware of.  
 (8) Q. (By Mr. Hemphill) Are you aware of any  
 (9) measures taken at the ACL at any time by Waste  
 (10) Management to increase the elevation of the drainage  
 (11) channels between the Phase I area and the old  
 (12) industrial waste area?  
 (13) A. By Waste Management of Texas?  
 (14) Q. Or its predecessor, if any.  
 (15) A. I'm aware of a plan for doing that.  
 (16) Q. A plan that was implemented?  
 (17) A. If implemented, not at a time when I was  
 (18) there.  
 (19) Q. Okay. What was the nature of that plan?  
 (20) A. To do what you said, to raise the elevation  
 (21) of the drainage channel.  
 (22) Q. Why? Why was the elevation going to be  
 (23) raised?  
 (24) A. To - to get rid of excess materials, excess  
 (25) soils, and that's what the plan was referred to as,

- (1) an excess materials management plan, or excess soils  
 (2) management plan.  
 (3) Q. And when was that plan in place? When did  
 (4) the plan exist? I understand that you don't -  
 (5) A. Implemented or -  
 (6) Q. No.  
 (7) A. - prepared?  
 (8) Q. Prepared.  
 (9) A. It was in the 1980s, and I don't know exactly  
 (10) when.  
 (11) Q. And you aren't aware of the drainage channels  
 (12) at any time being raised in elevation?  
 (13) A. I don't know that they - they may have been  
 (14) raised in elevation, but it didn't occur during the  
 (15) time that I was there.  
 (16) Q. Fair enough. Were you aware - ever aware of  
 (17) any plan to raise the elevation of the drainage  
 (18) channels and fill in that area of the drainage area  
 (19) between Phase I and the industrial waste area that had  
 (20) as its primary or any purpose preventing leachate  
 (21) outbreaks?  
 (22) MR. EDWARDS: Objection; form.  
 (23) THE WITNESS: I don't recall.  
 (24) Q. (By Mr. Hemphill) That leachate outbreak  
 (25) that we talked about before lunch over on - near the

- (1) east side of the industrial waste area - do you  
 (2) recall that?  
 (3) A. Yes.  
 (4) Q. What do you know was done, if anything, to  
 (5) remedy that leachate outbreak?  
 (6) A. Additional clay soils were packed in that  
 (7) area.  
 (8) Q. Was there anything excavated before those  
 (9) clay soils were packed?  
 (10) A. I don't recall, because I wasn't present when  
 (11) they actually did that work.  
 (12) Q. In your experience and knowledge, as an  
 (13) engineer dealing with landfill issues, would it be  
 (14) typical for the remediation of a seep like that to  
 (15) involve the excavation of some of the soil around  
 (16) there before recompacted clay is put in?  
 (17) A. Not necessarily.  
 (18) Q. Just depends?  
 (19) A. Some cases; some cases not.  
 (20) Q. Do you know who actually performed the  
 (21) remediation work on that seep?  
 (22) A. No, I don't.  
 (23) Q. Who was in charge of the landfill - the ACL  
 (24) landfill operations at that time? Do you recall?  
 (25) A. No, I don't, because I can't remember the

(1) Q. And that was in the context of the leachate  
 (2) collection system?  
 (3) A. In context of the liner system.  
 (4) Q. Okay.  
 (5) A. Actually, as I recall, one of the remarks he  
 (6) made is that under the performance-based criteria,  
 (7) leachate collection requirements didn't apply.  
 (8) Q. Did you agree with that?  
 (9) A. It surprised me. I wasn't aware that there  
 (10) was a loophole of that sort in Subtitle D.  
 (11) Q. And why do you believe it's a loophole?  
 (12) A. Because it seems rather unusual that the  
 (13) composite - standard composite liner system design  
 (14) would be required to meet certain performance  
 (15) standards related to leachate collection, and yet by  
 (16) using an alternate liner system design, those criteria  
 (17) no longer apply.  
 (18) Q. But the performance criteria for - or  
 (19) criterion for a standard design is simply that it  
 (20) maintain less than 30 centimeters of leachate over the  
 (21) liner, correct?  
 (22) A. I don't know. My understanding from my  
 (23) conversation with Mr. Dollins is the 30-centimeter  
 (24) head limitation didn't apply to an alternate liner  
 (25) system.

(1) Q. Right, to alternate, but it does to standard  
 (2) design?  
 (3) A. Yeah. That's a criteria for the design of  
 (4) a -  
 (5) Q. And that's the only criterion, isn't it,  
 (6) under the Subtitle D regulations for a leachate  
 (7) collection system with a standard design?  
 (8) A. I'm not real sure if that's the only  
 (9) criteria.  
 (10) Q. If the lack of a leachate collection system  
 (11) would tend to cause groundwater contamination, then  
 (12) that would be taken into account in the approval of a  
 (13) performance-based system, wouldn't it?  
 (14) MR. EDWARDS: Objection; form.  
 (15) THE WITNESS: I don't know. I'm not  
 (16) that familiar with those - the design standards for  
 (17) performance-based liner systems.  
 (18) Q. (By Mr. Hemphill) Did anyone with Waste  
 (19) Management ever say or otherwise communicate anything  
 (20) to you regarding TDS, TDSL, or Mr. Bob Gregory that  
 (21) you believed to be untrue?  
 (22) MR. EDWARDS: Objection; form.  
 (23) THE WITNESS: Not that I can recall.  
 (24) Q. (By Mr. Hemphill) What do you recall people  
 (25) with Waste Management saying to you about TDS or TDSL

(1) other than what we've discussed already?  
 (2) A. I can't recall specifics.  
 (3) Q. Can you recall in general?  
 (4) A. I recall having discussions about their  
 (5) awarding of the contract with San Antonio and their  
 (6) shipment of waste from the San Antonio area to their  
 (7) landfill.  
 (8) Q. Do you recall who you discussed that with?  
 (9) A. No, not really.  
 (10) Q. Anything else in general you can recall  
 (11) discussing about TDS or TDSL with people at Waste  
 (12) Management other than what we've discussed?  
 (13) A. I recall there being an incident that  
 (14) occurred where they received some unauthorized waste  
 (15) at their facility, and I believe I had some  
 (16) conversations with personnel within Waste Management  
 (17) about that.  
 (18) Q. That who received unauthorized waste?  
 (19) A. TDSL facility.  
 (20) Q. Do you remember what it was?  
 (21) A. As I recall, there was an accident or  
 (22) something, and it may have involved some monitors, but  
 (23) I'm not positive that that's what it was in regards  
 (24) to, and that they were brought out to the facility.  
 (25) And I don't know if they were actually disposed or

(1) stored at the site.  
 (2) Q. Have you been involved with the - with  
 (3) seeking approval of performance-based liners at the  
 (4) ACL?  
 (5) A. Yes.  
 (6) Q. And do you have any understanding as to the  
 (7) requirements for a leachate collection system in those  
 (8) particular performance-based designs?  
 (9) A. My understanding is that the requirements for  
 (10) head limitations on the liner system for leachate  
 (11) build-up don't apply in those situations; although,  
 (12) the liner systems we designed are built to those  
 (13) standards.  
 (14) Q. Well, they've exceeded it several times,  
 (15) though, haven't they?  
 (16) A. Pardon?  
 (17) Q. They've exceeded that leachate several times  
 (18) at the ACL?  
 (19) MR. EDWARDS: Objection; form.  
 (20) THE WITNESS: How do you define  
 (21) "several"?  
 (22) Q. (By Mr. Hemphill) More than five.  
 (23) A. On five separate occasions?  
 (24) Q. Five separate days.  
 (25) A. Okay. Then that would be true.

(1) Q. Okay. By magnitudes of feet, correct?  
 (2) MR. EDWARDS: Objection; form.  
 (3) THE WITNESS: Yes.  
 (4) Q. (By Mr. Hemphill) But do you have any  
 (5) knowledge as to whether any leachate collection system  
 (6) at all is required by the Subtitle D regulations in  
 (7) those performance-based cells?  
 (8) A. No.  
 (9) Q. What is your role in doing the SWP3  
 (10) evaluations for the Austin Community Landfill?  
 (11) A. Inspections or evaluations?  
 (12) Q. Inspections. I'm sorry. That was the word I  
 (13) was searching for and couldn't come up with.  
 (14) A. I sometimes conduct the inspections.  
 (15) Q. Within Waste Management, who typically is  
 (16) charged with conducting those inspections?  
 (17) A. Either the compliance manager may do them or  
 (18) site personnel may do them.  
 (19) (Exhibit No. 4  
 (20) marked for identification.  
 (21) Q. (By Mr. Hemphill) The court reporter has  
 (22) handed you what's marked as Exhibit 4 to your  
 (23) deposition. And these - well, can you tell me what  
 (24) these appear to be?  
 (25) A. Weekly site inspection checklists for storm

(1) water pollution prevention.  
 (2) Q. And is this the SWP3 inspection form?  
 (3) A. Yes.  
 (4) Q. Now, if you will turn to the next to the last  
 (5) page of that exhibit, that's the one with WM5.00335 on  
 (6) it down at the bottom. Do you see that way at the  
 (7) bottom right?  
 (8) A. Yes.  
 (9) Q. Okay. Is that your signature there at the  
 (10) bottom?  
 (11) A. Yes, it is.  
 (12) Q. And is it your handwriting in the far right  
 (13) column?  
 (14) A. Yes, it is.  
 (15) Q. Okay. Can you see that the date of that  
 (16) report is 5-29-96?  
 (17) A. Yes.  
 (18) Q. I will represent to you that this is an  
 (19) effort to collect all of such reports for the ACL  
 (20) between 5-29-96 and 12-23-96 as produced in this  
 (21) litigation by Waste Management. You were with Waste  
 (22) Management throughout the time period of May 29th, '96  
 (23) through December 17th, '96, correct?  
 (24) A. Yes.  
 (25) Q. Okay. Still right where you are, on that

- (1) Q. And this is at least four months after the  
 (2) first notation of cover problems in this set of  
 (3) documents back in February, correct?  
 (4) MR. EDWARDS: Objection; form.  
 (5) THE WITNESS: From what date are you  
 (6) referring to?  
 (7) Q. (By Mr. Hemphill) From February to June,  
 (8) approximately four months or more.  
 (9) A. That is approximately four months. Yes.  
 (10) Q. Does that seem like a long time, in your  
 (11) judgment and experience, for cover issues such as this  
 (12) to exist without being remedied?  
 (13) MR. EDWARDS: Objection; form.  
 (14) THE WITNESS: Please restate the  
 (15) question.  
 (16) MR. HEMPHILL: I'm sorry. Could you  
 (17) read it back? I don't remember exactly what it was.  
 (18) THE REPORTER: "Does that seem like a  
 (19) long time, in your judgment and experience, for cover  
 (20) issues such as this to exist without being remedied?"  
 (21) MR. EDWARDS: Objection; form.  
 (22) THE WITNESS: No. Actually not.  
 (23) Q. (By Mr. Hemphill) Do you recall why it took  
 (24) several weeks to remedy this cover situation?  
 (25) A. No, I do not.

- (1) Q. Beyond getting more soil for cover, what  
 (2) needs to be done to remedy that type of situation?  
 (3) A. That's the primary way of remedying it.  
 (4) Q. And what can the complications be in getting  
 (5) more soil to cover?  
 (6) A. Weather conditions, equipment issues, things  
 (7) of that nature.  
 (8) Q. Do you recall what particular issues there  
 (9) were during the first half of 1997 that contributed to  
 (10) the problems with adequate cover going on for four  
 (11) months or more?  
 (12) MR. EDWARDS: Objection; form.  
 (13) THE WITNESS: No, I do not.  
 (14) (Exhibit No. 6  
 (15) (marked for identification).  
 (16) Q. (By Mr. Hemphill) I'm handing you what the  
 (17) court reporter has marked as Exhibit 6 to your  
 (18) deposition, and this is a set of SWP3 inspection  
 (19) reports from roughly the second half of 1997. Do you  
 (20) see - well, please turn to the page that's numbered  
 (21) 5.00182.  
 (22) A. All right.  
 (23) Q. And on Category No. 5, where it says  
 (24) "Adequate cover is provided where needed," it says  
 (25) yes, but then there is a check under "Adds to Storm

- (1) Water Pollution," and you have noted, "Cover on west  
 (2) hill marginal. At several locations, leachate seeps  
 (3) noted." Do you see that?  
 (4) A. Yes.  
 (5) Q. Okay. Do you recall why you would have said  
 (6) that adequate cover is provided, you would have  
 (7) circled yes, but then you said, "Cover on west hill  
 (8) marginal." At several locations, leachate seeps  
 (9) noted"?  
 (10) A. Do I know why I would have said that?  
 (11) Q. Yes.  
 (12) A. I guess because that was my opinion at that  
 (13) time.  
 (14) Q. So even though there was marginal cover and  
 (15) there were several leachate seeps, you still thought  
 (16) the cover was adequate?  
 (17) A. At that point in time, even though, in my  
 (18) opinion, it was not as well as I would expect it, I  
 (19) thought it was adequate in terms of compliance.  
 (20) Q. Do you remember any of the several locations  
 (21) at which you noted leachate seeps at this time in  
 (22) October of '97?  
 (23) A. No. I don't remember specific locations.  
 (24) Q. Now, when we were talking about cover issues  
 (25) during the first half of 1997, whose responsibility

- (1) was it to ensure that any deficiencies with cover were  
 (2) resolved at the ACL?  
 (3) A. Landfill management.  
 (4) Q. Was your responsibility merely to point out  
 (5) the situation and ask or request or direct landfill  
 (6) management to correct it?  
 (7) A. I was not in a position to supervise or  
 (8) direct personnel to do it, but to identify and bring  
 (9) to their attention.  
 (10) Q. Now, No. 10 on any of these forms that are on  
 (11) Exhibit 6 down at the bottom, again, is the "Other  
 (12) erosion control structures are functioning  
 (13) effectively." And, for example, on the first page,  
 (14) it's no. As a matter of fact, it's no on every one of  
 (15) these in the second half of 1997. And you have  
 (16) written, "Repair/replace rock berms. Clean sediment  
 (17) out of ditches." Do you see that?  
 (18) A. Yes.  
 (19) Q. Okay. Do you recall generally in the 1996  
 (20) and 1997 time frame, on virtually every one of these  
 (21) SW3 - SWP3 reports you did, checking - circling no  
 (22) on that category?  
 (23) MR. EDWARDS: Objection; form.  
 (24) THE WITNESS: I'm sorry. Repeat the  
 (25) question, please.

- (1) Q. (By Mr. Hemphill) Sure. Do you remember in  
 (2) 1996 and 1997 generally having to circle no on that  
 (3) category in all or almost all of the SWP3 reports you  
 (4) did?  
 (5) A. No. I don't recall that without looking back  
 (6) at the report.  
 (7) Q. Is it consistent with your recollection that  
 (8) that was an ongoing problem - that category was an  
 (9) ongoing problem at the ACL in 1996 and 1997?  
 (10) MR. EDWARDS: Objection; form.  
 (11) THE WITNESS: No. I can only go by  
 (12) what's in the report. I don't have any specific  
 (13) recollection of that.  
 (14) Q. (By Mr. Hemphill) On the first page of this  
 (15) exhibit where it says, "Repair/replace rock berms,"  
 (16) what were the rock berms?  
 (17) A. They were berms of large diameter rock that  
 (18) would be placed across ditches to trap sediment to  
 (19) slow its discharge.  
 (20) Q. Okay. And ultimately, what's the purpose of  
 (21) doing that?  
 (22) A. To drop sediment out.  
 (23) Q. Why do you want to drop sediment out?  
 (24) A. So it's not discharged from the facility.  
 (25) Q. And why is that a concern?

- (1) A. Because you don't want sediment discharging  
 (2) in your storm water.  
 (3) Q. And why don't you want sediment discharging  
 (4) into your storm water?  
 (5) A. Because the regulations don't want you to  
 (6) discharge sediment.  
 (7) Q. Is it because of the potential for the  
 (8) sediment to be contaminated?  
 (9) MR. EDWARDS: Objection; form.  
 (10) THE WITNESS: No. It's because the  
 (11) sediment is dirt, and you don't want your water to be  
 (12) all muddy from that dirt.  
 (13) Q. (By Mr. Hemphill) Was this storm water  
 (14) runoff at the ACL in the 1996 to 1998 time frame  
 (15) typically tested for contaminants?  
 (16) A. No.  
 (17) Q. So is it fair to say you had no way of  
 (18) knowing whether or not there were any particular  
 (19) contaminants in the storm water in the '96 to '98 time  
 (20) frame at the ACL?  
 (21) MR. EDWARDS: Objection; form.  
 (22) THE WITNESS: What are you referring to  
 (23) in terms of "particular contaminants"?  
 (24) Q. (By Mr. Hemphill) Any types of groundwater  
 (25) contaminants typically recognized in the industry.

- (1) MR. EDWARDS: Objection; form.  
 (2) THE WITNESS: We weren't required to  
 (3) sample or analyze our storm water for groundwater -  
 (4) potential groundwater contaminants.  
 (5) MR. HEMPHILL: Okay. I will object to  
 (6) that as nonresponsive.  
 (7) Q. (By Mr. Hemphill) My question simply is, did  
 (8) you have any reason to know whether or not there were  
 (9) any particular contaminants in the storm water runoff  
 (10) in the '96 to '98 time frame?  
 (11) MR. EDWARDS: Objection; form.  
 (12) THE WITNESS: No.  
 (13) (Exhibit No. 7  
 (14) (marked for identification.  
 (15) Q. (By Mr. Hemphill) I'm handing you what's  
 (16) marked as Exhibit 7, and this is a set of SWP3 reports  
 (17) from the first half of 1998. And again, your name and  
 (18) signature and handwriting are on several, if not all,  
 (19) of them. Is that correct?  
 (20) A. Yes.  
 (21) Q. In these reports that we've been looking at,  
 (22) when you talk about storm water runoff, did that  
 (23) include runoff from daily cover?  
 (24) A. I'm sorry. In what regard?  
 (25) Q. Did that include storm water that had runoff

- (1) of daily cover?  
 (2) MR. EDWARDS: Objection; form.  
 (3) THE WITNESS: I'm sorry. Clarify -  
 (4) would you ask your question again, the whole question?  
 (5) Q. (By Mr. Hemphill) Sure. I'll try. The  
 (6) storm water that's being discussed in these reports -  
 (7) these reports are -  
 (8) A. Well - okay. Can I clarify?  
 (9) Q. Sure.  
 (10) A. I think I know now your question.  
 (11) Q. Sure.  
 (12) A. These reports don't necessarily address storm  
 (13) water. They address items that could impact storm  
 (14) water.  
 (15) Q. Okay. Fair enough. Now, if you look at the  
 (16) second page of Exhibit 7, you will see that under  
 (17) Category 5, "Adequate cover is provided where needed,"  
 (18) it says no, it's identified as a CARS issue, it's  
 (19) identified as something that might add to storm water  
 (20) pollution, and you've written, "More cover needed west  
 (21) central slope of east hill." Do you see that?  
 (22) A. Yes.  
 (23) Q. Now, if you go to the very last page of this  
 (24) exhibit -  
 (25) A. Which document number?

- (1) Q. It's 5.00170.  
 (2) A. Right.  
 (3) Q. You will see in Category 5, again, no is  
 (4) circled under "Adequate cover is provided where  
 (5) needed," there is a check for "Adds to Storm Water  
 (6) Pollution," "Current CARS Issue" is circled, and you  
 (7) have read, "Provide additional cover south/east slopes  
 (8) west hill, north slope east hill." Do you see that?  
 (9) A. Yes.  
 (10) Q. Okay. Now, in this set of documents, every  
 (11) week more cover is stated as being needed from January  
 (12) of 1998 all the way through June 1998. Based on your  
 (13) experience, is that an excessive time to not remedy  
 (14) this problem?  
 (15) MR. EDWARDS: Objection; form.  
 (16) THE WITNESS: Again, I would say it  
 (17) would depend on the circumstances.  
 (18) Q. (By Mr. Hemphill) Do you recall -  
 (19) A. What the conditions were, in terms of  
 (20) equipment and weather and things of that nature.  
 (21) Q. Do you recall any particular circumstances of  
 (22) this time frame?  
 (23) A. No. I don't.  
 (24) (Exhibit No. 8  
 (25) (marked for identification.

- (1) Q. (By Mr. Hemphill) The court reporter has  
 (2) handed you what's marked as Exhibit 8 to your  
 (3) deposition, and this is a collection of SWP3  
 (4) inspection reports from April through August of 2001.  
 (5) You were gone from Waste Management between 1998 and  
 (6) 2000; is that correct?  
 (7) A. Until 2000. I returned - left in '98 and I  
 (8) returned in 2000.  
 (9) Q. Do you recall whether or not you were doing  
 (10) the SWP3 inspections at the ACL upon your return in  
 (11) 2000?  
 (12) A. No. I did not start doing those when I  
 (13) returned.  
 (14) Q. When did you start doing those again? Do you  
 (15) remember?  
 (16) A. I don't recall.  
 (17) Q. Okay. Do you know if they were done between  
 (18) 1998 and April of - I'm sorry - 1999 and April of  
 (19) 2001?  
 (20) A. I don't know.  
 (21) Q. Okay. The last page of Exhibit 8, which is  
 (22) marked 5.00101 - do you see that page?  
 (23) A. Yes. I'm sorry. Yes.  
 (24) Q. On No. 10, "Other erosion control structures  
 (25) are functioning effectively," do you see where it says

- (1) no, and then you've written, "Eliminate leachate seeps  
 (2) on west and south sides east hill and south side  
 (3) industrial waste area"? Do you see that?  
 (4) A. Yes.  
 (5) Q. Do you remember anything about those seeps on  
 (6) the south side of the industrial waste area?  
 (7) A. That - yes. That was the seep that I was  
 (8) referring to earlier.  
 (9) Q. Okay. That's the one that you remember?  
 (10) A. Yeah. That's the one I remembered earlier  
 (11) that was occurring over in this area (indicating).  
 (12) Q. On the southeast side - southeast slope of  
 (13) the industrial waste area?  
 (14) A. Well, in terms of direction. We just - we  
 (15) kind of orient it this way, and I usually refer to  
 (16) this as the south, and that as the east, and that's  
 (17) the west, and that would be the north.  
 (18) Q. So it would be the south side?  
 (19) A. South side. That's why I referred to it as  
 (20) the south side.  
 (21) Q. Okay. Now. You note leachate seeps in the  
 (22) industrial waste area in every report from April 6th  
 (23) of 2001 up to June 1st of 2001, and June 1st is  
 (24) Page 5.00093. Do you see that?  
 (25) A. Yes, I see that document.

- (1) Q. Okay. And then the page before 00093, which  
 (2) is 00092, dated 6-5-01, you still note leachate seeps,  
 (3) but instead of saying industrial waste unit, you say,  
 (4) "Eliminate leachate seeps in central portion of  
 (5) facility." Do you see that?  
 (6) A. Yeah.  
 (7) Q. Was that the same leachate seep?  
 (8) A. Yes.  
 (9) Q. Do you recall why you changed your  
 (10) terminology from "industrial waste area" to "central  
 (11) portion of facility"?  
 (12) A. No, I don't recall why I changed it.  
 (13) Q. Did anyone ask you to stop referring to  
 (14) leachate seeps in the central portion - in the  
 (15) industrial waste area?  
 (16) A. I don't recall for sure.  
 (17) Q. Do you think it's possible that someone with  
 (18) Waste Management requested that you not say there were  
 (19) leachate seeps in the industrial waste area and  
 (20) instead just say there were leachate seeps in the  
 (21) central portion of the facility?  
 (22) MR. EDWARDS: Objection; form.  
 (23) THE WITNESS: It would be possible.  
 (24) Q. (By Mr. Hemphill) Okay. What was in a  
 (25) position to have told you that at the time?

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- (1) MR. EDWARDS: Objection; form.  
 (2) THE WITNESS: Anyone in, I guess, a  
 (3) management level above me.  
 (4) Q. (By Mr. Hemphill) Do you recall who might  
 (5) have told you that?  
 (6) MR. EDWARDS: Objection; form.  
 (7) THE WITNESS: No. Not for sure. It  
 (8) could have been the landfill manager, possibly.  
 (9) Q. (By Mr. Hemphill) And do you have any  
 (10) recollection about why you might have been asked to  
 (11) stop referring to the seeps as being in the industrial  
 (12) waste area?  
 (13) MR. EDWARDS: Objection; form.  
 (14) THE WITNESS: No.  
 (15) Q. (By Mr. Hemphill) The location of the seep  
 (16) didn't change, to your knowledge, right?  
 (17) A. Not to my knowledge.  
 (18) Q. Okay. Now, if you look to the next to the  
 (19) top page in this exhibit, it's Page 00084.  
 (20) A. Yes.  
 (21) Q. You will see that was done - that inspection  
 (22) was completed by someone other than yourself. Right?  
 (23) A. Yes.  
 (24) Q. Whose signature is that?  
 (25) A. Mark Hinds.

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- (1) Q. And what was his position?  
 (2) A. He's the landfill manager.  
 (3) Q. Okay. And then you're shown as getting a  
 (4) copy of this?  
 (5) A. Yes.  
 (6) Q. Okay. And Mr. Hinds has also written,  
 (7) "Eliminate leachate seeps in central portion of  
 (8) facility." Do you see that?  
 (9) A. Yes.  
 (10) Q. And then on the next - the top page, it's  
 (11) you again filling this out, right?  
 (12) A. Yes.  
 (13) Q. And it says, "Leachate seeps gone. Will  
 (14) continue to monitor for outbreaks." Do you see that?  
 (15) A. Yes.  
 (16) Q. Now, do you recall what was done after this  
 (17) four-month period of leachate seeps to fix the  
 (18) situation?  
 (19) A. As I recall, cover was added to those areas.  
 (20) Q. Do you recall why it took four months or more  
 (21) to remedy the leachate seeps from the industrial waste  
 (22) area?  
 (23) A. No. I don't recall why.  
 (24) Q. Does that seem like an inordinately long time  
 (25) to remedy a situation such as that?

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- (1) MR. EDWARDS: Objection; form.  
 (2) THE WITNESS: It is a long time.  
 (3) Q. (By Mr. Hemphill) Longer than it should have  
 (4) been, in your judgment?  
 (5) MR. EDWARDS: Objection; form.  
 (6) THE WITNESS: In my judgment, yes.  
 (7) Q. (By Mr. Hemphill) But you don't have any  
 (8) recollection as to what the cause of that inordinate  
 (9) delay was?  
 (10) MR. EDWARDS: Objection; form.  
 (11) THE WITNESS: No.  
 (12) Q. (By Mr. Hemphill) Do you recall discussing  
 (13) with anyone at Waste Management why it took so long to  
 (14) fix that problem?  
 (15) MR. EDWARDS: Objection; form.  
 (16) THE WITNESS: Not specifically.  
 (17) Q. (By Mr. Hemphill) Do you recall generally?  
 (18) A. I'm sure in general terms I did, because we  
 (19) discussed the results of the inspections.  
 (20) Q. But you don't recall anything other than the  
 (21) fact that you probably discussed them?  
 (22) MR. EDWARDS: Objection; form.  
 (23) THE WITNESS: No.  
 (24) Q. (By Mr. Hemphill) Do you recall at any time  
 (25) seeing leachate seeps from the old Phase I area?

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- (1) A. Yes.  
 (2) Q. And do you recall any of those seeps reaching  
 (3) the drainage features?  
 (4) A. Yes.  
 (5) Q. Okay. And were those seeps reported to the  
 (6) regulatory agency?  
 (7) A. No.  
 (8) Q. Why not?  
 (9) A. I'm not aware of the requirement that we  
 (10) report those to the agency.  
 (11) Q. Okay. I thought I understood you to say  
 (12) earlier in your deposition that you did not report the  
 (13) leachate seeps from the industrial waste area to the  
 (14) regulatory agency because they did not reach the  
 (15) drainage features. Is that what you said?  
 (16) A. That's true.  
 (17) Q. Okay. But when the leachate seeps from the  
 (18) Phase I area reached the drainage feature, you didn't  
 (19) report them?  
 (20) A. No.  
 (21) Q. If the leachate seeps from the industrial  
 (22) waste area had reached the drainage feature, would you  
 (23) have reported them then?  
 (24) A. I don't know.  
 (25) Q. Okay. So if it's possible that you wouldn't

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- (1) have, there must have been another reason that you  
 (2) didn't report the seeps from the industrial waste area  
 (3) to the regulatory agency, other than the fact that  
 (4) they didn't reach the drainage area, correct?  
 (5) MR. EDWARDS: Objection; form.  
 (6) THE WITNESS: Pardon?  
 (7) Q. (By Mr. Hemphill) If it's possible that you  
 (8) still wouldn't have reported the industrial waste  
 (9) leachate seep to the regulatory agency even if it had  
 (10) reached the drainage feature, then there must be some  
 (11) other reason that you didn't report those seeps to the  
 (12) agency, other than the fact that they didn't reach the  
 (13) drainage feature. Correct?  
 (14) MR. EDWARDS: Objection; form.  
 (15) THE WITNESS: I don't know. I'm not  
 (16) sure.  
 (17) MR. HEMPHILL: We're almost out of tape.  
 (18) Let's take a break.  
 (19) THE VIDEOGRAPHER: Going off the record,  
 (20) approximately 2:51. This is the end of Tape 2.  
 (21) (Brief Recess)  
 (22) THE VIDEOGRAPHER: We're back on the  
 (23) record, approximately 3:10. This is the beginning of  
 (24) Tape 3.  
 (25) Q. (By Mr. Hemphill) Mr. Fusilier, do you

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- (1) recall observing any leachate seeps at the ACL outside  
 (2) of the industrial waste or Phase I areas?  
 (3) A. Yes.  
 (4) Q. Where?  
 (5) A. I know I observed some leachate seeps on the  
 (6) west hill of the landfill.  
 (7) Q. Oh, is that the one in the southwest area  
 (8) that we talked about?  
 (9) A. That's - that's one, yes.  
 (10) Q. Okay. At more than one area in that - more  
 (11) than one location in that area?  
 (12) A. Of that hill, yes.  
 (13) Q. Okay. Do you recall what the time frame of  
 (14) those seeps was?  
 (15) A. No, not specifically.  
 (16) Q. Okay. Any others that you can recall?  
 (17) A. I don't recall if I found any on the east  
 (18) hill. I can't picture it in my mind that I did, but  
 (19) I'm not going to deny it. I'll just say that I can't  
 (20) recall.  
 (21) Q. Okay. Do you recall any instances where any  
 (22) regulators were at the ACL and witnessed any leachate  
 (23) seeps?  
 (24) A. I don't recall.  
 (25) Q. Do you recall ever talking to anyone at the

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CAUSE NO. 97-12163

TEXAS DISPOSAL SYSTEMS ) IN THE DISTRICT COURT  
LANDFILL, INC. )  
VS. ) TRAVIS COUNTY, TEXAS  
WASTE MANAGEMENT, INC., )  
WASTE MANAGEMENT OF )  
TEXAS, INC., and DONALD )  
MARTIN ) 126<sup>TH</sup> JUDICIAL DISTRICT

\*\*\*\*\*

ORAL AND VIDEOTAPED DEPOSITION OF

DWIGHT PITTMAN

JUNE 19, 2002

\*\*\*\*\*

CONDENSED TRANSCRIPT AND KEYWORD INDEX

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STIPULATIONS

ORAL DEPOSITION(S) OF: Bob Ross, Dwight Pittman,  
Johnny Williams

The attorneys for all the parties present stipulate and agree to the following checked items:

Objections:

Texas Rules of Civil Procedure.

Federal Rules of Civil Procedure.

Other: \_\_\_\_\_

Delivery for signature and changes:

The witness, or the witness's attorney, will return the signed deposition to the court reporter within 20 days of the date of submission. If the original of the deposition is not signed, or made available, an unsigned copy may be used as though signed.

The original transcript will be submitted to the witness's attorney.

The original transcript will be submitted to the witness at the following address:

P.O. Box 28490, San Antonio 78228  
2121 Bandera Road, San Antonio 78228  
 Signature waived.

The attorney asking the first question will be responsible for the timely payment of all costs in connection with the original deposition transcript.

I hereby agree to the above and foregoing marked items and request that AcuScribe Court Reporters furnish me with the items checked below. Unless otherwise requested, I will receive copies of all exhibits. My firm and I will be responsible for the timely payment of any original or copies and/or exhibits as indicated below that I may request. I agree that if I am an out-of-city client and/or have made no prior credit arrangement with AcuScribe Court Reporters, the transcript(s) stated above may be delivered on a COD basis. If any indebtedness due and owing is not paid as agreed, the undersigned agrees to pay reasonable attorneys fees, plus all costs of collection and all other costs and expenses which may be incurred by AcuScribe Court Reporters relative to collection of the indebtedness due and owing, whether suit be instituted or not.

Executed this the 12<sup>th</sup> day of June, 20 02.

[Signature] Attorney for: Plaintiff Texas Disposal Systems  
Lambert, Inc.

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[Signature] Attorney for: Defendants

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( 1 ) CAUSE NO 97-12163  
 ( 2 )  
 ( 3 ) TEXAS DISPOSAL SYSTEMS \* IN THE DISTRICT COURT  
 LANDFILL, INC \*  
 Plaintiffs. \*  
 ( 4 ) vs. \* TRAVIS COUNTY, TEXAS  
 ( 5 ) \*  
 WASTE MANAGEMENT, INC \*  
 WASTE MANAGEMENT OF TEXAS \*  
 INC. and DONALD MARTIN \*  
 ( 7 ) Defendant \* 126th JUDICIAL DISTRICT

( 8 ) -----  
 ORAL VIDEOTAPED DEPOSITION OF  
 DWIGHT PITTMAN  
 ( 9 ) JUNE 19, 2002  
 -----

(10)  
 (11)  
 (12) ORAL DEPOSITION OF DWIGHT PITTMAN, produced as a  
 (13) witness at the instance of the Plaintiff, and duly  
 (14) sworn, was taken in the above-styled and numbered cause  
 (15) on the 19th of June, 2002, from 9:17 a m to 1:26 p.m.  
 (16) before Dana Montgomery, CSR in and for the State of  
 (17) Texas, reported at the Offices of Jackson Walker  
 (18) L.L.P., 100 Congress Avenue, Suite 1100, Austin, Texas,  
 (19) pursuant to the Texas Rules of Civil Procedure and the  
 (20) provisions stated on the record or attached hereto.  
 (21)  
 (22)  
 (23)  
 (24)  
 (25)

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\*\*\*\*\*

( 1 ) APPEARANCES  
 ( 2 )  
 ( 3 ) FOR THE PLAINTIFF TEXAS DISPOSAL SYSTEMS LANDFILL,  
 INC  
 ( 4 )  
 Mr. James A Hemphill  
 GEORGE E DONALDSON, L.L.P.  
 1100 Norwood Tower, 114 West 7th Street  
 ( 6 ) Austin, Texas 78701  
 (512) 495-1400  
 (512) 495-0094 (Fax)  
 ( 7 )  
 ( 8 )  
 ( 9 )  
 (10) FOR THE DEFENDANTS WASTE MANAGEMENT INC . ET AL  
 (11) Mr. John K. Edwards  
 JACKSON WALKER, L L P  
 1100 Louisiana Street, Suite 4200  
 Houston, Texas 77002  
 (713) 752-4200  
 (713) 752-4221 (Fax)  
 (12)  
 (13)  
 (14)  
 (15)  
 (16) ALSO PRESENT  
 Jesse Perez, Videographer  
 Gary Newton  
 (17)  
 (18)  
 (19)  
 (20)  
 (21)  
 (22)  
 (23)  
 (24)  
 (25)

(1) THE VIDEOGRAPHER: We're on the record,  
 (2) June 19th, 2002. The time is approximately 9:17. This  
 (3) is the beginning of Tape 1.  
 (4) DWIGHT PITTMAN,  
 (5) having been first duly sworn, testified as follows:  
 (6) EXAMINATION  
 (7) BY MR. HEMPHILL:  
 (8) Q. Could you state your name for the record,  
 (9) please, sir?  
 (10) A. Dwight Pittman.  
 (11) Q. Mr. Pittman, my name is Jim Hemphill and I'm  
 (12) one of the lawyers for Texas Disposal Systems Landfill  
 (13) in this - in this lawsuit. Have you ever had your  
 (14) deposition taken in any - any lawsuit before?  
 (15) A. Yes.  
 (16) Q. Okay. How many times; do you recall?  
 (17) A. A couple of hundred.  
 (18) Q. Couple of hundred?  
 (19) A. Yeah.  
 (20) Q. Okay. So you're generally familiar about the  
 (21) deposition process?  
 (22) A. Pretty much.  
 (23) Q. Okay. If my questions don't make sense to you,  
 (24) which is quite possible will happen, or if - if you  
 (25) don't - if you can't hear me or if you need to take a

( 1 ) STIP PAGE  
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 (25)

(1) break or anything, just let me know. Okay?  
 (2) A. Yes, sir.  
 (3) (Exhibit No. 1 marked)  
 (4) Q. I'm handing you what's been marked as Exhibit 1  
 (5) to your deposition. This is a notice for your  
 (6) deposition. Have you seen this before, sir, and  
 (7) particularly the second - excuse me, the third through  
 (8) the last pages that has a list of documents?  
 (9) A. Yes.  
 (10) Q. Okay. And did you review your files to see if  
 (11) you have any documents currently in your possession that  
 (12) are in any of the categories that are in this list of  
 (13) documents in Exhibit 1?  
 (14) A. Yes.  
 (15) Q. Okay. And have you brought with you to your  
 (16) deposition today all the documents that you have  
 (17) currently in your possession that are listed in - in  
 (18) this list?  
 (19) A. Yes. The only two that I thought I had  
 (20) information that responded to was the first two.  
 (21) Q. Okay. And those are invoices and contracts,  
 (22) basically?  
 (23) A. Right.  
 (24) Q. All right. Now, sir, are you currently  
 (25) working?

- (1) A. Yes.  
 (2) Q. And what was it about the nature of the site  
 (3) layout that required stringent controls for handling  
 (4) surface water runoff?  
 (5) MR. EDWARDS: Objection; form.  
 (6) A. The industrial site was in the - kind of in  
 (7) the middle of the old site.  
 (8) Q. Uh-huh.  
 (9) A. And there were little drainage channels that  
 (10) came around - I think there were three drainage  
 (11) channels that entered the property and crossed kind of  
 (12) around that site.  
 (13) Q. So is it fair to say that because those  
 (14) drainage channels were near the industrial waste site,  
 (15) it was - it was important to try to control the surface  
 (16) water to make sure it didn't interact with the -  
 (17) A. I don't - no, not - it's just the fact that  
 (18) you have three drainage channels across any landfill  
 (19) site, it - it limits your height of fill and, you know,  
 (20) it's just more of a design limitation. It's something  
 (21) you've got to maintain forever -  
 (22) Q. Okay.  
 (23) A. - passing through.  
 (24) Q. Now, on the third page of the memo that's  
 (25) Exhibit 2, up at the very top, the last sentence of the

- (1) first paragraph says, "A cutoff wall could easily remedy  
 (2) such concerns," and it's - in that paragraph it's  
 (3) talking about the industrial waste area. Is the - it  
 (4) says a cutoff wall. Is that the kind of thing that you  
 (5) testified you were involved in - in designing and  
 (6) putting in place at the ACL?  
 (7) A. It could be described - yeah. That would be  
 (8) similar.  
 (9) Q. Okay. And the next sentence says, "The  
 (10) potential to accept hazardous waste at the site appears  
 (11) to be very good if surface water drainage ways can be  
 (12) rechannelized." Do you recall being involved with any  
 (13) rechannelization of water drainage ways at the ACL while  
 (14) you were there?  
 (15) A. We did some rechannelization. Mainly raised  
 (16) the - flattened the grade and raised the - the bottom  
 (17) of the channel on the south side of the industrial site,  
 (18) which just made it easier - you could put flatter side  
 (19) slopes on it by doing that -  
 (20) Q. Okay.  
 (21) A. - which cut down on erosion, let us have  
 (22) wider, flatter bottoms, slowed the water down coming  
 (23) through. One other channel that was coming off of BFI,  
 (24) we put in - a sump in and put a storm sure (phonetic)  
 (25) pipe through the hill and routed it over to the other

- (1) drainage way so that we could eliminate one - one  
 (2) drainage path through there.  
 (3) Q. Oh, so there was a drainage path coming from  
 (4) the north from the BFI site?  
 (5) A. There were two from BFI.  
 (6) Q. Okay.  
 (7) A. And we piped them such that they both  
 (8) collect - discharged onto the site at one point and  
 (9) went through instead of having two channels come  
 (10) through.  
 (11) Q. Okay. Now, the drainage way that you lifted up  
 (12) at the ACL south of the industrial waste, would that be  
 (13) between the industrial waste area and what's called  
 (14) Phase I?  
 (15) A. Yeah, I guess that was Phase I.  
 (16) Q. Okay.  
 (17) A. It was the original area they filled.  
 (18) Q. Was that - was that done being filled when you  
 (19) started doing work there?  
 (20) A. It was already filled. I think we stockpiled  
 (21) some dirt on top of it and - some top soil, I believe.  
 (22) They put dirt on it a couple of times after - you know,  
 (23) after the - Waste bought it.  
 (24) Q. Do you remember at any time that - after 1980,  
 (25) any waste being put in the - in that initial Phase I

- (1) area?  
 (2) A. I think Waste may have put some in there the  
 (3) first few months after they had - owned the site.  
 (4) Q. Do you remember any municipal solid waste being  
 (5) put in or over the industrial waste area while you were  
 (6) there?  
 (7) A. No, there wasn't any.  
 (8) Q. Okay.  
 (9) A. Not while I was there.  
 (10) Q. Was - to your knowledge, was any of the - any  
 (11) of the fill that was used to raise the channel of the  
 (12) drainage way south of the industrial waste site, was any  
 (13) of - any of that filled with any municipal solid waste?  
 (14) A. No, it was all clean; clay and compacted liner  
 (15) type stuff.  
 (16) Q. How high was it raised up; do you remember?  
 (17) A. Probably five or six feet on the lower end.  
 (18) (Exhibit No. 3 marked)  
 (19) Q. I've handed - I'm handing you what's marked as  
 (20) Exhibit 3 to your deposition, sir, if you could take a  
 (21) look at that and tell me if you recognize that  
 (22) document.  
 (23) A. Yes.  
 (24) Q. Okay. And what is that, sir?  
 (25) A. It's - it looks like a document that was

- (1) submitted to the predecessor of the TNRCC.  
 (2) Q. And is this a - a document that you would have  
 (3) drafted?  
 (4) A. Yes.  
 (5) Q. Okay. And I see on the - on the first -  
 (6) A. I don't see a seal or a signature on it.  
 (7) Q. That was exactly my question. Do you know -  
 (8) would this normally be the kind of thing that - that  
 (9) would be signed and sealed, if it was submitted?  
 (10) A. Yes.  
 (11) Q. Okay. And -  
 (12) A. I have no idea where this came from.  
 (13) Q. Okay.  
 (14) A. Or how they got taken off.  
 (15) Q. Was the -  
 (16) A. Do you know where you got it?  
 (17) Q. I think it's from - from the TNRCC or whatever  
 (18) was the TNRCC at that time. I think it's from the  
 (19) public record. And I was just wondering if you think  
 (20) that there probably is a version of this somewhere that  
 (21) has a signature and a seal.  
 (22) MR. EDWARDS: Objection; form.  
 (23) A. I'm sure. I never submitted anything without  
 (24) signing it and sealing it.  
 (25) Q. Okay. Was this report - or is it fair to call

- (1) it a report?  
 (2) A. No, I think it was proposed.  
 (3) Q. A proposal?  
 (4) A. Proposed - yeah, proposed methodologies for  
 (5) dealing with that.  
 (6) Q. Okay. Was this proposal part of your work for  
 (7) the ACL in connection with the expansion permit, or was  
 (8) this a separate project, if you remember?  
 (9) A. Well, this was a separate little issue.  
 (10) Q. Okay. Is this an issue that came up during -  
 (11) during your work for the expansion?  
 (12) A. There was considerable discussion of it in the  
 (13) hearings related to expansion. I don't know whether  
 (14) this was before or after the permit was issued. I don't  
 (15) remember when - exactly when the - I thought the  
 (16) permit was issued before this.  
 (17) Q. Okay. How do you - strike that. Do you  
 (18) recall how you first learned about the existence of the  
 (19) old industrial waste area at the ACL?  
 (20) A. I was aware of it in '73 when it had the  
 (21) temporary permits. Newspaper articles, various things.  
 (22) Q. Okay. And how did it come up in your work for  
 (23) the ACL that you looked at the old industrial waste  
 (24) area?  
 (25) A. There was some seepage coming out of the

(1) southwest end of that island where the industrial waste  
 (2) site was part of.  
 (3) Q. And is that something that - that you saw  
 (4) while you were on the site or that someone told you  
 (5) about or do you remember?  
 (6) A. I saw it.  
 (7) Q. Okay.  
 (8) A. It was kind of a rusty colored seepage.  
 (9) Q. And as a result of seeing that, what did you do  
 (10) next?  
 (11) A. Well, TNRCC, or the - what was that old -  
 (12) Texas Water -  
 (13) Q. - Quality Board?  
 (14) A. No.  
 (15) Q. Texas Water Commission?  
 (16) A. Water Resources, I believe it was.  
 (17) Q. Okay.  
 (18) A. It might have been Water Commission at that  
 (19) time. I believe so, TWC. I think they sampled it at  
 (20) the - at that point in time after - we - we concluded  
 (21) that it was tannic acid leaching out of some brush that  
 (22) had been put in that end that didn't have as good of  
 (23) cover as the other industrial stuff did. And that whole  
 (24) area was encapsulated in that sidewall liner and a cap  
 (25) on top and just stabilized the whole thing.

(1) accordance with their directives at that time.  
 (2) Q. Okay. Now, the next paragraph, about three  
 (3) lines down it says that, "In February of 1973 a clay key  
 (4) was installed through lateral seepage from Drum Disposal  
 (5) Site No. 1." Could you just briefly describe what a  
 (6) clay key is in this context?  
 (7) A. Well, it probably - I wasn't there and didn't  
 (8) see it, but in - in my way of thinking, it would be  
 (9) about a bulldozer wide and it would be cut down below  
 (10) ground to some depth, and that's what I'd call a clay  
 (11) key, compact it back in.  
 (12) Q. Okay. And would the - would the bottom of the  
 (13) clay key necessarily be in contact with anything else,  
 (14) or would it just be below the original grade or below  
 (15) the surface or how would that be?  
 (16) A. Well, typically you go down to some acceptable  
 (17) clay material and key into that, such that you, you  
 (18) know, form a container with your sidewall, or your key.  
 (19) Q. Okay. So one of the things that the key might  
 (20) do is go down into - far enough down into the type of  
 (21) clay that might - might be acceptable for an in situ  
 (22) liner?  
 (23) A. Right.  
 (24) Q. Now, that says that the clay key was just to  
 (25) preclude lateral seepage from Drum Disposal Site No. 1.

(1) Q. Now, on the - the first page of Exhibit 3  
 (2) after the cover page, the one with Page No. 1 at the  
 (3) bottom, it says up at the top, "History of Site," and  
 (4) then the - the proposal goes through and talks a little  
 (5) bit about the history of the site. Do you remember what  
 (6) documents or other material you looked at or what people  
 (7) you talked to to learn the history of the old industrial  
 (8) waste site?  
 (9) A. Well, I had a - a legal description of the  
 (10) boundaries of the disposal area, which I reestablished.  
 (11) I'm a surveyor, too, so I reestablished it on the  
 (12) ground. I talked with employees of the Water Commission  
 (13) who worked for the old Water Quality Board at the time,  
 (14) some of the field people at the time that that was -  
 (15) those drums were placed. That's about it.  
 (16) Q. Okay. Do you remember going back and looking  
 (17) at any documents that were on file with the agency?  
 (18) A. I'm sure I did.  
 (19) Q. Okay. The - the first paragraph under,  
 (20) "History of Site," begins saying, "On May 3rd, 1971, an  
 (21) emergency order was issued by the Texas Water Quality  
 (22) Board." Do you recall why it was an emergency order?  
 (23) A. Where are you finding this?  
 (24) Q. I'm sorry, right under, "History of Site," the  
 (25) first part of the first sentence on top of Page 1.

(1) Do you recall, was that just a portion of the industrial  
 (2) waste site?  
 (3) A. Yeah. I think - I think there were two  
 (4) portions to it that - or two drum trenches, and one of  
 (5) them was 1 and the other was 2, and I don't remember  
 (6) which one was which.  
 (7) Q. Do you remember there being basically two drum  
 (8) trenches and then some pits?  
 (9) A. Yeah, some - they had some acid and  
 (10) neutralization pits and some stuff like that that were  
 (11) scattered around a little bit, but there were two drum  
 (12) sites.  
 (13) Q. Okay.  
 (14) A. That I recall.  
 (15) Q. And later on in that paragraph it talks about  
 (16) revegetation of Drum Disposal Site No. 1. Can you tell  
 (17) me, just in general, why revegetation of a site like  
 (18) this would be important?  
 (19) MR. EDWARDS: Objection; form.  
 (20) A. Just for erosion control, mainly.  
 (21) Q. Okay. The next paragraph down talks in general  
 (22) about a geologic evaluation of the side for research  
 (23) purposes. Do you recall anything about that?  
 (24) A. I'm still trying to find what you're talking  
 (25) about.

(1) A. Okay. At that time, the Water Quality Board  
 (2) issued emergency orders or temporary orders for things  
 (3) they wanted to permit before they got around to issuing  
 (4) the final permit.  
 (5) Q. Do you recall if - if the industrial waste  
 (6) site at the ACL ever had a - a regular permit other  
 (7) than the emergency order?  
 (8) A. I don't think it did.  
 (9) Q. Okay.  
 (10) A. I think it was closed before it got a permanent  
 (11) permit.  
 (12) Q. Now, down at the bottom of that - that  
 (13) paragraph, that same paragraph, it talks about a letter  
 (14) dated June 19th, 1972 that set forth procedures for  
 (15) closing the industrial portion of the site. Do you see  
 (16) that?  
 (17) A. Yes.  
 (18) Q. Was - part of your work on the industrial  
 (19) waste site at the ACL, was part of that to determine  
 (20) whether or not the - the procedures for shutting down  
 (21) the site had been followed properly?  
 (22) A. Not really.  
 (23) Q. Okay.  
 (24) A. Because the Water Quality Board did the  
 (25) supervision, the inspection to see that it was done in

(1) Q. Sure. It's the paragraph that starts, "A  
 (2) letter dated January 7th." That first sentence talks  
 (3) about a request for permission to conduct a geologic  
 (4) evaluation of the site for research purposes.  
 (5) A. Oh, okay. Nick Murphy was Water Quality Board  
 (6) lawyer.  
 (7) Q. Uh-huh.  
 (8) A. Ira Moore was the owner of Longhorn, and the  
 (9) Water Commission, I guess, at that time, was just  
 (10) wanting to go out and do some geologic testing to see  
 (11) what happened -  
 (12) Q. Okay.  
 (13) A. - to the - you know, whether there had been  
 (14) any movement or not.  
 (15) Q. Right. Now, a couple of paragraphs down  
 (16) starts, "In June of 1980, seepage was observed on the  
 (17) side slope of an old brush and/or municipal waste  
 (18) disposal area located immediately southwest of the old  
 (19) industrial site." Do you see that?  
 (20) A. Yes.  
 (21) Q. Is that the seepage that you observed yourself?  
 (22) A. Yes.  
 (23) Q. Okay. And the last sentence of that paragraph  
 (24) says, "To date, no firm recommendations have been  
 (25) received from either department concerning correction of

- (1) do you recall if that certification of maintenance  
 (2) improvements referred to in this paragraph was actually  
 (3) performed?  
 (4) A. Yes.  
 (5) Q. Okay. And that was what you did?  
 (6) A. Yes.  
 (7) Q. And it was after the - the March 1981 proposal  
 (8) and the April 1981 letter that we've looked at?  
 (9) A. Right.  
 (10) Q. Okay. Do you recall ever providing a copy of  
 (11) the certification of the - those improvements to anyone  
 (12) with Waste Management?  
 (13) MR. EDWARDS: Objection; form.  
 (14) A. I don't remember.  
 (15) Q. Okay. If you look at the third page of this  
 (16) exhibit, there's a list at the top of some documents,  
 (17) including a document with your name, that's described as  
 (18) "Maintenance Improvements in Old Industrial Waste Area."  
 (19) A. Right.  
 (20) Q. And that appears to be a reference to the  
 (21) proposal we were talking about?  
 (22) A. Yeah, that -  
 (23) Q. Exhibit 3?  
 (24) A. Exhibit 3.  
 (25) Q. Yeah. Now, in the paragraph underneath that

- (1) A. Yes.  
 (2) Q. Then the paragraph right after that?  
 (3) A. Okay.  
 (4) Q. That second sentence talks about how a field  
 (5) investigator had observed what appeared to be industrial  
 (6) waste seeping in or flowing into a tributary at Walnut  
 (7) Creek.  
 (8) A. Okay.  
 (9) Q. Do you recall ever being present when a field  
 (10) investigator saw any kinds of seepage like that that's  
 (11) discussed in this exhibit?  
 (12) A. I think I've been out there standing and  
 (13) looking at seepage with - with maybe John Young and  
 (14) maybe George King on that site. I'm not sure it was at  
 (15) the time of this, but maybe another time.  
 (16) Q. Do you recall how many times you've seen at the  
 (17) ACL some kind of seepage from the area of the old  
 (18) industrial waste part of the landfill?  
 (19) MR. EDWARDS: Objection; form.  
 (20) A. Just during that general time period there for  
 (21) a few months. I don't know.  
 (22) Q. For a few months? Was it a fairly regular  
 (23) occurrence during those few months?  
 (24) MR. EDWARDS: Objection; form.  
 (25) A. I think there was - depending on the rainfall,

- (1) listing, five lines down there's a sentence that says,  
 (2) "The drainage channel surrounding the closed industrial  
 (3) waste areas were improved by ACDC and subsequently  
 (4) improved by Texas Waste Systems, Inc." Do you see that?  
 (5) A. Yes.  
 (6) Q. Did you work on two separate improvements or  
 (7) some kind of alteration or modification of those  
 (8) drainage channels?  
 (9) A. I did a site modification plan several years  
 (10) after - after Waste bought the site that - that may  
 (11) have had a little bit more modification of the channel  
 (12) bottom slope around that with a drop structure or two.  
 (13) That may be what he's referring to. Past that, I can't  
 (14) think of anything other than normal maintenance that  
 (15) they would have done on it.  
 (16) Q. Okay.  
 (17) MR. HEMPHILL: Do you want to take a quick  
 (18) break?  
 (19) MR. EDWARDS: Sure.  
 (20) THE VIDEOGRAPHER: Off the record,  
 (21) approximately 10:21.  
 (22) (Recess from 10:21 to 10:36)  
 (23) THE VIDEOGRAPHER: We're back on the record.  
 (24) at approximately 10:36.  
 (25) Q. Mr. Pitman, in approximately the 1980 and 1981

- (1) there were varying, you know - all the way from none to  
 (2) a little bit coming out until we put those sidewall  
 (3) deals around it.  
 (4) Q. And was it in just one particular spot or one  
 (5) general area?  
 (6) A. It was done in that southwest corner area.  
 (7) Q. Southwest corner of the old industrial waste  
 (8) area?  
 (9) A. Well, where the - outside of the industrial  
 (10) waste site specific, but in that same big island.  
 (11) Q. Now - but at various points along that  
 (12) southwest side?  
 (13) MR. EDWARDS: Objection; form.  
 (14) A. More or less just on the southwest corner.  
 (15) Q. Okay. Now, earlier you had - had said, I  
 (16) believe, that you saw seepage that turned out to be  
 (17) tannic acid from some brush?  
 (18) A. Right.  
 (19) Q. How did you determine that it was in fact  
 (20) tannic acid?  
 (21) A. The Water Commission or Water - TDWR or  
 (22) whatever it was analyzed it and didn't come up with any  
 (23) other statistics that I was area of, or constituents.  
 (24) Q. And because it was tannic acid, was it assumed  
 (25) it was from brush rather than from any of the industrial

- (1) time frame when you were working on issues for the  
 (2) Austin Community Landfill, do you recall ever having any  
 (3) knowledge of whether the U.S. Environmental Protection  
 (4) Agency was doing any kind of investigation or inquiry  
 (5) into the industrial waste site at the ACL?  
 (6) MR. EDWARDS: Objection; form.  
 (7) A. I don't remember anything about E.P.A. involved  
 (8) with that site.  
 (9) Q. Okay.  
 (10) (Exhibit No. 6 marked)  
 (11) Q. I'm handing you what's marked as Exhibit 6 to  
 (12) your deposition, and this is interoffice memorandum from  
 (13) the Department of Water Resources dated June 27th,  
 (14) 1980. And if you look a little bit more than halfway  
 (15) down the page, the first page, after the listing of the  
 (16) names, it says, "This investigation was conducted and  
 (17) initiated due to a request from Mr. Tom Tiner, Regional  
 (18) Engineer for the TSHD in Temple to Mr. Joe R. Morgan,  
 (19) District III supervisor. Mr. Tiner advised Mr. Morgan  
 (20) that one of his field investigators had observed what  
 (21) appeared to be industrial waste seeping and/or flowing  
 (22) into a tributary of Walnut Creek." Do you see that?  
 (23) A. No.  
 (24) Q. It's the beginning of the paragraph on the  
 (25) first page after - do you see the listing of names?

- (1) waste or was the source actually located?  
 (2) A. Well, tannic acid is a decomposition product of  
 (3) brush, and you could see it on adjacent properties where  
 (4) there hadn't been any waste of any kind disposed - or  
 (5) not any municipal or industrial waste. So to me, it was  
 (6) kind of a natural decomposition product.  
 (7) Q. Were you aware of, in this time frame, 1980,  
 (8) '81, any other testing of leachate or surface water  
 (9) around the industrial waste area that indicated presence  
 (10) of any substances other than that tannic acid?  
 (11) A. I wasn't aware of any tests that showed  
 (12) anything else.  
 (13) (Exhibit No. 7 marked)  
 (14) Q. I'm handing you what's marked as Exhibit 7 to  
 (15) your deposition. This is a Texas Department of Water  
 (16) Resources interoffice memorandum dated August 22nd, 1980  
 (17) regarding Longhorn Disposal Services. Do you recall  
 (18) having seen a copy of this memorandum before, sir?  
 (19) A. I'm not sure whether I have or not.  
 (20) Q. Now, the first paragraph of this memorandum  
 (21) talks about Monitoring Wells No. 1 and No. 2. Do you  
 (22) see that?  
 (23) A. Yes.  
 (24) Q. Do you recall the location of those wells at  
 (25) the ACL?

- (1) A. Somewhere in that area.
- (2) Q. All right. And then is the - is this little
- (3) feature that's between Grid Marker 24 and 25 at the top,
- (4) is that another drainage feature that goes down to
- (5) the - roughly to the southwest of the property?
- (6) A. Yes.
- (7) Q. Okay. So part of the closed industrial waste
- (8) area would drain into that drainage channel, as well?
- (9) A. Yes.
- (10) Q. Okay.
- (11) (Exhibit No. 10 marked)
- (12) Q. Now, I'm handing you what's marked as Exhibit
- (13) No. 10 to your deposition, and this is a map that shows
- (14) in more detail the industrial waste area at the Austin
- (15) Community Landfill. Do you recall having seen a map -
- (16) this map or a map like it before?
- (17) A. No.
- (18) Q. Now, do you see the areas that are marked
- (19) "south disposal area" and "north disposal area" on
- (20) Exhibit 10?
- (21) A. Yes.
- (22) Q. Is it your understanding that those are the
- (23) approximate locations of where the barrels were buried?
- (24) MR. EDWARDS: Objection; form.
- (25) A. That's at least a general location.

- (1) Q. Okay. Now, do you know how the - how the
- (2) cells or disposal areas or trenches for the barrels were
- (3) constructed at the time the barrels were buried?
- (4) A. No.
- (5) Q. You don't know how deep they were?
- (6) A. I saw some pictures during the hearings, I
- (7) guess, in '80 or '81. I think TN - TNRCC's predecessor
- (8) agency had those pictures in the file. They appeared to
- (9) be 20 to 30 - the trenches appeared to be 20 to 30 foot
- (10) deep.
- (11) Q. Okay. Do you have any recollection about how
- (12) deep any of the pits in the barrel disposal area were
- (13) excavated?
- (14) A. They were almost surface pits with little dams
- (15) pushed up.
- (16) Q. Okay.
- (17) A. I mean, they weren't very big.
- (18) Q. Okay.
- (19) A. Three or four foot, probably.
- (20) Q. In the - in the barrel disposal areas, do you
- (21) know if there were - there were any certifications or
- (22) any other kind of documentation regarding the - the
- (23) liner characteristics of those areas?
- (24) A. I don't know.
- (25) Q. Do you know if there was any requirement to

- (1) have such - such kind of certifications, kind of like
- (2) SLERs or anything like that at the time in the early
- (3) '70s?
- (4) A. Well, on the agricultural - on the - on the
- (5) cattle feed lots we were requiring permeability testing
- (6) and some certification of thickness. I'm not sure what
- (7) they did on this one.
- (8) Q. And you've never - you don't recall seeing any
- (9) documentation of any kind of permeability testing of any
- (10) of the liners, the original liners in the barrel
- (11) disposal areas?
- (12) A. I don't recall seeing anything.
- (13) Q. Did you look at any documents or any - or talk
- (14) to any people or - regarding the types of industrial
- (15) waste, specific types of waste put in either the barrel
- (16) disposal areas or the pit?
- (17) A. Well, my understanding is that the stuff put in
- (18) the pits was just acid that was being neutralized from
- (19) some industrial process. The stuff in the barrels, I
- (20) think I saw something in one of the exhibits there a
- (21) while ago that named out the things the Water Quality
- (22) Board thought was put in there. Now, I don't recall
- (23) seeing anything else.
- (24) Q. Okay. Did you have any understanding about the
- (25) quantities of materials of industrial waste that was

- (1) deposited in the industrial waste area?
- (2) A. Well, in the pictures I mentioned there were,
- (3) you know, barrels stacked two barrels deep in a - you
- (4) know, pretty well filling the trench, or - a portion of
- (5) the trench. I'm not sure of the - there were quite a
- (6) few.
- (7) Q. Did you ever hear anyone say that there were
- (8) 20,000 or more barrels in the area?
- (9) A. Well, I was thinking more like, you know, a few
- (10) hundred in the pictures I saw.
- (11) Q. Okay.
- (12) A. I thought.
- (13) Q. But you wouldn't have any knowledge other than
- (14) seeing that picture about how many barrels -
- (15) A. I wasn't out there, you know, on site at any
- (16) time while they were putting them in.
- (17) Q. And you don't recall looking at any documents
- (18) that tried to estimate the number of barrels, other than
- (19) just looking at those pictures?
- (20) MR. EDWARDS: Objection; form.
- (21) A. I don't recall seeing anything.
- (22) Q. Now, on this map that's Exhibit 10, see down in
- (23) the key there's a - there's a little dotted circle down
- (24) in the legend, there's a little dotted circle that says,
- (25) "Area of unknown or suspected industrial waste

- (1) management. February 4th, 1973." Do you see that?
- (2) A. Yes.
- (3) Q. And then there is an area that's between Grid
- (4) Marks 14 and 15?
- (5) A. Yes.
- (6) Q. Do you see that?
- (7) A. Yes.
- (8) Q. Do you recall there having been some kind of
- (9) industrial waste disposal at that location?
- (10) A. We didn't ever find - find it. There was an
- (11) old what looked like stock tank back there about the
- (12) location of that top one. I don't know what the bottom
- (13) one was. But we didn't find anything that - that -
- (14) you couldn't - there was no visible evidence, either
- (15) from a surface survey or when we excavated those areas
- (16) for liners, you know, to construct cells.
- (17) Q. Okay. So it looked like - is it fair to say
- (18) it looked like there was something there at one time
- (19) that held some kind of liquid, but that's all you could
- (20) tell?
- (21) MR. EDWARDS: Objection; form.
- (22) A. No. I saw people dove hunting on that little
- (23) pond. The birds drank out of it.
- (24) Q. Oh, there was standing water in it?
- (25) A. There - yeah, before we started working that

- (1) area.
- (2) Q. Now, do you remember doing any kind of testing
- (3) or anything of that water?
- (4) A. I didn't do any water testing.
- (5) Q. Do you - do you know if anyone else did any
- (6) before you started excavating?
- (7) A. I don't know.
- (8) Q. Did you recall any concern or anyone raising
- (9) the possibility at that time that that area had at one
- (10) point been some kind of industrial waste disposal site?
- (11) A. Well, we - you know, we did visual monitoring
- (12) in the soil and in daily cover, but at the time we
- (13) excavated that - those areas that was dry and, you
- (14) know, there wasn't any water and there wasn't any visual
- (15) discoloration of the soil or anything to indicate
- (16) something had been there.
- (17) Q. And no one told you or mentioned the
- (18) possibility that that might have been an industrial
- (19) waste disposal site?
- (20) A. Well, at the time we were having our hearings,
- (21) they were moving targets of, "I saw somebody burying
- (22) barrels on top of that hill back there in the back. And
- (23) they buried here, there and yonder." And after all of
- (24) it was excavated, nothing ever showed up. So, you know,
- (25) sometimes imagination gets wild.

- (1) gray line that's on - on the south side, that's  
 (2) probably the limits of the southern - southern limits  
 (3) of any disposal. The western limits may be 100 - 150  
 (4) feet west of that gray line on the west.  
 (5) Q. How about up on the north between the Phase I  
 (6) area and the industrial waste area, how far to the north  
 (7) was - was waste disposed of in Phase I; how close was  
 (8) it to the drainage feature there?  
 (9) A. I really don't recall.  
 (10) Q. Is it your recollection that the waste disposal  
 (11) in the Phase I area stopped short of the drainage  
 (12) channel?  
 (13) A. Yes.  
 (14) Q. Do you recall how the - what the cover was  
 (15) over the industrial waste area when it was first closed  
 (16) down in the '70s?  
 (17) A. I didn't see it. I don't know.  
 (18) Q. Do you recall reading anything about - in any  
 (19) of the documents about what it was?  
 (20) A. I just don't recall.  
 (21) Q. On this - this map that's Exhibit 12 - I'm  
 (22) sorry, 10, the - the leachate seeps that you said you  
 (23) saw in 1980 or '81, about where would they have been?  
 (24) MR. EDWARDS: Objection; form.  
 (25) A. Oh, they would be about F-21.

- (1) Q. Okay. Any other locations you can recall  
 (2) seeing leachate seeps around the industrial area at any  
 (3) time?  
 (4) A. No.  
 (5) Q. How was the - the surface water runoff from  
 (6) the waste - the industrial waste area controlled at  
 (7) the - before you did any of the - any of the work that  
 (8) was encompassed in your proposal?  
 (9) A. Well, it drained basically the same - same  
 (10) directions as it did afterwards. The only thing was,  
 (11) some of the top was uneven and so you had a little  
 (12) puddling on top after a rainfall because it wasn't  
 (13) smooth since it had all drained off.  
 (14) Q. Did you observe any types of - aside from the  
 (15) ponding, did you observe any types of cracks or fissures  
 (16) or anything else in the cover over the industrial waste  
 (17) area before you added the additional clay on the top of  
 (18) it?  
 (19) A. Not that I recall.  
 (20) Q. You did supervise the addition of more clay on  
 (21) top of the industrial waste area?  
 (22) A. I observed it.  
 (23) Q. Okay. Do you remember how much was put on the  
 (24) top?  
 (25) A. Three or four feet, I'm thinking. Maybe more,

- (1) but I think it was three or four feet.  
 (2) Q. Do you recall at any time personally  
 (3) experiencing any kind of chemical type odors in the  
 (4) vicinity of the industrial waste site at the ACL?  
 (5) A. No, not really.  
 (6) Q. Do you recall anyone at the ACL telling you  
 (7) that they had experienced any kind of chemical odors  
 (8) from that area?  
 (9) A. No.  
 (10) Q. Do you recall anyone ever telling you about  
 (11) anyone having any kind of adverse physical reaction, any  
 (12) kind of upset stomach or any other kind - or a headache  
 (13) or anything like that that they thought was associated  
 (14) with the industrial waste area at the ACL?  
 (15) A. No.  
 (16) Q. At the - at the time - at the time that you  
 (17) were doing your plan in 1980, '81 about adding  
 (18) additional cover and that kind of thing to the  
 (19) industrial waste area, did you ever consider the  
 (20) possibility of excavating the site and removing the  
 (21) industrial waste?  
 (22) A. No.  
 (23) Q. Why not?  
 (24) A. I just didn't consider it a possibility.  
 (25) Q. Was it too dangerous or too expensive or -

- (1) A. It was already there and, you know, I was asked  
 (2) to contain it, not move it.  
 (3) Q. Fair enough.  
 (4) MR. HEMPHILL: Let's take a break and  
 (5) change tape.  
 (6) MR. EDWARDS: Sure.  
 (7) THE VIDEOGRAPHER: Going off the record at  
 (8) approximately 11:30. This is the end of Tape 1.  
 (9) (Recess from 11:30 to 11:51)  
 (10) THE VIDEOGRAPHER: We're back on the record  
 (11) at approximately 11:51. This is the beginning of Tape  
 (12) 2.  
 (13) Q. Mr. Pittman, earlier you talked about when the  
 (14) various fill sectors were being excavated, the depth  
 (15) depended on how far you had to go down to find the kind  
 (16) of soil you wanted. Is that correct; is that what you  
 (17) said?  
 (18) A. Right.  
 (19) Q. What - what kinds of things were you looking  
 (20) for to know when you'd gone down far enough?  
 (21) A. Well, you - you wanted those trench bottoms to  
 (22) be based in unweathered portion of that Taylor, and  
 (23) basically what I call the blue - blue clay, because  
 (24) it's - it turns more of a blue color as to gets to the  
 (25) unweathered some. And you wanted it to be down in that

- (1) blue, past any surface crack features and all that. You  
 (2) wanted a solid blue bottom that you could slick off and  
 (3) have it look like a dance floor.  
 (4) Q. So that was essentially what you were looking  
 (5) for?  
 (6) A. Right.  
 (7) Q. Okay.  
 (8) A. And it was designed so that - that most of  
 (9) those bottoms matched - based on the site borings, you  
 (10) know, matched where we anticipated hitting at, you know.  
 (11) So we were hitting pretty well the prescribed bottom,  
 (12) anyway, but -  
 (13) Q. Got you. I'm sorry if I asked this, I don't  
 (14) remember asking it. How deep down did the clay key  
 (15) around the industrial waste site go; how far down was  
 (16) it?  
 (17) A. At least four foot into good clay material that  
 (18) didn't have any silt in it.  
 (19) Q. So do you remember how - how far from the -  
 (20) how far down from the then existing surface that would  
 (21) have been?  
 (22) A. No.  
 (23) Q. And I - if I remember your testimony  
 (24) correctly, I think you said that some of the old acid  
 (25) pits - there were still pits there when you started

- (1) working at the ACL site, they just were empty?  
 (2) A. Right.  
 (3) Q. Okay. What was done with them as part of  
 (4) the - as part of what you oversaw about, you know,  
 (5) putting more clay on top of the industrial waste area  
 (6) and everything; was anything in particular done to the  
 (7) pits before they were covered up?  
 (8) A. Well, they were - the dikes around them were  
 (9) leveled and pushed into them and compacted and then the  
 (10) clay cap came right on over it.  
 (11) Q. So the soil -  
 (12) A. So it's still there.  
 (13) Q. It's still there. It wasn't trucked out or -  
 (14) A. No.  
 (15) Q. - spread or anything like that. Okay. On  
 (16) Exhibit 10, do you recall where the approximate location  
 (17) of the monitoring well was that had to be replaced?  
 (18) A. I think it's the one that was close to F-21,  
 (19) but I'm not positive.  
 (20) Q. Okay. Do you recall any instances while you  
 (21) were working at the ACL of any trucks or any other  
 (22) equipment bogging down in the soil over the industrial  
 (23) waste area?  
 (24) A. No, not really.  
 (25) Q. Do you recall any kind of problem with - with

NO. 97-12163

TEXAS DISPOSAL SYSTEMS  
LANDFILL, INC.,  
Plaintiff,

\* IN THE DISTRICT COURT  
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\*

VS.

TRAVIS COUNTY, TEXAS

WASTE MANAGEMENT, INC.,  
WASTE MANAGEMENT OF TEXAS,  
INC., and DONALD MARTIN,  
Defendants.

126<sup>TH</sup> JUDICIAL DISTRICT

\*\*\*\*\*

ORAL AND VIDEOTAPED DEPOSITION  
OF  
JANE WITHERIDGE

\*\*\*\*\*

CONDENSED TRANSCRIPT & KEY WORD INDEX

SAN ANTONIO, TEXAS

JUNE 5, 2002

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( 1) NO. 97-12163  
 ( 2)  
 ( 3) TEXAS DISPOSAL SYSTEMS \* IN THE DISTRICT COURT  
 LANDFILL, INC. \*  
 ( 4) Plaintiff, \*  
 ( 5) VS. \* OF TRAVIS COUNTY, TEXAS  
 ( 6) WASTE MANAGEMENT, INC., \*  
 WASTE MANAGEMENT OF \*  
 ( 7) TEXAS, INC., and \*  
 DONALD MARTIN \*  
 ( 8) Defendants \* 126TH JUDICIAL DISTRICT  
 ( 9) \*\*\*\*\*  
 (10) ORAL AND VIDEOTAPED DEPOSITION OF  
 JANE WITHERIDGE  
 JUNE 5 2002  
 (11) \*\*\*\*\*  
 (12)  
 (13)  
 (14)  
 (15) ORAL AND VIDEOTAPED DEPOSITION OF  
 (16) JANE WITHERIDGE, produced as a witness at the instance  
 (17) of the Defendants and duly sworn, was taken in the  
 (18) above-styled and numbered cause on the 5th of June,  
 (19) 2002, from 10:09 a.m. to 3:48 p.m., before CINDY K.  
 (20) SYMPSON, Certified Shorthand Reporter in and for the  
 (21) State of Texas, reported by machine shorthand, at the  
 (22) offices of Jackson Walker, L.L.P., 112 East Pecan  
 (23) Street, Suite 2200, San Antonio, Texas, 78205 pursuant  
 (24) to the Texas Rules of Civil Procedure and the  
 (25) provisions stated on the record or attached hereto

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 ( 2)  
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 (15) ALSO PRESENT:  
 (16) Mr. Victor Barlow, Videographer  
 (17)  
 (18)  
 (19)  
 (20)  
 (21)  
 (22)  
 (23)  
 (24)  
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- (1) that you had with Mr. Cohn, did he ever indicate to  
 (2) you in so many words that he believed TDSL's landfill  
 (3) was environmentally inferior to Waste Management  
 (4) landfills in the area?  
 (5) A. No.  
 (6) Q. Anything else that you recall Mr. Cohn saying  
 (7) about TDS or TDSL?  
 (8) A. That the bid price was close and, I believe,  
 (9) that Waste Management's was a little less. Now, I  
 (10) could have that switched. But there was an issue that  
 (11) the pricing was pretty close.  
 (12) Q. Anything else you can recall Mr. Cohn saying  
 (13) about TDS or TDSL?  
 (14) A. No.  
 (15) Q. To your knowledge was Mr. Cohn an employee of  
 (16) Waste Management during both of these lunches?  
 (17) MR. EDWARDS: Objection; form.  
 (18) THE WITNESS: I don't believe he was an  
 (19) employee about a year ago, and I don't recall whether  
 (20) he was or not the first time I met him in '97.  
 (21) Q. (By Mr. Hemphill) Okay. Do you recall at  
 (22) which lunch Mr. Cohn made the remarks about the  
 (23) San Antonio contract involving TDS or TDSL?  
 (24) A. The one approximately a year ago.  
 (25) Q. Okay. Did you have any understanding as to

- (1) whether during the events Mr. Cohn was talking about  
 (2) when he went to officials trying to get the contract  
 (3) for Waste Management - whether he was working on  
 (4) Waste Management's behalf?  
 (5) MR. EDWARDS: Objection; form.  
 (6) THE WITNESS: My assumption was that he  
 (7) was working for Waste Management as he went to plead  
 (8) his story regarding a contract for the solid waste.  
 (9) Q. (By Mr. Hemphill) Do you remember any other  
 (10) conversations or other communications with Larry Cohn  
 (11) regarding TDS or TDSL?  
 (12) A. Yes, unless I already mentioned the issue of  
 (13) the - I did. It was the issue of the liner not being  
 (14) synthetic and getting approval from the agency, which  
 (15) I had already mentioned.  
 (16) Q. And you can't recall anything else regarding  
 (17) discussions with Larry Cohn about TDS or TDSL?  
 (18) A. Other than the liner and the contract -  
 (19) those were the two issues.  
 (20) Q. Do you remember ever discussing any aspect of  
 (21) the Austin Community Landfill with Mr. Cohn?  
 (22) A. No.  
 (23) Q. Do you recall ever speaking with or working  
 (24) with or otherwise communicating with a person named  
 (25) Susan Janek, J-a-n-e-k, regarding landfills in the

- (1) Austin or San Antonio area?  
 (2) A. No.  
 (3) Q. Do you recall communicating with, working  
 (4) with a person named Slim Williams regarding landfills  
 (5) in the Austin or San Antonio area?  
 (6) A. No.  
 (7) Q. Do you recall having any such conversations  
 (8) with anyone named Johnny Williams?  
 (9) A. No.  
 (10) Q. Do you recall having any such conversations  
 (11) with someone named Jack Arsenault?  
 (12) A. No.  
 (13) I'd like to back up on the  
 (14) John Williams. If he was from Dallas and he managed  
 (15) the site in Dallas, I had conversations with him, but  
 (16) they would have not been related to the San Antonio  
 (17) facilities, and that was not part of the -  
 (18) Q. Right.  
 (19) A. - form of the question.  
 (20) Q. Or Austin?  
 (21) A. Or Austin. Or Austin.  
 (22) Q. Okay.  
 (23) MR. HEMPHILL: Want to take a quick  
 (24) break?  
 (25) MR. EDWARDS: Sure.

- (1) VIDEOGRAPHER: Off the record at 11:15.  
 (2) (RECESS FROM 11: 16-11:31)  
 (3) VIDEOGRAPHER: On the record at 11:32.  
 (4) Q. (By Mr. Hemphill) Ms. Witheridge, did you  
 (5) testify earlier that at one point you were a regional  
 (6) engineer with responsibility over Texas with  
 (7) Waste Management?  
 (8) A. Yes. It was the east south central region,  
 (9) which included Texas.  
 (10) Q. What were your duties regarding Texas during  
 (11) that time?  
 (12) A. My duties were primarily to submit permit  
 (13) applications to expand facilities in the entire  
 (14) southeast quadrant of the United States, exclusive of  
 (15) Florida.  
 (16) Q. All right. And do you recall approximately  
 (17) what time frame you had that position?  
 (18) A. I think it was the late '70s.  
 (19) Q. Okay. We also briefly mentioned the  
 (20) compliance maintenance system, which I believe you  
 (21) testified was put into place after your tenure in the  
 (22) audit area; is that correct?  
 (23) A. Yes.  
 (24) Q. Did you - did you have any understanding  
 (25) while you were at Waste Management about what the

- (1) compliance maintenance system was or what it consisted  
 (2) of?  
 (3) MR. EDWARDS: You can answer, but don't  
 (4) go into the contents of the system.  
 (5) THE WITNESS: No.  
 (6) Q. (By Mr. Hemphill) You didn't have any  
 (7) knowledge about what it was?  
 (8) A. It related to compliance in the environmental  
 (9) management department and beyond that was not my  
 (10) concern.  
 (11) (EXHIBIT NO. 2 MARKED)  
 (12) Q. (By Mr. Hemphill) Okay. I am handing you  
 (13) what's been marked as Exhibit 2 to your deposition.  
 (14) If you could take a brief look at that and see if  
 (15) that's a document that you recognize, please.  
 (16) A. You had a question?  
 (17) Q. Do you recognize that document?  
 (18) A. Yes.  
 (19) Q. This document purports to be a memo dated  
 (20) July 15th, 1980, to a number of people from  
 (21) Jane G. LaPorte. In July of 1980 was that your name?  
 (22) A. Yes.  
 (23) Q. And do you recognize this as a memorandum  
 (24) that you would have drafted?  
 (25) A. Yes.

- (1) Q. And we earlier discussed your first visit  
 (2) that you could recall to the - what's referred to as  
 (3) the Austin Community Landfill. Would this be a memo  
 (4) that you drafted after that initial visit to the  
 (5) Austin Community Landfill?  
 (6) A. Yes.  
 (7) Q. All right. The first addressee on the memo  
 (8) is Al Morrow. Do you see that?  
 (9) A. Yes.  
 (10) Q. Who is he?  
 (11) A. Al Morrow was the regional manager or  
 (12) regional president or regional vice-president - he  
 (13) was the gentleman with responsibility for all of the  
 (14) P and L, profit and loss, responsibilities for the  
 (15) east south central region, which was the southeastern  
 (16) quadrant of the United States, exclusive of Florida.  
 (17) Q. Who is Oscar O'Bryant, the second addressee?  
 (18) A. Oscar O'Bryant was a business development  
 (19) person with focus predominantly in Texas.  
 (20) Q. Who was Phil Rooney?  
 (21) A. Phil Rooney was the president or COO of  
 (22) Waste Management, Inc.  
 (23) Q. And the fourth addressee is Don Wallgren; who  
 (24) was that gentleman?  
 (25) A. He was either the director or the

(1) be add-mixed and put in a slurry form. It could be a  
 (2) clay wall, recompact soils so that to the extent  
 (3) there were lenses or higher permeability soils, it  
 (4) would be reworked so that it would be more consistent.  
 (5) Q. And by lens, do you mean like a pocket of  
 (6) underground water?  
 (7) A. A lens is a pocket of underground water or a  
 (8) pocket of some other material.  
 (9) And a third would be a synthetic liner  
 (10) would form the basis of a cut-off wall.  
 (11) Q. Were synthetic cut-off walls sometimes used  
 (12) in 1980?  
 (13) A. The first landfill I worked on in 1976 used  
 (14) synthetic cut-off walls. I can't think offhand of one  
 (15) in 1980, but I do recall one in '76, so...  
 (16) Q. The type of cut-off wall you talk about on  
 (17) Page 3 of your memorandum - the type of potential  
 (18) cut-off wall, would there be any particular depth to  
 (19) which it would need to extend to be effective?  
 (20) MR. EDWARDS: Objection; form.  
 (21) THE WITNESS: Don't know. It would be  
 (22) entirely site specific.  
 (23) Q. (By Mr. Hemphill) Would it be necessary to  
 (24) extend it into the underlying shale?  
 (25) A. Not -

(1) MR. EDWARDS: Objection; form.  
 (2) THE WITNESS: - necessarily.  
 (3) MR. EDWARDS: You have to give me just a  
 (4) second.  
 (5) THE WITNESS: Sorry. I didn't know.  
 (6) MR. EDWARDS: It's all right.  
 (7) Q. (By Mr. Hemphill) Were you aware at the time  
 (8) that you wrote this memo of whether or not a partial  
 (9) cut-off wall had already been installed around a  
 (10) portion of the hazardous or industrial waste area?  
 (11) A. I don't recall.  
 (12) Q. If you had been told or had observed that  
 (13) such a wall existed, would it typically be something  
 (14) that you would include in this type of memorandum?  
 (15) MR. EDWARDS: Objection; form.  
 (16) THE WITNESS: I may or may not have,  
 (17) depending on the specificity or issues surrounding  
 (18) what I viewed as being important or not in identifying  
 (19) to management.  
 (20) Q. (By Mr. Hemphill) Do you recall whether or  
 (21) not you would have characterized the industrial waste  
 (22) area at the Austin Community Landfill as a major issue  
 (23) in your due diligence as of the time you wrote the  
 (24) memo that's Exhibit 2?  
 (25) MR. EDWARDS: Objection; form.

(1) THE WITNESS: I'm sorry, you're going to  
 (2) have to repeat that one.  
 (3) Q. (By Mr. Hemphill) Sure. Would you have  
 (4) characterized the existence of the industrial waste  
 (5) disposal site at the Austin Community Landfill as a  
 (6) major issue in your due diligence as of the time you  
 (7) wrote the memo that's Exhibit 2?  
 (8) MR. EDWARDS: Objection; form.  
 (9) THE WITNESS: I would identify this  
 (10) industrial waste area as an important fact to tell  
 (11) management about; hence in a three-page report I  
 (12) identified it as an important issue.  
 (13) Q. (By Mr. Hemphill) Why was it an important  
 (14) issue?  
 (15) A. Because as - as part of any due diligence  
 (16) process, my responsibility was to identify potential  
 (17) liabilities that management could then make a decision  
 (18) whether or not they wanted to acquire the facility or  
 (19) not. To the extent there was nonmunicipal waste  
 (20) disposed of, then management should be aware of that  
 (21) fact. And a scientist can determine whether or not  
 (22) those wastes constitute a higher liability or a lower  
 (23) liability than municipal solid waste.  
 (24) Q. Do you have any recollection of how the  
 (25) hazardous waste was disposed? In other words, whether

(1) it was disposed in bulk or in barrels or any other  
 (2) form?  
 (3) A. My recollection was that it was in drums.  
 (4) Q. Do you recollect whether or not there was any  
 (5) bulk disposal in pits?  
 (6) A. I do not recall.  
 (7) (EXHIBIT NO. 3 MARKED)  
 (8) Q. (By Mr. Hemphill) I'm handing you what's  
 (9) marked as Exhibit 3 to your deposition. And this is a  
 (10) plan or map of the Austin Community Landfill that was  
 (11) on file with the Texas Department of - the TNRCC.  
 (12) And you'll see it's dated April 1995, so this is well  
 (13) after your initial site visit, so the boundaries, I  
 (14) believe, would be different. But you see over in the  
 (15) key on the left-hand side where it says, "Estimated  
 (16) closed barrel disposal area" and "Estimated closed  
 (17) industrial waste area"?  
 (18) A. Yes.  
 (19) Q. And do you see where that is on the - on the  
 (20) map of the facility?  
 (21) A. Yes, I see.  
 (22) Q. Is that consistent with any recollection you  
 (23) might have about where that industrial waste area was  
 (24) at the time that you did the site visits in the early  
 (25) '80s?

(1) A. I would not be able to respond to whether or  
 (2) not that was the same one I was talking about. I have  
 (3) no recollection regarding that.  
 (4) Q. Okay. Fair enough. Was it your  
 (5) understanding that the disposal of industrial waste at  
 (6) that facility was confined to one particular area -  
 (7) one contiguous particular area?  
 (8) A. It was my recollection that it was in a  
 (9) single area.  
 (10) Q. Okay. That's all I have with that one. Put  
 (11) that aside.  
 (12) Going back to the last page of the 1980  
 (13) memo, under "Other Considerations" the first sentence  
 (14) says, "Acquiring such a site has inherent liabilities:  
 (15) (1) County-run site adjacent to property and (2)  
 (16) previously disposed hazardous wastes." Do you recall  
 (17) what the nature was of the inherent liability of  
 (18) having a county-run site adjacent to the property?  
 (19) A. The inherent liability is always with an  
 (20) adjacent facility that one cannot determine whose  
 (21) liability is whose in the event that a problem occurs  
 (22) with leachate, groundwater, or methane gas generation.  
 (23) Q. The next sentence says, "Due to the  
 (24) hydrogeology, however, such liabilities are relatively  
 (25) minimal." And the next sentence continues, "A study

(1) of leachate generation performed by the Department of  
 (2) Health indicates no effective leachate generation for  
 (3) the Longhorn site." Do you recall whether the study  
 (4) referenced in that passage was based on the  
 (5) installation of monitoring wells or leachate detectors  
 (6) of any kind?  
 (7) A. I don't recall.  
 (8) Q. Okay. You don't recall what it was based on;  
 (9) is that fair?  
 (10) A. I don't recall what - that's fair.  
 (11) Q. Okay. And did you notice any type of seepage  
 (12) or leachate outbreaks at the time you were at the  
 (13) facility in 1980?  
 (14) A. Not that I recall.  
 (15) Q. Do you recall if there were any residential  
 (16) neighborhoods near the facility in 1980?  
 (17) A. Nope.  
 (18) Q. Okay. The last sentence of the memo says,  
 (19) "Because of the location and hydrogeological  
 (20) conditions, I recommend pursuit as either a sanitary  
 (21) landfill or hazardous waste site." Is it your  
 (22) testimony that that is not a recommendation that  
 (23) Waste Management pursue purchase?  
 (24) MR. EDWARDS: Objection; form.  
 (25) THE WITNESS: No. My testimony is such

(1) that my job was not to recommend acquisition; it was  
 (2) not my duty or responsibility. And it looks like I  
 (3) threw in a freebie here at the end of the memorandum.  
 (4) Q. (By Mr. Hemphill) Okay. So it's fair to say  
 (5) that that was recommending pursuit of potential  
 (6) acquisition?  
 (7) MR. EDWARDS: Objection; form.  
 (8) THE WITNESS: I don't know whether it  
 (9) was pursuit of acquisition, but certainly determining  
 (10) more about the facility either as a sanitary landfill  
 (11) or a hazardous waste site.  
 (12) Q. (By Mr. Hemphill) And pursuit of at least  
 (13) further due diligence; is that fair to say?  
 (14) MR. EDWARDS: Objection; form.  
 (15) THE WITNESS: I would - that would be  
 (16) fair to say.  
 (17) Q. (By Mr. Hemphill) Okay. And is there  
 (18) anything not discussed in this memo that you can  
 (19) recall that went into the basis of your opinion that  
 (20) it could be a suitable hazardous waste site?  
 (21) A. No.  
 (22) Q. Okay.  
 (23) A. Wait. Could you ask that question again?  
 (24) Q. Sure. Is there anything not discussed in  
 (25) this memo that you can recall that went into your

(1) Q. Okay. After reviewing this memorandum, do  
 (2) you recall whether or not anyone from Waste Management  
 (3) accompanied you on this visit to the Austin facility?  
 (4) A. I don't recall.  
 (5) MR. HEMPHILL: Let's go off the record  
 (6) for a second.  
 (7) VIDEOGRAPHER: Off the record at 12:23.  
 (8) (LUNCH RECESS FROM 12:24-1:20)  
 (9) VIDEOGRAPHER: On the record at 1:21.  
 (10) Q. (By Mr. Hemphill) Ms. Witheridge, if we  
 (11) could go back for just a moment to the 1980 memo  
 (12) marked Exhibit 2 to your deposition. I just have a  
 (13) couple of follow-up questions.  
 (14) On the first page under "Summary,"  
 (15) number 3, it talks about soil borings. Do you see  
 (16) that?  
 (17) A. Yes.  
 (18) Q. Do you have any recollection how long those  
 (19) borings were left open?  
 (20) A. No.  
 (21) Q. Do you have any recollection as to what was a  
 (22) typical time period to leave such borings open at the  
 (23) time you wrote the memo?  
 (24) A. No.  
 (25) MR. EDWARDS: Objection; form.

(1) opinion that this facility might be pursued as a  
 (2) potential hazardous waste site?  
 (3) A. Not with respect to this facility. The  
 (4) hazardous waste issues were very present at the time  
 (5) of July of 1980, and the company was looking at  
 (6) facilities to convert from solid waste into hazardous  
 (7) waste sites. I don't recall this one specifically  
 (8) being identified as such, but clearly the memorandum  
 (9) reflects that it could be considered for such.  
 (10) Q. Is it fair to say that at the time you wrote  
 (11) this memo federal environmental regulations were going  
 (12) to make it - conditions for disposing hazardous waste  
 (13) more stringent?  
 (14) A. Yes.  
 (15) Q. And, therefore, finding suitable sites for  
 (16) the disposal of hazardous waste would be more  
 (17) difficult, correct?  
 (18) MR. EDWARDS: Objection; form.  
 (19) THE WITNESS: No.  
 (20) Q. (By Mr. Hemphill) More stringent standards  
 (21) did not mean that finding hazardous waste disposal  
 (22) sites would become more difficult?  
 (23) MR. EDWARDS: Objection; form.  
 (24) THE WITNESS: No. The restrictions for  
 (25) disposing of hazardous waste would be more onerous,

(1) Q. (By Mr. Hemphill) Okay. Again, under the  
 (2) "Summary" section, number 7, it says, "Due to the  
 (3) nature of the site layout, stringent controls will be  
 (4) required for handling surface water runoff." Are you  
 (5) aware of any surface water runoff controls that were  
 (6) put into place after Waste Management's purchase of  
 (7) the Austin Community Landfill?  
 (8) A. No.  
 (9) Q. And then on the third page, second paragraph  
 (10) down that starts, "The potential to accept" - the  
 (11) paragraph says, "The potential to accept hazardous  
 (12) waste at this site appears to be very good if surface  
 (13) water drainageways can be rechannelized." Do you  
 (14) recall why you thought that surface drainageways might  
 (15) need to be rechannelized?  
 (16) A. No.  
 (17) Q. Okay. Are you aware if whether surface water  
 (18) drainageways actually were rechannelized?  
 (19) A. No.  
 (20) (EXHIBIT NO. 4 MARKED)  
 (21) Q. (By Mr. Hemphill) I'm handing you what the  
 (22) court reporter has marked as Exhibit 4 to your  
 (23) deposition. If you could look at that and tell me  
 (24) whether or not you recognize that document, ma'am.  
 (25) A. I don't recall writing it. I don't question

(1) but it didn't mean that there would be fewer sites.  
 (2) Q. (By Mr. Hemphill) Well, is it fair to say  
 (3) that a site that might have been suitable for  
 (4) hazardous waste before RCRA might not be suitable  
 (5) after RCRA?  
 (6) MR. EDWARDS: Objection; form.  
 (7) THE WITNESS: In a very, very limited  
 (8) way. There were very few geological conditions - and  
 (9) particularly with respect to 1980 - that restricted  
 (10) hazardous waste disposal, and that was the salt domes,  
 (11) and that came out in the mid '80s. But the geology of  
 (12) a facility was not the issue to which the regulations  
 (13) limited facilities. It was the - both performance  
 (14) and design criteria that were required for facilities  
 (15) that almost made the hydrogeology irrelevant from the  
 (16) federal perspective.  
 (17) Q. (By Mr. Hemphill) There's a cc line at the  
 (18) end of the memo to Don McCombs. Who was Mr. McCombs?  
 (19) A. I - Don McCombs was in the environmental  
 (20) management department, and he may have been the  
 (21) regional engineer for this facility at the time. He  
 (22) performed regional engineering duties for chemical  
 (23) waste management. I don't recall whether or not he  
 (24) was also the solid waste regional engineer at the  
 (25) time.

(1) whether or not I wrote it, but I - I don't recall.  
 (2) And I'll have to read it in more detail to see if  
 (3) something jumps out at me.  
 (4) Q. Sure. But you believe that it is a  
 (5) memorandum that you wrote on or about August 17th,  
 (6) 1981?  
 (7) A. I have no reason to believe it's not a  
 (8) memorandum that I wrote on that date.  
 (9) Q. Fair enough. The addressees on this letter  
 (10) are Jerry Girsch, Phil Rooney, Don Wallgren, and  
 (11) Peter Vardy. I believe we've talked about Mr. Rooney,  
 (12) Mr. Wallgren, and Mr. Vardy. But who is Mr. Girsch?  
 (13) A. Jerry Girsch was a controller. And at that  
 (14) point in time, he was either the controller for the  
 (15) North American operations or VP of some aspect in the  
 (16) financial department.  
 (17) Q. For Waste Management?  
 (18) A. For Waste Management, Inc., or  
 (19) Waste Management of North America or some highly  
 (20) related subsidiary parent corporation thereof.  
 (21) Q. I understand. Now, the first memo,  
 (22) Exhibit 2, is dated July 15th, 1980, and this memo,  
 (23) Exhibit 4, is dated August 17th, 1981. At this time  
 (24) do you have any recollection of anything you might  
 (25) have done connected with the Austin Community Landfill

CLIENT COPY

CAUSE NO. 97-12163

TEXAS DISPOSAL SYSTEMS )	IN THE DISTRICT COURT
LANDFILL, INC. )	
VS. )	TRAVIS COUNTY, TEXAS
WASTE MANAGEMENT, INC., )	
WASTE MANAGEMENT OF )	
TEXAS, INC., and DONALD )	126 <sup>TH</sup> JUDICIAL DISTRICT
MARTIN )	

\*\*\*\*\*

ORAL AND VIDEOTAPED DEPOSITION OF

JOHNNY WILLIAMS

JUNE 19, 2002

\*\*\*\*\*

CONDENSED TRANSCRIPT AND KEYWORD INDEX

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STIPULATIONS

ORAL DEPOSITION(S) OF: Bob Ross, Dwight Pittman,  
Johnny Williams

The attorneys for all the parties present stipulate and agree to the following checked items:

Objections:

Texas Rules of Civil Procedure.

Federal Rules of Civil Procedure.

Other: \_\_\_\_\_

Delivery for signature and changes:

The witness, or the witness's attorney, will return the signed deposition to the court reporter within 20 days of the date of submission. If the original of the deposition is not signed, or made available, an unsigned copy may be used as though signed.

The original transcript will be submitted to the witness's attorney.

The original transcript will be submitted to the witness at the following address:

P.O. Box 28490, San Antonio 78228  
2121 Bandera Road, San Antonio 78228  
 Signature waived.

The attorney asking the first question will be responsible for the timely payment of all costs in connection with the original deposition transcript.

I hereby agree to the above and foregoing marked items and request that AcuScribe Court Reporters furnish me with the items checked below. Unless otherwise requested, I will receive copies of all exhibits. My firm and I will be responsible for the timely payment of any original or copies and/or exhibits as indicated below that I may request. I agree that if I am an out-of-city client and/or have made no prior credit arrangement with AcuScribe Court Reporters, the transcript(s) stated above may be delivered on a COD basis. If any indebtedness due and owing is not paid as agreed, the undersigned agrees to pay reasonable attorneys fees, plus all costs of collection and all other costs and expenses which may be incurred by AcuScribe Court Reporters relative to collection of the indebtedness due and owing, whether suit be instituted or not.

Executed this the 12<sup>th</sup> day of June, 2002.

[Signature] Attorney for: Plaintiff Texas Disposal Systems  
Lombard, Inc.

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[Signature] Attorney for: Defendant

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( 1 ) CAUSE NO 97-12163  
 ( 2 )  
 ( 3 ) TEXAS DISPOSAL SYSTEMS \* IN THE DISTRICT COURT  
 LANDFILL, INC. \*  
 Plaintiffs. \*  
 ( 4 ) vs \* TRAVIS COUNTY, TEXAS  
 \*  
 ( 5 ) WASTE MANAGEMENT INC. \*  
 WASTE MANAGEMENT OF TEXAS. \*  
 ( 6 ) INC. and DONALD MARTIN \*  
 Defendant \* 126th JUDICIAL DISTRICT  
 ( 7 )  
 -----  
 ( 8 ) ORAL VIDEOTAPED DEPOSITION OF  
 JOHNNY WILLIAMS  
 ( 9 ) JUNE 19 2002  
 -----  
 (10)  
 (11)  
 (12) ORAL DEPOSITION OF JOHNNY WILLIAMS produced as a  
 (13) witness at the instance of the Plaintiff, and duly  
 (14) sworn, was taken in the above-styled and numbered cause  
 (15) on the 19th of June 2002, from 2:27 p.m. to 4:35 p.m.  
 (16) before Dana Montgomery, CSR in and for the State of  
 (17) Texas, reported at the Offices of Jackson Walker  
 (18) L.L.P. 100 Congress Avenue, Suite 1100, Austin, Texas  
 (19) pursuant to the Texas Rules of Civil Procedure and the  
 (20) provisions stated on the record or attached hereto.  
 (21)  
 (22)  
 (23)  
 (24)  
 (25)

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THEY USED  
 EXHIBIT 11  
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ITS NOT LISTED -

( 1 ) APPEARANCES  
 ( 2 )  
 ( 3 ) FOR THE PLAINTIFF TEXAS DISPOSAL SYSTEMS LANDFILL,  
 INC.  
 ( 4 )  
 ( 5 ) Mr. James A. Hemphill  
 GEORGE & DONALDSON, L.L.P.  
 1100 Norwood Tower, 114 West 7th Street  
 ( 6 ) Austin, Texas 78701  
 (512) 495-1400  
 (512) 495-0094 (Fax)  
 ( 7 )  
 ( 8 )  
 ( 9 )  
 (10) FOR THE DEFENDANTS WASTE MANAGEMENT, INC., ET AL  
 (11) Mr. John K. Edwards  
 JACKSON WALKER, L.L.P.  
 (12) 1100 Louisiana Street, Suite 4200  
 Houston, Texas 77002  
 (713) 752-4200  
 (713) 752-4221 (Fax)  
 (14)  
 (15)  
 ALSO PRESENT  
 (16)  
 Jesse Perez, Videographer  
 (17) Gary Newton  
 Bob Gregory  
 (18)  
 (19)  
 (20)  
 (21)  
 (22)  
 (23)  
 (24)  
 (25)

(1) THE VIDEOGRAPHER: We're on the record.  
 (2) June 19th, 2002. The time is approximately 2:27. This  
 (3) is the beginning of Tape 1.  
 (4) JOHNNY WILLIAMS,  
 (5) having been first duly sworn, testified as follows:  
 (6) EXAMINATION  
 (7) BY MR. HEMPHILL:  
 (8) Q. Could you state your name for the record  
 (9) please, sir?  
 (10) A. It's Johnny Williams.  
 (11) Q. Okay, Mr. Williams, my name is Jim Hemphill.  
 (12) We met briefly before the deposition. I'm one of the  
 (13) lawyers for Texas Disposal Systems Landfill in this  
 (14) lawsuit. Have you ever had to have your deposition  
 (15) taken in any case before?  
 (16) A. No, this is the first one I've ever had.  
 (17) Q. All right. Well, just to give you a brief  
 (18) background about what the process is like, it's just a  
 (19) question and answer session; it's taken under oath just  
 (20) like you were in a courtroom, and this testimony can be  
 (21) used if this case goes to trial or other proceedings in  
 (22) front of the Court. Do you understand that?  
 (23) A. Yes.  
 (24) Q. Okay. And the court reporter here is taking  
 (25) down everything that everyone here says and it's also

( 1 ) STIP PAGE  
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(1) being recorded on videotape, I'll do my very best to  
 (2) wait until you're completely finished with an answer  
 (3) before I ask my next question, because that way it is  
 (4) easier for the court reporter to take it down, and if  
 (5) you could just try to wait until I'm finished with my  
 (6) question before your answer, and we'll make her life a  
 (7) little easier. Okay?  
 (8) A. Yes.  
 (9) Q. Okay. Great. If at any time you don't  
 (10) understand any of my questions or if they don't make  
 (11) sense to you or if I don't speak up loud enough, please  
 (12) just tell me. And if you need to take a break for any  
 (13) reason, please feel free to say so. This is not an  
 (14) endurance test or anything like that, we just want to  
 (15) try to get some information. Okay?  
 (16) A. Yes.  
 (17) Q. Okay. Mr. Williams, how old a man are you?  
 (18) A. How old?  
 (19) Q. Yeah.  
 (20) A. I'm 41.  
 (21) Q. Okay. And where do you currently work?  
 (22) A. I work at Williamson County Landfill.  
 (23) Q. Okay. What's your position there?  
 (24) A. As a lead operator.  
 (25) Q. Okay. Is that kind of like a foreman?

(1) A. I guess you could say that. You know, I run  
 (2) equipment all day, but also kind of oversee the landfill  
 (3) at the same time.  
 (4) Q. All right. In the operation side of the  
 (5) landfill, who do you report to?  
 (6) A. My boss is Mark Heinz.  
 (7) Q. Okay. And what's Mark's title?  
 (8) A. His title?  
 (9) Q. Yeah.  
 (10) A. Is operations manager.  
 (11) Q. Operations manager. Okay. Does he do a lot of  
 (12) hands-on work, too, or is he mostly an office guy?  
 (13) A. Well, he's got three different sites, so he  
 (14) spends a lot of time at the other two sites, more than  
 (15) he does the one where I work.  
 (16) Q. What other sites does he work?  
 (17) A. Temple Landfill and Waco Landfill.  
 (18) Q. And those are also both Waste Management sites?  
 (19) A. Yeah.  
 (20) Q. And you're an employee of Waste Management?  
 (21) A. Yes.  
 (22) Q. Okay. How long have you been in your current  
 (23) position at Williamson County?  
 (24) A. Well, I got -- it's transferred back and forth  
 (25) between Austin and Williamson County, but I've been a

(1) Q. But the shop was on site at the landfill?  
 (2) A. Yeah.  
 (3) Q. And when you started -- when you started  
 (4) working there about 1978, what was your father,  
 (5) Mr. William's position?  
 (6) A. He worked in the landfill. I don't know  
 (7) position wise, but it was just him and one other fellow  
 (8) that worked in the back.  
 (9) Q. Now, after working -- well, first of all, what  
 (10) kind of stuff did you do in the shop?  
 (11) A. In the shop, I was -- repaired cans, trash cans  
 (12) and just a helper, basically.  
 (13) Q. Then after a year, did you start working in the  
 (14) landfill?  
 (15) A. Yeah, then I started working in the landfill  
 (16) full time.  
 (17) Q. Around 1979?  
 (18) A. Yeah.  
 (19) Q. And what was the first position that you had  
 (20) when you were working in the landfill?  
 (21) A. Well, basically we had somebody pushing trash,  
 (22) but you push trash or, you know, just fixed whatever  
 (23) needed fixed or -- and hauling dirt.  
 (24) Q. Were you -- was your dad one of your bosses?  
 (25) A. Excuse me?

(1) lead operator for a good six, seven years now.  
 (2) Q. All right. Let's -- let's go back just a  
 (3) little bit and talk a little bit about your education  
 (4) and work history. Did you go to high school, sir?  
 (5) A. No.  
 (6) Q. Okay.  
 (7) A. I didn't make it to high school.  
 (8) Q. Okay. Where did you grow up?  
 (9) A. In Leander, Round Rock area.  
 (10) Q. Okay. And when did you first go to get a  
 (11) full-time job?  
 (12) A. When I was 15 years old.  
 (13) Q. Okay. And where was that?  
 (14) A. It was just a small construction site right  
 (15) there in Round Rock.  
 (16) Q. And did you stay in construction for some  
 (17) period of time?  
 (18) A. Yeah. Until I turned 18 years old.  
 (19) Q. Okay. So that would have been around '78 or  
 (20) so?  
 (21) A. Yeah.  
 (22) Q. And what did you do then when you turned 18?  
 (23) A. I went to work for Longhorn Disposal then, and  
 (24) Waste Management bought it out a few years later.  
 (25) Q. Have you been working in the landfill and waste

(1) Q. Was your dad one of your bosses at that time?  
 (2) A. No. He went to work in the shop at that time.  
 (3) Now, later on, like a year later or something, he was --  
 (4) he become the boss.  
 (5) Q. So he went to the shop about the time you went  
 (6) to the landfill in '79, then about a year later he went  
 (7) back to the landfill?  
 (8) A. Yeah.  
 (9) Q. And when he came back to the landfill in --  
 (10) around 1980, he was the guy in charge of the operations?  
 (11) A. Yeah.  
 (12) Q. Okay. And back then in about 1980 when your  
 (13) father came back and was running operations at the  
 (14) landfill, who was his boss: do you remember?  
 (15) A. Jim Hackfield.  
 (16) Q. Okay. And Mr. Hackfield, was he also doing  
 (17) work, hands-on operations work or was he mostly like a  
 (18) supervisor type?  
 (19) A. Well, if I'm not mistaken, he was part owner in  
 (20) the -- him and somebody else owned Longhorn Disposal.  
 (21) Q. Okay. So he was mostly like an office kind  
 (22) of --  
 (23) A. Yeah, just overseeing everything.  
 (24) Q. Okay. Now, you talked earlier about how you  
 (25) had been at some point transferred back and forth

(1) business consistently since you were 18?  
 (2) A. Yes.  
 (3) Q. How was it that you first came to go to work  
 (4) for Longhorn Disposal?  
 (5) A. Because I run -- I run equipment on road  
 (6) construction and you get rained out too much, so I  
 (7) needed a steady job.  
 (8) Q. Uh-huh. And did you know anyone who worked at  
 (9) Longhorn Disposal?  
 (10) A. Yes.  
 (11) Q. Who was that?  
 (12) A. It was my dad.  
 (13) Q. Okay. Is -- and he's Slim Williams?  
 (14) A. Slim, yeah.  
 (15) Q. And what was he -- and was your job at the  
 (16) landfill?  
 (17) A. No. I worked in the shop first.  
 (18) Q. Okay.  
 (19) A. For about the first year.  
 (20) Q. But it was on site there at the Austin  
 (21) Community Landfill?  
 (22) A. Well, it was just Longhorn Disposal then.  
 (23) Q. Right.  
 (24) A. But he -- my dad, he worked in the landfill  
 (25) part and I worked in the shop.

(1) between Austin and Williamson County. Right? Do you  
 (2) remember the first time that you went to Williamson  
 (3) County?  
 (4) A. In 1988, in February of 1988.  
 (5) Q. Now, I'm -- I'm going to want to talk a little  
 (6) bit about what you did during these years, but first of  
 (7) all, let's just -- I'd kind of like to try to figure out  
 (8) what periods of time you were in Williamson and what  
 (9) periods of time you were in Austin. You went to  
 (10) Williamson in February of '88, and then how long were  
 (11) you there before you went back to Austin?  
 (12) A. Okay. Then I was there until 19 -- 1995, then  
 (13) I got transferred back to Austin.  
 (14) Q. Austin, '95?  
 (15) A. And then January of '98 I went back to  
 (16) Williamson County.  
 (17) Q. Have you been with Williamson since January  
 (18) '98?  
 (19) A. Yes.  
 (20) Q. Now, while you were in Austin at the Austin  
 (21) Landfill between '79 and '88, did the kind of things you  
 (22) did in your job, did they change at all or did they  
 (23) pretty much stay the same?  
 (24) A. Pretty well stayed the same. I mean, the  
 (25) operation just got bigger as the years went on.

(1) Q. More employees?  
 (2) A. Yeah.  
 (3) Q. Larger amount of waste coming in?  
 (4) A. (Nods head). Yes. Sorry about that.  
 (5) Q. That's okay. And then who were your bosses during that time frame, '79 to '88 in Austin?  
 (6) A. That was my dad, mostly, was my boss.  
 (7) Q. Did you - did you ever report directly to Mr. Hackfield?  
 (8) A. Not unless - not unless my dad was gone.  
 (9) Q. Okay. Were you, during this time, like the number two guy in operations next to your dad?  
 (10) A. Yeah. I was more of a lead - a lead guy.  
 (11) Q. Okay. And do you recall when Mr. - was Mr. Hackfield still at the Austin Landfill when you first went up to Williamson in '88?  
 (12) A. No, he wasn't. He wasn't - he worked - if I'm not mistaken, he worked in the Dallas office, then.  
 (13) Q. Oh, still working for Waste Management?  
 (14) A. Waste Management, but he was in Dallas.  
 (15) Q. Do you recall when he went up there?  
 (16) A. I sure - I sure don't.  
 (17) Q. Okay. At the time you left in '88, who was in Mr. Hackfield's position?  
 (18) A. I don't know what his position was in - when I

(1) A. No, it - they changed the positions, so  
 (2) it's - I'm more - I'm classified as a lead operator  
 (3) now.  
 (4) Q. Okay. Is there a site manager up there now?  
 (5) A. No, it's just me and an operator, and then my boss is operation's manager.  
 (6) Q. Okay. Do you know Dwight Pittman?  
 (7) A. Yes.  
 (8) Q. We just talked to Dwight this morning, and he, if I remember correctly, explained what you do up at  
 (9) Williamson is you're the guy that makes sure stuff gets  
 (10) done. Is that pretty accurate?  
 (11) A. Yeah, pretty well.  
 (12) Q. Now, when you were first working at the Austin  
 (13) landfill in the late '70s, early '80s, was there any  
 (14) time during that time that you're aware of that your dad  
 (15) was a part owner of the facility?  
 (16) A. That who?  
 (17) Q. Your father was part owner of the facility?  
 (18) A. Oh, no.  
 (19) Q. Okay. Do you remember anything about people  
 (20) from Waste Management coming in to the Austin Landfill  
 (21) in the early '80s and doing inspections and that sort of  
 (22) thing, thinking about buying the place?  
 (23) A. Let's see. I don't recall coming in doing that.

(1) left, because Mike Korsman (phonetic) was the boss when  
 (2) I went to Williamson County the first time.  
 (3) Q. Okay. He - he was the boss of the Austin  
 (4) Landfill when you went?  
 (5) A. Yeah.  
 (6) Q. Okay. Now, when you went up to Williamson in  
 (7) February of '88, what was your job there?  
 (8) A. Oh, I guess you could say lead operator,  
 (9) because basically it was taking the site over.  
 (10) Q. Fair to say that when you went up to  
 (11) Williamson, you were kind of doing up there what your  
 (12) dad had been doing down here?  
 (13) A. Oh, somewhat, but I still had a boss right  
 (14) there over me.  
 (15) Q. Okay. And was that - and who was that boss?  
 (16) A. That was Jim Mienholtz (phonetic).  
 (17) Q. And did your job at Williamson stay pretty much  
 (18) the same from '88 to '95?  
 (19) A. It was a lead position for - oh, I'm going to  
 (20) say until about '92, and then I was a site manager  
 (21) for - of the site.  
 (22) Q. And then '95, back to Austin. Right?  
 (23) A. Yes.  
 (24) Q. And why did - that was a move that you wanted  
 (25) to make or they asked you to make or how did that come

(1) but, I mean, they - I guess once they bought it, then  
 (2) they let everybody know.  
 (3) Q. Uh-huh.  
 (4) A. But other than that, I didn't know anything was  
 (5) going on myself.  
 (6) Q. No one ever met with you or sat down with you  
 (7) from Waste Management before they bought it -  
 (8) A. No.  
 (9) Q. - and said, "We're thinking about buying this  
 (10) facility," or anything like that?  
 (11) A. No.  
 (12) Q. And - so you would have been about, what, 21  
 (13) when Waste Management bought it?  
 (14) A. Yeah, pretty close. I was 22 years old.  
 (15) almost.  
 (16) Q. Okay. Born in 1960?  
 (17) A. Uh-huh.  
 (18) Q. Me, too. When you started - first started  
 (19) working at the Austin facility, did you learn about the  
 (20) area that used to be the industrial waste site?  
 (21) A. Yes.  
 (22) Q. Okay. And do you remember what you were told  
 (23) about that area when you were first - when you first  
 (24) found out about it?  
 (25) A. Well, they really didn't say much about the

(1) about?  
 (2) A. It was just a transfer move, basically.  
 (3) Q. And what was your position when you came up to  
 (4) Austin in '95?  
 (5) A. It was a site manager.  
 (6) Q. Okay. Same job at a bigger site?  
 (7) A. Yeah.  
 (8) Q. Okay. And who did you report to then in '95  
 (9) when you came back to Austin as site manager?  
 (10) A. It was Gary Higgs.  
 (11) Q. Higgs?  
 (12) A. Higgs.  
 (13) Q. Higgs. Okay. And was he your boss until you  
 (14) went back up to Williamson in January of '98?  
 (15) A. No. It was for a good year and a half he was  
 (16) my boss, and then there was a Jim Nelson.  
 (17) Q. And then Williamson in January '98, what was  
 (18) your position up there?  
 (19) A. At Williamson County?  
 (20) Q. Yeah.  
 (21) A. It was basically the same.  
 (22) Q. Same?  
 (23) A. Site manager.  
 (24) Q. And - I'm sorry, are you still site manager up  
 (25) there?

(1) area, but it was just - just an area that we was  
 (2) supposed to stay off of.  
 (3) Q. What kind of condition was it in, like was  
 (4) there vegetation on it or was it, you know, just dirt or  
 (5) was there pits on it or can you remember?  
 (6) A. Yeah, when I got there, there was grass growing  
 (7) on it.  
 (8) Q. Uh-huh. Could you see where the - where there  
 (9) were ever any kind of acid disposal pits or anything?  
 (10) A. No.  
 (11) Q. Okay. What area of the landfill was being  
 (12) filled when you started working at the Austin facility?  
 (13) A. It was the - the cell, I guess you could say,  
 (14) south of the industrial waste area.  
 (15) Q. And is that location sometimes called Phase I?  
 (16) A. I believe that's what it was.  
 (17) Q. Okay. It's the one that's right on the south  
 (18) border of the property, kind of next to where the old  
 (19) county landfill was?  
 (20) A. Yes.  
 (21) Q. And do you recall how long that Phase I area  
 (22) was accepting waste after you started working there?  
 (23) A. I want to say we dumped over there at least two  
 (24) years.  
 (25) Q. And that Phase I, it's in between the old

- (1) county landfill and the industrial waste area. Right?  
 (2) A. Yeah. There is a creek dividing them,  
 (3) basically.  
 (4) Q. Between - there's a creek between the  
 (5) industrial waste area and the Phase I. Right?  
 (6) A. Phase I, yeah.  
 (7) Q. Now, how close to that creek do you recall  
 (8) waste being put in Phase I?  
 (9) A. Oh, see, I don't - I'm not sure, but there was  
 (10) at least, you know - I mean, there was a haul road and  
 (11) the - the trucks drove on it, so it was a good 50 foot,  
 (12) I'd think, at least, or 70 foot.  
 (13) Q. And would that creek usually run or was it  
 (14) usually dry and would just run after a rain or what was  
 (15) it like?  
 (16) A. Yeah, it just runs after a rain.  
 (17) Q. Okay. At any time when you were at the Austin  
 (18) facility, were you aware of anyone putting any waste in  
 (19) that creek bed?  
 (20) A. Not to my knowledge.  
 (21) Q. I'm sorry if I asked you this. I don't think I  
 (22) did. When did your - when did your father - well,  
 (23) strike that.  
 (24) Does your father still work at the Austin  
 (25) Landfill?

- (1) A. No, he retired in 1998.  
 (2) Q. '98?  
 (3) A. Yeah.  
 (4) Q. Okay. But he was at the Austin Landfill from  
 (5) the time you started until the time he retired?  
 (6) A. No, in '95 when I got transferred, he got  
 (7) transferred to Williamson County and I got transferred  
 (8) to Austin.  
 (9) Q. And then did he ever come back to Austin or did  
 (10) he retire when you transferred back in?  
 (11) A. No. He retired from Williamson County  
 (12) Landfill.  
 (13) Q. And was he the site manager up there when he  
 (14) transferred up there to Williamson?  
 (15) A. Yes.  
 (16) Q. Do you recall what the first area was at the  
 (17) Austin Landfill where you first started taking waste  
 (18) outside of that Phase I area?  
 (19) A. What the first area was we filled?  
 (20) Q. Yeah. After - after Phase I?  
 (21) A. It was just - it was right up front, right  
 (22) behind where the shop was.  
 (23) Q. To the east of Phase I?  
 (24) A. Yeah - yeah, east.  
 (25) Q. East, northeast?

- (1) A. Yeah, basically, and maybe just a little bit  
 (2) north.  
 (3) Q. Okay. And is it true that - or is it accurate  
 (4) that at some point at the landfill in Austin you had  
 (5) wet-weather areas and dry-weather areas to fill?  
 (6) A. Yes.  
 (7) Q. And when did it start that you had - that you  
 (8) had two different areas going on at the same time, a wet  
 (9) weather and dry weather?  
 (10) A. It was early '80s.  
 (11) Q. After - after Waste Management bought -  
 (12) A. Right after Waste Management.  
 (13) Q. Now, between the time you started at the Austin  
 (14) Landfill and the time that Waste Management bought the  
 (15) landfill, did you do anything in connection with the old  
 (16) industrial waste site, like help do any studies or any  
 (17) sampling or anything like that from there?  
 (18) A. No, all we did was stockpile more dirt on it.  
 (19) Q. Okay. That was just to use for fill - or for  
 (20) cover?  
 (21) A. Yeah, basically.  
 (22) Q. At any time while you were at the Austin  
 (23) Landfill, did you ever do any kind of investigation or  
 (24) work regarding the old industrial waste site, other than  
 (25) just, you know, maybe putting some cover dirt on top of

- (1) it?  
 (2) A. No.  
 (3) Q. Okay. Did anyone from Waste Management ever  
 (4) talk to you about the site, about - about the  
 (5) industrial waste at the site, you know, not just putting  
 (6) some cover over it or anything?  
 (7) MR. EDWARDS: Objection; form.  
 (8) A. Not other than, you know, them planning  
 (9) something, like doing - they did do some studies on it,  
 (10) but other than that, they never told me nothing.  
 (11) Q. Okay. Were you involved in doing any of the  
 (12) studies?  
 (13) A. No.  
 (14) Q. Did you - did you help out at all?  
 (15) A. No.  
 (16) Q. What kind of studies do you remember them  
 (17) doing?  
 (18) A. All I know is they - they drilled down there  
 (19) and I guess got samples of it.  
 (20) Q. Okay. And did they ever tell you what - what  
 (21) was in the samples?  
 (22) A. They - not to me, they didn't.  
 (23) Q. Okay. Did you ever hear anyone talking about  
 (24) what was in the samples?  
 (25) A. No, that kind of stuff, I mean, in the position

- (1) I was in, it didn't - it didn't - I mean, the bosses  
 (2) wasn't going to say nothing.  
 (3) Q. Okay. Is it - would you ever have any concern  
 (4) that there might be something dangerous there that's  
 (5) leaking out or anything like that?  
 (6) MR. EDWARDS: Objection; form.  
 (7) Q. From the industrial waste site?  
 (8) A. No, I didn't feel threatened about anything  
 (9) dangerous about it, but I never seen anything, so -  
 (10) Q. Now, was - has there ever been a time where  
 (11) you have seen at the Austin Landfill any kind of  
 (12) leachate seeps or anything like that around the - the  
 (13) southern or southwestern portion of that old industrial  
 (14) waste area?  
 (15) A. At one time they had some - some problems  
 (16) there. And it was more of a rusty look, it wasn't  
 (17) actually - I don't call it leachate, it's a seep, but  
 (18) it's not - it's more a rusty looking color.  
 (19) Q. And do you recall when that was?  
 (20) A. About mid '80s, maybe, something like that.  
 (21) Q. And do you remember a time, sometime in the  
 (22) 1980s when some additional clay cover was put around -  
 (23) over - over and around the industrial waste site?  
 (24) A. When we started stockpiling dirt on it? I  
 (25) don't remember what year it was, but - it may have been

- (1) right at the mid '80s or something - early '80s, could  
 (2) be.  
 (3) Q. When you say stockpiling dirt, was that, you  
 (4) know, just storing dirt there to use elsewhere in the  
 (5) landfill?  
 (6) A. Well, we had excess dirt at the time, and it  
 (7) was basically put there for a long period of time.  
 (8) Q. Do you remember any project that Mr. Pittman  
 (9) was involved in to make the - the cap over the  
 (10) industrial waste area thicker, put some recompacted clay  
 (11) and that kind of stuff in there and put some sidewall  
 (12) liners?  
 (13) A. At - at one time - I helped him survey a lot,  
 (14) but at one time we did survey all of that area, you  
 (15) know, and I think they did come up with like at least a  
 (16) five foot cap on the area.  
 (17) Q. Okay.  
 (18) A. So -  
 (19) Q. Do you recall anyone ever working on - on  
 (20) filling in the - the little creek or stream there and  
 (21) raising it up a little bit to reduce the amount of  
 (22) slope?  
 (23) A. Yes, we did fill in the creek.  
 (24) Q. And -  
 (25) A. We filled all the creeks in, though, you know.

- (1) Q. And what kind of material did you all use to  
(2) fill in those creeks?  
(3) A. Just a clay that was on site.  
(4) Q. Now, other than those seeps that you thought  
(5) were in the '80s that you talked about at the industrial  
(6) waste site, were any other times when you remember  
(7) any - any kind of seeps from the industrial waste site?  
(8) MR. EDWARDS: Objection; form.  
(9) A. No, not that I recall.  
(10) Q. Okay. Do you recall seeing any seeps from the  
(11) Phase I area after a final cover was put on?  
(12) A. No.  
(13) Q. Do you recall seeing any seeps anywhere else in  
(14) the Austin landfill at any time when you were there?  
(15) A. You're going to have them ever so often, but  
(16) you've just got to address them when you find them.  
(17) Q. Do you recall any particular area where you saw  
(18) some?  
(19) A. No. It was mainly when like wet-weather areas.  
(20) Q. In the wet-weather areas?  
(21) A. I would say that, yeah.  
(22) Q. Okay.  
(23) A. Because you get a lot of rain when you're  
(24) putting the material in and you'll trap water sometimes  
(25) in there.

- (1) Q. Are you aware of any instances where there was  
(2) a question as to whether there was any kind of leachate  
(3) migration between the old county landfill and the Austin  
(4) Community Landfill, the Phase I area?  
(5) A. In between them?  
(6) Q. Yeah.  
(7) A. No, not that I recall.  
(8) Q. Was there anything that separated the Phase I  
(9) area and the old county landfill or was the waste pretty  
(10) much put together there?  
(11) MR. EDWARDS: Objection; form.  
(12) A. I wasn't actually right there when it was  
(13) completed, but I believe there - if I'm not mistaken,  
(14) there was at least 10, maybe 15 foot of dirt in between  
(15) them two sites.  
(16) Q. So is it fair to say that when you got to the  
(17) Austin landfill, the part of Phase I that was closest to  
(18) the Old County Landfill had already been filled?  
(19) A. No, I helped fill some of it.  
(20) Q. Okay.  
(21) A. But I didn't complete that part of it.  
(22) Q. At any time when you were at the Austin  
(23) landfill, do you recall any issues or problems with any  
(24) landfill gases in the Phase I area?  
(25) A. Not that I recall.

- (1) Q. Were you generally involved in any gas  
(2) monitoring programs or systems?  
(3) A. No.  
(4) Q. So if there were any issues with gas  
(5) monitoring, that's not necessarily something you'd be  
(6) aware of?  
(7) A. Are you talking about early - now, in the '90s  
(8) I was involved more in the gas monitoring, groundwater  
(9) monitoring.  
(10) Q. Uh-huh.  
(11) A. But in the '80s, I wasn't.  
(12) Q. Well, okay. Let's break it up, then. In the  
(13) '80s there could have been some gas monitoring issues at  
(14) the Austin landfill, but you wouldn't necessarily have  
(15) been aware of them back then?  
(16) MR. EDWARDS: Objection; form.  
(17) A. I wouldn't have, no.  
(18) Q. Okay. Now, in the '90s, do you recall any -  
(19) any kind of gas monitoring issues at the Austin  
(20) landfill?  
(21) A. Yeah. They did gas monitoring and water  
(22) monitoring every quarter.  
(23) Q. Do you recall any time that you were at the  
(24) Austin landfill in the '90s when you were aware of any  
(25) instances where there was exceedances in the gas

- (1) monitoring?  
(2) MR. EDWARDS: Objection; form.  
(3) A. Well, this question is - we've got a flare  
(4) there, I guess that you're aware of. If the flare had a  
(5) problem, then there was a little bit of gas that seeps  
(6) in some places.  
(7) Q. Okay. Are you aware of any groundwater  
(8) monitoring exceedances in the '90s while you were at the  
(9) Austin Landfill?  
(10) A. No.  
(11) Q. Okay. Was that something that you would have  
(12) been aware of if it would have happened during the '90s,  
(13) due to your position?  
(14) A. Yes.  
(15) Q. And is the same thing in the '80s, that it  
(16) might have happened, it might not have happened, you  
(17) just wouldn't have known?  
(18) A. Yeah, I wasn't involved in that part.  
(19) Q. Okay. Are you - do you have any recollection  
(20) or any knowledge as to whether any waste was put in any  
(21) drainage ways anywhere in the Austin facility?  
(22) A. Not that I'm aware of.  
(23) Q. Is it fair to say that in the '80s, you  
(24) wouldn't have been in a position to really be aware of  
(25) anything that Waste Management was - was trying to do

- (1) to contain the old industrial waste area?  
(2) MR. EDWARDS: Objection; form.  
(3) A. I wasn't involved in much, as far as that part,  
(4) because I was just an operator at that time.  
(5) Q. You were - you were dealing with the working  
(6) face of the landfill?  
(7) A. Basically.  
(8) Q. Okay. Do you recall anything that was done at  
(9) the Austin Landfill in the '90s while you were there  
(10) regarding any kind of testing or plans or anything like  
(11) that regarding the industrial waste area, the old area?  
(12) A. Well, if I'm - let's see. We did put - we  
(13) put the stockpile on the industrial waste area, I guess  
(14) late '80s or mid '80s, and then we - we was hauling  
(15) dirt off of the industrial waste site for daily cover -  
(16) Q. Uh-huh.  
(17) A. - in the '90s.  
(18) Q. Were you - but the - the - any testing that  
(19) was done or any drilling that was done, like you talked  
(20) about earlier, you might have known what was going on,  
(21) but you didn't know what the results were?  
(22) A. If I'm not mistaken they did do some testing on  
(23) that area, but as far as results go, I wasn't aware of  
(24) what they become.  
(25) Q. Did - were you aware of whether or not any of

- (1) that drilling hit any like old 55 gallon drums or  
(2) anything like that?  
(3) A. If they what?  
(4) Q. Hit any old 55 gallon drums, or -  
(5) A. Not that I'm aware of.  
(6) Q. Okay.  
(7) MR. HEMPHILL: Excuse me.  
(8) Q. Do you remember a point in the '90s where the  
(9) new rules, the new Subtitle D rules were going to come  
(10) into effect for the landfills?  
(11) A. Was I aware of them?  
(12) Q. Yeah.  
(13) A. Yeah, when they come out, yes.  
(14) Q. Okay. Did you ever have any conversations  
(15) before the - the rules came out - did you ever have  
(16) any conversations with anyone at the Austin Landfill or  
(17) at the Williamson County Landfill about how the rules  
(18) were going to change the way you all did things, if at  
(19) all?  
(20) A. Well, when Subtitle D come in effect, it  
(21) changed a lot of things as far as doing liners, because  
(22) we used to do our own liners. And - and the capping,  
(23) you know, also changed. So - but at Williamson County  
(24) Landfill, we never did any of our - any of the Subtitle  
(25) D liners until this year, completed it.

- (1) A. If they was properly being run. Is that what  
(2) you said?  
(3) Q. Yeah. Do you recall anyone ever coming out  
(4) from Waste Management and being - doing that?  
(5) A. No. I mean we've always had inspections. You  
(6) know, engineers do the inspections; they do storm water  
(7) inspections every week.  
(8) Q. Right.  
(9) A. And then - and then years ago we had, you  
(10) know, quarterly inspections, so -  
(11) Q. Now, the storm water inspections that were done  
(12) every week, there's - there's a written report for  
(13) those. Right?  
(14) A. Excuse me?  
(15) Q. There - there are written reports for those  
(16) weekly storm water inspections?  
(17) A. Yes.  
(18) Q. And when you were in Austin like in '96, '97  
(19) until you went up to - right before you went up to  
(20) Williamson, you were getting copies of those?  
(21) A. Yes.  
(22) Q. Okay. And was Rusty the one who would usually  
(23) do those?  
(24) A. Yes.  
(25) Q. Now, other than those weekly storm water

- (1) reports, were there any other times that you can  
(2) remember when someone from Waste Management would come  
(3) in and do some kind of big-picture look at the landfill  
(4) to see if it's environmentally okay?  
(5) MR. EDWARDS: Objection; form.  
(6) A. If I'm not mistaken, about every two years they  
(7) did an environmental audit.  
(8) Q. Okay.  
(9) A. Somebody would come down - a team would come  
(10) down and check everything out.  
(11) Q. Okay. And did you ever get a copy of any  
(12) reports from those?  
(13) A. Not of them, no.  
(14) Q. Okay. Do you know who - who did get copies of  
(15) those?  
(16) A. It would either be the boss that I had at that  
(17) time or Rusty.  
(18) Q. Okay. While you were at the Austin facility,  
(19) do you recall any instances where leachate would be  
(20) pumped out of an area of the landfill and then put back  
(21) into the landfill?  
(22) A. Recirculate it?  
(23) Q. Yes.  
(24) A. Yes, we did recirculate in the first Subtitle D  
(25) liner area.

- (1) Q. Okay. And how did that work? I mean, how  
(2) would you get it out and then put it back on?  
(3) A. We've got a pump in the sump for the leachate,  
(4) and then we just pump it up to wherever we was going to  
(5) put it.  
(6) Q. And was it just in the - that area with the  
(7) first Subtitle D liner?  
(8) A. Yes.  
(9) Q. Okay. And was there some kind of a wall or  
(10) other barrier between that area and the one right next  
(11) to it that didn't have a plastic liner?  
(12) A. No, it wasn't a barrier. You could - it  
(13) wasn't full at the time we was doing that, you could  
(14) tell where it was, so -  
(15) Q. And so was it your understanding that when you  
(16) recirculated the leachate in that area, it would stay in  
(17) that Subtitle D liner area or would some of it go in  
(18) other areas?  
(19) A. I would say it stayed in the Subtitle D areas,  
(20) because it was downhill, so -  
(21) Q. And was there a purpose for doing that  
(22) recirculation?  
(23) A. Just to - recirculating. I mean, it's - it's  
(24) just another way of not accumulating it all in one  
(25) spot. It's to spread it out over the Subtitle D area.

- (1) Q. Do you know if there was any kind of rule about  
(2) how deep the leachate could be at that - at the pump  
(3) site?  
(4) A. You're supposed to have less than a foot a  
(5) head.  
(6) Q. Okay. And so recirculating could - was one  
(7) way to help keep it less than a foot?  
(8) A. Yes.  
(9) Q. Okay. Are you aware of any other areas or  
(10) times in Austin where there was recirculation of  
(11) leachate?  
(12) A. In the front hole, the other Subtitle D area we  
(13) did the same thing.  
(14) Q. Okay.  
(15) A. So -  
(16) Q. And was - was that area right next to any area  
(17) that didn't have a Subtitle D liner?  
(18) A. Yes.  
(19) Q. And what did you do, if you did anything, to  
(20) try to make sure that the leachate that got recirculated  
(21) stayed in the Subtitle D area and didn't go into the  
(22) other areas?  
(23) A. One thing, we never got right up close to the  
(24) edge. But also on the Subtitle D, the HDP went over to  
(25) the old site, so, I mean, you could tell the difference

- (1) between the older area and the new area, and we never  
(2) got right up close to the edge, so -  
(3) MR. HEMPHILL. Can we take a quick break?  
(4) MR. EDWARDS. Sure.  
(5) THE VIDEOGRAPHER: Going off the record.  
(6) approximately 3:24.  
(7) (Recess from 3:24 to 3:40)  
(8) THE VIDEOGRAPHER: We're back on the record  
(9) at approximately 3:40.  
(10) Q. Mr. Williams, I just needed clarification on a  
(11) couple of things I didn't know if I quite followed.  
(12) When you're talking about some gas exceedances in the  
(13) flare - do you remember when we were talking about  
(14) that?  
(15) A. When the flare would go down -  
(16) Q. Uh-huh.  
(17) A. - then yes, you would have some in some  
(18) places.  
(19) Q. Okay. In some places other than the flare?  
(20) A. Yes. As long as the flare was running, you  
(21) wouldn't have them.  
(22) Q. Okay. Now, we're looking again at this map  
(23) that was Exhibit 11 to Mr. Pittman's deposition. Is it  
(24) about right that this section right up here near the  
(25) place that says DIV-3, that was the area with the first

- (1) Subtitle D liner, to your recollection?  
(2) A. Yes, on the hill, yes.  
(3) Q. Okay. And so that's where there would have  
(4) been some leachate recirculation?  
(5) A. Yes, just on the - yeah, on that Subtitle D  
(6) area.  
(7) Q. Okay. And do you recall being involved with  
(8) the excavation of these areas next to it that say DIV-1  
(9) and DIV-2?  
(10) A. The excavation of the dirt?  
(11) Q. Yeah.  
(12) A. Yes.  
(13) Q. Okay. And those are the ones that don't have  
(14) the plastic liner. Right?  
(15) A. No.  
(16) Q. Okay. And do you remember if there was any  
(17) kind of leachate collection system in that area?  
(18) A. Yes, there is. There's - it's - it's just  
(19) like a drain fill, basically, French drain, you know.  
(20) Backwards French drain is basically all it is, but, yes,  
(21) we did put in some leachate system.  
(22) Q. Okay. And does it have - and it's got some  
(23) gravel lines -  
(24) A. Yes.  
(25) Q. - gravel lining? And is that in trenches?

REVISED PROPOSED ORDER

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER  
~~GRANTING~~ DENYING 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 or 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. ACCRD 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 [*sic*]) 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, application 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 commented 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 15<sup>th</sup> 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; TJFA, 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 and 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-foot clay cap over the IWU continued until early 1973.~~ Hazardous and industrial wastes were disposed in the IWU. MSW was disposed over the hazardous and industrial waste in the area of the IWU.

35A. The IWU was never properly closed pursuant to applicable agency rules.

35B. Industrial and hazardous wastes were disposed of at the ACL facility in the 1976 timeframe.

36. In the latter part of 1973 Universal Disposal 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).~~

36A. The Phase I Unit was never properly closed pursuant to applicable agency rules.

37. On September 26, 1977, the TDH issued Permit No. MSW-249 to Longhorn Disposal Service to operate the facility as a Type I 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 operation 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.
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., or 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 in the Application.
49. WMTX has provided complete information concerning governmental permits, authorizations, and construction approvals it has received or applied.
50. The Application does not 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 that exist at and near the Facility are not 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 not 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 operated its storm water controls pursuant to the Texas Pollutant Discharge Elimination System (TPDES) General Multi-Sector Permit.
58. WMTX has prepared and implanted 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 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 calcareous shale with siltstone seams and marl with clayey chalk, clay, sand, and some ~~modular~~ and phosphatic (containing

phosphates) zones. ~~The upper portion of the Taylor is~~ recognized as heavily over-consolidated. The lower Taylor present at the ACL site is also referred to as the Sprinkle Formation. The near-surface portion of the Taylor is comprised of a weathered montmorillonitic (hydrrous aluminum silicate) clay with high shrink/swell potential. The weathered Taylor is stiff, fissured, and slickensided.

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 later. 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 1A 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 1B 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 elevation 545ft. 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 desiccation/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 that may be used for human consumption.
69. The Application does not 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. In the central portion of the site between the East and West Hills, where the IWU and Phase I Unit area are located, groundwater flow is generally to the southeast ~~and southwest~~ from West Hill, and to the ~~southeast~~ southwest from East Hill. Both flow

systems have groundwater movement towards a low point at the southern permit boundary 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 has been adversely affected, i.e., the rate of hydraulic conductivity has increased, due to the effects of the hazardous and industrial wastes on the clay. ~~is such that water moves through these 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 both hydraulically downgradient from and upgradient to the closed Travis County Landfill site.
78. The IWU and the Phase I Unit have not been closed in accordance with MSW regulations. Over the years, aerial photographs have indicated disturbance of the soils on and in the vicinity of these units, and additional soils were placed over the Phase I Unit and the IWU in an effort to prevent seeps and leaks. A deep crack extends along the north side of the IWU, providing an unimpeded pathway for surface runoff to enter the underlying waste. The north side of the IWU is still narrow. In 2002, WMTX 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 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 former automobile body repair.

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.~~ The disposal of pure solvents, spent acids, and industrial process wastewater that might have been highly saline, have so 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. The hydraulic conductivity of the clays in the Taylor has been altered such that contaminants could move through it ten to one hundred times faster than through unaffected clays, easily reaching the easternmost boundary of the ACL facility and crossing the Applied Materials property.
82. ~~There is insufficient evidence to show~~ that any contamination in the Applied Materials wells likely came ~~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 near 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. These borings did not identify waste located on or immediately next to the ACL facility property boundary; however, MSW was found in other borings (MW-99-24, MW-99-25, MW-99-26, MW-99-31, and MW-32), all of which are beneath the drainageway between the IWU and the Phase I Unit and between those two units and the West Hill. In addition, two of the borings (MW-99-24 and MW-9925) indicated that MSW is buried beneath the South Pond.~~
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 depicting a single point in the drainage way. 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.

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.~~ of boring locations covering a distance of approximately twelve hundred linear feet along the drainage creek. These borings (identified in the application as MW-24, MW-25, MW-26, MW-26A, MW-27, MW-28, MW-29, and MW-31) show municipal solid waste buried as shallow as 3 feet and as deep as 33 feet below the ground surface of the creek.
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,” where it can then flow off the ACL facility through the MSW buried in the drainageway~~which is the lowest elevation of the Unit, where it is retained by the wall or dam created by the drainage way.~~ Leachate may also cross the ACL facility boundary into the adjacent closed Travis County Landfill prior to reaching the creek.
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~~ and that there is migration of leachate from the Phase I Unit and the IWU to the permit boundary 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. Such settlement evaluation was flawed.~~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, were flawed, 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, but such analysis was flawed. 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. WMTX failed to prove that 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 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 pending 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 in pipes directly into the leachate evaporation pond.
107. The application details that leachate and gas condensate ~~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. The proposed recirculation of leachate is in violation of 40 C.F.R. § 258.28. ~~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 can only may be recirculated back into the unit where it was generated.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 (LCQP) specifies materials, equipment, and construction methods for the construction of the disposal units. The LCQP 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 LCQP 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 do not meet the requirements of 30 TAC § 330, Subchapter H because they do not sufficiently describe ~~by describing the liner design and construction details, by providing details showing that the proposed liner system incorporates short term and long term hydrostatic pressure relief systems, by providing for leachate and contaminated water management systems, and by explaining the groundwater flow path and , including the most likely pathways for pollutant migration. The provisions for recirculation of leachate and gas condensate are in violation of applicable regulatory provisions.~~
113. The evidence fails to sufficiently demonstrates that there are adequate provisions to protect ground water as required by ~~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 Stratum I/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 sic 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. As described, the proposed ground water monitoring system will not comply with TCEQ rules. ~~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. No monitoring well adequately monitors the ~~The~~ area between MW-11 and MW-51, which includes ~~is the upgradient portion of~~ the Phase I Unit. The area between MW-11 and MW-51 is possibly the upgradient portion of the Phase I Unit and, as a result, cannot be part of the POC; however, in order to provide the requisite information on the exchange of leachate in contaminated ground water between the ACL facility and the

closed Travis County Landfill, monitoring along the permit boundary is necessary. ~~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 MW-11 is not placed appropriately. Inference that Phase I is down hydraulic gradient from the closed Travis County Landfill is based solely on the surface topography of the Phase I Unit. No direct evidence to support this inference was presented in the application or by testimony of WMTX's experts. ~~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 permit and the reconfiguration of the POC to include those four wells will not 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 i~~ Incorporation of the additional four wells into the groundwater monitoring system and the realignment of the POC to incorporate those four wells will not result in the Draft Permit ~~will include~~ adequately providing 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.~~ Volatile organic compounds (VOCs), including 1,4-dioxane, methylene chloride, and 1,2,4-trichloro-benzene, have been detected in the ground water monitoring wells monitored in the vicinity of the IWU.
- 129A. As recently as 1999 samples of waste in the IWU revealed the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), dioxin/furans, cyanide, and metals.
- 129B. The history of disposal of industrial and hazardous waste in the IWU and the evidence of ground water contamination both on-site at the ACL facility and at the Applied Materials facility is sufficient evidence that additional constituents should be added to any approved detection constituent monitoring list for the ACL facility.
- 129C. Any approved detection constituent monitoring list should include: (1) the constituents identified for assessment monitoring, 40 C.F.R. Part 258, Appendix II; (2) the top ten to twenty tentatively identified compounds (TICs) identified in previous monitoring at the ACL facility and at the Applied Materials facility; and (3) any additional constituents currently monitored pursuant to the voluntary monitoring agreement between the City of Austin and WMTX.

***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 does not comply ~~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 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 predevelopment conditions and, however, the surrounding existing drainage patters 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 additions, 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 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 at CP7, when. ~~When,~~ in fact, it should have been calculated to be approximately 1,4001,239 cfs.
140. Using the correct method of calculation, the Application shows that the current peak flow after the expansion will be 1,9711,310 cfs at CP7, resulting in an increase in peak flow at this location of over 500 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 does not accurately reflect the current drainage conditions, instead proposing 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 fails to include: (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 not sufficient to comply with agency rules.

***Slope Stability***

148. The Application contains a geotechnical report that does not adequately describes and summarizes the geotechnical properties of the subsurface as required by TCEQ MSW rules. The Application also fails to and-discusses the suitability stability of the soils for the uses for which they are intended in compliance with TCEQ MSW rules.
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 of 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. The ACL facility is situated in the Taylor Marl, which is also referred to as the Sprinkle Formation in Travis County. The Sprinkle Formation is one of the most unstable formations in the Austin area; it has caused many construction failures.~~

150A. The ACL facility has previously experienced slope stability problems involving the liner system.

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. Stability analyses contained in the application were based on unconservative and non-representative shear strength value inputs. Shear strengths were average peak strengths largely obtained from a proprietary database non-specific to the site of the ACL facility and design of the ACL facility. Assumptions used in the stability analyses are not included as part of the site operating plan requirements. The reported factors of safety have little relevance, although post-filling factors of safety are lower than EPA-recommended values (1.5), as contained in the Subtitle D Technical Manual.

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 places west of the liner, producing a more stable configuration than during waste filling. The minimum factors of safety in 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 does not 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. There is a continuum of waste along the facility boundary between the Phase I Unit of the Facility and the closed Travis County Landfill.~~

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. 30 TEX. ADMIN. CODE § 330.371(a)(2) identifies that monitoring probes can be put through other “matrices,” which would include waste.~~
165. The Application does not 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 Poned Water Prevention Plan that sets forth the different methods that will be utilized to prevent ponded water over waste-filled areas. The Poned Water Prevention Plan does not address how WMTX will address water that is currently ponded over waste at the ACL facility.
- 166A. There is clear evidence that waste is buried under the South Pond and in the drainage way between the IWU and the Phase I Unit.
- 166B. There is clear evidence that water is ponding over buried waste in the areas of the South Pond and in the drainage way between the IWU and the Phase I Unit.
167. The Application fails to 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 Final Cover Quality Control Plan incorrectly identifies that soil cover material is to consist of soils that are classified as SCS Hydrologic Soil Groups (HSG) A, B, or C.~~Application includes adequate provisions for cover, in compliance with agency rules.~~
- 169A. While there is testimony that the Final Cover Quality Control Plan should identify SCS HSG D, there is inadequate evidence to demonstrate that a simple revision to the soil group in the Final Cover Quality Control Plan will address all related inconsistencies in the application.

### ***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 indication 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~~ The IWU and Phase I Unit are not pre-Subtitle D landfill units; thus, they are ~~only~~ subject to all TCEQ closure and post-closure care maintenance rules~~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 does not 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 fails to demonstrated that the wetlands determination met the federal, state, and local requirements and met the technical requirements for wetland protection.
- 176A. Wetlands vegetation is present in the area between the Phase I Unit and the IWU.
- 176B. The area between the Phase I Unit and the IWU is frequency flooded by constructed impoundment structures.
- 176C. The area between the Phase I Unit and the IWU was an existing tributary (i.e., natural channel) of Walnut Creek.
- 176D. The area between the Phase I Unit and the IWU has the characteristics for designation as a regulated, jurisdictional wetland.
- 176E. The wetlands survey failed to provide a complete survey of the entirety of the ACL facility.
- 176F. The wetlands survey failed to identify all potential wetlands within the permit boundary of the ACL facility.
177. The Application does not 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-wide-foot 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 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 one 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 the daycare 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 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~~ WMTX failed to ~~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,

specifically failing to consider whether the ACL facility will adversely impact human health and the environment.

193. WMTX did not included sufficient information in the Application pertaining to land use and land use compatibility.

193A. The Land Use Analysis contained in the application is based on the false assumption that the ACL facility is operating and will operate in compliance with all environmental regulations.

193B. The evidentiary record shows that the Land Use Analysis should be reconsidered based on the noncompliance of WMTX at the ACL facility.

194. The existing ACRD Facility is not compatible with surrounding land uses.

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

197. The proposed expansion is not 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 waste 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 the 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 does not 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 of the 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 leaving 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 provides 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 of 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 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 and 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 does not propose 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 landscape 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;
- failure 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.

229A. There is a history of noncompliance, including nuisance odors and ground water and surface water contamination originating from the ACL facility.

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

***Construction of the proposed lateral expansion 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 ~~are 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 No. MSW-249D.~~
- 234A. The two ponds are located in the expansion area of the ACL facility as described in the application.
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.~~ Construction of the ponds is a violation of 30 TEX. ADMIN. CODE § 330.7(a).
- 236A. Because of its violation of 30 TEX. ADMIN. CODE § 330.7(a), the ACL facility is considered an “open dump” pursuant to 30 TEX. ADMIN. CODE § 330.15(b), and thus the ACL facility is prohibited under Section 4005(a) of the Resource Conservation and Recovery Act.
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 provides a basis for the Commission to make a final determination of noncompliance with the applicable regional solid waste management plan ~~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 does not 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 demonstrating that ~~any individual will suffer~~ adverse health effects could ~~as a result~~ from the ~~of~~ expansion of the landfill.
254. The Application does not ~~proposes~~ sufficient provisions to protect groundwater and surface waters.
255. The Application does not ~~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 constitute a major amendment to the technically application ~~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 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.~~
2623. 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 is a co owner 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 corporation of WMTX.~~
- ~~26370. TJFA owns two pieces of 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. While notice 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, additional public notice is required by 30 TEX. ADMIN. CODE § 281.23(a) because of substantial, substantive revisions made by WMTX to the technically complete application.
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 failed to 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. While the The Application was processed and the proceedings described in this Order were conducted in accordance with applicable laws 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, additional public notice is required by 30 TEX. ADMIN. CODE § 281.23(a) because of substantial, substantive revisions made by WMTX to the technically complete application.
7. The burden was on the Applicant, in accordance with 30 TEX. ADMIN. CODE ANN. § 80.17(a). WMTX failed to meet ~~met~~ its burden with respect to all referred issues ~~except the proposed hours of operation.~~

8. The evidence in the record is not sufficient to meet the requirements of applicable law for issuance of the Draft Permit, including TEX. HEALTH & SAFETY CODE ANN. Chapter 361 and TEX. ADMIN. CODE ANN. Chapter 330.
9. The expansion of the proposed Austin Community Recycling and Disposal Facility, even 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, and ~~or~~ the environment.
10. The Draft Permit No. MSW-249D, as prepared by the TCEQ staff, fails to includes all matters required by law.
11. The approval of the Application and the issuance of Permit No. MSW-249D, ~~will not~~ violates 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 do not meet the requirements of the Texas Solid Waste Disposal Act, TEX. HEALTH & SAFETY ACT 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 not 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 § 330.61(k)(3)~~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 restrictions; 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 Applicant 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 does not 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 does not meets the technical requirements of 30 TEX. ADMIN. CODE ANN. §§ 305.45, 330.57(c), and 330.61.
  21. The Site Development Plan, which supports Parts I and II of the Application, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.63 and 330.61.
  22. Part III of the Application does not 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, does not meets the requirements of 30 TEX. ADMIN. CODE ANN. §§ 330.57(c)(4) and 330.127.
  24. Applicant has failed to show that it will comply with the operational prohibitions and requirements in 30 TEX. ADMIN. CODE ANN. §§ 330.5, 330.12144 – 330.139.
  25. The Application does not includes adequate provisions to prevent the ponding of water over waste in the landfill, in violation of compliance with 30 TEX. ADMIN. CODE ANN. § 330.167.
  26. Applicant submitted a geology report that does not comply ~~complies~~ with 30 TEX. ADMIN. CODE ANN. § 330.63(e).

27. The Application does not 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 still not 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 did not~~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 does not comply~~complies~~ with 30 TEX. ADMIN. CODE ANN. § 330.159.
32. Applicant has not demonstrated compliance with applicable TPDES storm water permitting requirements.
33. Applicant has not 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 failed to ~~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~~ The Facility is not 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 not 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 do not 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 was never closed pursuant to applicable agency rules 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, 330.457 and 330.463 are applicable.~~
48. The proposed groundwater monitoring system ifas 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 not 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 was never closed pursuant to applicable agency rules ~~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, 330.457 and 330.463 are applicable.

50. The proposed groundwater monitoring system ~~if~~ 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 not 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 not be granted ~~with the modifications described in this Order.~~
- 51A. Pursuant to 30 Tex. Admin. Code § 330.15(b), the application should be denied because the ACL facility is operated in violation of applicable MSW rules, and thus, is considered an “open dump” and is prohibited pursuant to Section 4005(a) of the Resource Conservation and Recovery Act.
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 ~~100~~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~~ denied. 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 100% ~~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**

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**Buddy Garcia, Chairman**  
**For the Commission**