SOAH DOCKET NO. 582-08-2178 TCEQ DOCKET NO. 2007-1774-MSW

APPLICATION OF	§	BEFORE THE STATE OFFICE
BFI WASTE SYSTEMS OF	§	
NORTH AMERICA, LLC, FOR	§	OF
A MAJOR AMENDMENT, FOR	. §	,
TYPE I MSW PERMIT NO. 1447A	§	ADMINISTRATIVE HEARINGS

THE EXECUTIVE DIRECTOR'S DIRECT TESTIMONY OF ARTEN J. AVAKIAN, P.G. GEOSCIENTIST III



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

NOVEMBER 13, 2008

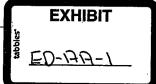


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1	<u>I.</u>	INTRODUCTION AND STAFF MEMBER BACKGROUND
1 2 3 4	Q:	Please state your name for the record.
5	A:	My name is Arten John Avakian. I sign documents as Arten J. Avakian.
7 8	Q:	How are you employed?
9 10 11 12	A:	I am employed with the Texas Commission on Environmental Quality (TCEQ) as a Geoscientist III, on MSW Permit Team II in the Municipal Solid Waste Permits Section, Waste Permits Division.
13 14	Q:	How long have you been employed by the TCEQ in this capacity?
15 16 17 18 19	A:	I have been employed by the TCEQ and its predecessor agency (the Texas Natural Resource Conservation Commission, or TNRCC) as a Geoscientist or Geologist since February 1995. From May 1994 to January 1995, I was employed as an Environmental Quality Specialist in the former Agriculture and Rural Assistance Division of the TNRCC.
20 21	Q:	How were you employed prior to joining the TCEQ?
22 23 24 25 26 27	A:	Before joining the TCEQ, I was employed by The University of Texas at Austin (UT), Department of Geological Sciences as a Teaching Assistant from August 1981 to July 1984, then by the UT Bureau of Economic Geology as a Research Assistant from June 1986 to March 1988 and January 1989 to May 1990, and as a Research Scientist Associate, from June 1990 to April 1994.
28	Q:	What are your job responsibilities at the TCEQ?
29 30 31 32 33 34 35 36	A:	I review and evaluate: permit applications, modifications, and other authorizations; groundwater and landfill gas monitoring and corrective action plans and reports; final cover designs, and other aspects of the design, operation, and monitoring of MSW facilities in Texas for compliance with applicable regulations. I also provide technical assistance and consultation to other staff members, MSW facility owners and operators, consultants, and interested persons.
37 38	Q:	Are you licensed to practice geology in the State of Texas?
39	A:	Yes. I am a Texas Licensed Professional Geoscientist, in the discipline of geology. My

license number is 3047.

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- 42 Q: Have you prepared a resume that reflects your professional career?
- 44 A: Yes. My resume is attached to this Prefiled Testimony as <u>Exhibit ED-AA-2</u> and this Prefiled Testimony is marked as <u>Exhibit ED-AA-1</u>.
- 47 Q: What was your role in the review of this Application?
- 48 49 I was the project manager and geologist for this Application. I performed a technical review A: 50 of materials in the Application that relate to geology, hydrogeology, groundwater monitoring, landfill gas, and parts other than those reviewed by the project engineer/hydrologist. During 51 the initial technical review (culminating in the TCEQ issuance of the first Notice of 52 53 Technical Deficiency (NOD), dated March 15, 2006), I was the project geologist only. The project manager at that time was Ms. Karen Cleveland, P.E., who left the TCEO shortly after 54 55 the first NOD was issued. I then became project manager and geologist, and Mr. Matthew Udenenwu became the project engineer/hydrologist. Ms. Cleveland later returned to the 56 57 MSW Permits Section of the TCEQ, but has not been assigned to or worked on the project 58 since her return. I will provide additional details regarding my role in the review of this Application later in this Prefiled Testimony, in Section IV (Technical Review of the 59 Application), Part A (Division of Responsibility). 60
 - Q: Have you reviewed any other MSW applications similar to that filed by BFI?
 - A: Yes. I performed a similar technical review of materials relating to geology, hydrogeology, groundwater monitoring, and landfill gas in the application by Waste Management of Texas, Inc., for proposed MSW Permit No. 249D, on the site immediately south of the BFI site that is the subject of this testimony. In my past ten years of employment in the MSW Permits Section of the TCEQ, I have also reviewed approximately 130 permit modifications relating to various aspects of the design, operation, and monitoring of MSW facilities. I have reviewed approximately 500 groundwater monitoring and landfill gas monitoring and corrective action plans and reports.

II. RESOURCES USED DURING THE APPLICATION REVIEW

- Q. Did you have training that assists you in conducting the review of MSW landfill permit applications such as the BFI Application?
- Yes. A list of training and continuing education courses which I have taken since 1994 is included in my resume which is attached as <u>Exhibit ED-AA-2</u>.
- 82 Q. What rules did you rely on in your review of the Application?

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A. The Executive Director declared the Application Administratively Complete on January 31, 2006. My review of the Application was therefore conducted following the MSW Rules in Title 30 Texas Administrative Code (30 TAC), Chapter 330, as they existed at that time, prior to the 2006 Revisions to Chapter 330 (which became effective March 27, 2006).

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89 Q. What guidance or other documents did you rely on in your review of the Application?

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91 A. I consulted the following guidance documents prepared by the MSW Permits Section for use by staff and/or applicants:

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MSW Permit Application Review Process, April 26, 2005

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- Waste Permits Division 5-Year Compliance History Review Procedures, March 12, 2004
- 95 Guidelines for Preparing a Landfill Gas Management Plan

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Methane Monitoring Handbook

97 98 Landfill Gas Reporting and Corrective Action Procedures for Owners and Operators of Municipal Solid Waste Landfills

99 100 TCEQ RG-420, Guide for Preparing Site Operating Plans for Municipal Solid Waste Facilities

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General Notice of Deficiency for Site Operating Plans

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III. GENERAL PROCEDURES FOR PROCESSING AN MSW APPLICATION

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Q: Are you familiar with the manner in which the MSW Permits Section processes municipal solid waste permit amendment applications?

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A: Yes.

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110 Q: Describe that process from the point at which an application is received to where we are today at the Contested Case Hearing.

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When the MSW Permits Section receives a permit amendment application, it goes through an 113 A: 114 administrative review, pursuant to 30 TAC §330.51 (relating to Permit Application for 115 Municipal Solid Waste Facilities), to determine whether the applicant has provided all the information and attachments required by the MSW rules. The administrative review ensures 116 that an administratively complete application is provided for technical review. The Permit 117 Administrative Review (PAR) Team of the Waste Permits Division works with the applicant 118 119 to cure any administrative deficiencies in the application, after which the Executive Director 120 declares the application Administratively Complete. At this time, a Notice of Receipt of Application and Intent to Obtain a Permit Amendment is provided and published in local 121

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area newspapers and mailed to affected landowners and other persons on a mailing list maintained by the TCEQ's Office of the Chief Clerk.

After the application is determined by the Executive Director to be Administratively Complete, the Executive Director commences a technical review as necessary and appropriate. The application is assigned to a team of staff members, with each person reviewing material within his or her area of expertise. The objective of technical review is to determine whether the contents of the application comply with all applicable regulations. If the application is found to be technically deficient in any aspect, the applicant is notified in writing, through a Notice of Technical Deficiency (NOD) letter, and is requested to respond on the deficient issues and provide necessary additional technical information for a complete application.

After one or more cycles of NOD letters and responses, if the application is determined to meet all the applicable requirements of the TCEQ Rules, it is declared Technically Complete and a Technical Summary, Draft Permit and Compliance History are prepared. At this time, a Notice of Application and Preliminary Decision (NAPD) is provided and published in local area newspapers and mailed to affected landowners and other persons on a mailing list maintained by the TCEQ's Office of the Chief Clerk. Throughout the review period and after the publication of the NAPD, members of the public may submit written comments until the comment period deadline stated in the NAPD elapses. If a public meeting on the application is held after publication of the NAPD, the public comment period is automatically extended to the close of any public meeting, pursuant to 30 TAC §55.152(b).

At any time during the technical review period, the Executive Director will prepare and mail an Inter-Agency Review package consisting of a summary of the contents of the application (Application Summary) and a letter addressed to appropriate federal, state, and local agencies and/or officials pursuant to 30 TAC §330.11 (relating to Relationships with Other Governmental Entities), informing them of the proposed activity and requesting their comments, if any. The agencies have 30 days from the date of the inter-agency review letter to respond in writing to the Executive Director.

A public meeting will be held at the request of a member of the legislature who represents the general area in which the facility is proposed to be located or if the Executive Director determines that there is substantial public interest in the proposed facility. The Executive Director usually receives oral and written comments from members of the public at a public meeting. The Executive Director prepares a formal Response to Comments (RTC), to respond to all timely received public comments concerning the application received from members of the public. Once the RTC is filed, pursuant to 30 TAC §55.201(a), the public has 30 days to request a contested case hearing. Any timely hearing requests are then evaluated by the Commissioners and issues are refined at the Commissioner's agenda for

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referral to SOAH.

165 Q: Was the general process you have just described followed to your knowledge for this Application?

168 A. Yes.

170 Q. Did you develop any special tools to assist you in your technical review?

A. Yes. I used a checklist in my review to ensure that the Application addressed all aspects of the applicable regulations in a manner that satisfies rule requirements. The checklist is a chart prepared by the MSW Permits Section of the TCEQ. It aids in the administrative and technical review and evaluation of Type I landfill applications to ensure consistency and completeness in the review process. The checklist briefly describes all the regulatory items, along with the corresponding rule citations, that need to be addressed in a MSW Type I landfill application (for a new permit or permit amendment). As my review progressed, I used the checkboxes provided within the checklist to check off each required item BFI submitted (or did not submit), and to designate whether that item was technically adequate (or technically inadequate) as well as to indicate which items are not applicable. Where I checked "yes" for both "submitted" and "technically adequate" for a listed item, the BFI Application complied with rule requirements.

IV. REVIEW OF THE APPLICATION

A. Division of Responsibility

Q. What was your responsibility in the technical review of this Application?

 A: I was the project manager and geologist for this Application. I performed a technical review of materials in the Application that relate to geology, hydrogeology, groundwater monitoring, and landfill gas, and parts of the Application other than those reviewed by the project engineer/hydrologist. I reviewed the portions of Parts I and II of the Application that were not related to engineering/hydrology, the narrative of Part III (the Site Development Plan, or SDP), certain attachments to Part III, and Part IV (the Site Operating Plan, or SOP). There were some portions of Parts I, II, III, and IV of the Application that the project engineer/hydrologist and I both reviewed. The attachments to Part III which I reviewed were:

- Attachment 4, Geology Report (excluding Geotechnical Report section)
- 201 Attachment 5, Groundwater Characterization Report
- 202 Attachment 11, Groundwater Sampling and Analysis Plan

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Attachment 14, Landfill Gas Management Plan

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I prepared the second Notice of Technical Deficiency (NOD) (the first NOD was prepared by the former project manager, Ms. Karen Cleveland), and supplementary NODs. I will identify the NODs more completely in the next part of this Prefiled Testimony. I also prepared the Draft Permit and Technical Summary, and the "Technically Complete Package" which included the letter that declared the application Technically Complete and transmitted the aforementioned documents and the Compliance History to the Applicant. The TCEQ Office of the Chief Clerk provided instructions to the Applicant for issuing the Notice of Application and Preliminary Decision (NAPD). In addition, I prepared the "Draft Permit Package" for filing in the Office of the Chief Clerk. The Draft Permit Package included the items in the Technically Complete Package, along with the Applicant's Part A Application Form, the Landowners List and Map from the Application, information regarding the NAPD, and other administrative documents.

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I also prepared the Response to Comments (attached as <u>Exhibit ED-AA-3</u>) with assistance from the project engineer/hydrologist, addressing the comments TCEQ received on the application (the opportunity for public comment was announced in the NAPD).

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B. Application Review History and Draft Permit

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Q. When was the Application received?

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A. The Executive Director received the Application on January 20, 2006.

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Q: Who conducted the administrative review of the Application?

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230 A: Ms. Kimberly Sladek, formerly of the TCEQ Waste Permits Division (WPD), Administrative 231 Review Group conducted the administrative review.

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Q. What is the date the Application was declared Administratively Complete?

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A. The Application was declared Administratively Complete on January 31, 2006, as documented in a letter of the same date to the Applicant, signed by Mr. Robert Brydson (now retired), former supervisor of the WPD Administrative Review Group.

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Q. What is the date that notice of the Application was first provided to the public?

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A. The TCEQ Office of the Chief Clerk (OCC) mailed a Notice of Receipt of Application and Intent to Obtain a Municipal Solid Waste Permit Amendment (NORI) on February 6, 2006. The OCC then mailed an amended NORI on February 22, 2006. BFI published the amended Mr. Arten J. Avakian, P.G. Prefiled Testimony SOAH Docket No. 582-08-2178 TCEQ Docket No. 2007-1774 MSW Permit Application No. 1447A Page 7 of 44

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- notice in English in the *Austin American-Statesman* on February 27, 2006, and in Spanish in El Mundo on March 2, 2006.
- Q. When did the technical review of the Application begin?
- 249 A. The technical review of the Application began immediately after the Application was declared Administratively Complete.
- Q. Who are the TCEQ staff members that made up the technical review team?
- During the initial review of the Application and through the issuance of the first Notice of Technical Deficiency (NOD) (which I will describe in more detail later in this testimony) I was the project geologist and Ms. Karen Cleveland of the MSW Permits Section was the project manager and project engineer. Ms. Cleveland left the TCEQ shortly after the first NOD was issued, at which time I assumed the role of project manager for the Application, in addition to my role as project geologist. Mr. Matthew Udenenwu of the MSW Permits Section assumed the role of project engineer.
- Q. Describe the method you used to conduct the technical review of the Application.
- A: I reviewed the parts of the Application assigned to me to determine if the technical requirements in 30 TAC Chapter 330 for a municipal solid waste permit amendment application were adequately addressed. When it appeared that an item required by the rule had not been adequately addressed or had been omitted, I prepared a comment to include in a Notice of Technical Deficiency requesting additional information from the Applicant.
- Q. What is the technical review history of the Application, up to and including the point at which it was declared Technically Complete?
- A. Ms. Cleveland (the former project manager for the TCEQ technical review of this Application) and I conducted the first technical review of the Application, and prepared a number of comments. Ms. Cleveland compiled our comments into the first Notice of Technical Deficiency (NOD), which was mailed to the Applicant on March 21, 2007. The Executive Director received revisions to the Application on May 8, 2006, in response to the first NOD. Mr. Udenenwu and I conducted a technical review of the revised Application, and mailed a second NOD to the Applicant on July 24, 2006.
- The Applicant met with Mr. Udenenwu and me on August 7, 2006, to discuss items in the second NOD, and then provided further revisions to the Application, which were received by the Executive Director on August 23, 2006. Mr. Udenenwu and I reviewed the revisions to

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the Application, and provided supplemental comments to the Applicant by E-mail on October 12, 2006.

The Applicant met with Mr. Udenenwu and me on October 25, 2006, to discuss items in the supplemental comments, and then provided further revisions to the Application, which were received by the Executive Director on November 10, 2006. Mr. Udenenwu and I reviewed the revisions to the Application, and provided further supplemental comments to the Applicant by E-mail on December 21, 2006. The Executive Director received additional revisions to the Application on February 5, 2007, February 12, 2007, and March 16, 2007, in response to the further supplemental comments E-mailed to the Applicant on December 21, 2006, and to address several minor discrepancies and other items recognized by the Applicant. Mr. Udenenwu and I determined that the revised application with these last revisions adequately addressed all of our technical review comments and met the requirements in the MSW rules.

I then prepared a Draft Permit (attached as <u>Exhibit ED-AA-4</u>) and a Technical Summary, as well as a "technically complete letter" to the Applicant advising that the Application was technically complete as of the date of the letter. At the same time, I obtained a Compliance History report (attached as <u>Exhibit ED-AA-5</u>) for the BFI Sunset Farms Landfill from the Division Support Team of the Waste Permits Division. The letter, along with the Draft Permit, Technical Summary, and Compliance History together constitute the "Technically Complete Package" for the application. The technically complete letter was signed by Dr. Richard C. Carmichael, Ph.D., P.E., Manager, MSW Permits Section, and was mailed to the Applicant on March 21, 2007. The Technically Complete Package is included as a section of the "Draft Permit Package," which I will describe in more detail in the answer to the next question.

Q. What procedural steps occurred next, after the Application was declared Technically Complete?

After preparing and mailing the Technically Complete Package to the Applicant, I prepared the Draft Permit Package for filing in the TCEQ Office of the Chief Clerk (OCC). The Draft Permit Package includes all of the items in the Technically Complete Package, along with the Applicant's Part A Application Form, the Landowners List and Map from the Application, information regarding the Notice of Application and Preliminary Decision for a Municipal Solid Waste Permit (NAPD), and other administrative documents.

Using the information provided in the Draft Permit Package, the OCC provided instructions to the Applicant for issuing the NAPD. The OCC mailed the NAPD on March 29, 2007. The OCC then mailed a revised notice titled "Amended Notice of Application and Preliminary Decision and Notice of Public Meeting for Municipal Solid Waste Permit" on May 7, 2007.

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325 BFI published the amended notice on April 26, 2007, May 3, 2007, May 10, 2007, and 326 May 17, 2007, in English in the Austin American-Statesman and on the same dates in 327 Spanish in El Mundo. The amended NAPD advised interested persons of the opportunity to 328 submit public comments on the Application, and that a public meeting would be held on May 329 24, 2007.

The Executive Director held a public meeting on the Application on May 24, 2007, in Manor, Texas. According to the amended NAPD, the comment period was to close on June 18, 2007, but the Executive Director extended the comment period to close on June 29, 2007.

Q. What procedural steps occurred next, after the public meeting?

 The TCEQ began to receive comments on the Application by mail in early April 2007. The TCEQ received additional public comments at the meeting and continued to receive public comments after the public meeting. After the comment period came to its close on June 29, 2008, I reviewed the comments and prepared a formal Response to Comments (RTC) to respond to all timely received public comments concerning the proposed Application and/or facility received from members of the public. Mr. Udenenwu assisted me in the preparation of some of the responses. The RTC was mailed October 5, 2007

Q. Did you make any changes to the Draft Permit after considering the public comments on the Application?

A. Yes. I made several changes to the Draft Permit to clarify certain details, and made several corrections. Specifically, I made the following changes: (1) revised the cover page of the draft permit to identify the Applicant, BFI Waste Systems of North America, Inc., as the sole permittee, and to identify BFI Waste Systems of North America, Inc., and Giles Holdings, L.P. together as the property owners; (2) revised Section III.D to represent accurately the Applicant's information regarding waste acceptance rates; (3) revised Section III.E to correct the number representing the total waste disposal capacity of the landfill for the proposed amendment; (4) revised Section VIII.I to delete the reference to alternative daily cover; (5) added a Special Provision specifying that all waste receipt shall cease on or before November 1, 2015; (6) added a Special Provision to prohibit leachate and gas condensate recirculation; and (7) added a Special Provision to clarify that the permittee is required to repair eroded cover within 5 days of detection unless the Commission's regional office approves otherwise. The revised Draft Permit was filed in the TCEQ's OCC on October 23, 2007.

Q. What procedural steps occurred next, after the RTC was mailed?

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- After the RTC was mailed, the public had 30 days to request a contested case hearing. The 366 A. TCEO received a number of hearing requests, which were reviewed by the Executive 367 368 Director's Environmental Law Division, and responded to in the Executive Director's 369 Response to Hearing Requests, which was filed in the OCC on February 1, 2008. The Commission considered the hearing requests at its Agenda on February 27, 2008. The 370 Commission voted to refer the Application to the State Office of Administrative Hearings 371 (SOAH) for a contested case hearing. In an Interim Order issued February 29, 2008, the 372 373 Commission identified 26 issues to be referred to SOAH for a contested case hearing. I will 374 discuss these issues in the next part of this Prefiled Testimony.
- Q. Did you make any other changes to the Draft Permit, since filing the revised Draft Permit in
 the TCEQ's OCC on October 23, 2007?
- 379 Yes. I made one more change to the Draft Permit to reflect the transfer of the Application at A. 380 the request of the Applicant. The Applicant had requested to transfer the existing MSW 381 Permit No. 1447 and the Application for MSW Permit No. 1447A from "BFI Waste Systems 382 of North America, Inc." to "BFI Waste Systems of North America, LLC." The transfer of the 383 permit was granted on April 3, 2008. The Applicant also requested transfer of the 384 Application under 30 TAC §281.23. That rule requires an additional notice which was provided by Applicant mailing notice on April 11, 2008. I then modified the cover page of 385 the Draft Permit, changing "BFI Waste Systems of North America, Inc." to "BFI Waste 386 387 Systems of North America, LLC" where the name appeared in the description of the 388 Permittee block and in the description of the Property Owner. This revised Draft Permit was 389 filed in the TCEQ's OCC on May 1, 2008.
- Q. Was any other notice provided for transferring the Application?
- 393 A. Yes. In addition to the notice of transfer of the Application under 30 TAC §281.23 which I just mentioned, the first sentence of the Notice of Hearing issued April 3, 2008, which was mailed and published, named the Applicant as "BFI Waste Systems of North America, LLC, (formerly BFI Waste Systems of North America, Inc.)."
- 398 Q. Have any changes been made to the Application after it was declared Technically Complete on March 21, 2007?
- 401 A. Yes. As I prepared the Response to Public Comments, I reviewed parts of the Application and while doing so noticed items potentially needing cleanup. I compiled a list of these items and E-mailed them to the Applicant on September 10, 2007. The Applicant met with Mr. Udenenwu and me on April 29, 2008, to discuss the cleanup changes to the Application and the changes necessary to reflect the transfer of the Application. The Applicant submitted a summary of the changes on May 13, 2008, under a cover letter dated May 12, 2008. The

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Executive Director agreed that the proposed changes adequately addressed the cleanup items, and that the changes were minor and would not require any additional notice. Those changes were incorporated into the Bates-stamped copy of the Application that was provided to the parties by the Applicant after the preliminary hearing.

- 412 Q. Please describe the types of cleanup changes made to the Application in the May 12, 2008 package.
- 415 A. Those revisions were minor typographical changes, formatting irregularities, clarification of identification of other permits, and consistency of revisions that had been requested for one section of the Application but had not been noticed in others.
- Would any of those revisions have amounted to a major amendment of the Application as that term is used in 30 TAC §305.62(c), which could have required re-notice and restarting of technical review?
- A. No. All of the revisions were minor, and did not affect the design or operation of the facility and therefore were not major amendments under 30 TAC §305.62. I may not have requested that these changes be made at the time, if it had not been for the need to make changes to identify the Applicant to reflect the transfer of the Application from "BFI Waste Systems of North America, Inc." to "BFI Waste Systems of North America, LLC."

V. DISCUSSION OF ISSUES REFERRED FOR HEARING

- 431 Q: How have you organized this section of your Prefiled Testimony? 432
- 433 A. I have organized this section of my Prefiled Testimony in the same order as the 26 issues identified as issues A through Z in the Interim Order from the Commission, issued 435 February 29, 2008, that referred the Application to SOAH for this contested case hearing.

A. Issue A – Natural Drainage Patterns

- 439 Q. What is the first issue in the list of 26 issues referred to SOAH by the Commission?
- 441 A. The first issue the Commission referred to SOAH is identified as issue A and relates to 442 "Whether the application demonstrates that natural drainage patterns will not be significantly 443 altered by the expansion, in accordance with agency rules, including 30 TAC 444 §330.56(f)(A)(iv)."
- Q. Did you review the parts of the Application that address this issue?

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A. No. The parts of the Application regarding natural drainage patterns were reviewed by the project engineer, Mr. Udenenwu, who will address the issue in his Prefiled Testimony.

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B. Issue B – Control of Disease Vectors

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1. Introduction to Issue B

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What is the second issue in the list of 26 issues referred to SOAH by the Commission?

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457 A. Issue B is "Whether the application includes adequate provisions to control disease vectors, in compliance with agency rules, including 30 TAC §330.126 and 330.133(a)."

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460 Q. Did you review the parts of the Application that address this issue?

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462 A. Yes.

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464 Q. What are the applicable rules regarding control of disease vectors?

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Rule 30 TAC §330.126 (relating to Disease Vector Control) requires the site operator to A. control onsite populations of disease vectors using proper compaction and daily cover procedures, and the use of other approved methods when needed. The rule also requires that the general methods and performance-based frequencies for disease vector control be specified in the SOP. The related applicable rule regarding compaction is 30 TAC §330.132 (relating to Compaction) which requires that solid waste be spread and compacted by repeated passages of compaction equipment such that each layer of solid waste is thoroughly compacted, and that the methods for compaction be specified in the SOP. The related rule regarding daily cover procedures is 30 TAC §330.133(a) (relating to Landfill Cover, Daily Cover), which requires that waste be covered with six inches of well-compacted earthen material not previously mixed with garbage, rubbish, or other solid waste at the end of each operating day to control disease vectors, fires, odors, windblown litter or waste, and scavenging, unless the Executive Director requires a more frequent interval. Landfills that operate on a 24-hour basis must cover the working face or active disposal area at least once every 24 hours.

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2. Application Materials Relating to Issue B

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Q. What parts of the Application address control of disease vectors?

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A. The Applicant specifies procedures for control of disease vectors in Section 16 of the SOP in Part IV of the Application. Section 16 indicates that "The primary means of control will be to prevent, inhibit, or deter vectors from coming into contact with deposited waste through

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proper waste compaction and daily cover application." Waste compaction is described in Section 22 of the SOP, and daily cover application is described in Section 23.1 of the SOP.

3. Technical Review Conclusion Relating to Issue B

Q. Do the procedures specified in the Application for control of disease vectors meet the requirements of the applicable rules?

A. Yes. Section 16 of the SOP specifies the procedures BFI will use for control of disease vectors, as well as provisions for semi-annual inspections by a licensed commercial pesticide applicator, with further procedures to follow if additional vector controls besides compaction and daily cover are needed. Section 22 of the SOP specifies the procedures for waste compaction, and Section 23.1 specifies the procedures for daily cover application. All three aforementioned sections of the SOP specify procedures that conform to the applicable rules, and the SOP itself is sealed by Mr. Ray L. Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d) (relating to Permit Application for Municipal Solid Waste Facilities, Preparation).

C. Protection of Groundwater and Surface Water

1. Introduction to Issue C

- Q. What is the third issue in the list of issues referred to SOAH by the Commission?
- 513 A. Issue C is "Whether the application proposes adequate protection of ground water [sic] and surface water, in compliance with agency rules, including 30 TAC §§330.55(b)(1), 330.56(f), 330.134, and 330.200-330.206."
- 517 Q. Did you review any parts of the Application that address this issue? 518
- Yes. I reviewed the part of the Application that addresses the requirements of 30 TAC §330.134 (relating to Ponded Water). The parts of the Application that address the other cited rules regarding protection of groundwater and surface water were reviewed by the project engineer, Mr. Udenenwu, who will address those aspects of this issue in his Prefiled Testimony.
 - Q. What are the requirements of 30 TAC §330.134 regarding ponded water?
- A. Rule 30 TAC §330.134 requires that facilities prevent ponding of water over waste. The rule further requires that facilities eliminate any ponded water that occurs and fill in and regrade the area in which the ponding occurred within seven days. In addition, a facility must

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provide a ponding prevention plan in the SOP 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.

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2. Application Materials Relating to Part of Issue C

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Q. What parts of the Application address the requirements of 30 TAC §330.134?

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A. The Applicant specifies procedures to prevent ponded water in Section 24 of the SOP. Section 24 also references Attachment 15, the Leachate and Contaminated Water Plan in Part III of the Application, for procedures for managing water that has been in contact with waste.

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3. Technical Review Conclusion Relating to Part of Issue C

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Q. Do the procedures specified in Section 24 of the SOP to prevent and manage ponded water meet the requirements of the applicable rules?

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A. Yes. Section 24 of the SOP specifies that waste fill areas and cover will be sloped to prevent ponding, and that the facility will eliminate any ponding that occurs and fill and regrade the area in which the ponding occurred within seven days of the occurrence. Section 24 also provides an inspection schedule to identify potential ponding sites and acknowledges that the facility will manage any ponded water that has been in contact with waste, leachate, or waste-contaminated soils according to Attachment 15, the Leachate and Contaminated Water Plan. The provisions in Section 24 of the SOP specify procedures that conform to the applicable rule, and the SOP itself is sealed by Mr. Ray L. Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d).

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The adequacy of the Leachate and Contaminated Water Plan is a separate issue in this hearing -- Issue Z -- which will be addressed by the project engineer, Mr. Udenenwu in his Prefiled Testimony.

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D. Issue D – Control of Odors

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1. Introduction to Issue D

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Q. What is issue D?

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A. Issue D is "Whether the application includes adequate provisions to control odors, in compliance with agency rules, including 30 TAC §§330.125(b) and 330.133(a)."

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Did you review the parts of the Application that address this issue?

573 A. Yes.

What are the applicable rules regarding control of odors?

A. Rule 30 TAC §330.125(b) (relating to Air Criteria), requires the SOP to include an odor management plan that addresses the sources of odors and includes general instructions to control odors or sources of odors. The rule states further that plans for odor management must include the identification of wastes that require special attention such as septage, grease trap waste, dead animals, and leachate. Rule 30 TAC §330.133(a) relates to the application of daily cover, and notes that one of the purposes of daily cover is to control odors.

2. Application Materials Relating to Issue D

What part of the Application addresses the requirements of 30 TAC §§330.125(b) and 330.133(a) regarding odors?

 A. The Applicant specifies procedures for controlling odor in Section 15.2 of the SOP. Section 15.2 constitutes an odor management plan which identifies possible sources of odors and wastes that may require special attention. Section 15.2 specifies practices which will be followed for prompt processing or covering of wastes that are a potential source of odor. Section 15.2 also indicates that the facility operates an active gas collection and control system to extract potentially odorous landfill gas from the landfill and the leachate collection system sumps before it escapes to the atmosphere. The extracted landfill gas is routed to a landfill-gas powered electrical generation facility and/or to a flare, both of which must operate within limits established by separate air quality regulations. In addition, Section 15.2 indicates that the facility may also use odor-controlling compounds at the working face and at other locations that may potentially be a source of odors or which may require odor management. Section 23.1 of the SOP describes procedures for daily cover.

3. Technical Review Conclusion Relating to Issue D

Q. Do the procedures specified in the Application for controlling odor meet the requirements of the applicable rules?

A. Yes. The SOP includes an odor management plan that addresses sources of odors and includes general instructions to control odors or sources of odors. The provisions in the SOP specify procedures that conform to the applicable rules, and the SOP itself is sealed by Mr.

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Ray L. Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d).

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E. Issue E – Managing Landfill Gas

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1. Introduction to Issue E

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617 O. What is issue E?

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A. Issue E is "Whether the application includes adequate provisions to manage landfill gas, in compliance with agency rules, including 30 TAC §§330.56(n) and 330.130."

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622 Q. Did you review the parts of the Application that address this issue?

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624 A. Yes.

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Q. What are the applicable rules regarding the management of landfill gas?

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A. Rule 30 TAC §330.56(n) (relating to Attachments to the Site Development Plan, Attachment 14 - Landfill Gas Management Plan) requires an owner or operator to describe how landfill gases will be managed and controlled, requires methane monitoring, sets minimum standards for the monitoring system, sets limits on the amounts of methane allowed at the permit boundary and in facility structures, and requires action if limits are exceeded. Rule 30 TAC §330.56(n) also requires that these details be documented in a landfill gas management plan. Rule 30 TAC §330.130 requires that all landfill gases be monitored in accordance with the landfill gas management plan developed pursuant to §330.56(n), and that all required reports and other submittals be included in the operating record of the facility and submitted to the Executive Director.

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2. Application Materials Relating to Issue E

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What part of the Application addresses the requirements of 30 TAC §§330.56(n) and 330.130 regarding the management of landfill gas?

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A. The Applicant provided a Landfill Gas Management Plan in Attachment 14 to the Site Development Plan, in Part III of the Application. The Landfill Gas Management Plan includes: a discussion of the site characteristics that are relevant to the management of gas; a discussion of the monitoring program, including the number and location of perimeter gas monitoring probes; an action plan in the event that methane exceeds an action limit at a monitoring point; a discussion of how a remediation plan will be implemented, if necessary;

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650 651		and a description of the landfill gas collection and control system. The Landfill Gas Management Plan also acknowledges the operating requirements of 30 TAC §330.130.
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653		3. Technical Review Conclusion Relating to Issue E
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655	Q.	Do the provisions specified in Landfill Gas Management Plan for managing landfill gas
656		meet the requirements of the applicable rules?
657		The second secon
658	A.	Yes. The Applicant's Landfill Gas Management Plan in Attachment 14 includes adequate
659		provisions to comply with 30 TAC §§330.56(n) and 330.130, and is sealed by Mr. Matt K.
660		Stutz, P.E., Texas Licensed Professional Engineer No. 93662, in conformance with
661		§330.51(d).
662		300 old 1(a).
663		F. Issue F – Slope Stability
664		1. Issue I stope studing
665	Q.	What is issue F?
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667	A.	Issue F is "Whether the application includes adequate provisions for proper slope stability, in
668	2 2.	compliance with agency rules, including 30 TAC §§330.55(b)(8) and 330.56(l)."
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670	Q.	Did you review the parts of the Application that address this issue?
671	~	- and journey and parts of one appropriate and
672	A.	No. The parts of the Application regarding slope stability were reviewed by the project
673		engineer, Mr. Udenenwu, who will address the issue in his Prefiled Testimony.
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675		G. Issue G – Spilled and Windblown Waste
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677		1. Introduction to Issue G
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679	Q.	What is issue G?
680	ν.	Time is issue G.
681	A.	Issue G is "Whether the application includes adequate provisions to control spilled and
682		windblown waste and cleanup spilled waste, in compliance with agency rules, including
683		30 TAC §§330.117, 330.120, 330.123, and 330.127."
684		50 1710 gg550.117, 550.126, 550.125, and 550.127.
685	Q.	Did you review the parts of the Application that address this issue?
686	۸.	212 Journal and parts of the Experioration and address and assess.
687	A.	Yes.
688	~ **	

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- What are the applicable rules regarding control of spilled and windblown waste and cleanup of spilled waste?
- The applicable rules are: 30 TAC §§330.120 (relating to Control of Windblown Solid Waste 692 A. 693 and Litter); 330.123 (relating to Materials Along the Route to the Site); 330.127 (relating to Site Access Roads); and 330.117 which regulates the unloading of waste, but does not 694 695 contain any requirements regarding control of spilled and windblown waste or cleanup of 696 spilled waste. Rule §330.120 requires the facility to operate the working face in a manner to 697 control windblown waste, to collect and manage windblown waste, and to specify the 698 procedures for complying with these requirements in the SOP. Rule §330.123 requires the 699 owner or operator to take steps to encourage vehicles hauling waste to effectively secure 700 loads to prevent the escape of any part of the load by blowing or spilling, and to perform at 701 least once per day cleanup of waste materials spilled along and within the right-of-way of public access roads serving the facility for a distance of two miles in either direction from 702 703 entrances to the facility. Rule §330.127, specifically §330.127(c), requires the facility to maintain all onsite and other access roadways in a clean and safe condition and to pick up 704 705 litter and any other debris at least daily.

2. Application Materials Relating to Issue G

- Q. What parts of the Application address the requirements of 30 TAC §§330.117, 330.120, 330.123, and 330.127, regarding control of spilled and windblown waste and cleanup of spilled waste?
- A. The Applicant specifies procedures in Section 10 of the SOP, for encouraging vehicles hauling waste to effectively secure loads, for litter control at the working face, for onsite litter pickup, and for offsite litter pickup. The Applicant also states in Section 17 of the SOP that litter and other debris along access roadways will be collected as provided in Section 10.

3. Technical Review Conclusion Relating to Issue G

- Q. Do the procedures specified in Section 10 of the SOP for control of spilled and windblown waste and cleanup of spilled waste meet the requirements of the applicable rules?
- A. Yes. Section 10 of the SOP includes procedures as required by 30 TAC §§ 330.117, 330.120, 330.123, and 330.127 for operating the working face, for encouraging vehicles hauling waste to the facility to effectively secure loads, and for performing cleanup, and the SOP itself is sealed by Mr. Ray L. Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d).

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729 H. Issue H – Groundwater Monitoring

731 1. Introduction to Issue H

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733 Q. What is issue H?

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735 A. Issue H is "Whether the application includes adequate provisions for groundwater monitoring, in compliance with agency rules, including 30 TAC §330.230-330.233."

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738 Q. Did you review the parts of the Application that address this issue?

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740 A. Yes.

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742 Q. What are the applicable rules regarding groundwater monitoring?

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744 A. The applicable rules are 30 TAC §§330.230 (relating to Applicability), 330.231 (relating to Groundwater Monitoring Systems), 330.233 (relating to Ground-Water Sampling and Analysis Requirements), 330.234 (relating to Detection Monitoring Program), and 330.235 (relating to Assessment Monitoring Program). The Chapter 330 rules under which this Application was reviewed does not include a rule §330.232.

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752 753 Rule 30 TAC §330.230 requires the owner or operator of a facility to conduct groundwater monitoring, to certify that the facility is in compliance with the groundwater monitoring requirements specified in §§330.231 and 330.233 - 330.235 before waste can be placed in a unit, and to conduct monitoring throughout the active life and post-closure care period of a landfill unit.

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Rule §330.231 requires the owner or operator to install a groundwater monitoring system that is designed and certified by a qualified groundwater scientist, that consists of a sufficient number of monitoring wells installed at appropriate locations and depths to yield representative groundwater samples from the uppermost aquifer. It also requires background wells to be installed to allow determination of the quality of background groundwater that has not been affected by leakage from a unit, and downgradient wells to be installed to allow determination of the quality of groundwater passing the relevant point of compliance.

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765 766 Rule 30 TAC §330.233 requires the owner or operator to prepare a Groundwater Sampling and Analysis Plan that details the procedures for groundwater elevation measurement, sample collection, sample preservation and shipment, analytical procedures, chain of custody controls, quality assurance and quality control, and evaluation and reporting of results.

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Rule 30 TAC §330.234 requires the owner or operator of a facility to conduct detection monitoring in the monitoring system, established pursuant to 30 TAC §330.231, specifies requirements for evaluation and reporting of monitoring results, and requires the facility to initiate assessment monitoring if a statistically significant change from background of any tested constituent occurs in any monitoring well.

Rule 30 TAC §330.235 requires the owner or operator of a facility to conduct assessment monitoring whenever a statistically significant change from background has been detected for one or more of the tested constituents, and it prescribes the procedures for evaluating and acting on the results of the monitoring.

2. Application Materials Relating to Issue H

- Q. What parts of the Application address the requirements of 30 TAC §§330.230-330.233, 330.234 and 330.235 regarding groundwater monitoring?
- A. The Application includes a Groundwater Sampling and Analysis Plan in Attachment 11 to the Site Development Plan, in Part III of the Application, which specifies that the owner or operator will monitor groundwater as required by 30 TAC §330.230 and details the procedures for sampling, analysis, reporting, and action on results required by §§330.233-330.235. The Application also includes a Groundwater Characterization Report in Attachment 5 to the Site Development Plan, which includes the design and installation of the groundwater monitoring system required by 30 TAC §330.231 and includes a Geology and Geotechnical Report in Attachment 4 to the Site Development Plan that documents the geological investigation of the site.

3. Technical Review Conclusion Relating to Issue H

- Q. Does the Application contain procedures for groundwater monitoring that meet the requirements of the applicable rules?
- Yes. The Groundwater Sampling and Analysis Plan contains adequate procedures for A. groundwater sampling, analysis, reporting, and action on results, as required by §§330.233-330.235. The Groundwater Characterization Report adequately details the design of the monitoring system and presents the hydrogeological information that was considered for the design, as required by §330.231. The Groundwater Characterization Report also references information in the Geology and Geotechnical Report that is relevant to the groundwater monitoring system design. In addition, all three of the aforementioned documents are sealed by Mr. John Michael Snyder, P.G., Texas Licensed Professional Geoscientist No. 595, in conformance with 30 TAC §330.51(d).

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810 I. Issue I – Rate of Solid Waste Deposition and Operating Life

1. Introduction to Issue I

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814 Q. What is issue I?

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Issue I is "Whether the application includes adequate provisions calculating the estimated rate of solid waste deposition and operating life of the site, in compliance with agency rules, including 30 TAC §330.55(a)(4)."

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820 Q. Did you review the parts of the Application that address this issue?

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822 A. Yes.

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What are the applicable rules regarding calculating the estimated rate of solid waste deposition and operating life of the site?

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A. The applicable rules are 30 TAC §330.55(a)(4) (relating to Site Development Plan), which requires that the Site Development Plan contain a calculation of the estimated rate of solid waste deposition and operating life of the site, and 30 TAC §330.113(h) (relating to Recordkeeping Requirements), which requires the owner or operator to maintain records to document the annual waste acceptance rate for the facility. Rule §330.113(h) also requires the owner or operator to modify the permit if the annual waste acceptance rate exceeds the rate estimated in the permit application, to revise the estimated acceptance rate, and to make any other needed changes in the SOP to manage the increased acceptance rate.

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2. Application Materials Relating to Issue I

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Q. What parts of the Application address the requirements of 30 TAC §§330.55(a)(4) and 330.113(h), regarding calculating the estimated rate of solid waste deposition and operating life of the site?

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842 The Application provides information on sources and estimated rates of waste acceptance in A. 843 Section 2.0, Solid Waste Data in the narrative text of the Site Development Plan, and 844 information on how the site life was estimated in Section 6.0, Estimated Site Life. 845 Appendix III-A to the narrative text of the Site Development Plan contains the calculations of the estimated rate of solid waste deposition and operating life of the site. Section 3.5 of the 846 847 SOP explains how BFI will determine the annual waste acceptance rate and acknowledges 848 BFI's obligation to modify the SOP if the actual rate exceeds the rate estimated in the 849 Application, and which parts to modify.

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851	3.	Technical Review Conclusion Relating to Issue I
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- Does the information in Sections 2.0 and 6.0 in the narrative text of the Site Development Plan and the calculations in Appendix III-A meet the requirements of the applicable rules regarding estimated rate of solid waste deposition and operating life of the site?
- 857 Yes. The information in those Sections 2.0 and 6.0 explains the basis for the estimates, and A. Appendix III-A provides the calculations of site life. The Site Development Plan, including 858 859 the calculations of site life, are sealed by Mr. Adam W. Mehevec, P.E., Texas Licensed Professional Engineer No. 84736, in conformance with 30 TAC §330.51(d). It should also 860 be noted that the estimate for the operating life has less significance in this case, because this 861 862 permit is proposed to include a set term limit. The Applicant has agreed to the term limit which the Executive Director has included as a Special Provision in the Draft Permit 863 specifying that all waste receipt shall cease on or before November 1, 2015. 864

J. Issue J – Closure and Post-Closure

Q. What is issue J?

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 870 A. Issue J is "Whether the application includes adequate provisions for closure and post-closure in compliance with agency rules, including 30 TAC §330.56(1) and (m)."
- 873 Q. Did you review the parts of the Application that address this issue?
- No. The parts of the Application regarding slope stability were reviewed by the project engineer, Mr. Udenenwu, who will address the issue in his Prefiled Testimony.

K. Issue K – Special Waste

1. Introduction to Issue K

- 882 Q. What is issue K?
- Issue K is "Whether the application includes adequate provisions to manage and dispose of special waste, in compliance with agency rules, including 30 TAC §330.136."
- 887 Q. Did you review the parts of the Application that address this issue?
- 889 A. Yes. 890

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- What are the applicable rules regarding the management and disposal of special wastes?
- 893 The applicable rules are 30 TAC §§330.113(b)(10) (relating to Recordkeeping), 330.136 A. (relating to Disposal of Special Wastes), 330.137 (relating to Disposal of Industrial Wastes) 894 895 and 330.2(137) which defines the term "special waste." Rule 30 TAC §330.113(b)(10) 896 requires an owner or operator to record and retain in the operating record any and all 897 documents, manifests, trip tickets, etc., involving special waste. Rule §330.136 details the 898 requirements for accepting and disposing of special wastes at a municipal landfill. Industrial 899 wastes are also considered to be special wastes, and Rule §330.137 details the requirements for disposing of industrial wastes. 900

2. Application Materials Relating to Issue K

- Q. What parts of the Application address the requirements of 30 TAC §§330.113(b)(10), 330.136, and 330.137, regarding the management and disposal of special wastes?
- 907 A. Section 3.1, including Figure 1 in the SOP acknowledges the requirement to retain records 908 involving special waste. Section 26 of the SOP details which wastes will be prohibited and 909 which special wastes will be accepted, and the procedures for waste evaluation, acceptance, 910 recordkeeping, and disposal.

3. Technical Review Conclusion Relating to Issue K

- 914 Q. Does the information in the SOP meet the requirements of the applicable rules regarding management and disposal of special wastes?
- Yes. Section 3.1 of the SOP acknowledges the recordkeeping requirements of 30 TAC §330.113(b)(10), and the provisions of Section 26 conform to the rules regarding acceptance and disposal of special wastes and industrial wastes in §§330.136 and 330.137. In addition, the SOP is sealed by Mr. Ray L. Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d).

L. Issue L – Responsible Parties and Qualified Personnel

1. Introduction to Issue L

- Q. What is issue L?
- 929 A. Issue L is "Whether the application includes adequate provisions designating the owner, 930 operator, responsible parties, and qualified personnel, in compliance with agency rules, including 30 TAC §§330.52(a)(1), 330.52(b)(7)-(10), and 330.114(1)."

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Q. Did you review the parts of the Application that address this issue?

935 A. Yes.

937 Q. What are the applicable rules regarding designation of the owner, operator, responsible parties, and qualified personnel?

A. The applicable rules are 30 TAC §§281.5, 305.45, 330.52 and 330.114(1). Rule §330.52(a)(1) requires an applicant to submit the information required by §§330.52 and 305.45. Rules 30 TAC §§281.5 and 305.45 require basic information including facility owner and applicant name, and advise that the Executive Director will provide an application form for submitting that information and other information as reasonably may be required by the Executive Director. Rules §330.52(b)(7)-(10) require an applicant to provide a property owner affidavit, verification of legal status, evidence of competency, and notices of appointments establishing the authority of the person signing the application and identifying the applicant's engineer. Rule §330.114(1) requires a description of functions and minimum qualifications for each category of key personnel to be employed at the facility and for the supervisory personnel in the chain-of-command.

2. Application Materials Relating to Issue L

Q. What parts of the Application address the requirements of 30 TAC §§281.5, 305.45, 330.52(a)(1), 330.52(b)(7)-(10), and 330.114(1), regarding designating the owner, operator, responsible parties, and qualified personnel?

A. The site operator and site owners are designated on the Part A Application Form and Core Data Forms in Part I of the Application. Property ownership is detailed further in the Property Owner Affidavits in Section I.J in Part I of the Application. The verification of legal status and evidence of competency of the Applicant are provided in Sections I.K and I.L in Part I of the Application. Notices of appointments are provided in Section I.M in Part I of the Application. Provisions for qualified personnel and their responsibilities are detailed in Section 4.1 of the SOP, in Part IV of the Application.

3. Technical Review Conclusion Relating to Issue L

Q. Does the information in the Application meet the requirements of the applicable rules regarding designation of the owner, operator, responsible parties, and qualified personnel?

A. Yes. The Part A Application Form and Core Data Forms in Part I of the Application identify that BFI is the Applicant, operator, and a property owner, and that Giles Holdings is also a

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property owner (but not an applicant or operator). BFI will be the permittee if the permit is issued. The Property Owner Affidavits in Section I.J in Part I of the Application identify which tracts are owned by BFI, and which by Giles Holdings. The permittee will be responsible for the operation, closure, and post-closure care of the facility; however, under 30 TAC §330.52(b)(7), the State of Texas may also hold the property owner(s) of record either jointly or severally responsible for the operation, maintenance, and closure and post-closure care of the site. The verification of legal status, evidence of competency, and notices of appointments are provided as required by §\$330.52(b)(8)-(10). Part I of the Application therefore contains all of the information required by 30 TAC §\$281.5, 305.45, and 330.52. The SOP contains the provisions for qualified personnel and their responsibilities as required by §330.114(1). In addition, Part I of the Application and Part IV of the Application (which consists of the SOP) are sealed by Mr. Ray Shull, P.E., Texas Licensed Professional Engineer No. 47759.

Q. Are there other historical notes you would like to mention about the identification of the permittee and site owners?

A. Yes. When I initially prepared the Draft Permit for this Application, I used a format that did not differentiate the permittee and site owner. To clarify those roles, I revised the Draft Permit to identify the Applicant (BFI Waste Systems of North America, Inc.), as the sole permittee and to identify BFI Waste Systems of North America, Inc. and Giles Holdings, L.P., together as property owners. That revised Draft Permit was filed in the TCEQ Office of the Chief Clerk (OCC) on October 23, 2007. Later, BFI transferred the permit Application from BFI Waste Systems of North America, Inc., to BFI Waste Systems of North America, LLC, to reflect a change in corporate structure. I therefore revised the Draft Permit a second time, to reflect the transfer and filed that revised Draft Permit in the OCC on May 1, 2008.

M. Issue M – Preventing Unauthorized Wastes

1. Introduction to Issue M

Q. What is issue M?

A. Issue M is "Whether the application includes adequate provisions to prevent unauthorized wastes from being disposed in the landfill, in compliance with agency rules, including 30 TAC §330.114(5)."

Q. Did you review the parts of the Application that address this issue?

1012 A. Yes.

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1014 Q. What are the applicable rules regarding preventing disposal of unauthorized wastes?

A. The applicable rules are 30 TAC §§330.5(e) (relating to General Prohibitions), 330.113(b)(2) (relating to Recordkeeping), 330.114(5) (relating to Site Operating Plan), and 330.117(c) (relating to Unloading of Waste). Rule §330.5(e) lists wastes that are prohibited from disposal in any municipal solid waste facility. Rule §330.113(b)(2) requires the owner or operator to record and retain in the operating record inspection records, training procedures, and notification procedures relating to excluding the receipt of prohibited waste. Rule§330.114(5) requires that the SOP include procedures to detect and prevent the disposal of prohibited wastes. Rule §330.117(c) states that the unloading of prohibited wastes at a municipal solid waste facility must not be allowed, and it requires that the owner or operator take necessary steps to ensure compliance with this provision. Rule §330.117(c) also requires the owner or operator to immediately return any prohibited waste to the transporter or generator of the waste, or to otherwise properly manage the waste.

2. Application Materials Relating to Issue M

Q. What parts of the Application address the requirements of 30 TAC §§330.5(e), 330.113(b)(2), 330.114(5), and 330.117(c), regarding the prevention of disposal of unauthorized wastes?

A. The following sections of the SOP address preventing disposal of prohibited or unauthorized wastes:

 • Section 3.1, including Figure 1, acknowledges the requirement to retain in the operating record the inspection records, training procedures, and notification procedures relating to excluding the receipt of prohibited waste;

 • Section 4.1, including Figure 3, identifies which personnel will have responsibility to identify prohibited or unauthorized wastes;

• Section 4.3.1 identifies training topics for site personnel, including prevention, detection, and management of prohibited waste;

• Section 4.4 identifies prohibited wastes and details the procedures for detecting and controlling the receipt of prohibited or unauthorized wastes, including educating customers, training site personnel, load observations, and random inspections;

• Section 4.5 details procedures for detecting and preventing the disposal of regulated radioactive materials;

• Section 7.2 acknowledges that spotters or equipment operators must monitor the working face for any unauthorized or prohibited wastes;

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1051 1052		• Section 9 states that a sign listing prohibited wastes will be posted on the entrance road to the facility;
1053		• Section 26.1.1 lists prohibited wastes;
1054 1055 1056		 Section 26.5 provides a contingency plan to investigate and manage prohibited wastes, radioactive wastes, or other unauthorized wastes if they are suspected or discovered; and
1057 1058 1059		 The Generator Waste Profile Sheet in Appendix A contains a statement to be signed by the waste generator certifying that the generator will not deliver or attempt to deliver any prohibited waste for disposal.
1060 1061 1062		The Applicant has also indicated in Section 27 of the SOP that the facility will prohibit acceptance or disposal of Class 1 non-hazardous industrial waste
1063		3. Technical Review Conclusion Relating to Issue M
1064	_	
1065 1066	Q.	Does the information in the SOP meet the requirements of the applicable rules regarding preventing disposal of prohibited or unauthorized wastes?
1067		
1068	A.	Yes. The SOP adequately addresses the requirements regarding prohibited and unauthorized
1069		wastes. The SOP contains adequate procedures for training personnel, and for detecting and
1070 1071		preventing disposal of prohibited or unauthorized wastes. In addition, the SOP is sealed by Mr. Ray L. Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance
1072 1073		with 30 TAC §330.51(d).
1073		N. Issue N – Transportation
1075		14. Issue 14 — ITansportation
1076	Q.	What is issue N?
1077	۷٠	What is issue it.
1078	A.	Issue N is "Whether the application provides adequate information related to transportation,
1079		as required by agency rules, including 30 TAC § 330.53(b)(9)."
1080		
1081	Q.	Did you review the parts of the Application that address this issue?
1082		J
1083	A.	No. The parts of the Application regarding transportation were reviewed by the project
1084		engineer, Mr. Udenenwu, who will address the issue in his Prefiled Testimony.
1085		
1086		O. Issue O – Dust Control and Maintenance of Site Access Roads
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Introduction to Issue O

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- 1090 Q. What is issue O?
- Issue O is "Whether the application includes adequate provision for dust control and maintenance of site access roads, in compliance with agency rules, including 30 TAC §330.127."
- 1096 Q. Did you review the parts of the Application that address this issue? 1097
- 1098 A. Yes.

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- 1100 Q. What are the applicable rules regarding dust control and maintenance of site access roads? 1101
- 1102 The applicable rules are 30 TAC §§330.55(a)(2) (relating to Site Development Plan) and A. 1103 330.127 (relating to Site Access Roads). Rule §330.55(a)(2) requires the owner or operator to include provisions for all-weather operation, provisions for all-weather access to 1104 unloading areas used during wet weather, and provisions for roads designed to minimize the 1105 1106 tracking of mud onto public access roads. Rule §330.127(a) requires all-weather access roads to the unloading area(s) designated for wet-weather operation, at least once per day 1107 removal of mud and debris tracked onto public roadways on days when tracking occurs, and 1108 1109 specification of methods for controlling tracking. Rule §330.127(b) prohibits the owner or operator from allowing dust from access roadways to become a nuisance to surrounding 1110 1111 areas, and it requires the owner or operator to provide a water source and necessary equipment or other means of dust control. Rule §330.127(c) requires the owner or operator 1112 to maintain all on-site and other access roadways in a clean and safe condition and to specify 1113 1114 the frequency of regrading access roadways to minimize depressions, ruts, and potholes.

2. Application Materials Relating to Issue O

- What parts of the Application address the requirements of 30 TAC §§330.55(a)(2) and 330.177, regarding dust control and maintenance of site access roads?
- A. Section 4.0 of the Site Development Plan documents that the city streets and state highways provide adequate all-weather access routes to the site, and it indicates that onsite roads are surfaced with asphalt, crushed rock and gravel, and covered in wood chips in some areas near the working face. Section 4.0 also indicates equipment is available onsite to maintain the roads, and that an outside contractor may perform major repairs as needed. In addition, Section 4.0 indicates BFI installed a wheel wash to reduce the transport of mud to off site roadways.
- Section 4.1.2.5 of the SOP indicates that the Site Manager is responsible for monitoring and abating any nuisance conditions such as dust and mud tracking. Figure 4 in Section 4.2.1

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indicates the facility will have one or two water trucks available for dust control and other purposes. Section 17 of the SOP identifies the all-weather access roads at the site, specifies inspection frequency, and indicates that access roads will be maintained on a regular basis and repaired or regraded as necessary. Section 17.1 of the SOP specifies how BFI will maintain roads to control and suppress dust. Section 17.2 identifies the wheel wash at the facility, and when it will be used. Section 17.2 also states that during periods of wet weather, BFI personnel will inspect the access roads to the site daily for the presence of excessive mud, and that BFI will remove excessive mud deposited from trucks leaving the site by washing and/or sweeping. Figure 4 in Section 4.2.1 indicates that the facility will have one street sweeper available for cleaning roads.

3. Technical Review Conclusion Relating to Issue O

- Does the information in the Site Development Plan and the SOP meet the requirements of the applicable rules regarding dust control and maintenance of site access roads?
- Yes. Section 4.0 of the Site Development Plan, and Sections 4.1.2.5, 4.2.1, and 17 of the SOP contain adequate provisions for all-weather access, dust control, and road maintenance. The Site Development Plan is sealed by Mr. Adam W. Mehevec, P.E., Texas Licensed Professional Engineer No. 84736, and the SOP is sealed by Mr. Ray Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d).

P. Issue P – Endangered Species

1. Introduction to Issue P

- 1157 Q. What is issue P? 1158
- Issue P is "Whether the application includes adequate provisions to protect endangered or threatened species, in compliance with agency rules, including 30 TAC §§330.53(b)(13) and 330.129."
- 1163 Q. Did you review the parts of the Application that address this issue?
- 1165 A. Yes.
- 1167 Q. What are the applicable rules regarding protection of endangered or threatened species?
- 1169 A. The applicable rules are 30 TAC §§330.51(b)(8) (relating to Permit Application for Municipal Solid Waste Facilities, Required Information), 330.53(b)(13) (relating to Technical Requirements of Part II of the Application, Protection of Endangered Species),

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330.55(b)(9) (relating to Site Development Plan), 330.129 (relating to Endangered Species Protection), and 330.302 (relating to Wetlands).

Rule §330.51(b)(8) requires an applicant to submit Endangered Species Act compliance demonstrations under state and federal laws according to the definition of "endangered or threatened species" in §330.2 (relating to Definitions). The federal and state laws are the Federal Endangered Species Act, §4, 16 United States Code, §1536, and the Texas Endangered Species Act. Rule §330.53(b)(13) requires the impact of a solid waste disposal facility upon endangered or threatened species to be considered and, along with §330.129, prescribes that the facility and its operation 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. Rule §330.55(b)(9) requires that the site be designed to protect endangered species. Rule §330.302 requires that MSW facilities not be located in wetlands, unless the owner or operator makes certain demonstrations, including as required by §330.302(c) that construction and operation will not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat protected under the Endangered Species Act of 1973.

2. Application Materials Relating to Issue P

- Q. What parts of the Application address the requirements of 30 TAC §§330.51(b)(8), 330.53(b)(13), 330.55(b)(9), 330.129, and 330.302, regarding protection of endangered or threatened species?
- A. Section II.I in Part II of the Application contains an endangered and threatened species review and evaluation prepared by Horizon Environmental Services, which concludes that the site contains marginal habitat for the Texas horned lizard, but not for any other state or federal listed threatened or endangered species. The habitat review includes a Texas horned lizard management plan required by 30 TAC §330.129. Section II.K contains letters dated November 11, 2005, documenting communication by the Applicant with the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service regarding threatened and endangered species, with responses from those agencies indicating that they expect no adverse impacts.

Section 13.0 of the Site Development Plan in Part III of the Application states that the Application will result in no destruction or adverse modification of critical habitats or cause or contribute to the taking or harming of any endangered or threatened species, and it references the coordination with the U.S. Fish and Wildlife Service and Texas Parks & Wildlife Department documented in Section II.K of Part II of the Application.

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Section 19 states that no endangered or threatened species or any potential critical or essential habitats for federal or state listed endangered or threatened species exist on the site, and therefore BFI determined that neither the facility nor its operation would result in the destruction or adverse modification of critical habitat or cause the taking of any endangered or threatened species. Appendix B to the SOP contains a copy of BFI's endangered and threatened species review and evaluation that appears in Section II.I.

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3. Technical Review Conclusion Relating to Issue P

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Q. Does the information in the Application meet the requirements of the applicable rules regarding protection of endangered or threatened species?

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A. Yes. Section II.I and II.K in Part II of the Application, Section 13.0 of the Site Development Plan in Part III of the Application, and Section 19 of the SOP contain the information required to demonstrate compliance with the applicable rule. In addition, Part II of the Application and the SOP are sealed by Mr. Ray L. Shull, P.E., Texas Licensed Professional Engineer No. 47759, and Part III of the Application is sealed by Mr. Adam W. Mehevec, P.E., Texas Licensed Professional Engineer No. 84736, in conformance with 30 TAC §330.51(d).

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Q. Issue Q-Cover

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1237 Q. What is Issue Q? 1238

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1239 A. Issue Q is "Whether the application includes adequate provisions for cover, in compliance with agency rules, including 30 TAC §330.133."

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Q. Did you review the parts of the Application that address this issue?

Introduction to Issue Q

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1244 A. I reviewed the parts of the Application related to daily and intermediate cover. The project engineer, Mr. Udenenwu reviewed the parts of the Application related to final cover, and he will address that issue in his Prefiled Testimony regarding Issue F on slope stability and Issue J on closure and post-closure care.

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1249 Q. What is the applicable rule regarding cover?

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1251 A. The applicable rule is 30 TAC §330.133 (relating to Landfill Cover). Rule §330.133(a) (relating to Daily Cover) requires that waste be covered with six inches of well-compacted

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earthen material at the end of each operating day. Landfills that operate on a 24-hour basis must cover the working face or active disposal area at least once every 24 hours.

Rule §330.133(b) (relating to Intermediate Cover) requires that all areas that have received waste that will be inactive for longer than 180 days be covered with intermediate cover or final cover. Intermediate cover must be a minimum of 12 inches of earthen material.

Rule §330.133(c) (relating to Alternative Material Daily Cover) does not apply in this case as the Application has specifically excluded the use of alternative cover. Rule §330.133(d) relates to a temporary waiver of requirements in §330.133(a)-(c) during extreme seasonal climatic conditions, and does apply in this case.

Rule §330.133(e) (relating to Final Cover) requires that the final cover for the landfill be in accordance with the site closure plan and the rules regarding closure and post-closure care in Subchapter J of the Chapter 330 MSW rules.

Rule §330.133(f) (relating to Erosion of Cover) requires erosion of final or intermediate cover to be repaired within five days of detection unless the Commission's regional office approves otherwise. The rule also requires that the owner or operator document the date of detection of erosion and date of completion of repairs in a cover inspection record that will be part of a cover application record required by §330.133(g). The frequency of regular inspections and other occasions for conducting inspections of the cover to detect the need for repairs must be specified in the SOP.

Rule §330.133(g) (relating to Cover Inspection Record) requires the facility to keep a cover application record on site readily available for inspection documenting the application of daily, intermediate, and final cover.

2. Application Materials Relating to Issue Q

- Q. What parts of the Application address the requirements of 30 TAC §330.133, regarding cover?
- A. Section 23.1 of the SOP in Part IV of the Application specifies the procedures for applying daily cover, and Section 23.2 specifies the procedures for applying intermediate cover. Section 23.3 of the SOP states that BFI does not propose the use of alternative material daily cover. Section 23.5 of the SOP acknowledges that final cover will be in accordance with the Final Closure Plan in the Application. Section 23.4 specifies the procedures for keeping a cover log, and Section 23.6 specifies the procedures for inspection and repair of cover.

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1293 3. Technical Review Conclusion Relating to Issue Q 1294 1295 Does the SOP include adequate provisions for daily and intermediate cover and for Q. 1296 documenting cover application, inspection, and repair? 1297 1298 Yes. Sections 23.1, 23.2, 23.4, and 23.6 of the SOP contain adequate provisions for daily A. 1299 and intermediate cover and for documenting cover application, inspection, and repair that 1300 meet the requirements of 30 TAC §330.133. The SOP is sealed by Mr. Ray Shull, P.E., 1301 Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d). 1302 1303 R. Issue R – Compliance History 1304 1305 What is issue R? Q. 1306 1307 Issue R is "Whether the application should be denied based on the Applicant's compliance A. 1308 history, in accordance with state laws and agency rules, including Tex. Health & Safety Code 1309 §361.089, 30 TAC §305.66, and 30 TAC ch. 60." 1310 1311 Q. Did you review the Compliance History of the Applicant? 1312 1313 Yes. A. 1314 1315 Q. What does Texas Health and Safety Code (THSC), Chapter 361, Section 361,089, referred to 1316 in Issue R, state about Compliance History? 1317 1318 THSC §361.089(a) states that the Commission "may, for good cause, deny or amend a permit A. 1319 it issues or has authority to issue for reasons pertaining to public health, air or water 1320 pollution, or land use, or for having a compliance history that is in the lowest 1321 classification..." 1322 1323 What are the applicable TCEQ rules regarding Compliance History? Q. 1324 1325 A. The applicable rules are 30 TAC §§60.1 (relating to Compliance History), 60.2 (relating to Classification), 60.3 (relating to Use of Compliance History), and 305.66 (relating to Permit 1326 1327 Denial, Suspension, and Revocation). The rules in Chapter 60 explain the applicability, method of calculation and use of Compliance History. Rule 30 TAC §305.66 allows the 1328 1329 Commission to deny, amend, revoke, or suspend, after notice and hearing, any permit it 1330 issues or has authority to issue for a solid waste storage, processing, or disposal facility, for 1331 good cause.

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- 1333 Q. How did you obtain the Applicant's Compliance History?
- During the technical review of the Application, I obtained a Compliance History report for the Applicant published October 1, 2006, for the compliance period September 1, 2001, through August 31, 2006, from the TCEQ Central Registry database.
- 1339 Q. How did you review the Applicant's Compliance History?
- A. I followed the internal guidance document that I noted earlier: Waste Permits Division
 5-Year Compliance History Review Procedures, dated March 12, 2004, which is based on the
 rules in 30 TAC Chapter 60. The procedure states that "those facilities which are ranked
 average or higher will be presumed to have permits with adequate provisions to ensure
 compliance with the state's environmental regulations," whereas those which are ranked as
 poor will have their compliance histories and permits reviewed in an effort to determine if
 enhancement of the permits through revised provisions might increase compliance.
- 1349 Q. How is Compliance History expressed, and for whom?
- A. Compliance History is expressed as a Classification and a Rating. Both the Regulated Entity (the physical feature consisting of the facility itself), and the Customer (the owner or operator who is the Applicant) have a Compliance History. According to 30 TAC Chapter 60, a company and site may have one of the following classifications and ratings:

1356 **CLASSIFICATION RATING** 1357 High < 0.10 (above-average compliance record) 1358 3.01 (for sites that have never been investigated) Average by Default 1359 0.10 < Rating < 45 (generally complies with Average environmental regulations) 1360 1361 45 < Rating (performs below average) Poor

- What was the Applicant's Compliance History Classification and Rating in the Compliance History report you included in the Draft Permit Package?
- The Applicant, the Customer BFI Waste Systems of North America, Inc., had a Classification of Average with a Rating of 2.59. The Regulated Entity, the landfill, also had a Classification of Average, with a Rating of 17.77.
- 1370 Q. What was your conclusion regarding the Applicant's Compliance History?
- 1372 A. Because the Compliance History for the facility and the Applicant were both Average, and because the Application reflects the current practices at the facility, I concluded that no

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1374 changes needed to be made to the Application other than those to address technical deficiencies identified by Mr. Udenenwu and me during our technical review.

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S. Issue S – Fire Protection

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1. Introduction to Issue S

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Q. What is issue S?

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1383 A. Issue S is "Whether the application includes adequate provisions for fire protection in accordance with agency rules, including 30 TAC §330.115."

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1386 Q. Did you review the parts of the Application that address this issue?

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1388 A. Yes.

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1390 Q. What is the applicable rule regarding fire protection?

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A. The applicable rule is 30 TAC §330.115 (relating to Fire Protection), which requires the owner or operator to maintain a source of earthen material that is available at all times to extinguish any fires. The source must be large enough to cover any waste not yet covered with six inches of earthen material, and sufficient equipment must be provided on-site to place a six-inch layer of the earthen material to cover any waste not already covered within one hour of detecting a fire. The SOP must contain calculations demonstrating the adequacy of the earthen material. The Executive Director may approve alternate methods of fire protection. The rule requires that the SOP contain a fire protection plan that identifies the fire protection standards to be used at the facility and how personnel are trained. The fire protection plan must also address fire protection measures specific to each activity at a landfill that stores or processes combustible materials, such as solidification basins, brush collection areas, construction waste and demolition waste areas, composting areas, mulching areas, and shredding areas. The rule also requires notification to the Commission's regional office in some circumstances.

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2. Application Materials Relating to Issue S

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1409 Q. What parts of the Application address the requirements of 30 TAC §330.115, regarding fire protection?

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1412 A. The Applicant details fire protection procedures in Section 5 of the SOP, and provides calculations regarding the adequacy of the proposed stockpile of earthen material on the last page of Appendix A to the SOP.

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1416		3. Technical Review Conclusion Relating to Issue S
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1418	Q.	Does the information in the SOP meet the requirements of the applicable rules regarding fire
1419		protection?
1420		
1421	A.	Yes. The Applicant details adequate fire protection procedures in Section 5 of the SOP, and
1422		provides calculations demonstrating that sufficient soil will be available and can be moved
1423		quickly enough to cover the maximum area of waste that might be exposed within one hour
1424		of detecting a fire. The SOP is sealed by Mr. Ray Shull, P.E., Texas Licensed Professional
1425		Engineer No. 47759, in conformance with 30 TAC §330.51(d).
1426		
1427		T. Issue T – Financial Assurance
1428		
1429	Q.	What is issue T?
1430		
1431	A.	Issue T is "Whether the Applicant has complied with financial assurance requirements, in
1432		accordance with agency rules, including 30 TAC §§330.52(b)(11) and 330.281."
1433		
1434	Q.	Did you review the parts of the Application that address this issue?
1435		
1436	A.	No. The parts of the Application regarding financial assurance were reviewed by the project
1437		engineer, Mr. Udenenwu, who will address the issue in his Prefiled Testimony.
1438		
1439		U. Issue U – Land Use Compatibility
1440		
1441		1. Introduction to Issue U
1442	0	
1443	Q.	What is issue U?
1444	٨	TTI:-69371-4141
1445	A.	Issue U is "Whether the proposed expansion is compatible with land use in the surrounding
1446		area."
1447 1448	0	Did way mayiary the mosts of the application that address this issue?
1449	Q.	Did you review the parts of the application that address this issue?
1449	٨	Yes.
1451	A.	1 65.
1451	\circ	What are the applicable rules recording competibility with land use in the surrounding area?
1452	Q.	What are the applicable rules regarding compatibility with land use in the surrounding area?
1454	A.	The applicable rules are 30 TAC §§330.53(a)(1) (relating to Technical Requirements of Part
1455	4 3.	If of the Application, General), and 330.53(b)(7) and (8) (relating to Technical Requirements

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of Part II of the Application, Requirements of Part II).

Rule 30 TAC §330.53(a)(1) requires Part II of the Application to describe the existing conditions and character of the site and surrounding area, and requires Parts I and II of the Application to provide information relating to land use compatibility. Rule §330.53(b)(7) requires the Applicant to provide a land-use map of the site showing the boundary of the property and any existing zoning on or surrounding the property and actual uses (e.g., agricultural, industrial, residential, etc.) within the site and within one mile of the site. Rule §330.53(b)(8) requires the Applicant to provide certain information to assist the Executive Director in evaluating the impact of the site on the surrounding area, including zoning, character of surrounding land uses within one mile, growth trends of the nearest community, proximity to residences and other uses, and a description and discussion of all known wells within 500 feet of the proposed site.

2. Application Materials Relating to Issue U

What parts of the Application address the requirements of 30 TAC §§330.53(a)(1) and 330.53(b)(7) and (8), regarding compatibility with land use in the surrounding area?

A. The Applicant provided an Existing Conditions Summary, an Aerial Photograph, a Land Use Map, a Land Use Report, and a Transportation Study in Sections II.A through II.E in Part II of the Application.

3. Technical Review Conclusion Relating to Issue U

Q. Does the information in Part II of the Application meet the requirements of the applicable rules regarding compatibility with land use in the surrounding area?

1484 A. Yes. The maps, reports, and other information in Sections II.A through II.E in Part II of the
1485 Application adequately document the surround land uses and conditions. The land use
1486 information submitted does not justify the commission denying the application based on the
1487 landfill being an incompatible land use. Part II of the Application is sealed by Mr. Ray Shull,
1488 P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC
1489 §330.51(d).

Executive Director's Prefiled Testimony of Mr. Arten Avakian

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1.401		
1491		V. Issue V – Buffer Zones and Landscape Screening
.1492 1493		1. Introduction to Issue V
1493		1. Introduction to issue v
1495	Q.	What is issue V?
1496	Q.	With to issue V.
1497	A.	Issue V is "Whether the provisions proposed for buffer zones and landscape screening
1498		comply with agency rules, including 30 TAC §§330.121(b) and 330.138."
1499		tomps, want against toward or anno 3300 over 1(0) and or over
1500	Q.	Did you review the parts of the Application that address this issue?
1501		
1502	A.	Yes.
1503		
1504	Q.	What are the applicable rules regarding buffer zones and landscape screening?
1505		
1506	A.	The applicable rules are 30 TAC §§330.11(b) (relating to Relationships with Other
1507		Governmental Entities, Texas Department of Transportation (TxDOT)), 330.55(b)(10)
1508		(relating to Site Development Plan), 330.56(a)(1) (relating to Attachments to the Site
1509		Development Plan, Attachment 1 - Site Layout Plan), 330.121(b) (relating to Easements and
1510		Buffer Zones), and 330.138 (relating to Visual Screening of Deposited Waste).
1511		
1512		Rule 30 TAC §330.11(b) requires the Commission to coordinate with TxDOT on the review
1513		of all permit applications for municipal solid waste land disposal facilities existing or
1514		proposed within 1,000 feet of an interstate or primary highway to determine the need for
1515		screening or special operating requirements, in view of the responsibilities of TxDOT
1516		regarding the junkyard control provisions of the Texas Litter Abatement Act.
1517 1518		Dula 20 TAC \$220,55(h)(10) requires the extract or encurtar to install landfill markers to
1519		Rule 30 TAC §330.55(b)(10) requires the owner or operator to install landfill markers to clearly mark significant features, including the buffer zone. Rule §330.56(a)(1) requires a
1520		Site Layout Plan on a constructed map that includes, where appropriate, plans for screening
1521		the site from public view.
1522		the site from public view.
1523		Rule 30 TAC §330.121(b) requires the Applicant to maintain a minimum separating distance
1524		of 50 feet between solid waste processing and disposal activities and the boundary of the
1525		facility. The buffer zone must provide for safe passage for fire-fighting and other emergency
1526	• .	vehicles. Buffer zone is defined in 30 TAC §330.2 (relating to Definitions).
1527		
1528		Rule 30 TAC §330.138 requires the owner or operator of a facility to provide visual
1529		screening of deposited waste materials at a municipal solid waste facility if the executive
1530		director determines that screening is necessary or where permit or design requirements so

dictate.

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2. Application Materials Relating to Issue V

Did the Commission coordinate with TxDOT on the review of this Application, in accordance with 30 TAC §330.11(b)?

1538 A. Yes. I prepared letters that were mailed on January 22, 2007, to various agencies including 1539 TxDOT, advising them of the Application and the opportunity to comment. TxDOT did not comment that any screening or special operating requirements were necessary.

What parts of the Application address the requirements of 30 TAC §§330.55(b)(10), 330.56(a)(1), 330.121(b), and 330.138, regarding buffer zones and landscape screening?

A. Section 11.2 of the SOP states that BFI will maintain a minimum buffer of 50 feet between the permit boundary and waste processing and disposal activities. Section 12 of the SOP indicates that BFI will place buffer zone markers as required. Section 28 of the SOP states that landscape screening vegetation is located along Blue Goose Road to assist in screening the landfill from view. The Applicant shows this area of screening on the Site Layout Plan in Attachment 1 to the Site Development Plan, in Part III of the Application.

3. Technical Review Conclusion Relating to Issue V

 Q. Does the information in the Site Development Plan and the SOP meet the requirements of the applicable rules regarding buffer zones and landscape screening?

A. Yes. The Applicant addressed the buffer zone requirement in Sections 11.2 of the SOP, and included the required provision for buffer zone markers in Section 12 of the SOP. The Application indicates that some screening will be provided along Blue Goose Road, and the Executive Director did not determine that any additional screening was required under 30 TAC §330.138. The Site Layout Plan is sealed by Mr. Adam W. Mehevec, P.E., Texas Licensed Professional Engineer No. 84736, and the SOP is sealed by Mr. Ray Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d).

W. Issue W – Health Protection and Avoiding Nuisance

Q. What is issue W?

Issue W is "Whether the application proposes sufficient provisions to protect the health of requesters and their families, and to avoid causing a nuisance, in violation of Commission rules, including 30 TAC §330.5(a)(2)."

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- 1573 Q. What parts of the Application address this issue?
- The Application in its entirety addresses this issue. The regulations in 30 TAC Chapter 330 1575 A. 1576 were promulgated to implement the purpose of the Texas Solid Waste Disposal Act to 1577 safeguard the health, welfare, and physical property of the people and to protect the environment by controlling the management of solid waste. Therefore, the ultimate intent of 1578 1579 the MSW rules is to ensure facility owners or operators will manage municipal solid waste in a manner that will protect human health and the environment and prevent nuisances, 1580 which is expressed by the statements in 30 TAC §330.5 (relating to General Prohibitions), 1581 1582 including §330.5(a)(2).
- 1584 Q. Did the Application meet the requirements of the applicable rules? 1585
- The project engineer, Mr. Udenenwu and I determined that the Application meets the requirements of the applicable rules. We, therefore, expect that BFI will protect human health and the environment and will prevent nuisances if it constructs and operates the proposed landfill as proposed in the application and as required by the regulations.

X. Issue X – Operating Hours

1. Introduction to Issue X

- 1595 Q. What is issue X?
- 1597 A. Issue X is "Whether the landfill's operational hours are appropriate."
- 1599 Q. Did you review the parts of the Application that address this issue?
- 1601 A. Yes.

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- 1603 Q. What is the applicable rule regarding operating hours?
- 1605 The applicable rule is 30 TAC §330.118 (relating to Facility Operating Hours). The rule A. 1606 requires that the owner or operator specify in the SOP the waste acceptance hours, the 1607 operating hours when materials will be transported on or off site, and the hours when heavy equipment may operate. Waste acceptance hours of an MSW facility may be any time 1608 between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, unless otherwise 1609 approved in the authorization for the facility. Transportation of materials and heavy 1610 1611 equipment operation must not be conducted between the hours of 9:00 p.m. to 5:00 a.m., 1612 unless otherwise approved in the authorization for the facility. Operating hours for other 1613 activities do not require other specific approval. The Commission's regional offices may

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allow additional temporary operating hours to address disaster or other emergency situations, or other unforeseen circumstances that could result in the disruption of waste receipt at the facility.

2. Application Materials Relating to Issue X

Q. What part of the Application addresses facility operating hours?

A. The Application specifies the operating hours in Section 8 of the SOP. Section 8 of the SOP proposes operating hours and waste acceptance hours of 24 hours per day, seven days a week. The Draft Permit was drafted according to the Applicant's proposal. Section III.A of the Draft Permit reads "The facility is authorized to operate and accept waste 24 hours per day, seven days per week." Section 8 of the SOP indicates that the Site Manager, at his own discretion may choose to have shorter waste acceptance hours; however, it is not a proposed Permit provision.

3. Technical Review Conclusion Relating to Issue X

Q. Does the information in the Site Operating Plan meet the requirements of the applicable rules regarding operating hours?

A. Yes. The Applicant specified the proposed waste acceptance hours, operating hours when materials will be transported on or off site, and the operating hours when heavy equipment may operate as required by 30 TAC §330.118. The proposed operating hours are the same as the existing operating hours, and the Executive Director is not aware of potential impacts rising to a level that would justify restricting the proposed operating hours. The Site Operating Plan is sealed by Mr. Ray Shull, P.E., Texas Licensed Professional Engineer No. 47759, in conformance with 30 TAC §330.51(d).

Y. Issue Y – Erosion Control Methods

1645 Q. What is issue Y?

A. Issue Y is "Whether the erosion control methods identified in the application and draft permit are sufficient."

1650 Q. Did you review the parts of the Application that address this issue?

1652 A. No. The parts of the Application regarding erosion control were reviewed by the project engineer, Mr. Udenenwu, who will address the issue in his Prefiled Testimony.

Mr. Arten J. Avakian, P.G. Prefiled Testimony SOAH Docket No. 582-08-2178 TCEQ Docket No. 2007-1774 MSW Permit Application No. 1447A Page 42 of 44

1655	Z.	Issue Z –	Contaminated	Water
1655	Z.	Issue Z –	Contaminated	Wa

1657 Q. What is issue Z?

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- 1659 A. Issue Z is "Whether the storage, treatment, and disposal of contaminated water is adequately addressed in the application and draft permit."
- 1662 Q. Did you review the parts of the Application that address this issue?
- 1664 A. No. The parts of the Application regarding the storage, treatment, and disposal of contaminated water were reviewed by the project engineer, Mr. Udenenwu, who will address the issue in his Prefiled Testimony.

VI. RESPONSE TO PREFILED TESTIMONY BY WITNESSES FOR PROTESTANT TJFA

- 1671 Q: Did you review the prefiled testimony of any of the other parties in this hearing.
- 1673 A. Yes. I briefly examined the prefiled testimony of the Applicant's witnesses and the protestants' witnesses.
- 1676 Q. Do you have any comments regarding subjects discussed in those testimonies?
- 1678 A. Yes.
- 16791680 Q. Which of these subjects would you like to comment on first?
- 1682 First, I disagree with Mr. Pierce Chandler's opinion that the site characterization is A. 1683 inadequate [citation]. The existing BFI Sunset Farms Landfill has an existing permit that was issued on the basis of an application that met the requirements of the rules in effect at 1684 1685 that time, including rules that required characterizing the site. In addition, BFI modified its 1686 permit in the mid-1990s to comply with new state requirements to upgrade to federal RCRA 1687 Subtitle D standards for MSW landfills, including standards for groundwater characterization 1688 and monitoring system design. As part of that upgrade to Subtitle D standards, BFI performed additional characterization of the groundwater at the site, redesigned the 1689 1690 groundwater monitoring system, and installed the redesigned monitoring system. The results of these previous investigations are incorporated in the Geology and Geotechnical Report in 1691 1692 Attachment 4 to the Site Development Plan, in Part III of the Application.
 - BFI submitted a soil boring plan in April 2004 for a contemplated lateral expansion of the waste disposal footprint at the Sunset Farms Landfill by 14 acres and deepening of part of the

Mr. Arten J. Avakian, P.G. Prefiled Testimony SOAH Docket No. 582-08-2178 TCEQ Docket No. 2007-1774 MSW Permit Application No. 1447A Page 43 of 44

existing footprint in the northeast part of the site. The TCEQ approved the soil boring plan, with revisions, in a letter dated July 20, 2004. The Permit Amendment Application that BFI submitted proposes vertical expansion, but did not propose the lateral expansion or deepening contemplated earlier. The Executive Director is of the opinion that permit amendment applications that propose vertical expansion of the existing waste disposal area, but not lateral expansion of the waste disposal footprint or deepening of the bottom of the waste disposal unit, do not require additional subsurface investigation beyond that which was already provided for the existing permit. Therefore, the additional subsurface investigation that BFI conducted pursuant to the Soil Boring Plan approved in July 2004 ultimately was not needed for the Application.

- Q. Which subject do you wish to comment on next?
- Next, I disagree with the opinions of Mr. Chandler and Mr. Robert Kier that leachate from the landfill is recharging to the groundwater beneath the landfill. Mr. Chandler and Mr. Kier referred to Fill Cross Sections in Attachment 2 to the Site Development Plan and Geologic Cross Sections in Appendix 4C of Attachment 4 to the Site Development Plan that show a line representing the groundwater levels in December 1999. On the cross sections that run through the landfill itself, the line representing the groundwater level is also shown to run through the landfill and, in some places within the landfill, the line appears higher than in the areas outside the landfill at the ends of the cross sections.

According to the December 1999 groundwater potentiometric surface map in Figure 4I.2 in Appendix I of Attachment 4, all of the groundwater elevation measurements in December 1999 were in wells or piezometers around the periphery of the landfill, and none were from within the landfill itself. I understood the groundwater potentiometric contours drawn within the waste disposal area to merely represent the interpretation of the Applicant's geologist as to what the shape of the potentiometric surface would be in the middle of the site, in absence of landfill development. I also understood that, as BFI developed the landfill, portions of the uppermost aquifer were excavated and blocked off at the edges of the excavations by the landfill liners, which should cause the groundwater to flow around those parts of the landfill in approximately the same directions as indicated by the potentiometric surface map. The groundwater mounds implied by the cross sections and potentiometric surface maps are therefore most likely artifacts of the geologist's interpretation. Indeed, if you compare the potentiometric surface maps by The Carel Corporation reproduced in Mr. Kier's exhibit BK-4 with those in the Application for the same monitoring period, you will see that two geologists produced two very different maps using the same data.

Mr. Arten J. Avakian, P.G. Prefiled Testimony SOAH Docket No. 582-08-2178 TCEQ Docket No. 2007-1774 MSW Permit Application No. 1447A Page 44 of 44

1/3/	<u>VII.</u>	CONCLUSIONS
1738 1739 1740 1741	Q:	Overall, what is your conclusion about the BFI Sunset Farms Application meeting applicable TCEQ regulations?
1742 1743 1744 1744	A:	In my capacity as the Project Manager and Geologist for Executive Director's technical review of the Application, I have determined that the BFI Sunset Farms Application satisfactorily meets all applicable TCEQ regulations.
1746 1747	Q:	Does this conclude your Prefiled Testimony?
1748 1749 1750 1751 1752	A:	Yes.
1753		

ARTEN AVAKIAN RESUME – OCTOBER 2008

PROFESSIONAL REGISTRATION

Texas Licensed Professional Geoscientist (License No. 3047)

EDUCATION

B.A. Geology, Magna Cum Laude, California State University, Fresno, December 1980

M.A. Geology, The University of Texas at Austin, December 1989

Continuing Education:

A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, Interstate Technology & Regulatory Council Internet Seminar, September 2008

Determination and Application of Risk-Based Values, ITRC Internet Seminar, July 2008

Constraints for Combining Modeling and Management for Groundwater, Texas Water Development Board, October 2007

Phytostabilization of Mine Tailings in Arid and Semi-Arid Environments, ITRC Internet Seminar, July 2007

Characterization, Design, Construction, and Monitoring of Bioreactor Landfills, ITRC Internet Seminar, April 2007

Evaluating, Optimizing, or Ending Post-Closure Care at Municipal Solid Waste Landfills, ITRC Internet Seminar, February 2007

Designing with Geosynthetic Clay Liners, CETCO Lining Technologies, February 2007

Alternative Covers for Landfills, Waste Repositories and Mine Wastes, University of Wisconsin / Desert Research Institute / USEPA, September 2006

Unsaturated-Zone Forensics Provides Insight to Soil and Water Resources, U.S. Geological Survey Internet Seminar, July 2006

Applied Ground Water Statistics, NIC USA Inc., May 2005

An Overview of Direct-Push Well Technology for Long-Term Groundwater Monitoring, ITRC Internet Seminar, April 2005

Performance Based Measurement Systems, Texas Natural Resource Conservation Commission (TNRCC), January 2001

Natural Attenuation of Chlorinated Solvents, TNRCC / University of Texas / ITRC / Remediation Technologies Development Forum, September 1997

Vadose Zone Hydrology, TNRCC, August 1997

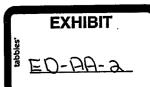
OSHA 29 CFR 1910.120(e)(3)(i) 40 Hour HAZWOPER General Site Worker Training, Environmental Options, Inc., May 1997

Method Detection Limits: Measurement Theory, TNRCC, December 1996

Fundamental Approaches to Groundwater Investigations, TNRCC, June 1995

Practical Application of Ground Water Geochemistry, National Ground Water Association (NGWA), May 1995

Fundamentals of Ground Water Geochemistry, NGWA, May 1995



Arten Avakian, Resume, June 2008 Page 3

Physical Science Aid, U.S. Bureau of Mines, Summer 1979 Range Aid, U.S. Bureau of Land Management, Summer 1978

PROFESSIONAL AFFILIATIONS

American Geophysical Union

PRESENTATIONS AND PUBLICATIONS

- Evapotranspiration (ET) Cover Systems for MSW Landfills Design and Modeling Recommendations: Presentation at TCEQ Environmental Trade Fair, May 2007
- Groundwater Monitoring Statistical Evaluation for MSW Sites, Presentation at TCEQ Environmental Trade Fair, May 2000
- Paine, J. G., Avakian, A. J., Gustavson, T. C., Hovorka, S. D., and Richter, B. C., 1994, Geophysical and Geochemical Delineation of Sites of Saline-Water Inflow to the Canadian River, New Mexico and Texas: The University of Texas at Austin, Bureau of Economic Geology.

Proposed Amendment to TCEQ MSW Permit No. 1447 BFI Sunset Farms Landfill

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

2007 SEP 28 PM 2: 06

Application by
BFI Waste Systems of North America,
Inc.
for TCEQ MSW Permit No. 1447A

Before the TEXAS COMMISSION CORFICE ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comment on the application by BFI Waste Systems of North America, Inc. (BFI, applicant), for an amendment to TCEQ Municipal Solid Waste (MSW) Permit Number 1447 (BFI Sunset Farms Landfill), and on the Executive Director's preliminary decision on the application. As required by Title 30 of the Texas Administrative Code (30 TAC), Section (§) 55.156, the Executive Director prepares a response to all timely, relevant and material, or significant, comments before issuing a permit. The TCEQ Office of the Chief Clerk received timely comment letters, and comments at the public meeting held May 24, 2007, from eight elected officials and from 86 concerned citizens representing themselves and various organizations. A comment was also received from the Applicant. This Response to Public Comment addresses all timely public comments received, whether or not withdrawn.

If you would like more information about this application or the permitting process, please call the TCEQ Office of Public Assistance at 1-800-687-4040. General information about the TCEQ can be found on the TCEQ Web site at www.tceq.state.tx.us.

BACKGROUND

Description of Facility

The BFI Waste Systems of North America Sunset Farms Landfill is located in Travis County, Texas, approximately three quarters of a mile north of the intersection of Giles Road and U.S. Highway 290. The site is within the city limits and extra-territorial jurisdiction of the City of Austin. The address of the facility entrance is 9912 Giles Road.

The landfill is a Type I municipal solid waste landfill, with a total capacity of 27,703,735 cubic yards (waste and daily cover) and final maximum elevation of 720 feet mean sea level (msl) under current MSW Permit No. 1447. The landfill is currently authorized to operate 24 hours a day, seven days a week. The total area within the permit boundary is approximately 349.4 acres, of which approximately 251.5 acres is designated for waste disposal.

MSW Permit Amendment Application No. 1447A proposes to expand the landfill vertically by 75 feet to a new final maximum elevation of 795 feet msl, and increase landfill capacity by 10,630,000 cubic yards, to a total of 38,333,735 cubic yards (waste and daily cover). The operating hours, total area within the permit boundary, and area designated for waste disposal are not changed by this application. The application indicates that the site life will be approximately 8 years, and that waste will be accepted for disposal at this site at the initial rate of approximately 3,150 tons-per-day, increasing over time to a maximum acceptance rate of approximately

EXHIBIT

ED-AA-3

TCEQ rules, codified in Title 30
Texas Administrative Code

www.tceq.state.tx.us/rules/index.html, and info.sos.state.tx.us/pls/pub/readtac\$ext.ViewTAC

Secretary of State

www.sos.state.tx.us

Federal statutes and rules

www.epa.gov/epahome/lawregs.htm

Because the Executive Director declared this permit application administratively complete on January 31, 2006, the application was reviewed under the 30 TAC Chapter 330 rules effective prior to March 27, 2006. All references to 30 TAC Chapter 330 rules are to those rules in effect prior to March 27, 2006. These rules are available at:

www.tceq.state.tx.us/permitting/waste_permits/msw_permits/msw_330rules_old.html

Commission records for this facility are available for viewing and copying at the TCEQ Central Office in Austin, 12100 Park 35 Circle, Building E, Room 103 (Central Records), and at the TCEQ Region 11 Office in Austin at 2800 S IH 35, Suite 100. The technically complete application is also available for review and copying at the University Hills Public Library in Austin, at 4721 Loyola Lane.

If you would like to file a complaint about an existing facility concerning its compliance with provisions of its permit or with TCEQ rules, you may contact the TCEQ at 888-777-3186 or the TCEQ Region 11 Office at 512-339-2929. Citizen complaints may also be filed on-line at www.tceq.state.tx.us/compliance/complaints/. If the Executive Director finds that a facility is out of compliance, it will be subject to enforcement action.

COMMENTS AND RESPONSES

Copies of comment letters are available for examination in the TCEQ Office of the Chief Clerk. Comments have been grouped under the following topics for response:

. CO	MMENT	TOPIC
	1	Opposition to Expansion
	2.	Public Meeting Date, Comment Period, and Issues for Hearing
•	3	Access to Application Materials
. •	4	Representative of BFI with Legal Authority Over Application
	5 .	Identification of Permittee and Site Owners
	6 .	Permit Term, End Date for Waste Acceptance, and Coordination with CAPCOG
•	7	Regional Capacity, Facility as a Regional Landfill, and Planning for New Location
	8	Applicable Municipal Solid Waste Rules
	9	Low Economic Area, Health and Environmental Risks, and Environmental Impact Statement
	10	Compliance History, Complaint Response, and Enforcement
	11.	Business Practices of Applicant
	12	Application Format and Professional Responsibilities
	13	Compatibility with Surrounding Community and Growth Trends
	14	Facility Location

for reviewing the application for compliance with state statutes and TCEQ's rules. Accordingly, the TCEQ does not have jurisdiction to prohibit owners and operators from seeking an authorization; nor can the TCEQ prohibit owners and operators from receiving authorization if they comply with all statutory and regulatory requirements. The Executive Director has determined that the application complies with applicable laws.

COMMENT 2 Public Meeting Date, Comment Period, and Issues for Hearing

Several commentors registered their concern that the public meeting notices issued for this application were confusing, that the deadline for public comments was unclear, and that the May 24, 2007, date for the public meeting was inconvenient. Several commentors also asked which comments would be responded to and could be considered if a contested case hearing is granted. One commentor asked why commissioners don't attend the public meeting since the Executive Director may only make recommendations to the Commission on an application.

RESPONSE 2

The TCEQ regrets any confusion and inconvenience regarding the public meeting and comment period. BFI requested the TCEQ Office of Public Assistance to schedule a public meeting rather than wait for public meeting requests and requested that the TCEQ issue an Amended Notice of Application and Preliminary Decision and Notice of Public Meeting. BFI arranged the public meeting date with the Office of Public Assistance and then published an amended notice. The last date of publication was May 17, 2007, which made the deadline for public comments June 18, 2007 (the first business day on or after the 30th day after the last date of publication). At the request of several interested parties including Texas Senator Kirk Watson, the deadline for comments was extended to June 29, 2007.

The Commission considers all timely received, relevant and material, or significant public comments, including those submitted in writing and those stated during the formal comment period at the public meeting held on May 24, 2007. TCEQ rules prohibit commissioners from considering comments on an application until after that application is formally referred to them, a procedural step completed after the Executive Director evaluates public input. It would not be practical for the commissioners to attend the 300-400 public meetings held annually around Texas for air quality, water quality, and hazardous and municipal solid waste applications.

COMMENT 3 Access to Application Materials

Several commentors indicated that persons living in neighborhoods surrounding the facility did not have access to the application and revisions to the application or did not have enough time to critically evaluate the information. Travis County Judge Samuel Biscoe commented that the County requested and received the initial application in its entirety, but not the revisions, and that it reserves the right to review and comment on information in those documents. One commentor asked why the applicant was not required to provide an electronic copy of the application on a publicly accessible Internet site.

RESPONSE 3

The notices for this application indicated that the application is available for viewing and copying at the University Hills Branch of the Austin Public Library, 4721 Loyola Lane, Austin, Texas, approximately two and one-half miles southeast of the BFI Sunset Farms Landfill.

Consultants, Inc., which in turn became Giles Holdings, L.P., and that all assets of Mobley Chemicals, Inc., are now held by Giles Holdings, L.P.

The application does not detail the history and role of Tiger Corporation. BFI informed the Executive Director that Tiger Corporation was originally a partnership of BFI and the Mobley family and that BFI purchased the Mobley interests in Tiger, which included an option to purchase the land. After BFI did not exercise the land purchase option, BFI assimilated Tiger Corporation's interests in the permit into BFI. The land was purchased instead by Mobley, whose assets are owned by Giles Holdings. Giles later sold approximately 54.13 acres of the land to BFI. The Executive Director does not know exact reason for the sale as 30 TAC §330.52(b)(7) requires that the permit application identify the property owner, but does not require an explanation of why ownership may have changed.

Section I.L in Part I of the application states that BFI Waste Systems of North America, Inc., is a subsidiary of Allied Waste Industries.

COMMENT 6 Permit Term, End Date for Waste Acceptance, and Coordination with CAPCOG

Several commentors expressed concern that the proposed permit has no expiration date and/or stated their wish that the landfill be closed immediately, or as soon as possible. Several other commentors, including public officials expressed concern about potentially conflicting statements in the application regarding expected site life and date of last receipt of wastes. Commentors also asked whether the agreement between BFI and CAPCOG (Capitol Area Council of Governments) regarding conformance with the regional solid waste management plan (RSWMP) was meaningful or enforceable. One commentor expressed concern that the Final Closure Plan does not indicate the closure date.

RESPONSE 6

MSW permits are generally issued for the life of a site, including the closure and post-closure care periods. MSW permits must remain in place after the last receipt of waste and after closure of a facility while permit-required activities, such as post-closure care monitoring and maintenance continue.

The original application lacked definitive evidence of conformance with the RSWMP and indicated a site life extending to 2018, with no certain end date for last receipt of wastes. The technically complete application included a conditional agreement between BFI and CAPCOG regarding conformance with the RSWMP. Under the agreement, BFI promised to cease accepting waste on or before November 1, 2015, provided the terms of the agreement were met. The conditional agreement was incorporated into the draft permit as a Special Provision. At the public meeting on May 24, 2007, BFI stated unconditionally that it would cease accepting waste on or before November 1, 2015. Therefore, the Executive Director has revised the draft permit to add a Special Provision specifying that BFI receive no waste after November 1, 2015. Although the commission does not generally have authority to enforce agreements between other parties, the deadline for receiving waste is now enforceable as a permit provision.

The Final Closure Plan (Attachment 12 to Part III of the application) details procedures and specifications for closure in accordance with 30 TAC §330.253, which does not require the plan to specify a date for last receipt of waste or initiation of final closure.

for the particular requirement.

COMMENT 9 Low Economic Area, Health and Environmental Risks, and Environmental Impact Statement

Several commentors expressed the feeling that the area in which the landfill is located is targeted for waste disposal because of perceived low economic status of residents. Many commentors asked if the State had performed any environmental assessments or comprehensive health studies to determine what individual and/or cumulative risks and impacts may be caused by the Sunset Farms Landfill, adjacent landfills, and related activities (such as emissions from vehicles going to and from the landfill, and landfill gas-fueled electrical generation facilities), as well as effects from other traffic that will be using new and projected highways in the area.

RESPONSE 9.

The TCEQ considers MSW landfill applications under the commission's rules which apply to landfill applications. When evaluating permits, TCEQ takes into consideration the surrounding community regardless of its socioeconomic status.

The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. To meet this requirement, federal agencies must prepare detailed statements known as an Environmental Impact Statements (EIS) for projects receiving federal funding. An EIS is not required for state actions such as considering this application.

COMMENT 10 Compliance History, Complaint Response, and Enforcement

Many commentors stated that the facility has a poor compliance history, with ongoing problems including odors, uncontrolled storm water runoff and sediment, and windblown trash, and urged that the TCEQ not grant a permit amendment which they believe would worsen existing problems. Several commentors stated that they have contacted the landfill operator when problems occur, but in their opinion the operator is not responsive or does not correct the problem. Commentors also stated that they have contacted the TCEQ and gotten no formal response on complaints, or by the time an investigator from the TCEQ is able to respond, the problem the complainant experienced (such as odor) has gone, and/or that the TCEQ fails to identify a violation or enforce, giving the perception of being more interested in permitting than addressing complaints and protecting citizens from bad practices. One commentor expressed concern that the TCEQ does not have enough staff to pursue enforcement. Another commentor stated that the City of Austin renewed a contract with facility but did nothing to curtail behaviors that threaten health and property values.

RESPONSE 10

During the technical review, a compliance history review of the company and the site is conducted based on the criteria in 30 TAC Chapter 60. These rules may be found on the TCEQ website at www.tceq.state.tx.us/rules/index.html, and on the Texas Secretary of State website at info.sos.state.tx.us/pls/pub/readtac\$ext.ViewTAC. The compliance history for the company and site is reviewed for the five-year period prior to the date the permit application was received by the Executive Director. The compliance history includes multimedia compliance-related components about the site under review. These components include the following: enforcement

of the operator, who must operate the facility in compliance with applicable rules and regulations and the permit, regardless of what disposal fees it charges customers.

COMMENT 12 Application Format and Professional Responsibilities

One commentor expressed concern that two engineers signed and sealed the application without specifying who is taking responsibility for what part, that both an engineer and a geoscientist signed and sealed the geology report (Attachment 4 to Part III of the application) without specifying who is taking responsibility for what part, and that only title sheets were signed and sealed. The commentor also stated that figures in Attachment 4 do not have page numbers.

RESPONSE 12

The application complies with the sealing requirements. TCEQ rules at 30 TAC §330.51(d)(1) require the responsible engineer to seal, sign, and date each sheet of engineering plans, drawings, and the title or contents page of bound reports; 30 TAC §330.56(d) requires that a qualified groundwater scientist (who may be a licensed engineer or licensed geoscientist) prepare and sign the geology report, except for certain reports within the geology report that must be signed and sealed by an engineer. Documents submitted in three-ring binders are considered bound reports; therefore a person sealing a title page is accepting responsibility for the entire document, unless noted otherwise. If more than one engineer or geoscientist seals a document, it is taken to mean that each is accepting full responsibility for the contents as work done by them or under their supervision, unless notes are included to specify otherwise. Seals on individual drawings and other items within the application indicate that a person is responsible for that particular item, whether or not they are sealing the title page of the document.

Each figure in Attachment 4 to Part III of the application bears a separate figure number following a logical numbering scheme, and each is listed in the table of contents. Each page can be referenced by its unique number, and therefore is considered to meet the requirement of 30 TAC §330.51(e)(3) that all pages contain a page number.

COMMENT 13 Compatibility with Surrounding Community and Growth Trends

Most commentors expressed the opinion that the landfill is incompatible with the surrounding community and growth trends, and that the landfill does and would continue to impact the quality of the environment and quality of life in the surrounding area. Commentors noted that the area is in the desired development zone for the Austin area, and expressed concern that the presence of the BFI and other landfills harms property values and hampers the ability of the area to grow and prosper, and ultimately will undermine the tax base for the area. Several commentors stated that the application did not provide sufficient or complete information regarding compatibility, and one commentor stated that the maps in the application are old and do not reflect present land use or ownership. One commentor asked why more building permits are issued for areas close to the landfill.

RESPONSE 13

The TCEQ's jurisdiction is established by the Legislature and is limited to the issues set forth in statute and rules. Accordingly, the TCEQ does not have jurisdiction to consider effects on property values when determining whether to approve or deny a permit application. Rule 30 TAC §330.53(b)(8) requires that the Commission consider the impact of a site upon a city,

establishes operating requirements for easements; §330.52(b)(4) and §330.53(b)(7) specify that easements should be documented in Parts I and II of the application. Easements at the BFI Sunset Farms Landfill are documented in a drawing in Section II.I in Part I of the application, which is referenced on figures in Section II.C of Part II of the application and in Figure 14B-1 in Attachment 14 to Part III of the application. The location of an underground utility trench, discussed in Section 2.6 of Attachment 14, is shown in Figure 14A-1. The application meets the requirements for easements and buffer zones, and it includes adequate provisions to control odors and runoff.

COMMENT 16 Ownership and Use of 54.13-acre Tract of Land Transferred from Giles Holdings to BFI

Several commentors asked what was the purpose of BFI's purchase of the 54.13-acre tract in the northeast quadrant of the site (also referred to as 54.1 acres and 54.119 acres in Section I.B-2 and I.J-3 in Part I of the application) from Giles Holdings, how the change of ownership affects commitments or agreements made with the City of Austin or Travis County, what part of the facility is located on the tract, what plans BFI may have for this part of the facility, and who has jurisdiction over the drainage area. One commentor noted the property owner affidavit for the 54.13 acres (in Section I.J-4 in Part I of the application) states that an affidavit will be filed with the county deed records advising that the land has been used for a solid waste facility, and asked if the 54.13 acres has been or will be part of disposal area.

RESPONSE 16

The location of the 54.13-acre tract is shown in Figure I.F in Part I of the application. The reason for BFI's purchase of the tract is not stated in the application and is not required by the MSW rules. According to the application, the 54.13 acres is outside the landfill footprint and therefore not to be used for disposal. However, because the tract is within the permit boundary, the property owner is required by 30 TAC §330.52(b)(7) to include a property owner affidavit for the tract, acknowledging that the owner has a responsibility to file the specified affidavit with the county deed records. The portion of the 54.13-acre tract closer to the landfill is being used for a detention pond for runoff from the facility, and the portion adjacent to Blue Goose Road is used for maintaining the natural drainage through the site. The application does not indicate any other plans for the tract. Details regarding drainage are contained in Attachment 6 to Part III of the application.

The 54.13-acre tract is within the city limits and extraterritorial jurisdiction of the City of Austin, and within Travis County, and would need to comply with any drainage ordinances of those local governments. In addition, according to Section II.H in Part II of the application, several areas within the tract are considered jurisdictional wetlands that must be managed in accordance with rules administered by the U.S. Army Corps of Engineers (USACE). Section II.K of Part II contains a letter documenting the applicant's coordination with USACE. Any commitments or agreements made by BFI with the City of Austin or Travis County would need to be enforced by those entities.

COMMENT 17 Size of Facility and Visual Impact

Many commentors expressed concern about the height and size of the landfill after the proposed expansion, its appearance, and the visual impact it will have on the surrounding area, and the ability to screen operations from view. Several commentors expressed their wish that the sides

Whether MSW landfills, the leachate, and resulting air emissions should be classified as hazardous is not relevant to whether this application complies with the commission's MSW landfill permitting rules. In accordance with Title 40 Code of Federal Regulations (CFR), Part 261, Section 261.4(b), leachate and gas condensate from a municipal solid waste landfill is excluded from regulation as a hazardous waste provided the leachate or gas condensate is not characteristically hazardous (that is, not ignitable, reactive, corrosive, or toxic). Air emissions from the landfill are regulated under federal rules in 40 CFR Part 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills), adopted by reference by the state, which require active gas collection and control (including reduction of non-methane organic compounds by 98 weight-percent or to less than 20 parts per million by volume), monitoring, and corrective action as needed to ensure compliance.

COMMENT 19 Restrictions on Types of Waste Accepted

One commentor suggested that the landfill should restrict acceptance of sludge and/or liquid wastes, industrial wastes, special wastes, contaminated soils, asbestos-containing materials, and prohibited wastes, and should install equipment to detect radioactive materials. The commentor also asked if the facility has ever received "dangerous material" during the last 26 years, and if so, the details regarding the case and the fate of the waste.

RESPONSE 19

According to the Part A application form in Part I of the application, and the Site Operating Plan (SOP) (Part IV of the application), the applicant proposes to continue to accept the wastes currently authorized, including municipal solid waste, regulated asbestos-containing material from municipal sources, Class 1 industrial nonhazardous solid waste that is considered Class 1 only because of asbestos content, Class 2 industrial nonhazardous solid waste, Class 3 industrial nonhazardous solid waste, and certain special wastes. The facility is not authorized and will not be authorized to accept prohibited wastes identified in 30 TAC §330.5(e), hazardous wastes (other than household hazardous waste and hazardous waste from conditionally exempt small quantity generators [CESQGs]), radioactive wastes, polychlorinated biphenyl (PCB) wastes, nonhazardous Class 1 industrial wastes (other than that considered Class 1 only because of asbestos content), or any other wastes not identified in the permit. The facility may accept sludge and liquid waste that has been solidified, and tested and determined not to contain free liquids before disposal. The SOP indicates that automated radiation detection equipment will be installed at each incoming waste scale to allow detection of radioactive materials. commission's rules authorize MSW landfills to accept the types of waste that the applicant proposes to accept.

The Executive Director is not certain what materials the commentor would include in the definition of "dangerous material," however, as explained above, the facility is not authorized to accept regulated hazardous wastes, radioactive wastes, PCB wastes, or nonhazardous Class 1 industrial wastes, and the existing landfill has not reported receiving or disposing of such wastes.

COMMENT 20 Traffic and Routes to Site

Many commentors expressed concern regarding traffic to and from the facility, including truck traffic on back roads and bridges that are too narrow to allow safe passing, trucks exceeding speed limit and/or driving unsafely, deterioration of roads, illegal left turns out of the facility, and truck drivers not watching as they pull into or out of the facility. Several commentors stated

RESPONSE 21

The commentor questioning the equipment list did not specify how the list does not match the waste acceptance rate. Rule 30 TAC §330.114(2) requires the applicant to describe the minimum number, size, type, and function of the equipment to be used. The applicant provided an equipment list in Figure 4 in the SOP (and also in Section I.L in Part I of the application), which shows the types and number of pieces of equipment that will be used for three ranges of waste acceptance rates, up to the maximum rate anticipated. The SOP includes information in Section 5 and in Appendix A regarding the working face size and calculations to show that six inches of soil cover can be applied to the working face within one hour.

The rule regarding easements and buffer zones, at 30 TAC §330.121, specifies requirements for easements and buffer zones, but does not specifically state that the SOP must describe the features nor explain how they meet the requirements. Easements are shown in a drawing in Section I.I in Part I of the application, which is referenced on figures in Section III.C (regarding land use) of Part II of the application and in Figure 14B-1 in Attachment 14 to Part III of the application; the location of an underground utility trench, discussed in Section 2.6 of Attachment 14, is shown in Figure 14A-1. The buffer zone for the landfill is shown on Attachment 1, Sheet-2 to Part III, and is at least 50 feet wide between the permit boundary and the landfill footprint and other processing and disposal activities.

Fire protection in the old, pre-Subtitle D area of the landfill is provided by existing intermediate cover.

Procedures to control potential impacts from operation of the landfill are contained in the SOP. The SOP complies with the rules and operating the facility in accordance with these procedures should control impacts from the proposed expansion.

COMMENT 22 Odor and Air Quality

Many commentors stated that the facility has been and continues to be a source of noxious odors affecting people at their residences, businesses, schools, and public places, and that at times the odors are too unbearable to be able to be outside or to have windows open. Many expressed the concern that as the landfill grows the odor problem will worsen and lead to an extended period of odor releases as had occurred some years ago, which one commentor explained BFI battled and was barely able to control. Several commentors suggested that the odor management plan is insufficient given the historical odor problems, and that the applicant should be required to provide an odor management plan under the revised MSW rules (the 2006 Revisions).

Several commentors asked whether odors are caused by excessive amounts of leachate on the liner, or if they are escaping from the leachate collection system, or emanating from leachate recirculated on the working face. One commentor asked if odors are coming from trucks bringing in waste from distant collection points, and what is the most distant collection point from which waste is brought to the BFI Sunset Farms Landfill.

Some commentors expressed concern about the health effects of short term and long-term exposures to the odor-causing compounds and gaseous pollutants that may be emitted along with the odor.

Commentors also asked how gas releases are monitored; what is present in the on-site misters

compounds. The MSW rules do not require that the application specify the composition of the odor-controlling compounds. However, material safety data sheets (MSDSs) were provided with a letter to the TCEQ dated April 6, 2006, from Associated Consulting Engineers, Inc. responding to comments on the permit modification to upgrade the SOP for the existing facility under MSW Permit No. 1447 (modification issued September 27, 2006). The MSDSs indicated no adverse effects are expected on human health or the environment.

This is an MSW landfill permit amendment application, and air quality issues are generally outside the scope of review for landfill applications. The facility and traffic emissions will continue to be subject to applicable air quality requirements. The TCEQ does not consider the effects on air quality from increased numbers of diesel trucks, alone or in combination with any other factors, in deciding whether to issue a landfill permit. However, according to the Part A application form in Part I of the application, and the traffic study in Section II.E in Part II of the application, the proposed expansion could result in an increase of approximately 239 vehicles per day (12 percent increase, from current 1205 vehicles per day to 1344 vehicles per day at the peak of operations), including waste hauling trucks and all other vehicles.

COMMENT 23 Operation of Working Face

Several commentors inquired about how often the facility operates more than one working face, and why, and if and how often the facility has diverted waste-carrying vehicles to other facilities when the working face was inaccessible due to surface water problems.

RESPONSE 23

TCEQ rules at 30 TAC §330.117 require that the unloading of solid waste be confined to as small an area as practical. The rule requires that the maximum size of the unloading area be specified in the Site Operating Plan (SOP), and that the number and types of unloading areas be identified. The proposed SOP complies with these requirements. The commission is not aware of how often the existing facility has operated more than one working face or how often the facility has diverted waste-carrying vehicles to other facilities when the working face was inaccessible.

COMMENT 24 Dust

Several commentors reported that dust from facility roads, soil stockpiles, and other sources drifts off site and onto neighboring properties, and have asked how the dust problems will be managed if an expansion is granted and activity at the site increases. One commentor asked what the health effects of dust particles are and what chemicals they might contain or carry. One commentor reported seeing what was thought to be smoke and assumed the facility was burning waste; other commentors reported seeing dust thick enough that it resembled smoke.

RESPONSE 24

Section 17 of the Site Operating Plan specifies procedures to control dust from facility roads as required by 30 TAC §330.127(b). Dust from other sources, such as soil stockpiles must not create a nuisance which is prohibited by §330.5(a)(2). Burning of solid waste is prohibited, except in very specific circumstances as outlined in §330.5(d). The MSW rules do not require health impact studies; therefore, the application does not contain information about health effects of dust from the existing or proposed facility. The Executive Director has determined that the

windblown trash end up in pastures and endanger livestock that may accidentally ingest the trash, and are incorporated into bales of hay. Several commentors also reported that waste is spilled from trucks both on the way to the landfill and on the way out if they did not empty completely. One commentor reported getting flat tires from debris that has fallen off trucks. One commentor questioned whether the City of Austin spends tax dollars to clean up the windblown trash along the routes to the site. Several commentors reported that illegal dumping occurs in the area by people who have come when the landfill is closed or who find the disposal fee too high.

RESPONSE 27

Sections 10 and 13 of the Site Operating Plan provide procedures for control of windblown solid waste and litter and for control and cleanup of materials along the route to the site. BFI is responsible for picking up litter scattered throughout the site, along fences and access roads, at the gate, and along and within the right-of-way of public access roads serving the facility for a distance of two miles from the entrance (including any waste illegally dumped within the right-of-way). That clean up must occur at least once a day on the days the facility is in operation. BFI is responsible for the costs of the cleanup.

The Executive Director has determined that BFI's application complies with the requirements of 30 TAC §330.120 and §330.123. If the landfill is operated in accordance with the SOP, the Executive Director expects that windblown waste and materials along the route to the site will be adequately controlled and picked up. The TCEQ is not aware of whether the City of Austin spends tax dollars to clean up trash along routes to the site. If you have any complaints or concerns regarding operation of the facility, please contact the TCEQ Region 11 Office in writing or in person at 2800 South IH 35, Suite 100, Austin, Texas 78704-5700, or by telephone at (512) 339-2929. If you observe or have information regarding illegal dumping, please contact the TCEQ Region 11 Office and city or county officials.

COMMENT 28 Scavenging Animals and Vectors

Several commentors expressed concern that the landfill provides food for or attracts vectors (insects, rodents, birds, or other animals or organisms capable of mechanically or biologically transferring a pathogen from one organism to another). Commentors also reported that scavenging animals such as coyotes pass through the residential neighborhood on the way to or from the landfill. They also complained about scavenging birds that roost on houses, power lines, and in trees in the neighborhood and at the nearby elementary school, and leave messy, potentially disease-ridden droppings on the ground.

RESPONSE 28

The procedures provided in Section 16 of the Site Operating Plan (SOP) for controlling on-site populations of disease vectors meet the requirements of 30 TAC §330.126. The procedures include proper compaction and application of daily cover, which should adequately control scavenging animals and vectors.

COMMMENT 29 Liner and Leachate Collection System Design, Construction, and Stability

Several commentors expressed opinions that the Soil and Liner Quality Control Plan (SLQCP)

COMMENT 31 Daily Cover

Several commentors raised issues related to the alternative daily cover (ADC). They asked why BFI used ADC in the past instead of using dirt from areas they are excavating now and stockpiling, whether the facility is currently permitted to use any ADC, and whether the amendment application proposes to use ADC. One commenter advised that despite statements by the applicant's engineer that the site has not used ADC in more than five years, annual reports filed by BFI for the past five years indicate that the facility did use "tire pieces/chips and ground woody waste" as ADC. Several commentors expressed concern that it was unclear whether ADC would be authorized by the permit amendment, because of references to ADC in Standard Permit Condition VIII.I in the draft permit, and statements in Section 15 of the narrative to Part III of the application. Another commentor expressed the belief that the facility does not apply daily cover soil in the winter when it appears there will be a freeze. Commentors also expressed concern that soil balance calculations in Appendix III-D to Part III indicate a deficit of soil and questioned what BFI will do if it does not have enough dirt for daily cover.

RESPONSE 31

Section 23.1 of the Site Operating Plan (SOP) in Part IV of the application indicates that the facility will apply daily cover soil at least once per day, in accordance with 30 TAC §330.133(a). Section 23.3 of the SOP states that the use of ADC material is not proposed and that no ADC materials are currently approved for the site. The facility was authorized by its permit in the past to use ADC instead of soil as daily cover, but BFI apparently ceased using ADC several years ago because of operational issues. Standard Permit Condition VIII. I has been revised in the draft permit to delete the reference to ADC. The Executive Director is not aware of any occasion that the facility did not apply daily cover (or ADC) because of freezing weather conditions.

The soil balance calculations provide information and help the applicant plan for soil needs. The MSW rules do not require that all construction materials be available on site. The applicant will be responsible for obtaining the necessary materials, whether available on site or from another source. Attachment 8 (Cost Estimate for Closure and Post-Closure Care) in Part III of the application includes provisions for purchase of soil.

COMMENT 32 Soil Stockpiles

Several commentors inquired about soil stockpiles on top of filled areas of the facility. They asked what is the source of the material in the stockpiles, whether the permit allows stockpiling, whether the tops of the stockpiles extend above the permitted final elevations for the landfill, and how the material will be used. Commentors also reported that the stockpiles are a source of dust and sediment that create a nuisance and asked how long the stockpiles would remain.

RESPONSE 32

The soil in the stockpiles on top of filled areas of the facility is from excavations on the site. The tops of the stockpiles extend above the final contours specified in the current permit, and therefore must be moved and/or regraded according to the existing final closure plan if the pending application is not granted. The Executive Director anticipates that the facility will use most, or all of the soil in the stockpiles for daily, intermediate, and final cover, and/or other activities that require soil. The facility will be required to follow the erosion and sediment control procedures for stockpiles, described in Section 3.1 in Appendix ATT6-A of Attachment 6

vertical expansion. The application complies with all applicable requirements regarding drainage and erosion controls.

The Executive Director declared the permit amendment application for BFI Sunset Farms Landfill administratively complete on January 31, 2006, and processed the application under the MSW rules in effect at that time. The applicant will be required to submit a separate application to modify the permit (within one year after the commission's decision on the amendment application has become final and appealable) to incorporate design features that will provide effective erosional stability during all phases of landfill operation, closure, and post-closure care, in accordance with the revised MSW rules that became effective March 27, 2006.

The comment regarding drainage calculations did not explain what aspect of the calculations did not appear to demonstrate that the proposed controls will perform as required by the rules; the Executive Director determined that the drainage calculations and designs meet the requirements of the rules. The analysis and demonstration of "no significant alteration" of natural drainage patterns was conducted in accordance with TCEQ rules and guidance (Guidelines for Preparing a Surface Water Drainage Report for a Municipal Solid Waste Facility, August 2006), which advises that for expansions or modifications of existing facilities, the appropriate comparison should be between the currently permitted site closure condition and the proposed post development condition at closure.

COMMENT 34 Cover Inspection and Repair

Several commentors noted that the Site Operating Plan proposes that cover inspections will be conducted the next weekday operating day after measurable rainfall occurs, even though the landfill is also proposing to be open on weekends; and that the timeline for repair (within five days of detection) is not consistently stated.

RESPONSE 34

The rule regarding erosion of cover, 30 TAC §330.133(f), does not specify that cover must be inspected the next day after a rain. Inspecting cover on the next weekday operating day after a measurable rainfall occurs is sufficiently protective. However, the Executive Director has revised the draft permit to clarify statements regarding the time by which erosion must be repaired, by adding a Special Provision specifying that the permittee shall repair eroded cover within 5 days of detection unless the commission's regional office approves otherwise.

COMMENT 35 Leachate Management and Contaminated Water Management

One commentor asked where the leachate collection system (LCS) is located in Subtitle D cells; how the applicant will keep leachate from Subtitle D cells (which have LCSs) out of pre-Subtitle D cells (which do not have LCSs); how the applicant will keep leachate depths below 12 inches (30 centimeters) above the liner and out of waste; and how the applicant is ensuring that the liner system is built with a slope that will promote drainage of leachate. Several commentors expressed concern that the Site Operating Plan (SOP) contains no provisions for leachate management and no provisions to prohibit leachate recirculation, and that the application did not provide required details on storage, treatment, and disposal of contaminated water. One commentor suggested that the landfill should have installed cutoff drains to prevent infiltration of groundwater into waste cells. Another commentor stated that the LCS may not work adequately because of "problems related to the sump."

detention ponds is contaminated and not fit for birds.

RESPONSE 36

Section 29 of the Site Operating Plan (SOP) in Part IV of the application refers to procedures for contaminated water management and surface water discharges in Attachments 6 (Groundwater and Surface Water Protection Plan) and 15 (Leachate and Contaminated Water Plan) to Part III of the application. Section 2.2 of Attachment 6 identifies the procedures the applicant will follow to minimize the generation of contaminated water, which include the use of diversion berms to prevent surface water from running onto the working face and separation berms to contain water that does contact waste. Section 5.6 of Attachment 15 describes how contaminated water will be managed. According to 30 TAC §330.56(o)(1), contaminated water is water which has come into contact with waste, leachate or gas condensate. Runoff from areas that have intact daily cover is not considered as having come into contact with the working face or leachate. Section 23.6 of the SOP describes how daily cover will be maintained. Surface water quality testing requirements and discharge limits are established by a separate stormwater permit issued in accordance with the Texas Pollutant Discharge Elimination System (TPDES), and an associated Storm Water Pollution Prevention Plan. All discharges of stormwater must be in accordance with TPDES requirements; if unauthorized discharges from the landfill occur, the permittee will be subject to enforcement. Section 5.6 of Attachment 15 indicates that contaminated water will be stored in tanks or lined ponds until treated and/or disposed in accordance with TPDES requirements. Stormwater detention ponds should only contain stormwater that is uncontaminated or has been treated in accordance with TPDES requirements.

The application meets the requirements of 30 TAC §330.55(b)(6), §330.56(o), and §330.139 regarding contaminated water management. The off-site discharge of contaminated water should be prevented if the facility is constructed and operated as proposed.

COMMENT 37 Final Cover Design

Several commentors expressed opinions that the final cover system design may not meet the requirements of the rules, suggesting that the application does not address slope stability; and that the vegetative layer soil is not thick enough to support permanent vegetation, particularly through hot and dry summers. One commentor expressed concern that Figures 6-16 and 6-17 in the Groundwater and Surface Water Protection Plan (Attachment 6 to Part III of the application) did not show or otherwise indicate that geomembrane (GM) in the final cover system extends beneath the drainage downchutes, and that the thickness of the GM is variously stated to be 20, 40, or 60 mil high density polyethylene.

RESPONSE 37

Section 3.6 of Attachment 4 (Geology and Geotechnical report) to Part III of the application describes the slope stability analysis conducted for the facility, which includes analysis of the final cover slope. Section 2.1 of Attachment 12 (Final Closure Plan) to Part III indicates two options for the final cover system; both will have a six-inch top soil layer directly overlying a 12-inch erosion layer. The combined thickness of 18 inches is expected to provide sufficient moisture storage capacity and rooting depth to support vegitation.

Figures 6-16 and 6-17 in the application show that the GM in the final cover system extends beneath the drainage downchutes and specifies a thickness of 40 mils. Attachment 12 specifies

monitor wells. The spacing of the proposed wells complies with the 600-foot spacing requirement in the revised MSW rules that became effective March 27, 2006. The existing and new wells will be along approximately the same point of compliance (POC) as for the existing facility; therefore, the zone between the landfill and POC in which contaminants might attenuate would not be changed by the proposed amendment.

The groundwater monitoring system at the BFI Sunset Farms Landfill originally consisted of 14 monitor wells installed in 1981, which were replaced by 17 monitor wells in 1998. A brief history of the groundwater monitoring system at the BFI Sunset Farms Landfill is described in Section 1.3 of Attachment 5 (Groundwater Characterization Report) to Part III of the application. The Executive Director provides the following additional information from TCEQ files:

- In a letter dated November 19, 1993, the Executive Director raised concerns regarding the construction of the monitor wells in the original groundwater monitoring system;
- In a letter dated January 7, 1994, BFI advised that it would replace the monitor wells;
- In a letter dated August 9, 1994, BFI further advised that it would do additional groundwater characterization at the facility;
- In a letter dated October 17, 1994, BFI certified pursuant to 30 TAC §330.231 that the landfill will be in compliance with groundwater monitoring requirements;
- The Executive Director acknowledged that certification in a letter dated October 18, 1994, and advised that due to the large number of permit modifications received from facilities upgrading to Subtitle D standards, the review of the certification would be delayed;
- In a letter dated March 9, 1995, the Executive Director provided a review of the certification and requested additional information;
- BFI provided additional information in a letter dated May 2, 1996, and further information in a letter dated December 18, 1996;
- In a letter dated March 31, 1998, the Executive Director requested that BFI address several items further;
- BFI provided additional information in a letter dated May 22, 1998; and
- the Executive Director approved the groundwater monitoring system design in a letter dated July 15, 1998.

The installation of wells for the Subtitle D groundwater monitoring system was completed in October 1998. The old monitoring system was retained and continued to be monitored in the interim while the Subtitle D monitoring system design was under review; the last monitoring of the old system occurred in July 1998, and the first monitoring of the new system in December 1998.

The October 2005 groundwater monitoring event detected 1,1-dichloroethane (DCE), a volatile organic compound (VOC), at a concentration of 8.2 micrograms/liter (μ g/L) in monitor well MW-30 (near the southwest corner of the site). The constituent was detected at 7 μ g/L during a verification resampling event in January 2006, triggering assessment monitoring for the well.

monitoring probes along the common boundary with the Waste Management facility had been removed, and that as a result the monitoring system is not protective.

One commentor inquired about how many times landfill gas concentrations have exceeded action levels at the facility, and whether the TCEQ has studied health effects of landfill gas on populations surrounding landfills. One commentor questioned whether the existing gas collection and control system would be stable under the increased weight of the vertical expansion.

Several commentors asked about the ownership, operation, and responsible party for the landfill gas to energy (LFGTE) facility, including questions about quantities of methane produced, efficiency of energy recovery, emissions monitoring/testing, and plans for expansion of the facility.

RESPONSE 39

Landfill gas consists mainly of methane and carbon dioxide with small amounts of nitrogen, oxygen, hydrogen, and non-methane organic compounds (NMOC). Regulations in 30 TAC §330.56(n) and §330.130 require control of landfill gas to prevent creation of explosive hazards from migration and accumulation of methane. Regulations in 40 CFR Part 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills) require control of landfill gas to prevent emission of hazardous air pollutants (non-methane organic compounds). Subsurface gas migration and surface emissions are controlled by containment systems (liners and covers) and by an active gas collection and control system (GCCS) which applies a vacuum to the landfill through gas extraction wells installed in waste. Section 3 of the Landfill Gas Management Plan (LGMP) (Attachment 14 to Part III of the application) details procedures for quarterly monitoring of permanent gas probes around the perimeter of the facility in accordance with 30 TAC §330.56(n) and §330.130 to detect potential subsurface gas migration. BFI proposes to add five probes along the common boundary with the Waste Management facility, restoring probes removed during earlier permit actions. The locations for the proposed probes are shown in Figure 14A-1 in the LGMP. Sections 6.1 and 6.3 of the LGMP explain that gas collected by the GCCS will be routed to the on site LFGTE facility, and excess gas burned in a flare. Operating requirements for the GCCS, and testing requirements and emission limits for the landfill and flare are established by separate air permits referenced in Sections 6.1 and 6.3 of the LGMP.

Methane was detected above the action level of 5 percent methane by volume in gas monitoring probe GMP-13 (near the southwest corner of the facility) in April 1999 (8 percent methane). Following the April 1999 detection, the facility expanded the GCCS into that area of the landfill, which apparently did not yet have gas extraction wells. Methane was detected above the action level in GMP-12 (near the southwest corner of the facility, along the boundary with the Waste Management facility to the south) in January 2000 (24 percent methane). The facility has not reported exceeding a methane action level since then. Section 6 of the LGMP describes procedures for maintaining the GCCS, including addition and replacement of wells as waste disposal operations proceed. If a component of the GCCS were to fail under the weight of the proposed expansion, the facility would be required to replace it as needed to comply with landfill gas regulations and provisions of the permit.

The application does not propose to expand the LFGTE facility. The LFGTE facility is operated

horned lizard management plan detailing procedures for identifying the lizard and relocating any individuals that are found, as well as for conducting land clearing in a manner to minimize harm to any Texas horned lizards that may be present. Section II.K of the application contains letters dated November 11, 2005, documenting communication with the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service regarding threatened and endangered species, with responses from those agencies indicating they expect no adverse impacts.

COMMENT 41 Financial Assurance

One commentor stated that the facility does not have adequate financial assurance should a release occur.

RESPONSE 41

TCEQ rules at 30 TAC §330.284 require that a municipal solid waste landfill unit required to undertake a groundwater corrective action program establish financial assurance to cover the cost of hiring a third party to perform the corrective action. The site currently is not required to undertake a groundwater corrective action; therefore a cost estimate and financial assurance for corrective action are not required. If at some time groundwater corrective action is required, the facility will be required to submit a permit modification to incorporate the cost estimate and to provide financial assurance. BFI has provided financial assurance to close the existing facility and has proposed to provide financial assurance to close the proposed facility in compliance with 30 TAC §330.281.

COMMENT 42 Recycling

Several commentors expressed concern that the application does not propose recycling or composting.

RESPONSE 42

The TCEQ encourages source reduction, reuse, and recycling; however, recycling is not a requirement for a landfill permit.

COMMENT 43 Post-Closure Care, and Use of Land After Closure

Several commentors inquired about what plans the applicant has for using the land after the landfill closes. One commentor expressed concern about landfill gas after the landfill closes.

RESPONSE 43

Attachment 12 (Final Closure Plan) to Part III of the application does not indicate that either the applicant or owner has any plans for use of the land after the landfill closes. Use of the land is restricted according to the provisions of 30 TAC §330.255 (relating to Post-Closure Land Use). The owner or operator must submit any plans for proposed construction activities or structural improvements on a closed MSWLF unit to the Executive Director for review and approval. If the permit is revoked after the end of the post-closure care period (nominally 30 years after closure), use of the land will be restricted according to the provisions of 30 TAC Chapter 330, Subchapter T (Use of Land Over Closed Municipal Solid Waste Landfills). The owner or operator is required by 30 TAC §330.254(b)(2) to continue monitoring programs, including landfill gas monitoring, during the post-closure care maintenance period.

Respectfully submitted,

Steve Shepherd

Attorney

Environmental Law Division State Bar No. 18224200

Representing the Executive Director of the Texas Commission on Environmental Quality

CERTIFICATE OF SERVICE

I certify that on September 28, 2007, the "Executive Director's Response to Public Comment" for Permit No. 1447A was filed with the Texas Commission on Environmental Quality's Office of the Chief Clerk.

Steve Shepherd, Attorney Environmental Law Division State Bar No. 18224200

Comments were received in writing and/or orally, by mail and at the May 24, 2007, public meeting on this application, from Samuel Biscoe, Travis County Judge; Gerald Daugherty, Travis County Commissioner Precinct 3, Ron Davis, Travis County Commissioner Precinct 1; Sarah Eckhardt, Travis County Commissioner Precinct 2, Margaret Gomez, Travis County Commissioner Precinct 4; Hector Gonzales, Mayor, Village of Webberville; Mark Strama, State Representative District 50; and Kirk Watson, State Senator District 14.

² Comments were received in writing and/or orally, by mail and at the May 24, 2007, public meeting on this application, from Lane Ahnell, Robert Andrews, Karin Ascot, Ed Attra, Todd Ballard, Jeremiah Bentley (representing Harris Branch Residential Property Owners Association), Joyce Best (representing NorthEast Action Group), Jim and Cheryl Bowles, Dr. & Mrs. J.L. Breazeale, Dewy Brooks, Linda Bullock, Neil Carman, (representing the Sierra Club, Lone Star Chapter), Mary Carter (representing Northeast Neighbors Coalition), Doka Cullender, Chuck Dabbs, Juan DeAnda, Mandy Doctoroff, Jocelyn Doherty, Trek English (representing NorthEast Action Group), Jeannie Ferguson, Wallace and Marsha Fowler, Kyle and Sara Friesen, Ellen Hironymous, Dennis Hobbs (representing TJFA, L.P.), Lisa, Joel, and John Hotchkiss, Kim Jones, Ronald and Cam Junker, Sheila Kannappan, Amy Kersten, Janet Klotz, Robert Lanford, Amber Luttig-Buonodono, Ariana Martinez, Emilio Martinez, Fabian Martinez, Jesus Martinez, Maria Martinez, Rebecca Martinez, Anne McAfee, Melanie and Mark McAfee (representing themselves and NorthEast Action Group), Christine and Kenneth W. Miller, Jan Milstead, Roberto and Cindy Montoya, Susan Morgan, Alto and Rosemary Nauert, Craig Nazor, Mike O'Brien, Laurel O'Neal, Alice Penney, Abel Porras, Leahbeth Prince, Sherry Pyle, Cecil and Evelyn Remmert, Georgia Rich, F. Rinehart, Dr. Delmer Rogers, Mike and Ramona Rountree, Celeste Scarborough (representing Pioneer Farms and Pioneer Crossing neighborhood), Robin Schneider (representing Texas Campaign for the Environment), Roy and Janet Smith, Germaine Swenson (representing Park Springs Neighborhood Association), Joyce Thorsen (representing Walnut Place Neighborhood Association), Elizabeth Trevino (representing NorthEast Neighbors Coalition), Andrea and Jason Troncale, K. C. Walter, Martha Ward (representing Ridge Top Neighborhood Association and North Loop Planning Team), Robert Werstler, John Wilkins, David Williams, Evan Williams (representing himself and representing Williams Ltd.), and Rex Yocum.

³ See Texas Water Code, Sections 5.551 - 5.557.

Buddy Garcia, Chairman Larry R. Soward, Commissioner Glenn Shankle, Executive Director



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 5, 2007

TO: Persons on the attached mailing list.

RE: BFI Waste Systems of North America, Inc.

Permit No. 1447A

Decision of the Executive Director.

The executive director has made a decision that the above-referenced permit application meets the requirements of applicable law. This decision does not authorize construction or operation of any proposed facilities. Unless a timely request for contested case hearing or reconsideration is received (see below), the TCEQ executive director will act on the application and issue the permit.

Enclosed with this letter is a copy of the Executive Director's Response to Comments. A copy of the complete application, draft permit and related documents, including public comments, is available for review at the TCEQ Central office. A copy of the complete application, the draft permit, and executive director's preliminary decision are available for viewing and copying at the University Hills Branch of the Austin Public Library, 4721 Loyola Lane, Austin, Texas 78723-3939.

If you disagree with the executive director's decision, and you believe you are an "affected person" as defined below, you may request a contested case hearing. In addition, anyone may request reconsideration of the executive director's decision. A brief description of the procedures for these two requests follows.

How To Request a Contested Case Hearing.

It is important that your request include all the information that supports your right to a contested case hearing. You must demonstrate that you meet the applicable legal requirements to have your hearing request granted. The commission's consideration of your request will be based on the information you provide.

How To Request Reconsideration of the Executive Director's Decision.

Unlike a request for a contested case hearing, anyone may request reconsideration of the executive director's decision. A request for reconsideration should contain your name, address, daytime phone number, and, if possible, your fax number. The request must state that you are requesting reconsideration of the executive director's decision, and must explain why you believe the decision should be reconsidered.

Deadline for Submitting Requests.

A request for a contested case hearing or reconsideration of the executive director's decision must be in writing and must be received by the Chief Clerk's office no later than 30 calendar days after the date of this letter: You should submit your request to the following address:

LaDonna Castañuela, Chief Clerk TCEQ, MC-105 P.O. Box 13087 Austin, Texas 78711-3087

Processing of Requests.

Timely requests for a contested case hearing or for reconsideration of the executive director's decision will be referred to the alternative dispute resolution director and set on the agenda of one of the commission's regularly scheduled meetings. Additional instructions explaining these procedures will be sent to the attached mailing list when this meeting has been scheduled.

How to Obtain Additional Information.

Jama askins

If you have any questions or need additional information about the procedures described in this letter, please call the Office of Public Assistance, Toll Free, at 1-800-687-4040.

Sincerely,

LaDonna Castañuela Chief Clerk

LDC/er

Enclosures

LESLIE JOHNSON JOCABED GUTIERREZ 11732 DUNFRIES LN 3404 LONG DAY DR. **AUSTIN TX 78754** AUSTIN TX 78754 KIM JONES NANA T HAIRSTON 7024 THISTLE HILL WAY 8109 GEORGIAN DR AUSTIN TX 78754 ALISTIN TX 78753. CAM & RONALD JUNKER CHRIS HALLOCK 1304 E APPLEGATE 11709 LANSDOWNE RD AUSTIN TX 78754 AUSTIN TX 78753 CAM JUNKER MICHAEL HANNA 11709 LANSDOWNE RD 3612 SAVAGE SPRINGS DR AUSTIN TX 78754-5817 AUSTIN TX 78754 RON-JUNKER ANTONIO HERNANDEZ 11709 LANSDOWNE RD · 127 OLD AUSTIN TRL AUSTIN TX 78754-5817 ELGIN TX 78621-5744 SHEILA KANNAPPAN ELLEN HIRONYMOUS 7120 DAGON DR 2402 POST OAK RD AUSTIN TX 78754-5761 WEBBERVILLE TX 78653 DENNIS L HOBBS

AUSTIN TX 78754-5817

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GEORGIA RICH 1609 BRUSHY VIEW CV AUSTIN TX 78754

MERRY RIGHTMER 6305 THIRLMARE CT AUSTIN TX 78754 DELMER D ROGERS 5901 SPEYSIDE DR MANOR TX 78653

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