# PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR TWO PARCELS OF A PROPERTY LOCATED AT THE CITY OF AUSTIN FM 812 LANDFILL AUSTIN, TX 78719

**Prepared for** 

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**Prepared by** 

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Weston Solutions, Inc (WESTON<sub>®</sub>) conducted a Phase I Environmental Site Assessment (ESA) for a portion of the FM 812 Landfill property located at 10108 FM 812, Austin, TX 78719. The ESA was conducted in strict accordance with the approved proposal dated 20 July 2012, 40 Code of Federal Regulations (CFR) Part 312 – Standards and Practices for All Appropriate Inquiries (AAI), and American Society for Testing and Materials (ASTM) International – Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-05. Any exceptions to, or deletions from, this practice are described in Section 5 of this report.

The Phase I site visit was performed on 07 September 2012 by Lori Kalich and Mary Tibbets (WESTON). Ms. Kalich and Ms. Tibbets were accompanied on the visit by Mr. Conley Leloux, Waste Management Program Manager with the City of Austin (COA). The subject property consists of two non-contiguous parcels of property located within the FM 812 Landfill property. According to Mr. Conley Leloux, the portion of landfill property covered by the landfill permit is approximately 360 acres. The Travis County Appraisal District reports the size of the entire FM 812 Landfill property as 391 acres. The subject property consists of two parcels; the southern parcel is approximately 46 acres, and the northeastern parcel is approximately 10 acres. According to the COA, the subject property parcels have never been used for waste disposal activities. Approximate boundaries of the subject property were provided by the property owner, the COA.

## **Current Subject Property Operations**

A portion of the southern parcel of the subject property was used for landfill operations and as a staging area for recyclable waste materials. According to the COA, these recyclable materials were transported off-site on a regular basis. The northeastern parcel of the subject property is undeveloped land. The southern parcel of the subject property includes four buildings; several unpaved parking areas; an open-sided shed area for temporary staging of used oil, air conditioners, scrap metal, and used tires; and a trash bin storage area for the storage of damaged trash cans and recycling bins. The eastern and western portions of the southern parcel of the

subject property are leased for agricultural use. Grass for hay was planted there at the time of the site visit.

At the time of the site visit in September 2012, the temporary staging area was used by the City to store recyclables such as used oil, used anti-freeze, used oil filters, batteries, scrap metal, and "white goods" (household appliances, including freezers and refrigerators). The used oil, used anti-freeze, and used oil filters were stored in drums in a covered, open-sided shed in the temporary staging area. According to COA, recyclables staging activities are no longer conducted on the southern parcel as of January 2013. Used tires were also staged on-site until transported off-site for recycling. Waste asphalt from public works roadway resurfacing projects was temporarily staged on-site and was recycled to build roadways at the FM 812 Landfill facility.

Sanitary wastewater from an office restroom and sinks in the office building discharges to an onsite septic system. The system consists of a 1,000-gallon, 2-compartment tank and two leach fields. The two leach fields cover a combined area of 1,640 square feet (ft<sup>2</sup>) and are located approximately 15 feet to the west of the office building. The septic system is permitted through Travis County. WESTON reviewed documents provided by Travis County dating from 1990 and 1997. According to the Austin-Travis County Health Department documents from April 1997, the "system has a history of failure." Modifications were made (low-flow toilets, deverting stormwater from the drain field, etc.) to correct the capacity issues reported by Travis County Health Department. According to COA, the septic system is currently operational, and the system has no current reported issues related to system capacity.

## FM 812 Landfill Background

The FM 812 Landfill began accepting waste in the 1960s. The landfill was designated as a Type I facility and accepted municipal solid waste (MSW) until 1999 when Austin Bergstrom International Airport opened to the north. At that time, the landfill's designation and operation was changed to a Type IV landfill, at which time it ceased accepting putrescible wastes that could attract birds to the facility. The landfill continued to accept only brush and construction debris. An approximately 1-acre portion of Cell E, located immediately adjacent to the north of the southern parcel of the subject property, was used at that time by the COA Electric Utility

Department to dispose of friable asbestos-containing material (ACM). According to the site contact, closure procedures for the FM 812 Landfill were started approximately 3 years ago, and all cells of the landfill have been capped. A review of files obtained from the Texas Commission on Environmental Quality (TCEQ) confirmed that construction activities for final closure of the landfill began in October 2009 and were completed in September 2010. However, final closure of the FM 812 Landfill has not been granted by the TCEQ due to recent drought conditions exacerbating efforts to establish vegetative cover on the clay caps. The clay cap construction has been certified and accepted by the TCEQ.

According to the COA site contact, the subject property parcels have not been used for the disposal of waste. This is generally supported by independent lines of evidence, including historical aerial photographs, satellite imagery, and a September 2012 site visit. No signs of waste disposal were observed by WESTON on the subject property parcels during the site visit.

In the early 1990s, a failure of the northern landfill slope resulted in a slide of clay into Onion Creek, prompting several subsurface investigations to examine leachate seeps and slope issues. As a result of these investigations, the slope was re-graded and stabilized in 1994. Remediation of the northern portion of the FM 812 landfill was initiated to eliminate surface seeps of leachate into Onion Creek, which is located north of the landfill property. WESTON reviewed all available information in the TCEQ file room, and no additional information regarding the location of the slope failure beyond that provided by COA and Travis County was found during the file review. Based on documentation provided by the COA showing the location of the slope failure and subsequent remediation projects, the slope failure did not affect the two parcels that make up the subject property of this report.

In 1998, the COA installed a gas collection control system (GCCS) to address methane gas migration issues. According to the COA site contact, the GCCS was activated in approximately 2003. The GCCS is not located on either parcel of the subject property; however, gas monitoring points exist on the subject property parcels.

Groundwater monitoring for the landfill property began in 1984 and 1985 per the requirements of the Texas Water Commission (TWC), predecessor to the TCEQ. Groundwater sampling is conducted on a semi-annual basis as required by the landfill permit. The groundwater

monitoring requirements include background monitoring, detection monitoring, and assessment monitoring programs. Based on the approximate boundaries for the subject property parcels provided by COA, groundwater monitoring wells (MW) and gas probes (GP) that fall on the subject property parcels include the following:

- GP-1, GP-2, GP-3, GP-12, GP-13, and GP-14 on the southern parcel.
- MW-1, MW-2, and MW-20 on the southern parcel.
- GP-7 and GP-8 on the northeastern parcel.
- MW-6, MW-13, and MW-21 on the northeastern parcel.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the property, except for the following:

Hydrocarbon-stained soil observed on the southern parcel of the subject property during the September 2012 site visit, as well as reports of historical stained soils associated with diesel and hydraulic oil spills at the site, together represent a REC at the property. Stained soils were observed in 2012 and were historically reported at the temporary recyclable material staging area and at other locations in the southwestern quadrant of the southern parcel where equipment maintenance and recyclables management operations were based. Inspection records from 1993 and 1995 indicate that stained soils identified during those inspections were remediated as requested by COA inspectors. One inspection record from July 1995 indicated that future diesel spills would be managed on an ongoing basis by operator self-inspection and cleanup, as needed. Stained soil from spills were reportedly excavated based on visual and smell indications. Limited soil analytical data were collected to document the hydrocarbon residuals in soil after removal. Laboratory analytical data were available for a 20-gallon hydraulic oil spill in 2010, and these data indicate that hydrocarbons remained in place above background levels following the soil removal.

The following *de minimis* conditions were noted based on current property use and/or surrounding property uses:

- Stained concrete floors were noted on the southern parcel in the maintenance shed.
- According to Austin Energy, the southeastern portion of the southern parcel of the subject property was historically used for temporary storage of creosote-treated wood poles. The poles were staged in this area prior to transport off-site for disposal.

Although not considered RECs, the following items were noted as part of this ESA:

 Based on WESTON's review of landfill groundwater monitoring data collected semiannually in 2011 and 2012, selenium has been reported at concentrations above the Texas Risk Reduction Program (TRRP) Protective Concentration Level (PCL) of 0.05 milligrams per liter in samples from groundwater monitoring well MW-20. Although the

property is not regulated under TRRP, the TRRP PCLs were used as comparison values in the historical reports reviewed by WESTON. Well MW-20 is located along the eastern boundary of the subject property southern parcel, which is interpreted as being an upgradient boundary. Selenium has also been reported in samples from other landfill monitoring wells, most of which are in upgradient positions relative to the landfill waste cells. As such, the presence of selenium could be attributed to a naturally-occurring background condition associated with the high clay content in the Taylor Marl.

- There is a potential for the nearby properties to impact groundwater flowing under the subject property (southern parcel): Reveile Body Shop; Triple Diesel Injection Transmission Shop; Sinaloa Body Shop (located at 10209 FM 812, directly south of FM 812); and Austin IESI Landfill (9904 FM 812, located directly adjacent and to the west of the southern parcel of the subject property).
- There are three oil and gas pipeline easements running through the southern parcel of the subject property.
- The two parcels of the subject property are separated by landfill property that was used to dispose of various types of municipal solid wastes (MSW).
- The northern slope of the landfill collapsed into Onion Creek in the early 1990s. The slope was regraded in 1994. The slope failure did not affect the two parcels that make up the subject property of this report.
- The southern parcel subject property is located adjacent and hydraulically upgradient to a 14-acre landfill cell where the bottom is native Taylor Clay. Only municipal solid waste was placed in this cell, plus ACM within a small, 1-acre area. The northeastern parcel subject property is downgradient of this cell. Groundwater monitoring data indicate no current or historical impacts in the wells located downgradient of the 14-acre cell.
- There is a low to moderate potential for methane to migrate onto the subject property parcels. Historical reported methane concentrations (from 2001 and 2004) exceeded the regulatory threshold of 5% methane (equal to 100% of the methane lower explosive limit [LEL]) at a location 200 feet east of the northeastern parcel on privately owned land east of FM 973. Eight gas probes are present on the two subject property parcels, but no LEL exceedances were reported at those probe locations in 2001 and 2004. Methane monitoring data collected between 2008 and 2012 also indicate no LEL exceedances at these eight probe locations. Two areas of localized methane accumulation were detected in 2012 on the eastern slope of Cell B on the northeastern side of the landfill. These areas were immediately adjacent to the northeastern parcel of the subject property. Passive vents were installed to disperse the accumulated methane safely and minimize further accumulation or migration in the area. COA has indicated that the vents have reduced the accumulation as designed.

This Summary is intended to be a general description of the RECs identified as a result of the Phase I ESA of the subject property conducted by WESTON. However, this section is not intended to be a "stand alone" document or to include the basis of all conclusions presented. The

report should be read and used in its entirety. Information included in this section is subject to the scope of services and limitations noted in the original proposal and the complete report.

# 1. INTRODUCTION

## 1.1 SCOPE OF WORK AND PURPOSE

Weston Solutions, Inc (WESTON<sub>®</sub>) conducted a Phase I Environmental Site Assessment (ESA) for portions of the City of Austin FM 812 Landfill property located at 10108 FM 812, Austin, TX 78719. The ESA was conducted in strict accordance with the approved proposal dated 20 July 2012, 40 Code of Federal Regulations (CFR) Part 312 – Standards and Practices for All Appropriate Inquiries (AAI), and American Society for Testing and Materials (ASTM) International – Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-05. The purpose of an ESA is to identify: (1) recognized environmental conditions (RECs) associated with the historical and current uses of the property, (2) recognized physical conditions of buildings and adjacent grounds, and (3) recognized present operational practices. ASTM E 1527-05 defines RECs as follows:

[...] the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

A Phase I ESA consists of four general components: (1) a records review, (2) a site reconnaissance, (3) interviews, and (4) a report. The first three are conducted to identify environmental conditions related to the subject property. This Phase I ESA report provides the results of the first three components and fulfills the fourth.

This assessment report contains the results of reconnaissance of the subject property and surrounding properties (dates provided in each section), and a review of property, government, and historical records. Information used to complete this ESA was reasonably ascertainable, and visually and physically observable. This ESA did not include any testing or sampling of materials (e.g., soil, water, sediment, building materials, etc.).

#### INTRODUCTION

## 1.2 SPECIAL TERMS AND CONDITIONS

This document has been prepared by WESTON solely for the use and benefit of the City of Austin (COA) and is subject to the contract services agreement with the COA. Any use of this document or information herein by persons or entities other than COA, without the express written consent of WESTON, will be at the sole risk and liability of said person or entity, and WESTON will not be liable to COA, or such persons or entities, for any damages resulting therefrom. It is understood that this document may not include all information pertaining to the described site.

## 1.3 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

ASTM E 1527-05 (Section 4.5.1) acknowledges that "No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property." The ESA "[...] is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost." Furthermore, the ASTM E 1527-05 (Section 4.5.2) states that "There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions."

## 1.4 PERSONNEL PERFORMING ESAS AND QUALIFICATIONS

This ESA was completed by the following team of WESTON personnel, whose qualifications are provided at the end of the report:

- Jeffrey R. Henke P.G. Principal Project Manager and Environmental Professional
- Michell Hales Project Manager
- Lori Kalich Site Assessor, Research, Report Preparation.
- Mary Tibbets Site Assessor, Research, Report Preparation

Jeffrey R. Henke, P.G. is considered an Environmental Professional as defined by 40 CFR Part 312.10, has undertaken the inquiry as defined in 40 CFR part 312.21 (b), and has supervised the others above during the inquiry. The following is the Environmental Professional certification:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR Part 312.10 of this part. I have the specific qualifications based on education, training, and

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experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR part 312.

Jeffrey R. Henke, P.G.
Certifying Environmental Professional (Print)
Principal Project Manager
Title
Jeffenstenle
Signature
14 March 2013
Date

# 1.5 USER RESPONSIBILITIES

Section 6 of ASTM E 1527-05 outlines the following responsibilities of the user of a Phase I ESA to assist in the identification of potential RECs:

- Communication to the environmental professional, by the user, of information relative to any environmental cleanup liens filed or recorded under Federal, tribal, State or local law of which the user is aware. *The client is not aware of any environmental liens regarding the subject property.* WESTON's scope of work did not include a complete review of title information, and no chain-of-title information was reviewed.
- Communication to the environmental professional, by the user, of information relative to any activity and land use limitations such as engineering controls, land use restrictions or deed restrictions, etc. that are in place at the site and/or have been filed or recorded in a registry under Federal, tribal, State or local law of which the user is aware. *The client is not aware of any land use restrictions except for those imposed through the landfill permit. WESTON's scope of work did not include a complete review of title information, and no chain-of-title information was reviewed.*
- Communication to the environmental professional, by the user, of any specialized knowledge or experience, or other information that might be material to the identification of

#### INTRODUCTION

**RECs.** *Previously prepared environmental reports regarding groundwater monitoring for the landfill property and methane monitoring data were provided to WESTON by the client.* 

• Communication to the environmental professional, by the user, of the relationship of the purchase price to the fair market value of the property assuming the property has not been contaminated through past usage. *The client is not aware of any diminished value of the subject property*.

## 1.6 DISCLAIMERS

WESTON has performed this Phase I ESA in general conformance with the scope and limitations of the ASTM standard and subject to the conditions and limitations noted herein and in the contract services agreement with the City of Austin. The information from the site reconnaissance is based on the conditions existing on the date of WESTON's visit to the property. The findings and conclusions presented herein are professional opinions based solely on visual observations of the facility and vicinity, and interpretation of information provided or reasonably available to WESTON. Past conditions were considered on the basis of observations, readily available records, interviews, and recollections.

WESTON does not warrant or guarantee the correctness, completeness, and/or currentness of the information obtained from third parties contained in the environmental record sources and recollections used for this assessment. Such information is the product of independent investigation by parties other than WESTON and/or information maintained by government agencies.

WESTON did not collect samples or perform any testing during the property visit. It is possible that past contamination remains undiscovered or that property conditions will change in the future. WESTON does not warrant or guarantee the property suitable for any particular purpose or certify the property as "clean."

Detailed asbestos, indoor air quality, lead paint, vapor intrusion, occupational health and safety, radon, and wetland surveys were not requested, nor included, as part of this project.

Information, limitations, and disclaimers provided in this general section apply to all of the sections included in the remaining report.

# 2. PROPERTY DESCRIPTION

## 2.1 PROPERTY DESCRIPTION, LOCATION, AND PROPERTY HISTORY

Facility Name	City of Austin FM 812 Landfill
e e	(The subject property consists of two portions of the landfill property.)
Address	10108 FM 812, Austin, TX 78719
Size of property	The subject property consists of two non-contiguous portions of the FM
(acres)	812 Landfill property: approximately 10 acres located on the northeast
	corner (northeastern parcel); and approximately 46 acres on the south side
	of the landfill property (southern parcel). According to the site contact,
	the portion of landfill property covered by the landfill permit is
	approximately 360 acres.
Latitude/Longitude	30° 9' 20.16" N / 97° 40' 24.96" W
Site and Vicinity	The subject property is located in a rural industrial area in the City of
General	Austin. (See Figure 1, Property Location Map.)
Characteristics	
Property	The subject property consists of two portions of the FM 812 Landfill that
Description	historically have not been used to dispose of waste materials. The FM
	812 Landfill has been capped, is currently in the process of obtaining
	closure from the State, and no longer accepts waste for disposal on the
	landfill property. According to COA, the southern parcel of the subject
	property is currently used for landfill administrative and maintenance
	operations. The southern parcel was also used as a staging area for
	limited recyclable waste materials until they were taken off-site to be
	recycled. These staging activities ceased in January of 2013 but were
	observed during the September 2012 site visit. The northeastern parcel is
	undeveloped and has not historically been used for waste disposal, nor has
	it been used as a staging area. Access to the landfill is a paved road off of
	FM 812.
	According to COA, the subject property parcels have not been used for
	disposal of wastes. The following features were located on the southern
	parcel at the time of the September 2012 site visit:
	• Office Building: One building used as office space.
	Maintenance Shed: One enclosed steel shed is used for vehicle
	maintenance and chemical storage Minor vehicle and equipment
	maintenance is conducted by landfill personnel
	maintenance is conducted by funding personnel.
	• Open shed: Used oil that is dropped off by citizens is temporarily
	stored in drums and a temporary storage tank in the shed until it
	can be picked up for off-site disposal. Adjacent to the open shed
	are uncovered areas used to store old air conditioners (previously

	drained of Freon), old tires waiting to be removed off-site and
	recycled, and scrap metal stored in large dumpsters.
	<ul> <li>Scale house: A small guard building with an adjacent truck scale is located on the entrance drive.</li> </ul>
	<ul> <li>Trash Bin Storage Areas: There are two areas on either side of the entrance drive that are used for the storage of old trash cans and recycling bins in need of repair.</li> </ul>
	<ul> <li>Crop Areas: The eastern and western portions of the southern parcel of the subject property are leased to a farmer to grow crops (currently hay).</li> </ul>
	<ul> <li>Austin Energy Laydown Yard: According to the site contact, the southeastern corner of the southern parcel is being used by Austin Energy as a laydown yard. The site contact could not provide any information about the historical Austin Energy operations in this area. In an email from Austin Energy dated 4 December 2012, Austin Energy stated that creosote-treated wood poles were stored in this area prior to transport off-site for disposal. According to Austin Energy, no poles were disposed of at the FM 812 Landfill, and no transformers were ever stored in the Austin Energy Laydown Yard area.</li> </ul>
	<ul> <li>Lawnmower Storage Shed: Located behind the maintenance shed on the southern portion of the subject property.</li> </ul>
	The northeastern parcel of the subject property is undeveloped and covered with grass. (See Figure 2, Property Layout Map)
Size of building(s) (ft <sup>2</sup> )	The site contact did not provide size of buildings. The below sizes were approximated using mapping software. The three sheds were too small to determine their area using the software.
	Office Building: Approximately 1,800 square feet (ft <sup>2</sup> ) Maintenance Shed: Approximately 1,500 ft <sup>2</sup>
Construction date of building(s) &	According to the COA site contact, Mr. Conley Leloux, the buildings on- site were constructed prior to 1993. A review of aerial photos indicates the buildings were constructed between 1980 and 1995.
Renovation dates and description (if applicable)	None
Building(s) description	<ul><li>Office Building: Single-story wooden structure.</li><li>Maintenance Shed: Single-story steel building with concrete</li></ul>
	floors.

	<ul> <li>Open Shed: The shed is an open-sided shed with three walls and a sheet metal roof.</li> </ul>
	<ul> <li>Scale house: Single-story wood building.</li> </ul>
	<ul> <li>Lawnmower storage shed: Metal shed used to store lawnmower and fuel.</li> </ul>
No. of employees	Four
Owned or leased	Owned by COA
Current property	The southern parcel of the subject property was used as a temporary
operations	<ul> <li>staging site for various types of recyclable materials which were stored on-site until removal for off-site recycling. According to COA, these activities ceased in January 2013. Types of recyclable material temporarily stored on-site included the following: batteries, scrap metal, used oil, used tires, air conditioning units drained of Freon, and old trash cans and recycling bins in need of repair. Used oil was dropped off by private citizens, and landfill personnel transferred the oil into drums or a large aboveground temporary storage tank (Appendix A, Photos 28, 29, and 30). The northeastern parcel of the subject property is undeveloped land.</li> <li>Used asphalt is stored on landfill property (east of Cell D and west of Cell E) and is recycled to construct roads on the landfill property (including the subject property parcels). According to the site contact, earth-moving equipment is serviced on-site by Caterpillar (See Figure 2, Property Layout Map). No information was provided as to the specific.</li> </ul>
	maintenance performed on-site. According to the site contact, FM 812 Landfill has been capped and is no longer accepting waste for disposal. The FM 812 Landfill is in the process of obtaining final closure from the Texas Commission on Environmental Quality (TCEQ).
Date current	The landfill began operations in the early 1960s.
operations commenced at facility	
Legal description	According to the Travis County Central Appraisal District, the landfill consists of four parcels covering approximately 391 acres (see Appendix I). The property identifier (PID) numbers for the four parcels are 297427, 297428, 298866, and 297426.
	Being a part of the land out of the Garner Mays Survey No. 501 and the J. Bittick Survey No. 500 being 293.94 acres, more or less, situated and lying in the City of Austin, Travis County, State of Texas. PID: 297427.
	All that certain piece of parcel of land being 67.07 acres more or less, out of the J. Bittick No. 500 and the Garner Mays No. 501 Survey, situated

and lying in the City of Austin, Travis County, State of Texas. PID: 297428.
All that certain piece of parcel of land being 0.941 acres, more or less, out of the Garner Mays No. 501 Survey, situated and lying in the City of Austin, Travis County, State of Texas. PID: 298866
All that certain piece or parcel of land being 29.30 acres, more or less, out of the J. Bittick No. 500 Survey, situated and lying in the City of Austin, Travis County, State of Texas. PID: 297426

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Summary of	ourrant and	nrovious nro	norty uses	and dates of	onoration
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Based on interviews with current employees and owners and a review of available topographic maps and aerial photos, the current and previous uses and owners (if known) of the subject property are as follows:

Start	End	Description
Prior to 1960		Based on a review of aerial photos, the two portions of the subject property were used to grow agricultural crops. The owner is unknown.
1960s to 1999		FM 812 Landfill was a Type I landfill, accepting all forms of MSW. A 1-acre area of Cell E of the landfill (adjacent to the subject property) accepted friable asbestos from the COA Electric Utility Department. The southern parcel of the subject property was developed with buildings. The northeastern parcel of the subject property was undeveloped. COA owned the property.
1999 to 2009		FM 812 Landfill was a Type IV landfill accepting construction waste. Neither parcel of the subject property was used to dispose of waste. COA owned the subject property and surrounding landfill property. Prior to the opening of Austin Bergstrom Airport, the landfill ceased accepting putrescible MSW.
2009 to 2013		The southern parcel of the subject property is used as a temporary staging area for certain types of recyclable materials. The northeastern parcel was undeveloped. No putrescible waste was disposed of on the subject property parcels. COA owns the property.
2013 to present		The southern parcel is no longer used as a temporary staging area for recyclable waste (COA personal communication).

## 2.2 SURROUNDING PROPERTIES

Surrounding properties are shown on Figure 3. Site photographs are provided in Appendix A. A summary of the surrounding properties as observed during the 07 September 2012 site reconnaissance is provided in the table on the following page.

Direction	Description		
North	<ul> <li>Michalk Grocery (6214 FM 973)</li> </ul>		
	<ul> <li>Onion Creek is north of the landfill and the grocery</li> </ul>		
	<ul> <li>Richard Moya Park (located directly north of Onion Creek)</li> </ul>		
	<ul> <li>Burleson Rd</li> </ul>		
	<ul> <li>Austin Bergstrom International Airport Property</li> </ul>		
	<ul> <li>National Guard Armory</li> </ul>		
East	<ul> <li>FM 973 S is located directly adjacent to the east.</li> </ul>		
	<ul> <li>Enterprise Products LP (7211 FM 973 South)</li> </ul>		
	<ul> <li>Residential area</li> </ul>		
South	<ul> <li>FM 812 is directly adjacent to the south.</li> </ul>		
	<ul> <li>A-1 Partsmart (9701 FM 812)</li> </ul>		
	<ul> <li>Reveile Body Shop (10209 FM 812)</li> </ul>		
	<ul> <li>Sinaloa Body Shop (10209 FM 812)</li> </ul>		
	<ul> <li>Triple Diesel Injection Transmission Shop</li> </ul>		
West	<ul> <li>Flea Market (9908 FM 812)</li> </ul>		
	<ul> <li>Karina Auto Parts (9610 FM 812)</li> </ul>		
	<ul> <li>Austin IESI Landfill (9904 FM 812)</li> </ul>		

## 3.1 PREVIOUSLY PREPARED ENVIRONMENTAL REPORTS

<b>Report Title, Prepared</b> <b>For, Prepared By, Date</b>	Description
Letter Regarding the Slope Failure Adjacent to Moya Park	The letter discusses the failure and collapse of a portion of the northern slope of the FM 812 Landfill. The failure is described as a combination of a slide and circular slope failure causing some parts of the adjacent Onion Creak had to be writing the aviating
Prepared by: Joe D. Word of the City of Austin Environmental and Conservation Services Department 8 March 1991	of the adjacent Onion Creek bed to be uplifted, shifting the existing channel of the creek. The area of failure is described as being approximately 300 by 300 feet. Only a relatively small area of compacted garbage was thought to have been affected, but the natural ground between the landfill cells and creek shifted, leaving some trash exposed. The exposed garbage slumped into the canyon created by the movement. The shifting and blockage of the Onion Creek channel created a pool of water approximately ten feet deep adjacent to Moya Park. The alteration to the creek bed was anticipated to have a significant effect on the 1- or 2-year flood plain, but it was not anticipated to have a significant effect on the 25- or 100-year flood plain. The letter proposes using earth-moving equipment to lower the depth of the pool formed by the slope collapse. No other repairs to the creek bed itself would be made, as they could cause further slope failure. The letter also proposes using low-energy explosive charges at the base of the remaining free-standing blocks of earth to cause them to collapse back into the landfill and not out into the creek, before regarding a gentle slope from the creek back to the edge of the landfill. The City was seeking concurrence from Travis County, as some of the work would need to occur on park property.
Landfill Gas Collection and Control System Assessment Report, City of Austin FM 812 Londfill MSW Permit	The report describes the results of an evaluation of the landfill gas (LFG) collection and control system (CCS) installed by Ecogas Corporation in 1998. The size of the landfill is given in this report as 382 acres.
No. 360-A, Travis County, Texas	The landfill began operation in the 1960s and operated as a Type I landfill, accepting all types of municipal waste until the opening of the Austin Bergstrom International Airport in May of 1999. The
Prepared by: Roy F. Weston, Inc. (now WESTON)	airport is approximately 1 mile north-northwest of the landfill. Type I landfilling operations ceased in 1999 because birds attracted to the landfill presented a potential hazard to air traffic at the airport. Since that time, the landfill has operated as a Type IV landfill accepting
January 2002	only non-putrescible wastes, such as brush and construction debris.

<b>Report Title, Prepared</b> For Prepared By Date	Description					
	In 1997, Texas Natural Resource Conservation Commission (TNRCC) requested that COA perform a detailed landfill gas assessment and submit a landfill gas remediation plan outlining the steps COA intended to implement in order to bring the FM 812 Landfill into compliance with 30 Texas Administrative Code (TAC) §330.56. In 1998, based on the results of the 1997 LFG Assessment Report by HBC Engineering, Inc (HBC) and discussions with TNRCC, COA, and Ecogas installed a LFG collection system (56 extraction wells and approximately 10,000 linear ft of lateral and header lines) on the surface of the landfill. The installation of the system was not completed (blower and flare were not completely installed), and the gas collection system was not activated.					
	WESTON COMMENT: Based on Figure 3-1 of the report, the CCS was installed entirely within Cells A and B to the north of the southern parcel of the subject property. Collection system components appear to be located approximately 300 ft to the west and 600 ft to the south of the northeastern parcel of the subject property. These distances are based on the approximate boundaries for the subject property provided by COA.					
	Based on data collected during the investigation, the report identified the following recommendations:					
	<ul> <li>Obtain a complete facility-wide land survey to ensure proper location of current and future LFG system components.</li> </ul>					
	<ul> <li>Initiate quarterly surface emissions monitoring.</li> </ul>					
	<ul> <li>Repair damaged extraction wells, and upgrade existing wells with quick-disconnect monitoring ports.</li> </ul>					
	<ul> <li>Monitor water levels in extraction wells.</li> </ul>					
	<ul> <li>Purge watered-in extraction wells, and close and replace them if water levels recover to the extent that the well becomes unusable.</li> </ul>					
	<ul> <li>Install additional extraction wells to meet the CCS design standards in Federal and State regulations.</li> </ul>					
	<ul> <li>Repair the existing header and lateral lines where possible, replace the remaining lines, install new lines to areas where additional extraction wells are installed, and bury the entire network under the surface of the landfill to protect it from</li> </ul>					

<b>Report Title, Prepared</b>	Description					
For, Prepared By, Date						
	excessive temperature-induced movement and physical damage.					
	<ul> <li>Install in-line valves in the header and lateral lines for adjustment of the system and isolation of damaged or malfunctioning portions of the system.</li> </ul>					
	<ul> <li>Replace all flexible hose connections between the header and lateral lines and the extraction wells.</li> </ul>					
	<ul> <li>Install a condensate management system and develop a plan for disposing of recovered condensate.</li> </ul>					
	<ul> <li>Install a new, integrated, enclosed flare LFG destruction system.</li> </ul>					
	• Obtain a Title V operating permit.					
	The report notes that, at the time it was written, the landfill was unlined, which would have affected the efficacy of the LFG CCS. A copy of the report is provided in Appendix I.					
Draft of Methane Migration Investigation Report, City of Austin FM 812 Landfill, Travis County, Texas, MSW Permit No. 360-A	A study conducted in 1997 by HBC Engineering indicated that methane gas at concentrations exceeding the 25% lower explosive limit (LEL) were recorded up to 200 ft east of the eastern boundary of the landfill on two privately owned properties east of FM 973. Additional monitoring indicated LELs of greater that 100% and elevated carbon dioxide levels on the nearby properties.					
Prepared by: Roy F. Weston, Inc. (now WESTON)	WESTON COMMENT: The methane migration occurred on property located east of FM 973, immediately southeast of the northeastern parcel of the subject property.					
January 2002	This report documents the results of an off-site methane migration study to update the TNRCC on the status of LFG monitoring and control programs at the landfill and to prepare for the rehabilitation and startup of the existing LFG collection and control system. The investigation was conducted on 18 and 19 September 2001, east of GP-9 and GP-10, where methane had previously been detected above LEL in the shallow subsurface.					
	WESTON COMMENT: GP-9 and GP-10 are located on the eastern border of the landfill immediately south of the northeastern parcel of the subject property					
	A total of 14 borings were installed in the right of way (ROW) along					

<b>Report Title, Prepared</b>	Description				
For, Prepared By, Date					
	FM 973 and on the two off-site, privately owned properties (Figure 4- 1 from the report shows the boring locations and is provided in Appendix I). Three borings (B1, B2, and B3) were advanced, on approximately 50-ft centers, in the area east of GP-9. Five borings (B4, B5, B6, B7, and B8) were advanced, on approximately 50- to 100-ft centers, in the area east of GP-10. Six borings (B9, B10, B11, B12, B13, and B14) were advanced, on approximately 100- to 150-ft centers, on the two off-site, privately owned properties. Detectable levels of methane were not identified in any of the three borings advanced in the off-site area adjacent to GP-9. Detectable levels of methane were not found in any of the five borings advanced in the area east of GP-10. Detectable levels of methane were not found in any of the six borings advanced on the privately owned properties. However, carbon dioxide was detected in 5 out of the 14 borings (B4, B7, B9, B10, and B14). Borings B-10 and B-14 had oxygen levels that were significantly lower than ambient air concentrations. As of 19 September 2001, methane concentrations in excess of 100% of the LEL were present in the perimeter-monitoring probe GP-10. The reason for the reduction in off-site levels of methane gas were unclear, but were reported to have been possibly attributable to the incomplete gas collection control system (GCCS), which might have allowed some venting of methane into the atmosphere. The report indicates that it is also possible that the gaining waste was no longer producing sufficient volumes of LFG to create enough of a pressure differential to force methane off-site in the subsurface.				
Solicitation No. SA 04300021: Management & Operation of the City of Austin's Type IV Landfill; Permit No. 360A Prepared by: Robert S. Kier Consulting 26 October 2004	The document is a response to a request for proposal (RFP) by the City to privatize the management and operation of the landfill. The following items were noted in the document: Kier was unaware of any liners used prior to 1973 in the construction and operation of the FM 812 Landfill. In 1994, a permit modification was completed that involved the construction of a leachate collection system and a standard design, composite liner consisting of a flexible membrane over 2-ft deep compacted, relatively impermeable clay. Unfilled portions of the landfill, such as areas C, D-1, F, G, and parts of A-2 and E-1, were removed from the permitted waste disposal area to meet the State requirements. In 1997, an alternate liner consisting of 2 ft of compacted clay covered by a thin geosynthetic clay liner was installed in the landfill. Kier believed that this liner was being used at the landfill at the time the report was prepared and that this liner was the only Subtitle D liner system ever installed at the landfill. It appeared that this liner was only installed in a portion of area B of				

Ean Drananad Dy Data	Description					
For, Prepared by, Date	the landfill					
	In 2004, detected methane levels exceeded the LEL in monitoring					
	immediately south of the northeastern parcel of the subject property. Based on the information provided, the exact location of GP-9A relative to the subject property is unclear). The COA received					
	approval of an application for a permit modification to renovate and improve the landfill gas collection and control system in 2003.					
	According to the Kier report, "[] apparent groundwater contamination has been detected and reported for samples from 7 of the 12 monitoring wells" (MW-7, MW-8, MW-9, MW-10, MW-12, MW-14, and MW-15) installed at the time of this report. Nitrates and volatile organic compounds (VOCs) were detected in groundwater samples collected from these wells. VOCs reported in the groundwater samples included benzene; acetone; chlorobenzene; 1,4- dichlorobenzene; 1,1-dichloroethane; cis- and trans-1,2- dichlorethene; and trichloroethane. Elevated concentrations of total organic compounds (TOCs) were detected in MW-10. The samples with reported contamination were collected from monitoring wells located on the north and east sides of the landfill property in downgradient positions with no apparent barriers to Onion Creek. Based on the approximate boundaries of the subject property parcels, monitoring wells MW-14 and MW-15 fall immediately south of the northeastern parcel of the subject property. Kier concluded that groundwater generally flows north on the landfill property					
Letter Regarding	This letter from COA Solid Waste Services addressed to the TCEQ					
Elevated Landfill Gas	discusses follow up monitoring based on the results of routine LFG quarterly monitoring on 18 December 2006. During the monitoring					
Monitoring Probe GP-9	event, methane levels exceeding the LEL were detected at GP-9 along FM Highway 973 Following the detection methane					
Prepared by: Vidal	monitoring at GP-9 was performed daily for 11 consecutive days (18					
Maldonado, City of	December 2006 to 4 January 2007). From 18 December 2006 to 27					
Austin Solid Waste	December 2006, percent LEL (%LEL) of methane ranged from a					
Services	high of 37.8%, on 20 December, to a low of 21.3%, on 27 December.					
10 January 2006	From 28 December until 4 January 2007, %LEL levels were reported lower, ranging from a high of 4.1% on 29 December to a low of 0.1%					
	on 3 January. The letter states that the spike in methane was likely					
	due to a loss of vacuum caused by a blockage in the LFGCCS. Over					
	700 gallons of condensate were removed from the LFGCCS in the					
	area of GP-9 on 19 December 2006, and a tear in the collection line was repaired on 20 December 2006. According to the letter					
Letter Regarding Elevated Landfill Gas Concentrations at Monitoring Probe GP-9 Prepared by: Vidal Maldonado, City of Austin Solid Waste Services 10 January 2006	<ul> <li>improve the landfill gas collection and control system in 2003.</li> <li>According to the Kier report, "[] apparent groundwater contamination has been detected and reported for samples from 7 of the 12 monitoring wells" (MW-7, MW-8, MW-9, MW-10, MW-12, MW-14, and MW-15) installed at the time of this report. Nitrates and volatile organic compounds (VOCs) were detected in groundwater samples collected from these wells. VOCs reported in the groundwater samples included benzene; acetone; chlorobenzene; 1,4-dichlorobenzene; 1,1-dichloroethane; cis- and trans-1,2-dichlorethene; and trichloroethene. Elevated concentrations of total organic compounds (TOCs) were detected in MW-10. The samples with reported contamination were collected from monitoring wells located on the north and east sides of the landfill property in downgradient positions with no apparent barriers to Onion Creek. Based on the approximate boundaries of the subject property parcels, monitoring wells MW-14 and MW-15 fall immediately south of the northeastern parcel of the subject property. Kier concluded that groundwater generally flows north on the landfill property.</li> <li>This letter from COA Solid Waste Services addressed to the TCEQ discusses follow up monitoring based on the results of routine LFG quarterly monitoring on 18 December 2006. During the monitoring event, methane levels exceeding the LEL were detected at GP-9 along FM Highway 973. Following the detection, methane monitoring at GP-9 was performed daily for 11 consecutive days (18 December 2006 to 4 January 2007). From 18 December 2006 to 27 December 2006, percent LEL (%LEL) of methane ranged from a high of 37.8%, on 20 December, to a low of 21.3%, on 27 December. From 28 December until 4 January 2007, %LEL levels were reported lower, ranging from a high of 4.1% on 29 December to a low of 0.1% on 3 January. The letter states that the spike in methane was likely due to a loss of vacuum caused by a blockage in the LFGCCS in the area of GP-9 on 19 December 2006. According to</li></ul>					

Report Title, Prepared For, Prepared By, Date	Description				
1 or, 1 repared Dy, Date	following repairs, methane gas detections returned to allowable levels. The letter states that GP-9 would be tested on a weekly basis for a period of 4 weeks and would return to the normal quarterly monitoring schedule if no further exceedances were detected.				
Part III Site Development Plan, Attachment 11, Groundwater Sampling and Analysis Plan (GWSAP), Permit Modification, City of Austin FM 812 Landfill, TCEQ Permit No. MSW-360A, Travis County, Texas Prepared by: Terracon December 2008	This report details groundwater monitoring for the landfill property. The area of the landfill is given in this report as 382 acres. The plan was written in accordance with 30 TAC §330, Subchapter J (relating to Groundwater Monitoring and Corrective Action) and in compliance with TCEQ Permit No. MSW-360A. Detection and background monitoring consisted of monitoring for the constituents listed in Appendix 11B within the report. Sampling included nitrate (which has been the subject of corrective action in the vicinity of MW-10 on the landfill property). Background water quality was outlined for parameters listed in Appendix 11 B. At least four background samples were planned to be collected from each well. Background monitoring was planned to be conducted approximately every 90 days (quarterly) for a period not to exceed 12 months (1 year). Detection monitoring was planned to be conducted on a semi-annual basis. Assessment monitoring was planned to be implemented whenever a statistically significant increase (SSI) had been confirmed for one or more of the detection monitoring constituents listed in Appendix I to 40 CFR Part 258, and/or nitrate. If any of the Appendix I to constituents were detected at a statistically significant level above the groundwater protection standards (defined under 30 TAC §330.409[h], [i], or [U]), an assessment of corrective measures was planned to be implemented within 90 days of the notice to the executive director that an exceedance occurred and completed within 180 days of initiation. The assessment, selection, and implementation of the selected corrective measure was planned to be conducted in accordance with the requirements listed in 30 TAC §330.411,				
Letter Regarding the Temporary Authorization of an Extension for Completion of Closure Activities	<ul> <li>§330.413, and §330.415, respectively.</li> <li>This letter discusses the approval of an extension of deadline for closure activities on the FM 812 Landfill facility. The deadline for closure had to be extended multiple times due to inclement weather interfering with final closure activities. An extension of 180 days was granted from the date of the letter.</li> <li>WESTON COMMENT: <i>This is the final letter in a series of letters</i></li> </ul>				

Report Title, Prepared For, Prepared By, Date	Description						
Prepared by: TCEO	from the TCEO granting an extension of completion of closure						
1 opuiou 0j. 10LQ	activities for the FM 812 Landfill. A review of documents at the						
16 June 2010	TCEQ revealed no further extensions after the date of this letter.)						
Construction	URS Corporation (URS) conducted an investigation of the						
Certification Report:	construction on the FM 812 Landfill in preparation for landfill						
Final Closure of Areas	closure. Construction activities related to landfill closure began in						
A, B, D, and	October 2009 and were completed in September 2010. Material						
E2/Asbestos of the FM	testing was conducted by HVJ Associates and Texas Research						
812 Landfill, TCEO	International (TRI) with URS providing work oversight HVI and						
Municipal Solid Waste	URS performed field verification of final cover thickness on						
Permit No. 360-A	previously closed landfill cells. Subsurface exploration was						
	performed by Terracon						
Prepared by: URS							
Corporation	A total of 19 verification borings in Area A showed a deficiency in						
March 2011	thickness and/or material type for the soil infiltration layer. These areas were repaired by excavating to depths that permitted						
	construction of a new final cover with an 18-inch minimum						
	infiltration layer and 12-inch minimum erosion protection layer.						
	Physical tie-in with the existing infiltration layer was also						
	constructed. A total of 13 verification borings in Area D indicated a deficiency in thickness and/or material type for the soil infiltration layer, and 9 borings indicated material that was questionable with respect to hydraulic conductivity requirements. URS determined that the most effective repair would be to replace the entire final cover over all of Area D. No borings were performed in the asbestos area of Area E due to the potential to disturb asbestos. In lieu of borings, a new final cover was constructed within the bounds of the asbestos area. A total of 19 verification borings in Area E2 indicated a deficiency in thickness and/or material type for the soil infiltration layer. Repairs were conducted by either excavating to depths that permitted construction of a new final cover and physical tie-in with existing infiltration layer or by stripping vegetation from the surface and constructing a new 6-inch lift on the existing infiltration layer with maintaining the physical tie-in.						
	URS and its subconsultants provided Construction Quality Assurance (CQA) monitoring services for the following:						
	<ul> <li>Soil infiltration layer in accordance with the Final Closure Plan (FCP), Section 5.1 and project specifications.</li> </ul>						
	• Flexible membrane cover (FMC) in accordance with the FCP.						

<b>Report Title, Prepared</b>	Description					
For, Prepared By, Date						
	Section 5.2.					
	<ul> <li>Geocomposite drainage layer in accordance with the FCP, Section 5.3.</li> </ul>					
	<ul> <li>Erosion protection layer in accordance with the FCP, Sections 4.4 and 5.4.</li> </ul>					
	URS found the FM 812 Landfill Closure to be constructed in substantial compliance with the approved Final Closure Plan.					
Semi-Annual Groundwater Monitoring Report, City of Austin FM 812 Landfill, Austin, Travis County, Texas Prepared by: Baer Engineering and Environmental	This report details the results of a semi-annual groundwater monitoring event collected for the entire landfill property in October 2011. The area of the landfill was reported as 382 acres in this report. Samples were collected from 17 groundwater monitoring wells during the sampling event. The wellheads were monitored for methane gas concentrations, and depth to groundwater was measured. Depth to groundwater ranged from 10.06 ft at MW-2 to 47.09 ft at MW-16. The report states "the highest percentage of the Lower Explosion Limit (LEL) was measured in well MW-3R which reported a value of 6%, which is likely related to methane concentrations."					
Consulting, Inc	According to the Baer report, cobalt was detected in MW-18 at 0.01					
	milligrams per liter (mg/L), which was above the protective concentration level (PCL) of 0.0073 mg/L. Selenium was detected in MW-20 above the PCL of 0.05 mg/L at a concentration of 0.148 mg/L. Vanadium was detected at an estimated (or J-flagged) concentration of 0.00516 mg/L in the sample collected from monitoring well MW-12, which was above the PCL of 0.0017 mg/L. Both 1,4-dichlorobenzene and cis-1,2-dichloroethene were detected in MW-18 at concentrations of 0.00204 mg/L and 0.00586 mg/L, respectively. These values are below the respective PCLs. The presence of cis-1,2-dichloroethene in MW-18 was also observed in the April 2011 groundwater monitoring event. These two consecutive detections confirmed the presence of cis-1,2- dichloroethene in the groundwater. At the request of TCEQ, in a letter dated 11 August 2011, MW-18 was added in the assessment monitoring program.					
Email Regarding FM	This email summarizes a discussion between Mr. Kesar and Clarence					
812 – Discussion with TCEQ	Winzer of Shaw Group with Iryna Kushnirsky with the TCEQ regarding the landfill. The conversation is summarized in the bullet points below.					
Prepared By: Shivani						
Kesar with Shaw Group	<ul> <li>Per Section 16.0 of the Groundwater Sampling and Analysis Plan (GWSAP) (12/11/2008) semi-annual reporting is not</li> </ul>					

<b>Report Title, Prepared</b>	Description					
For, Prepared By, Date						
18 April 2012	required. Annual reporting is required. The April 2012 semi- annual sampling event will be the last semi-annual report.					
	<ul> <li>Annual reporting is required 60 days after assessment monitoring and 90 days after detection monitoring. It is acceptable to submit one annual report after 60 days that covers both assessment and detection monitoring.</li> </ul>					
	<ul> <li>The SSI is required to be evaluated after each semi-annual event and submitted in a letter format along with description of new activity (example MW-18 in assessment monitoring). Only an annual report is required. Submittal of a letter after the April semi-annual sampling event would be required.</li> </ul>					
	<ul> <li>Assessment monitoring is required for MW-18 and two adjacent wells. The adjacent wells require analysis of assessment monitoring parameters for two consecutive events. COA will be required to start with the 40 CFR Part 258 App II list of parameters. Then, depending on the Appendix II constituents exhibiting SSIs, subsequent sampling will be for an Appendix II reduced list (back to detection monitoring in the future based on analytical results).</li> </ul>					
	<ul> <li>Currently, the 40 CFR Part 258 Appendix II reduced list on FM812 permit is the 40 CFR Part 258 Appendix I list plus nitrate (listed in Appendix 11B of GWSAP). Detection and background monitoring consists of monitoring for constituents in Appendix 11B of GWSAP.</li> </ul>					
Semiannual	This letter report summarizes the results of the April 2012 semi-					
Groundwater Letter	annual groundwater sampling event at the FM 812 Landfill. Samples					
Report – April 2012:	were collected from 19 monitoring wells on April 25, 26, and 27.					
City of Austin FM 812	MW-17 was dry at the time of the sampling event, and no samples					
Landfill – Travis	were able to be collected.					
County, Municipal Solid						
Waste (MSW) – Permit	Wells sampled for background samples include MW-3R, MW-8R,					
No. 360A	MW-10R, MW-16, MW-17, MW-18, MW-19, MW-20, and MW-21.					
Dranarad by: Charry	MW-3R was reported with a barium concentration of $0.15 \text{ mg/L}$ ,					
Environmental Inc	which is less than the PCL of 2.0 mg/L. Cobalt and nickel were also detected in MW 2D at 0.00824 and 0.0202 mg/L mean activity by the the					
	below the PCL for those constituents. Nitrate was detected in the					
June 2012	groundwater sample collected from monitoring well MW-8R at a concentration of 32.5 mg/L, which is above the PCL of 10.0 mg/L. Analytical data from samples collected from MW-10R, MW-16, MW 20, and MW 21 reported nitrate levels above the POL, but					

Report Title, Prepared	Description					
For, Prepared By, Date						
	below the PCL. Barium was also detected in samples collected from monitoring wells MW-8R, MW-10R, MW-16, MW-19, MW-20, and MW-21 at levels below the PCL of 2.0 mg/L. Selenium was detected in the sample collected from MW-20 at a concentration 0.149 mg/L, which is above the PCL of 0.05 mg/L.					
	Wells in detection monitoring include MW-1 and MW-2, both of which are considered background wells, and both are located on the southern parcel of the subject property. Barium was detected in groundwater samples collected from monitoring wells MW-1 and MW-2 at concentrations of 0.0158 mg/L and 0.0162 mg/L, respectively. Nitrate was also reported in the sample collected from MW-2 at a concentration of 39.8 mg/L. No VOCs were detected in either well.					
	Wells in assessment monitoring include MW-6, MW-7, MW-9, MW- 11, MW-12, MW-13, MW-14, MW-15, and MW-18. Sulfides were reported in the groundwater sample collected from MW-11 at a concentration of 0.0131 mg/L. There is no PCL for sulfides. Nitrate was detected in the groundwater sample collected from MW-14 at a concentration of 3.17 mg/L, which is below the PCL of 10.0 mg/L. Cis-1,2-dichloroethene was detected in the groundwater sample collected from MW-18 at a concentration of 0.00614 mg/L, which is below the PCL of 0.070 mg/L. This report indicated that cis-1,2- dichloroethene is the constituent that caused MW-18 to be placed into assessment monitoring due to PCL exceedances during previous sampling events.					
	Monitoring well MW-10 was reported in corrective action due to elevated levels of nitrate. Nitrate was detected in the groundwater sample collected from MW-10 during the April 2012 monitoring event at a concentration of 5.1 mg/L, a decrease from the reported concentration of 8.02 mg/L in October 2011.					
	analysis program at the time of the report.					
Letter Regarding the COA FM 812 Landfill, MSW Permit No 360-A, GWM April 2012 Semi- Annual Report	This letter states that, based on the results of the groundwater monitoring sampling event conducted in April 2012, monitoring for 40 CFR Part 258 Appendix II constituents may be discontinued, and monitoring for Appendix I constituents plus nitrates may resume. However, MW-18 must remain in assessment monitoring.					
Prepared By: TCEQ						

<b>Report Title, Prepared</b>	Description						
For, Prepared By, Date							
20 August 2012							
IESI Travis County	This report summarizes the results of the 22 June 2012 annual						
Landfill – Travis	groundwater monitoring sampling event performed at the IESI						
County, MSW – Permit	Landfill. The IESI Landfill is immediately adjacent to the FM 812						
No. 1841, Groundwater	Landfill to the west. According to the report, annual groundwater						
Monitoring – Annual	monitoring began in 2000 with the installation of three wells: MW-						
Report	1A, MW-2, and MW-3. Three wells, MW-4R, MW-5, and MW-6,						
	were installed in 2002, and an additional well, MW-7, was installed						
Prepared By: TEAM	in 2006.						
Consultants, Inc.							
	Wells MW-4R, MW-5, MW-6, and MW-7 were dry at the time of						
21 August 2012	sampling. All analytical results, reporting limits, and methods for						
	laboratory analysis were in accordance with the site's Groundwater						
	Sampling and Analysis Plan (GWSAP). The report recommends no						
	changes to the groundwater monitoring program.						
FM-812 Landfill GCCS	This report summarizes routine monthly monitoring of methane						
OM&M Summary	levels at extractions wells on the FM 812 Landfill GCCS as well as						
Report for January 2013	routine maintenance performed on the GCCS system. SCS						
	monitored 67 landfill gas wells during this monitoring and						
Prepared by: SCS Field	maintenance event. New source permit standards, though not						
Services	applicable to landfill operations, were used as they provide						
8 Eshara 2012	"reasonable operation goals." Of the wells monitored, 23 exceeded						
8 February 2015	operational goals for pressure and/or oxygen concentration. This is						
	an increase from the 21 wells with exceedances in pressure/oxygen						
	concentration during the previous month's monitoring and						
	maintenance event. No wells were recorded with exceedances in						
	temperature. There were 19 decommissioned wells during this event						
	as opposed to 13 from the prior month. The six additional wells were						
	decommissioned in an effort to improve LFG quality at the methane						
	hare by eliminating LFG from wells that have historically exhibited						
	poor LFG quality. The report suggests that wens with elevated inquid						
	the flare						
Miscellaneous Landfill	In addition to the formal reports and communications reviewed and						
Methane Monitoring	summarized above. WESTON also reviewed methane concentration						
Data for Period June	data from methane monitoring wells at the EM 812 I and fill provided						
2008-December 2012	by the COA The data were collected from 24 June 2008 to 18						
	December 2012. Of the wells monitored only MW-03 showed						
City of Austin Resource	readings exceeding 5% methane. MW-03 is located approximately						
Recovery Services	0.6 miles to the west of the northeastern parcel and 0.5 miles to the						
-	north of the southern parcel. There were no exceedances of the						
1 March 2013	methane LEL reported for the monitoring wells and gas probes on						
	either subject property parcel (southern parcel: GP-1, GP-2, GP-3.						
	GP-13, GP-14, MW-1, MW-2, and MW-20; northeastern parcel: GP-						

Report Title, Prepared	Description				
Tor, Treparcu Dy, Date	7, GP-8, MW-6, MW-13, and MW-21). Gas probes GP-9 and GP-10, which are directly south of the northeastern subject property parcel and which were noted in historical reports as having LEL exceedances in 2001 and 2004, were reported with no methane concentrations above 5% since 2008.				
Miscellaneous Information Regarding Presence of Methane on the Landfill's Northeastern Slope City of Austin Resource Recovery Services 6 March 2013	In addition to the formal reports and communications reviewed and summarized above, WESTON also reviewed correspondence between the COA and SCS Field Services. Inc (SCS) regarding two accumulations of methane gas that were detected in February 2012 at the northeastern slope of the landfill on Cell B adjacent to the northeastern parcel of the subject property. SCS reported that erosion had damaged the cap soil, allowing methane to accumulate on the eastern slope of Cell B in the northeastern corner of the landfill. Passive vents were installed in March 2012 to disperse the methane safely into the atmosphere and to prevent further accumulation and potential migration underground. COA has indicated that the vents have reduced the accumulation as designed allowing cap repairs to occur in the near future to repair the damage caused by the erosion.				
Miscellaneous Environmental Information (Response to formal FOIA Request) City of Austin Watershed Protection Department 7 March 2013	Through a Freedom of Information Act (FOIA) request, the COA Watershed Protection Department provided WESTON with miscellaneous documentation regarding known environmental issues at the property address. Three COA inspection records from 1993 and 1995 indicate that small areas of stained soils (typically less than 100 sq ft) were present. The stained soils areas identified during those inspections were remediated, as requested, and confirmed with follow-up visits by COA inspectors. Stained soils were associated with the recyclables area and a diesel AST (estimated volume 2000 to 4000 gallons) located to the southeast of the recyclables area. An inspector's follow-up report from July 1995 indicated that diesel spills would be managed on an ongoing basis by operator self- inspection and cleanup, as needed. Stained soil was reportedly excavated based on visual and smell indications. Minimal soil analytical data were collected to document hydrocarbon residuals in soil after removal. Laboratory analytical data were available for a 20- gallon hydraulic oil spill in 2010, and these indicate that hydrocarbons remained in place above background levels following the soil removal. COA Spills and Complaints Response Program personnel indicated that there was no water quality issue with regard to the spill.				

## 3.2 STANDARD ENVIRONMENTAL RECORD SOURCES

For the subject property, WESTON relied on the reports provided by Environmental Data Resources, Inc (EDR) and listed below. Because the subject property is a portion of the FM 812 Landfill property, information from EDR was obtained for the entire FM 812 Landfill property located at 10108 FM 812, Austin, TX 78719.

- *The EDR Radius Map<sup>TM</sup> Report with GeoCheck<sup>®</sup>* An electronic search of the standard environmental record sources. This report contains certain information obtained from a variety of public and other sources reasonable available to EDR. A copy of the report is provided as Appendix B.
- *The EDR Aerial Photo Decade Package* Aerial photographs are provided for the subject property and are included in Appendix C.
- *EDR Historical Topographic Map Report* Topographic maps are provided for the subject property and are included in Appendix D.
- *The EDR-City Directory Abstract* The abstract is generally a summary of information from city directories reviewed at approximately 5-year intervals. A copy of the city directory abstract is provided as Appendix E
- *Certified Sanborn<sup>®</sup> Map Report* Sanborn maps were not available for the subject property, as detailed in the attached search report, provided as Appendix F.
- *Chain of Ownership Report* A chain of ownership report was not obtained and reviewed as part of the scope of work for this ESA.
- *The EDR Environmental LienSearch*<sup>TM</sup> *Report* As part of the records search, EDR provides a search for environmental liens. A copy of the lien search report is provided as Appendix G.
- The EDR Property Tax Map Report As part of the records search, EDR provides a search for property taxes. A copy of the property tax map report is provided in Appendix H.
- *The EDR Building Permit Report* As part of the records search, EDR provides a search for building permits. A copy of the building permit report is provided in Appendix H.

The FM 812 Landfill address (10108 FM 812, Austin, TX 78719) was used to run *The EDR Radius Map Report with GeoCheck*<sup>®</sup>. The radius-based searches by EDR were based on measurements of the required distances from the outer boundaries of the entire FM 812 landfill. *The EDR Radius Map Report with GeoCheck*<sup>®</sup> did identify the landfill (entire landfill facility) on the following databases searched:

- FINDS Facility Index System
- Solid Waste Facility/Landfill (SWF/LF)
- Ind. Haz Waste
- Financial Assurance
- Aboveground Storage Tank (AST)

*The EDR Radius Map Report with GeoCheck* identified the following sites near the landfill property, which includes the two portions of the subject property:

- <u>Three</u> SWF/LF sites located within a 1/2-mile radius of the landfill property.
- <u>Two</u> Closed Landfill Inventory (CLI) sites located within a 1/2-mile radius of the landfill property.
- <u>One</u> AST site located within a 1/4-mile radius of the landfill property.
- <u>One</u> Resource Conservation and Recovery Act non generating (RCRA-NonGen) site located within a 1/2-mile radius of the landfill property.

Included in the following table are details for the target property and for nearby sites that WESTON preliminarily reviewed for their potential to cause environmental impacts to the subject property, based primarily on distance and relative direction. Unless otherwise stated in Section 1 or Section 6 of this report, these properties do not represent RECs. A figure showing the locations of the sites is provided in Appendix B.

Property	Map ID	Address	Approx. Distance (Miles)	Relative Elevation	Database	Summary of Information from EDR Report (Appendix B)
FM 812 Landfill, City of Austin Landfill, Steiner Landfill	A1 - A6	10108 FM 812	Includes Subject Property	Equal	FINDS, SWF/LF, Ind. Haz Waste, FINANCIAL ASSURANCE and AST	FINDS: Three registry IDs listed for this site – 11001581752, 110034322926, 110043792508. Listed as being in the RCRA, TCEQ Agency Central Registry (TX-TCEQ ACR), and Greenhouse Gas Report information systems. SWF/LF: The landfill property has been a 381.83-acre permitted landfill since 1975, accepting up to 550 tons of waste per day. In 1977, the facility had permit number 986 revoked for unspecified reasons. The last listed permit issued expired in November of 2010. Ind Haz Waste: As of 2005, the landfill no longer accepts (receives) industrial hazardous waste. One acre is dedicated to friable asbestos landfill cell NE of the scale house. It was for the sole use of COA Electric Utility Department. Facility status is listed as active. AST: Subject property is listed as having one steel, 4,000-gallon diesel AST installed in 2006. The AST status is listed as in use. (Interviews indicate this tank was removed in approximately 2010.)
N/A (unable to map property on mapping software)	7	W of FM 973, 3 miles N of FM 812, 1 mile SE of Bergstrom AFB, 4 miles W Cty L	< 1/8	Lower	CLI	CLI: Property listed as a grandfather site. Opened in 1975 and closed in 1990. Has an estimated cleanup date of 01 Feb 1980. Property had 16.4 acres and accepted up to 30 tons of waste per day.

Property	Map ID	Address	Approx. Distance (Miles)	Relative Elevation	Database	Summary of Information from EDR Report (Appendix B)
Triad Maximum Potential Sorting Site	8	10501 Linda Vis	< 1/8 NE	Lower	SWF/LF	SWF/LF: The facility type is listed as 5RR, and the status is given as active. The listed permit for the facility was issued and expired in July 2005. The permit was issued for Triad Building Maintenance.
Franks Waste Oil	9	6210 FM 973	< 1/8 NE	Lower	RCRA- NonGen, FINDS Ind	RCRA-NonGen: Facility as verified as a non-gen facility in 1982. Numerous notices of violation are listed dating from 1983 to 1996. Most appear minor and no enforcement actions are listed. The current owner came into possession of the property in 2001.
Service					Haz Waste	110005079495. Listed in RCRAInfo and TX-TCEQ ACR information system.
						Ind. Haz Waste: The property status is listed as active for 2012. The generator type for this facility is not reported.
Onion Creek Gravel Inc Base	10	10212 Burleson Rd	1/8 – 1/4 NE	Lower	AST	AST: One steel, 6,000-gallon diesel tank installed in 1979. Tank status is listed as out of use.
Bergstrom Air Force Base	11	Travis, TX	1/4 - 1/2 NNW	Lower	CLI	CLI: Property is listed as having 7 landfills and 1 radioactive site. Site opened in 1943 and closed in 1980. Listed as accepting household waste, construction waste, industrial waste, and agricultural waste. Hazardous wastes in landfills likely include pesticides, paints, paint thinners, solvents, and oils. Seven drums of dichlorodiphenyltrichloroethane (DDT) were found in landfill #6 in the early 1970s. One barrel was buried on-site, and the others were taken to City of Austin.

Property	Map ID	Address	Approx. Distance (Miles)	Relative Elevation	Database	Summary of Information from EDR Report (Appendix B)
N/A (property listed as 973 Materials)	12	6005 FM 973	1/4 - 1/2 NE	Lower	SWF/LF, FINANCIAL ASSURANCE	SWF/LF: The landfill type is listed as Type V RR, and the status is listed as active. The client name is given as B&G Environmental Services, Inc. The last listed permit issued for the facility expired in April 2010.
						Property is listed as a construction and demolition resource online.
						SWF/LF: The facility type is listed as 4, and the status is given as active. The first permit issued for the facility was given in 1985, and the last listed permit expired in Oct 2009.
IESI Travis County C&D Landfill	13	9600 FM 812	1/4 – 1/2 WNW	Lower	SWF/LF, TIER 2, FINANCIAL ASSURANCE	TIER 2: Facility has been in reporting since 2005. The facility is permitted to store up to 99,999 pounds of diesel fuel in containers up to 80,000 gallons in capacity for 365 days/year on-site. The fuel on- site is kept in aboveground storage tanks ranging from 200 to 10,000 gallons in capacity. There is one 1,000-gallon and several 200-gallon portable tanks on-site.

## 3.3 ORPHAN SITES SUMMARY

The Orphan Sites Summary included in *The EDR Radius Map Report with GeoCheck* is a listing of sites that could not be mapped by EDR due to insufficient addresses. WESTON attempted to locate the orphan sites using internet-based mapping programs. WESTON has identified those sites that appear to be located within a 1/2-mile radius of the subject property or otherwise represent potential impacts to the subject property.

|--|

Site	Address	Distance (miles)	Database	Description
IESI Travis County Landfill	9600 FM 812	1/3 W	ENF	Active landfill for Travis County. Property is listed in Section 3.2 as Map ID 13.

## 3.4 LOCAL GOVERNMENT AND/OR PRIVATE INQUIRIES

Requests for information regarding the landfill property, which includes the two parcels of the subject property, were submitted to the following agencies:

- COA Fire Department (AFD) WESTON submitted a records request via fax (512-974-0196) on 10 September 2012. As of December 2012, WESTON had received no reply. WESTON placed a follow-up call to AFD which was returned on 21 February 2013 by Mr. Doyle. He stated that he had no record of the original request and that it may have been lost during a transition in their records department that occurred in September of 2012. Mr. Doyle stated that record requests for site assessments are no longer handled by the Fire Department and that all requests should be made to Mr. Jarrod Kendall (512-974-4100), COA Public Information Office.
- COA Code Compliance Department and COA Watershed Protection Department WESTON submitted a formal FOIA records request on 10 September 2012 via email (<u>public.information@austintexas.gov</u>). A reply via phone was received that same day from COA stating that no environmental violations have been documented. At COA's request, the FOIA request was resubmitted via email on 21 February 2013 to Mr. Jarrod Kendall (jarrod.kendall@austintexas.gov). A response was received on 25 February from Lia Warren in the Code Compliance Department stating that there are no open building or zoning code violations for the subject property. An additional response was received on 7 March 2013 from Joan Esquivel in the Watershed Protection Department with documentation of environmental incidents attached. These documents are reviewed in Section 3.1 of this report.
- COA UST/PST Database WESTON called Mr. Schuyler Schwarting of COA (512-974-2715) on 20 February 2013. Mr. Schwarting indicated he found no UST or PST records for the FM 812 Landfill property. Mr. Schwarting indicated that the property was not within COA jurisdiction as it falls outside of the city limits.
- COA Watershed Spills Department WESTON called Ms. Jen Churchman (512-974-2550) on 20 February 2013. Ms. Jen Churchman indicated no records were found for the FM 812 Landfill property. Ms. Churchman indicated that the property was not within COA jurisdiction as it falls outside of the city limits.
- COA Fleet Services WESTON contacted Mr. Irvin Schmidt at Fleet Services via phone (512-978-2655) regarding records of the AST formerly kept on the subject property. Mr. Schmidt stated that the AST was considered a temporary storage tank and that it was

never owned by COA. Mr. Schmidt stated that the tank was owned by Suncoast and that they had removed the tank from the subject property on 9 September 2011.

Travis County Transportation and Natural Resource Department (TNR) – WESTON contacted Travis County TNR via email (<u>TNR.OpenRecords@co.travis.tx.us</u>) on 10 September 2012. A response was received on 18 September 2012 stating that no violations for the property were found. A copy of the septic system permit and the leachate/slope remediation permit through Travis County was provided.

In addition, WESTON reviewed archived records at the TCEQ Central Registry online database. The landfill property has permits for air new source, industrial and hazardous waste, municipal solid waste disposal, a petroleum storage tank registration, stormwater, and used oil. WESTON also reviewed the report *Landfills in the Vicinity of Austin*, TX (Geomatrix, 2004) provided by the COA. No information regarding the FM 812 Landfill was included in the Geomatrix report. Copies of the records of communication with these governmental agencies are included in Appendix I.

## 3.5 WATER AND OIL WELL SUMMARY

Information regarding area water wells, which includes water supply wells and groundwater monitoring wells, as well as oil and natural gas wells, was provided by EDR. The identified wells are shown on the Physical Setting Source Map in *The EDR Radius Map Report with GeoCheck*, which is included as Appendix B. No wells were identified on the landfill property. None of the reported wells with a 1/4-mile radius around the landfill property were identified as groundwater monitoring wells. There is one oil/gas well reported within a 1/4-mile radius around the subject property.

Based on a review of previously prepared reports, there are approximately 20 groundwater monitoring wells on the landfill property that did not appear on the EDR Database Search, six of which appear to be located within the approximate boundaries of the subject property. Based on correspondence provided by the client, the wells were sampled on a semi-annual basis beginning in the 1980s and will continue to be sampled on a semi-annual basis in the future (Baer, 2011; Shaw, 2012).

The following list includes the EDR-reported on-site water wells (supply and monitoring wells), off-site oil/gas wells, and off-site monitoring wells located within 1/4-mile of the landfill property area:

Well Type/Use	Map ID	Distance (miles)	Relative Elevation	Summary of Information from EDR Report
Oil/Gas	1	1/8 – 1/4 W	Not Reported	Owner: Not Reported Type: Permitted Location Database: OIL_GAS Date drilled: Not Reported Well depth: Not Reported Surface ID: 1123012 Lat/Long: 30.15561478 -97.67692814

## 3.6 PHYSICAL SETTING

Setting	Description
Topography	The landfill property is generally flat. According to <i>The EDR Radius Map</i> <i>Report with GeoCheck</i> , the elevation of the subject property is approximately 564 ft above mean sea level (MSL), and the general
	topographic gradient is to the general northwest direction (EDR, 2012b).
Soil and Groundwater	According to the <i>EDR Radius Map Report with GeoCheck</i> , the dominant surficial soil component in the vicinity of the landfill property is Houston Black. Houston Black soil is characterized by a clay texture with very slow infiltration rates. The soils are moderately well drained and have a high water table
	Groundwater monitoring reports provided by the client indicate the flow of water on the landfill property is predominantly to the north towards Onion Creek. Depth to groundwater from well casings ranged from approximately 8 ft to 47 ft.
Geology	The stratified sequence at the landfill property is dated to the Mesozoic era, Cretaceous system, and Navarro Group series (EDR, 2012a). The Taylor Clay is part of the Navarro Group.
Wetlands	No potential wetland areas were observed on the subject property or the landfill property during the site reconnaissance. There were no wetland areas identified in the <i>EDR Radius Map Report with GeoCheck</i> within the 1-mile radius around the landfill property.
	According to the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map for the landfill property, a wetland area was indicated on the southwest corner of the southern parcel of the subject property, but it appears to have been developed (USFWS, 2012). There is another wetland area indicated immediately to the north of the southern parcel of the subject property. Onion Creek to the north of the subject property is a designated wetland.
Surface Water	According to <i>EDR Radius Map Report with GeoCheck</i> , the landfill property is located within a 100-year and 500-year floodplain on the north side of the property (EDR, 2012a).
	No surface water bodies are present on the subject property. Onion Creek is approximately 750 ft north of the northeastern parcel.

## 3.7 AERIAL PHOTOGRAPH REVIEW

Aerial photographs were provided by EDR (EDR, 2012c). Copies of the aerial photographs are included in Appendix C. The review is summarized below:

Year	Source	Description
1940	ASCS	<u>Subject Property</u> : Both portions of the subject property appear to be composed primarily of undeveloped agricultural fields. The southern parcel has what appears to be a dirt road running north to south leading to a farmstead. There appears to be a pond or stock tank associated with the farmstead. There is another road running east to west from the farmstead to an adjacent highway (FM 973 S). A branch from the creek to the north of the property flows south onto the northern part of this portion of the property. The northeastern portion of the property is undeveloped farmland with no structures.
		<u>Surrounding Properties</u> : Roads are present in the current locations of FM 812 and FM 973 S. The area around the subject property appears to be primarily undeveloped farmland with a few farmsteads along dirt roads and paved highways. There is a creek (Onion Creek) running east to west along the northern boundary of the subject property. There are several branches of the creek that break off from the main channel and appear to flow south. There is one farmstead to the south of the southern portion of the subject property on the other side of a paved highway. There is another farmstead adjacent to the east of this portion. The northeastern portion of the subject property has a farmstead adjacent to the southeast.
1954	USGS	<u>Subject Property</u> : The dirt road on the southern portion of the subject property leading from north to south is no longer apparent. Otherwise, there have been no significant changes to either portion of the subject property since the previous aerial photo. Due to the blurry quality of the aerial photo, it is impossible to tell if there are any structures on the property.
		<u>Surrounding Properties</u> : An area on the landfill property to the immediate north of the southern portion of the subject property appears to have been excavated. There is a new development to the immediate west of the southern portion of the property, but due to the blurry nature of the aerial photo, it is impossible to see more detail.
1967	USGS	<u>Subject Property</u> : The main road providing access to the southern parcel and the landfill is present. The northeastern parcel remains undeveloped.
		<u>Surrounding Properties</u> : The excavation to the north of the southern parcel appears to have expanded. The development to the west of the southern portion appears to be industrial in nature. The area around the northeastern parcel appears largely unchanged from the previous aerial photo.

Year	Source	Description
1973	USGS	<u>Subject Property</u> : No significant changes have occurred since the previous aerial photograph.
		<u>Surrounding Properties</u> : There are several more developments to the east of the landfill along FM 973 S and a few south of FM 812.
1980	TXDOT	<u>Subject Property</u> : No significant changes have occurred since the previous aerial photograph.
		<u>Surrounding Properties</u> : There is a new area of excavation on the landfill property to the north of the southern parcel that could be associated with an expansion of landfill activities. The original area of excavation has expanded northward. Additional development is present on the east side of FM 973 S.
1988	TXDOT	<u>Subject Property</u> : Two new structures have been developed along the white dirt or caliche road on the southern parcel. Due to the scale of the photo, details are impossible to see. The northeastern portion of the property remains undeveloped.
		<u>Surrounding Properties</u> : The excavation to the north of the southern portion of the subject property has expanded. Development of properties to the south, southeast, and east of the subject property has increased and all appear to be industrial or agricultural in nature. A new development to the south of the southern portion of the subject property appears to be either a junkyard or an auto yard.
1995	EDR	<u>Subject Property</u> : Due to the scale and location of this aerial photo, the northeastern parcel is not visible. Several buildings have been constructed along the dirt or caliche road on the southern parcel. There is a new white road built in a loop on the southeastern corner of the southern parcel. What looks like a detention pond has been constructed in the northwest corner of the southern parcel.
		WESTON COMMENT: According to the site contact, the pond was an area excavated for clay liner soil during construction activities at the landfill property. The water visible in the pond is from stormwater runoff. The pond has since been back filled with clean soil from City projects within the past 5 to 6 years.
		<u>Surrounding Properties</u> : There is a white structure that might be a tank in the excavated area on the landfill property to the north of the southern portion of the subject property. Otherwise there have been no significant changes since the previous aerial photo.

Year	Source	Description
1995	USGS- CIR	<u>Subject Property</u> : The northeastern parcel is visible on this aerial photograph, and disturbed ground is present along the northern third of the property. No significant changes have occurred since the previous aerial photo.
		<u>Surrounding Properties</u> : A detention pond has been constructed in the northwestern corner of the excavated area. The excavation to the north of the southern parcel has expanded. There are appears to be a few structures that could be tanks or utility trucks in the excavated areas. Development to the north of the subject property on the northern side of Onion Creek has increased with the construction of several new roads, buildings, and road running east to west.
2004	USDA- CIR	<u>Subject Property</u> : The southeastern corner of the southern parcel is being used as a laydown yard for pipes or lumber. The detention pond in the northwestern corner of the southern parcel has been filled in. There are several new buildings along the white dirt or caliche road. There appears to have been a road constructed on the very edge of the eastern and southern sides of the northeastern parcel.
		<u>Surrounding Properties</u> : The detention pond to the northwest of the excavated area on the landfill property has been filled in, but a new pond has been constructed to the west of the excavated area. The property to the east of the southern parcel appears to be used as a junkyard or landfill.
2005	EDR	<u>Subject Property</u> : Due to the scale and position of the aerial photograph, the northeastern parcel is not visible. No significant changes have occurred on the southern parcel.
		<u>Surrounding Properties</u> : No significant changes have occurred since the previous aerial photo.
2008	EDR	<u>Subject Property</u> : Due to the scale and position of the aerial photograph, the northeastern parcel is not visible. No significant changes have occurred on the southern parcel.
		<u>Surrounding Properties</u> : No significant changes have occurred since the previous aerial photo.

## 3.8 TOPOGRAPHIC MAP REVIEW

Topographic maps were provided by EDR (EDR, 2012b). Copies of the topographic maps are included in Appendix D. The topographic maps were reviewed to evaluate development on the subject property and adjacent properties.

The review is summarized below:

Year	Description
1896	Subject Property: The southern and northeastern parcels appear undeveloped.
	<u>Surrounding Properties</u> : The areas around the subject property appear undeveloped. Onion Creek runs from west to east to the north the subject property. Dry Creek and Mahard Creek are to the east and southeast respectively. Pilot Knob is to the southwest. The Colorado River is to the far north of the subject property.
1910	Subject Property: No significant changes have occurred since the previous topographic map.
	<u>Surrounding Properties</u> : No significant changes have occurred since the previous topographic map.
1955	<u>Subject Property</u> : There is a road running from east to west at the northern section of the southern parcel. The road leads to a pond. Three pipelines run from east to west across the southern parcel.
	<u>Surrounding Properties</u> : The area around the landfill property has been developed with roads, highways, and small structures. There are several gravel pits to the north of the northeastern parcel of the subject property.
1955	Subject Property: No significant changes have occurred since the previous topographic map.
	<u>Surrounding Properties</u> : No significant changes have occurred since the previous topographic map.
1966	<u>Subject Property</u> : A road running north to south and splitting off into two branches on the southern parcel has been constructed. The northeastern parcel remains undeveloped.
	<u>Surrounding Properties</u> : The property immediately adjacent to the east of the southern parcel has been developed with two large buildings and several smaller ones. There are several smaller developments to all sides of the landfill property.
1973	<u>Subject Property</u> : No significant changes have occurred since the previous topographic map.
	<u>Surrounding Properties</u> : There is a large shaded area to the immediate north of the southern parcel of the subject property that might indicate excavation or mine spoils. There are three more shaded areas that fall on landfill property and might indicate excavation. There is a large shaded area to the north of the landfill property. There is a trailer park labeled to the west of the southern portion of the subject property.

Year	Description
1988	<u>Subject Property</u> : No significant changes have occurred since the previous topographic map. <u>Surrounding Properties</u> : The shaded areas are no longer indicated on this map. There is now a county park indicated to the north of the subject property on the northern bank of Onion Creek. The trailer park to the west is no longer labeled, but
	there are two more trailer parks indicated to the southeast.

## 3.9 CITY DIRECTORY

*The EDR-City Directory Abstract* (EDR, 2012d) was reviewed for 10108 FM 812, Austin, TX 78719, as well as surrounding properties for which listed names indicate a potential source of environmental impacts. Business directories including city cross reference and telephone directories were reviewed, if available, at approximately 5-year intervals for the years spanning 1872 through 2012. The historical property addresses of significance are presented below, and a copy of the full EDR City Directory Abstract is included in Appendix E.

Landfill Property (Including Subject Property) – (10108 FM 812)				
Year	Name/Use			
1996	Austin Landfill/Austin Landfill Diversion			
2000	Austin Landfill Diversion Recycle			
2006	Austin Landfill Diversion/C S Recycling			

Surrounding Properties – (FM 812)	
Year	Name/Use
1996	A-1 Imports (9707)
	All American Recycling Inc (9906)
	Christian Brothers Air Cond (10209)
	Jessie Revile Body-Shop (10209)
	Quality Iron Works (10209)
	Quality Mobile Home Transporting (10209)
	Special Automotive Svc (10462)
2000	Dan's Auto Repair (8718)
	Franks Welding (8805)
	Hyatt's Towing auto svcs (9202)
	Central Texas Refuse refuse systems (9316)
	A 1 Imports auto home sppl str (9707)
	Reverle Jessie Body Shop pnt & body rpr (10209)
	Special Automotive Service auto home sppl str (10462)

H:\City Of Austin - Public Works Dept (06141)\2010-2012 Environmental Rotation List\06141.045.001 FM 812 Landfill ESA\19.0 Final Deliverables\Final Phase I ESA\_03.14.13.Doc

Surrounding Properties – (FM 812)	
Year	Name/Use
2006	Travis County Landfill (9600)
	Aus-Tex Sandblasting (9605)
	D & C Paint & Body Shop (9610)
	Junior's Body Shop (9610)
	A-1 Imports auto parts – used & rebuilt (9707)
	IESI Solid Waste Management (9904)
	Aaron's Iron Works welding (10209)
	Jessie Reveile Body Shop (10209)
	Reveile's Wrecker Svc (10209)
	Salazar Body Works auto body – rpr & painting (10209)
	Don Johnson Equipment Rental (10420)
	Special Automotive Wrecker Svc auto parts – used & rebuilt (10462)
2012	CD Trucking (8701)
	A Galaxy Towing wrecker serv (9202)
	Central Texas Refuse (9316)
	Travis County Landfill (9600)
	Aus-Tex Sandblasting (9605)
	A-1 Imports auto parts – used and rebuilt (9707)
	Garza Joseph/IESI garbage collection (9904)
	Guerro's Truck Shop (9906)
	Triplet Diesel Injection (10205)
	Jessie Reveile Body Shop (10209)

## 3.10 SANBORN MAP REVIEW

Sanborn maps were not available for the subject property, as detailed in the attached search report, provided as Appendix F.

## 3.11 CHAIN-OF-TITLE

A chain-of-title report was not included in the scope of work for this ESA, and no chain-of-title information was reviewed.

## 3.12 ENVIRONMENTAL LIEN

An environmental lien search was completed, and no environmental liens or land use restrictions were identified in *The EDR Environmental LienSearch Report*. The lien search included a court document from 1988 that allowed the City to condemn a portion of the subject property. The lien search also included two warranty deeds and a special warranty deed for portions of the

subject property. A copy of *The EDR Environmental LienSearch Report* is included in Appendix G.

## 3.13 TAX MAP REPORT

Tax maps were not available for the subject property, as detailed in the attached search report, provided as Appendix H.

## 3.14 BUILDING PERMIT REPORT

*The EDR-Building Permit Report* (EDR, 2012f) was reviewed for 10108 FM 812, Austin, TX 78719, as well as surrounding properties for which listed names indicate a potential source of environmental impacts. A search of building department records including COA Building Regulations and Travis County Records Management were reviewed, where available, for the years spanning 1977 through 2012. Based on a review of *The EDR-Building Permit Report*, no permits related to environmental activities were identified for the landfill property or surrounding properties. A copy of *The EDR Environmental Building Permit Report* is included in Appendix H.

# 4. SITE RECONNAISSANCE AND INTERVIEWS

# 4.1 SITE VISIT

Site Assessor	Lori Kalich and Mary Tibbets
Date of	07 September 2012
Reconnaissance	
	Visual inspection of the property, including the exterior and interior of
Methodology Used	buildings on the southern portion of the subject property.
	The entirety of the landfill property is approximately 382 acres in size.
	The site visit consisted of a visual inspection of the entire landfill property
	from a truck and a closer inspection of the two parcels of the landfill that
Limiting	are considered the subject property for the purpose of this ESA. The
Conditions	boundaries of the subject property were approximated by the client.

## 4.2 INTERVIEWS RECORDS

Name	Conley Leloux
Employer	COA
Position	Waste Management Program Manager
Time with company	19 years
Time at this facility	19 years
Date & Method of	On-site interview conducted 07 September 2012.
interview	

## 4.3 WASTE GENERATION, PERMITTING AND UTILITIES

Water Supply	СОА
Electricity	Austin Electric
Natural Gas	None provided to facility.
Wastewater	Sanitary wastewater generated on the subject property from a restroom and sinks in the office building discharges to a septic system. The system consists of a 1,000-gallon, 2-compartment tank and two leach fields. The leach fields are 1,640 ft <sup>2</sup> each and are located approximately 15 ft to the west of the office building. The septic system is permitted through Travis County.
	According to 1997 Austin-Travis County Health Department documents reviewed as part of this Phase I ESA, the septic system "was never completed legally nor was it licensed." The 1997 document states that the "system has a history of failure." No further information or documents after 1997 were provided by Travis County. According to COA, modifications were made (low-flow toilets, diverting stormwater from the drain field, etc.) to correct the capacity issues reported by Travis County

	Health Department. The septic system is currently operational, and the system has no current reported issues related to system capacity.
	According to Mr. Leloux, industrial wastewater from the leachate collection system on the landfill property (not a part of the subject property) is stored in two 12,000-gallon tanks located on the northern section of the landfill property and is transported off-site to an Austin Wastewater Treatment Plant site as needed. The leachate is tested every 3 months.
Stormwater	Stormwater drains via sheet flow to storm outfalls located around the perimeter of the FM 812 Landfill property to the south, east, and north. Only the southern outfall (Outfall 1) is a part of the portion of the FM 812 Landfill property that is considered the subject property. According to the site contact, a new drainage area located along the southern border of the southern parcel of the subject property has the potential to back up. Based on the approximate boundaries of the southern parcel of the subject property, it is likely that this drainage area falls within the subject property. According to the site contact, TCEQ is currently investigating the potential for stormwater to backup in this area.
	Stormwater from the northeastern parcel of the subject property has the potential to flow towards Outfall 3 (Figure 2). According to Mr. Leloux, at the time of the Sept 2012 site visit there was a violation for stormwater Outfall 3 on the northern part of the landfill property. The outfall has been reconstructed to better regulate flow of stormwater into Onion Creek (see Appendix A, photos 13 and 14). The issue was resolved with a letter of no further response required from the TCEO dated 20 December 2012.
Air	No potential sources of air emissions were observed on the two portions of the subject property.
	A permitted methane flare system (TCEQ Permit TH0742G) is located towards the center of the landfill property that is not considered part of the subject property parcels (see Figure 2).
<b>Cooling Towers</b>	No cooling towers were noted during the site reconnaissance.
Solid Wastes	Solid waste generated on the subject property consists of general office waste and is stored in bins by the east side of the office building and transported off-site for disposal. Old tires and air conditioning units were temporarily stored on-site until they could be picked up for recycling, but according to the COA these activities ceased in January of 2013.
	The subject property does not produce industrial solid waste.
Hazardous	The subject property was used as a staging area for multiple types of
Materials	recvclable materials including used oil, used oil filters, batteries, and
1.20001 1010	Freon-containing appliances until January of 2013. According to Mr.
	Leloux, collection of used antifreeze occurred from 2009 to 2011. A
	drum labeled "used anti-freeze" was observed in the open shed of the

## SITE RECONNAISSANCE AND INTERVIEWS

	temporary staging area sitting on the ground with no secondary containment (Appendix A, Photo 31). No waste was disposed of on the two parcels of the subject property.
Waste Disposal	Waste is no longer disposed of at the FM 812 property. Waste produced
Alcas	that were historically used for waste disposal are located between the two parcels of the subject property (See Figure 2).

## 4.4 HAZARDOUS/DANGEROUS MATERIALS

Products and Chemicals Used / Managed / Stored	Used oil, used oil filters, used antifreeze, Freon, motor oil, engine oil, propane, batteries, acetylene, oxygen, washer fluid, diesel and gasoline.
Products and Chemicals Storage Location	<ul> <li>The temporary staging area on the southern parcel of the subject property held used oil, used antifreeze, used oil filters, and propane tanks until January 2013 when staging activities ceased. These staging activities were observed by WESTON during the September 2012 site visit. Used oil was stored in drums or in a larger aboveground temporary storage tank until it was transported off-site (Appendix A, Photos 28, 29, and 30). Used oil filters were stored in drums until they were removed from the site (Appendix A, Photo 30).</li> </ul>
	<ul> <li>The maintenance shed stored motor oil, engine oil, acetylene, oxygen, washer fluid, and gasoline in containers ranging in size from a 55-gallon drum to 5-gallon buckets. There is also a diesel fuel truck with a 300-gallon capacity stored in the shed (Appendix A, Photo 40).</li> </ul>
	• The methane flare area is being used to store empty propane tanks.
Storage Tanks	According to the site contact, a 4,000-gallon aboveground diesel storage tank used for fueling vehicles was located on the southern parcel of the subject property in 2006 and was removed in approximately 2010. The diesel tank was located on metal skids within a secondary containment system. The associated electric pump, filter, hose, and nozzle were also located within the double containment area. There was no secondary containment around the vehicle fueling area. However, according to COA Fleet Services, the AST was considered a subcontracted temporary storage tank and was never owned by COA or registered with the TCEQ. The tank was owned by Suncoast, Inc, who was responsible for installing, maintaining, and removing the tank from the subject property.
	AST on the southern parcel to the southeast of the recyclables area. Stained soils were reported near the tank on three separate occasions. The

	May 1995 inspection indicated that the tank had an earthen containment berm. The COA inspection reports indicate that the stained soils were removed following the inspections recorded. The COA records provided no documentation regarding ownership, installation, or tank removal. COA Fleet Services was contacted for more information; however, no response was received by the date of this report.
	Occasional spills estimated at less than a quart were reported by the site contact. According to Mr. Leloux, the spills were immediately cleaned with absorbent material and taken to a household hazardous waste (HHW) facility for disposal. <i>The EDR Radius Map</i> <sup>TM</sup> <i>Report with GeoCheck</i> <sup>®</sup> listed the diesel AST as being still in use; however, as previously stated, it was not observed by WESTON in September 2012.
	There are no underground storage tanks (USTs) currently on-site, and no USTs are known to have been present historically at the FM 812 Landfill.
Chloringted	According to the site contact, no chlorinated solvents are currently used
Chlumta Usad	an site Historical use of chloringted solvents define healt to the 1000s
Solvents Used	on-site. Historical use of chlorinated solvents dating back to the 1960s
	when the landfill first opened is not known. Two chlorinated organic
	compounds, 1,4-dichlorobenzene and cis-1,2-dichloroethene, have been
	detected in trace amounts in groundwater samples collected from
	monitoring walls located on the FM \$12 I and fill
	monitoring wens located on the PW 812 Landini.

## 4.5 ADDITIONAL OBSERVATIONS AND INFORMATION

Vapor Intrusion	Assessment of the potential for vapor intrusion to affect the current or future improvements on the property was not included in the scope of work for this assessment. See Section 3.1 for a general discussion of methane gas monitoring data for the landfill.
PCB-Containing	No polychlorinated biphenyl (PCB)-containing equipment was observed
Equipment	on the subject property. Transformers were observed on the landfill
	property, with stickers indicating no-PCBs.
Radon	No known testing has been performed at the landfill property. An
	Environmental Protection Agency (EPA) map of radon zones indicates
	Travis County, Texas is considered a Zone 3 area. Average radon levels
	for Zone 3 are less than (<) 2 picocuries per liter (pCi/L) (EPA, 2012).
	Air sampling was not performed at the subject property to evaluate actual
	radon levels.

## SITE RECONNAISSANCE AND INTERVIEWS

Asbestos- Containing Materials (ACM)	According to the site contact, the buildings on the southern portion of the subject property were constructed some time prior to 1993. Based on a review of aerial photographs of the property, the buildings on-site were constructed between 1980 and 1995. According to COA, there is known ACM in the flooring of the office building on the landfill property that is permitted and managed in place. There are no other buildings located on landfill property.
	A cell of the landfill (Cell E) used for asbestos disposal is located immediately north of the southern parcel of the subject property.
Lead-Based Paint (LBP)	No testing for LBP has been conducted on the subject property. Based on the estimated building construction date, the presence of LBP is not likely.
Lead and Drinking Water	According to the site contact, the drinking water for the subject property has not been independently tested for lead. According to the 2011 Drinking Water Quality Report for the COA, the drinking water meets or exceeds all Federal (EPA) drinking water requirements. A copy of the report is included in Appendix I.
Fluorescent Lights	Fluorescent lights are present throughout the buildings on the subject property. Mr. Leloux stated that fluorescent lights are disposed of off-site at a household chemicals disposal facility.
Sumps, Oil/Water Separators	None observed on the subject property during site reconnaissance. One sump associated with the methane burn-off system was observed on landfill property that is not considered a part of the subject property. Several methane pumps and one water pump associated with a stormwater detention pond were observed on the portion of the property not considered a part of the subject property.
Monitoring wells, vent pipes, manhole covers, etc.	There are several groundwater monitoring wells located throughout the FM 812 Landfill property, including on the two parcels that are the subject property. According to documentation provided by Mr. Leloux and the approximate boundaries of the subject property, approximately six wells are located on the two portions of the subject property. Based on documentation provided by the client, the wells have historically been sampled on a semi-annual basis and will continue to be sampled on a semi-annual basis in the future.
Staining	Small oil stains were present on the floor of the maintenance shed and in the open-sided shed on the southern portion of the subject property (Appendix A, Photos 27, 29, 37, 38, and 39).
Stressed Vegetation	None observed during site reconnaissance.
Ponds, pits, lagoons	None were observed on the portion of the FM 812 Landfill property under
and debris piles	investigation. One stormwater detention pond was observed on the portion of the FM 812 Landfill property not under investigation. Mr. Leloux stated that the pond would be drained soon due to bird airstrike bazards presented to the nearby airport
	I nazarus presenteu to the hearby amport.

## SITE RECONNAISSANCE AND INTERVIEWS

Water staining or	None observed during site reconnaissance.
mold within	
building	
Indoor air quality	No issues were observed or reported during site reconnaissance. No
issues (complaints	testing was conducted.
and/or testing)	
Odors	No strong, pungent, or noxious odors were detected during the property
	visit.
<b>Pools of Liquid</b>	None observed during site reconnaissance.
Unidentified	None observed during site reconnaissance.
Substance	
Containers	

# 5. EXCEPTIONS, DELETIONS, AND GAPS

WESTON has performed this Phase I ESA in strict conformance with the scope and limitations of ASTM E-1527-05 for the property located in Austin, Travis County, Texas Exceptions to, or deletions from, this practice or data gaps include the following:

- The site contact has been at the landfill property for 19 years, but the facility has been in operation for approximately 50 years. A site contact knowledgeable of landfill operations prior to 1993 was not available.
- The boundaries of the subject property provided to WESTON were approximate.
- The majority of the landfill property was investigated from a pickup truck. The southern and northeastern parcels that make up the subject property were investigated on foot.
- No Sanborn maps were available for the subject property.
- A chain-of-title report was not obtained, and no chain-of-title information was reviewed.

These exceptions are not thought to have a material impact on the findings and conclusions of the ESA.

# 6. FINDINGS, OPINIONS, AND CONCLUSIONS

WESTON has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527 for a portion of the FM 812 Landfill property located at 10108 FM 812, Austin, TX 78719. The subject property consists of two non-contiguous parcels of property located within the FM 812 Landfill property. Any exceptions to, or deletions from, this practice are described in Section 5 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property except for the following:

Hydrocarbon-stained soil observed on the southern parcel of the subject property during the September 2012 site visit, as well as reports of historical stained soils associated with diesel and hydraulic oil spills at the site, together represent a REC at the property. Stained soils were observed in 2012 and were historically reported at the temporary recyclable material staging area and at other locations in the southwestern quadrant of the southern parcel where equipment maintenance and recyclables management operations were based. Inspection records from 1993 and 1995 indicate that stained soils identified during those inspections were remediated as requested by COA inspectors. One inspection record from July 1995 indicated that future diesel spills would be managed on an ongoing basis by operator self-inspection and cleanup, as needed. Stained soil from spills were reportedly excavated based on visual and smell indications. Limited soil analytical data were collected to document the oil or fuel residuals after removal. Laboratory analytical data were available for a 20-gallon hydraulic oil spill in 2010, and these indicate that hydrocarbons remained in place above background levels following the soil removal.

The following *de minimis* conditions were noted based on current property use and/or surrounding property uses:

- Stained concrete floors were noted on the southern parcel in the maintenance shed.
- According to Austin Energy, the southeastern portion of the southern parcel of the subject property was historically used for temporary storage of creosote-treated wood poles. The poles were staged in this area prior to transport off-site for disposal.

Although not considered RECs, the following items were noted as part of this ESA:

Based on WESTON's review of landfill groundwater monitoring data collected semiannually in 2011 and 2012, selenium has been reported at concentrations above the Texas Risk Reduction Program (TRRP) Protective Concentration Level (PCL) of 0.05 milligrams per liter in samples from groundwater monitoring well MW-20. Although the property is not regulated under TRRP, the TRRP PCLs were used as comparison values in the historical reports reviewed by WESTON. Well MW-20 is located along the eastern boundary of the subject property southern parcel, which is interpreted as being an

#### FINDINGS, OPINIONS, AND CONCLUSIONS

upgradient boundary. Selenium has also been reported in samples from other landfill monitoring wells, most of which are in upgradient positions relative to the landfill waste cells. As such, WESTON believes the presence of selenium could be attributed to a naturally-occurring background groundwater condition associated with the high clay content in the Taylor Marl.

- There is a potential for the nearby properties to impact groundwater flowing under the subject property (southern parcel): Reveile Body Shop; Triple Diesel Injection Transmission Shop; Sinaloa Body Shop (located at 10209 FM 812, directly south of FM 812); and Austin IESI Landfill (9904 FM 812, located directly adjacent and to the west of the southern parcel of the subject property).
- There are multiple oil and gas pipeline easements running through the southern parcel of the subject property.
- The two parcels of the subject property are separated by landfill property that was used to dispose of MSW.
- The northern slope of the landfill collapsed into Onion Creek in the early 1990s. The slope was regraded in 1994. The exact location of the collapsed material in relation to the northeastern subject property parcel is unknown. However, the slope failure is believed to have not affected the two parcels that make up the subject property of this report.
- The southern parcel subject property is located adjacent and hydraulically upgradient to a 14-acre landfill cell where the bottom is native Taylor Clay. Only municipal solid waste was placed in this cell, plus ACM within a small, 1-acre area. The northeastern parcel subject property is downgradient of this cell. Groundwater monitoring data indicate no current or historical impacts in the wells located downgradient of the 14-acre cell.
- There is a low to moderate potential for methane to migrate onto the subject property parcels. Historical reported methane concentrations (from 2001 and 2004) exceeded the regulatory threshold of 5% methane (equal to 100% of the methane lower explosive limit [LEL]) at a location 200 feet east of the northeastern parcel on privately owned land east of FM 973. Eight gas probes are present on the two subject property parcels, but no LEL exceedances were reported at those probe locations in 2001 and 2004. Methane monitoring data collected between 2008 and 2012 also indicate no LEL exceedances at these eight probe locations. Two areas of localized methane accumulation were detected in 2012 on the eastern slope of Cell B on the northeastern parcel of the landfill. These areas were immediately adjacent to the northeastern parcel of the subject property. Passive vents were installed to disperse the accumulated methane safely and minimize further accumulation or migration in the area. COA has indicated that the vents have reduced the accumulation as designed.

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# 8. QUALIFICATIONS

WESTON utilized qualified professional staff trained in performing the scope of work required for this Phase I ESA. This team included a senior technical reviewer, project manager, and technical support team. Their roles are described in more detail as follows:

- Senior Technical Reviewer and Environmental Professional Jeffrey R. Henke, P.G. is a Principal Project Manager with over 20 years of experience in the field of environmental sciences and consulting. Mr. Henke specializes in the development, implementation, and management of practical and cost-effective investigation and remediation approaches, analysis of soil and groundwater data, evaluation of remediation options, and development of technically strong, legally defensible data for litigation purposes. He is responsible for managing projects involving initial site assessment, soil and groundwater investigations, remedial action/corrective action plans, risk assessment, closure plan development, agency negotiation, and litigation support.
- <u>Project Manager</u> Michell K. Hales is a Project Manager with over 13 years of experience performing and supervising environmental investigations, including site assessments, remediation, and closures of commercial/industrial sites, State and Federal superfund sites, and hazardous waste sites. Ms. Hales also has 12 years of experience performing Phase I and Phase II ESAs at commercial and industrial properties using ASTM guidelines.
- <u>Technical Team</u> Lori Kalich is a Project Scientist with 3 years of experience performing environmental consulting on projects. Ms. Kalich's responsibilities have included site research and report writing for Phase I ESAs, Phase II ESAs, and Screening Level Ecological Risk Assessments. Her responsibilities on this project included site reconnaissance and research.
- <u>Technical Team</u> Mary Tibbets has performed environmental consulting for over a year on projects and was responsible for the site research and report preparation in this report. Ms. Tibbets has written multiple Phase I ESAs and Environmental Assessments in accordance with the National Environmental Policy Act under the mentorship of environmental professionals. Her responsibilities on this project included site reconnaissance and research.

# LIST OF ACRONYMS

AAI	All Appropriate Inquiries
ACM	asbestos-containing material
AFD	Austin Fire Department
ASCS	Agricultural Stabilization and Conservation Service
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
CCS	collection and control system
CFR	Code of Federal Regulations
CLI	Close Landfill Inventory
COA	City of Austin
CQA	Construction Quality Assurance
DDT	dichlorodiphenyltrichloroethane
EDR	Environmental Data Resources, Inc.
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ft <sup>2</sup>	square feet
FINDS	Facility Index System
FLP	Final Closure Plan
FMC	flexible membrane cover
FOIA	Freedom of Information Act
GCCS	gas collection control system
GWSAP	Groundwater Sampling and Analysis Plan
HBC	HBC Engineering, Inc.
HHW	household hazardous waste
LEL	lower explosive limit
LBP	lead-based paint
LFG	landfill gas
lbs	pounds
MDL	method detection limit
mg/L	milligrams per liter
MSA	Master Services Agreement
MSL	mean sea level
MSW	municipal solid waste
Non-Gen	non-generating facility
NWI	National Wetlands Inventory

PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PCL	protective concentration level
PID	property identifier
P.G.	Professional Geoscientist
PQL	practical quantitation limit
RCRA	Resource Conservation and Recovery Act
RECs	recognized environmental conditions
RFP	request for proposal
ROW	right of way
SSI	statistically significant increase
SWF/LF	solid waste facility/landfill
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TNR	Transportation and Natural Resource Department
TNRCC	Texas Natural Resource Conservation Commission
TOC	total organic compounds
TRI	Texas Research International
TXDOT	Texas Department of Transportation
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VOCs	volatile organic compounds
WESTON	Weston Solutions, Inc.



06141.045.001 FM 812 Landfill ESA\06.0 Data and FIGURE 1.dwg Layout: Layout1



06141.045.001 FM 812 Landfill ESA\06.0 Data andFIGURE 2.dwg Layout: Layout1



06141.045.001 FM 812 Landfill ESA\06.0 Data and FIGURE 3.dwg Layout: Layout1

APPENDICES A THROUGH I PROVIDED ON CD