ConformaTECH

Phase I Environmental Site Assessment
Los Reales Landfill Expansion Project
73.6 Acres of Undeveloped Land
Pima County Parcel Nos.: 140-39-052E & -052F
Tucson, Arizona

Submitted To:

City of Tucson
Environmental Services
P.O. Box 27210
Tucson, Arizona 85726

Submitted By:

ConformaTech, Inc.
1425 East Apache Park Place
Tucson, Arizona 85714

February 6, 2014

AAI Continued Viability Date: June 18, 2014

CTEC Job No. 13-1319

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Gerry P. Yarab, R.G.
Project Manager

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EXECUTIVE SUMMARY

ConformaTech, Inc. (CTEC) performed a Phase I Environmental Site Assessment (ESA) for the City of Tucson at the proposed Los Reales Landfill Expansion Project in Tucson, Arizona. The Property consists of Pima County parcel Nos. 140-39-052E & -052F. The Property is currently owned by the City of Tucson and is located north of the active Los Reales Landfill. The Property consists of approximately 73.6 acres of undeveloped land.

This assessment has revealed no evidence of recognized environmental conditions in connection with the Property except for the following:

- The Los Reales Landfill WQARF Site is located on adjoining property to the south. A contaminated groundwater plume originating from the Site extends beneath the western portion of the Property. The contaminant plume consists of PCE above the EPA established MCL of 5 µg/L. Two monitoring wells and one groundwater extraction well are located on the Property. CTEC understands that pump and treat remediation of the contaminated groundwater will continue for some time. This cleanup is being conducted under the oversight of the ADEQ WQARF Division.

- A groundwater contamination plume, originating from the Los Reales Landfill WQARF Site, which consists primarily of the solvent PCE is present beneath the Property. The PCE in groundwater beneath the Property exceeds the EPA MCL. CTEC recommends that a Soil Vapor Intrusion Assessment in accordance with ASTM E2600-08 be conducted for the Property prior to development.

- Two areas of sediment were observed to be present across the former Los Reales Road alignment on the south property line. It is apparent that, on occasion, storm water and sediment enters the Property from the adjoining property to the south (Los Reales Landfill) and previously gravel pit operations. These areas are located from approximately 850 feet to 1,050 feet east of the southwest corner of the Property (110.881110 - 110.880403). CTEC recommends the sampling of soil just north of the former Los Reales Road and analyzed for VOCs, polyaromatic hydrocarbons (PAHs) and total RCRA metals.

- Two areas of potentially buried waste material were observed near the west property line. These two areas are indicated on Figure 2. The northern disturbed area is located from 32.12171/110.88357 to 32.12142 and has dimensions of approximately 100 feet north-south and 20 feet east-west (Photo 5). At the southwest corner of parcel 140-39-052E, partially buried debris was observed at 32.11975/110.88357 (Photos 6 & 7). CTEC recommends the physical investigation of these areas to assess the extend and type of potentially buried waste.

- A partially buried five-gallon bucket (Photo 16) was observed on the northwest portion of the Property (32.12218/110.88169). The bucket was observed to be partially filled with soil with unknown additional contents. CTEC recommends a physical assessment of the bucket to ascertain if it contains any potential hazardous substance or petroleum product.

- A pile of white stucco (Photo 12) approximately 15 feet in diameter and six inches high was observed on the northwest portion of the Property (32.12239/110.88195). The stucco may contain asbestos. CTEC recommends the material be sampled and analyzed for asbestos.

1.0 INTRODUCTION

ConformaTech, Inc. (CTEC) performed a Phase I Environmental Site Assessment (ESA) for the City of Tucson at the proposed Los Reales Landfill Expansion Project in Tucson, Arizona. The Property consists of Pima County parcel Nos. 140-39-052E & -052F. The Property is currently owned by the City of Tucson and is located north of the active Los Reales Landfill. The Property consists of approximately 73.6 acres of undeveloped land.

1.1 Purpose

The purpose of this Phase I ESA is to identify, to the extent feasible, *recognized environmental conditions* in connection with past or current uses of the Property in respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) U.S.C §9601 and petroleum products. This Phase I ESA is intended to permit the user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide perspective purchaser limitations provided within CERCLA's landowner liability protections. This Phase I ESA constitutes all appropriate inquiries (AAI) into the previous ownership and uses of the property consistent with good commercial and customary practice as defined in U.S.C §9601(35)(B).

1.2 Scope of Services

Project details were provided by Mr. David Barraza, City of Tucson Environmental Services, to Mr. Gerry Yarab, R.G. of CTEC. CTEC's scope of services consisted of the following activities:

- Review of certain federal and state regulatory agency databases for the Property and up to a 1-mile radius around the Property.
- Review and evaluate available historical records, topographical maps, historical aerial photographs and Sanborn maps as available.
- Research information publicly available and reasonably ascertainable to determine Property usage since first development, or from the year 1940, whichever is earlier.
- Contact various city or county agencies for environmental information pertaining to the Property.
- Conduct a site reconnaissance to evaluate current Property conditions and note visual evidence of recognized environmental conditions.
- Conduct a limited visual reconnaissance of properties within a ½-mile radius of the Property.
- Interview people with significant knowledge of the Property.
- Prepare a report of findings.

This report presents CTEC's field observations, findings and conclusions. The criteria meet the level of care and technical complexity currently practiced by environmental professionals within our service area for projects of a similar scope. The summary of findings, conclusions and recommendations in this report are subject to modification if subsequent information is developed by CTEC or any other party.

1.3 Significant Assumptions

CTEC has assumed that no false testimony was given by interviewed parties or false or incorrect data supplied by government agencies.

1.4 Limitations and Exceptions

This Phase I ESA was conducted in accordance with the scope and limitations of ASTM Standard Practice E 1527-13 and limitations presented in Appendix A of this report. Any exceptions to, or deletions from, the ASTM Standard Practice are described in Section 10.0 of this report.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a Phase I ESA in accordance with ASTM Standard E1527-13 is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and the Practice recognizes reasonable limits of time and cost.

All appropriate inquiry does not mean an exhaustive assessment of a property. 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. One of the purposes of the Phase I ESA is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information.

In accordance with ASTM Standard E1527-13 Section 4.6, this ESA is valid for use by the User for one year provided that certain components are updated within 180 days of a transaction:

- Interviews with owners, operators and occupants;
- Searches for recorded environmental cleanup liens;
- Review of federal, tribal, state and local government records;
- Visual inspection of the Property and of adjoining properties; and
- Declaration by the environmental professional responsible for the assessment or update

The AAI 'Continued Viability' date for this ESA is presented on the cover sheet of this report. This date marks the time at which the earliest component requiring a 180 day update will expire.

1.5 Special Terms and Conditions

For the purpose of this Phase I ESA, the following terms, referred to in the report, shall be defined as follows:

- *Property* – approximately 73.6 acres of undeveloped land located north of the current Los Reales Landfill in Tucson, Arizona. The Property is bisected by East Los Reales Road which is not considered part of the Property. Pima County Parcel No. 140-39-052E is located north and 140-39-052F is located south of Los Reales Road.

- *Adjoining Properties* – Any real property or properties, the border of which is contiguous or partially contiguous with that of the Property, or that would be contiguous or partially contiguous with that of the Property but for a street, road, or other public thoroughfare separating them.
- *Environment* – environment shall have the same meaning as the definition of environment in CERCLA 42 U.S.C§9601(8).
- *Release* – a release of any hazardous substance or petroleum product shall have the same meaning as the definition of "release" in CERCLA 42 U.S.C§9601(22). A release or threatened release of a hazardous substance includes any "spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment (including the abandonment of discarding of barrels, containers and other closed receptacles containing any hazardous substance or pollutant or contaminant.
- *Project Vicinity* – Refers to an approximate ½-mile radius around the Property.
- *Recognized Environmental Condition* – The term recognized environmental condition means the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.
- *Controlled Recognized Environmental Condition* – a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).
- *Historical Recognized Environmental Condition* – A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the Property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).
- *De Minimis Condition* – A condition that generally does 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 nor controlled recognized environmental conditions.
- *Key Site Manager* – The person identified by the owner or operator of the property as having good knowledge of the uses and physical characteristics of the Property. The Key Site Manager has been identified as Mr. David Barraza, City of Tucson, Environmental Services.
- *Migrate/Migration* - The movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface of subsurface, and vapor in the subsurface.

- *Groundwater Flow Direction* – Based upon information presented in the City of Tucson report titled *January-June 2013 Report: Groundwater Monitoring and Treatment System Progress Report, Los Reales Landfill Water Quality Assurance Revolving Fund Site,* depth to groundwater near the Property is approximately 220 feet below ground surface. CTEC did not make any quantitative assessment of groundwater flow as part of this assessment. Notwithstanding, with regard to subsequent references to up gradient, cross gradient or down gradient locations relative to the Property, the above referenced report indicates a northwesterly direction of groundwater flow in the Project Vicinity.
- *User* – the party seeking to use this Phase I ESA. A User may include, without limitation, a potential purchaser of Property, a potential tenant of property, and owner of property, a lender, or a property manager. The User has specific obligation for completing a successful application of this Phase I ESA.

1.6 User Reliance

This Phase I ESA has been prepared by CTEC on behalf of and for the exclusive use of the City of Tucson (User). Extension of reliance upon the report via a letter of reliance may be requested by the User for additional entities. Letters of reliance are bound by the original Services Agreement and proposal.

2.0 PROPERTY AND VICINITY DESCRIPTION

The following information was obtained during CTEC's site reconnaissance, from information provided by governmental agencies and a professional title search service (All Lands of Goodyear, Arizona).

2.1 Location and Legal Description

The Property Location Map is presented as Figure 1. The legal descriptions for the two parcels comprising the Property are presented in Appendix B. The Property is bisected by East Los Reales Road. Pima County Parcel No. 140-39-052E is located north and parcel 140-39-052F is located south of Los Reales Road. The Property Detail Map is presented as Figure 2.

The Property is located in the southeast quarter of Section 14, Township 15 South, Range 14 East of the Gila and Salt River Baseline and Meridian System. The Property is shown on the United States Geological Survey (USGS) 7.5-minute series topographic map titled “Tucson Southwest, Arizona Quadrangle.”

2.2 Current Property Use and Description

The Property Detail Map is presented as Figure 2. In general, the Property is rectangular in shape and has dimensions of approximately 2,630 feet east-west and 1,300 feet north-south. The Property is bisected by East Los Reales Road, which is not considered part of the Property. Pima County Parcel No. 140-39-052E is located to north and 140-39-052F is located south of Los Reales Road.

For the most part, the Property is undeveloped and covered in native desert vegetation. The former alignment of the paved Los Reales Road is presently parallel and near the southern Property line. The alignment then curves northward at the southeast corner of the Property and parallels the east property boundary as Craycroft Road. An unpaved road parallels Craycroft Road at the east property line. Primitive roads crisscross the north and east portions of parcel 140-39-052F. A storm water retention basin is located on the west side of parcel 140-39-052F. Storm water culverts are located under Los Reales Road at a wash crossing located approximately 100 feet southwest of the retention basin and near the northwest corner of the retention basin. The north property line is bounded by a block wall where houses are located on adjoining property and a barbed wire fence to the east. A chain link fence is located along the west property line and the south side of Los Reales Road. Barbed wire fencing encloses a majority of the remainder of the Property.

Two City of Tucson groundwater monitoring/extraction wells (WR-470 & -471A) are located on the northwest corner of the Property, and monitoring well WR-465A is located near the north-central property line.

2.2.1 Heating and Cooling Systems

No structures were located on the Property during the time of the site reconnaissance.

2.2.2 Utilities

The on-site utilities consisted of the following:

- Water - Tucson Water (fire hydrants observed)
- Electrical - Tucson Electric Power (to well sites)
- Wastewater - Sewer line crosses northeast portion of Parcel 140-39-053E
- Refuse - None observed
- Gas - None observed

2.3 Adjoining Property Use

As part of CTEC's assessment, a visual reconnaissance of the properties adjoining the Property was conducted. Major roadways/properties which adjoin the Property are as follows:

- North - Single family residences (west) and auto auction business (east)
- Northwest - Early Avenue (unpaved) followed by single family residences
- West - Early Avenue (unpaved) followed by trucking, construction, equipment rental and solid waste transport companies. The northern 450 feet of adjoining properties is across a concrete storm water culvert
- Southwest - Intersection Early Avenue and Los Reales Road followed by the Los Reales Landfill
- South - Los Reales Landfill
- Southeast - Los Reales Landfill

- East - Paved Craycroft road followed by vacant land (north) and unpaved road followed by vacant land, mobile homes and a small roll-off container business (south)
- Northeast - Craycroft Road followed by vacant land

CTEC viewed the adjoining properties from the Property and/or public roadways for visual evidence of significant chemical storage, improper waste disposal, or other indications of adverse environmental conditions. The Los Reales Landfill is an active solid waste facility and is located on adjoining property to the south. The landfill produces methane and other landfill gasses. Landfill gas monitoring probes were observed along the north property line of the landfill. Soil was observed to be located on the pavement at two locations along the former Los Reales Road on the southern portion of the Property indicting storm water transport from the landfill onto the Property. Three apparent empty 55-gallon drums and two five-gallon buckets were observed at a construction company located on adjoining property to the west. No spillage from the drums or containers was noted. Adjoining property to the west of the southwest corner of the Property consisted of an equipment company with two trailer-mounted tanks labeled as containing a total of 540 gallons of gasoline and diesel fuel. No spillage was observed. An automobile auction business was observed on adjoining property to the north of the northeast corner of the Property. No repair or fueling facilities were observed near the Property boundary. No improper waste disposal or storage was observed by CTEC on adjoining properties.

2.4 Project Vicinity General Characteristics

General land uses within the ½-mile Project Vicinity consists of the following: landfill, single family residences, undeveloped land and light-industrial properties. CTEC viewed the ½-mile Project Vicinity from public roadways for visual evidence of significant chemical storage, improper waste disposal, or other indications of adverse environmental conditions. The Los Reales Landfill is an active municipal solid waste disposal facility which produces landfill gasses. Light-industrial facilities likely store and use petroleum and chemicals in their operations. No visual evidence of improper waste disposal or other indications of adverse environmental conditions were observed by CTEC.

3.0 USER PROVIDED INFORMATION

A User Environmental Questionnaire was completed by Mr. David Barraza, City of Tucson, Environmental Services. A copy of the completed User Questionnaire is presented in Appendix C.

3.1 Review of Reasonably Ascertainable Title & Judicial Records for Environmental Liens and Activity and Use Limitations (AULs)

The User requested that CTEC contract with a company to conduct a search for the existence of environmental liens and AULs that are recorded against the Property. A review of AULs-related title records was conducted by All Lands and is presented in Section 6.3. The User stated in the User Questionnaire that they were unaware of any environmental liens or AULs associated with the Property.

3.2 Actual Knowledge of the User

The User has no actual knowledge of any environmental lien or AULs encumbering the Property on in connection with the Property.

3.3 Specialized Knowledge

According to information provided in the User Environmental Questionnaire, the User does not have specialized knowledge related the Property other than it has been undeveloped land and is currently owned by the City of Tucson. The User is aware that adjoining property to the south is the City of Tucson Los Reales Landfill which is an operating solid waste disposal facility established in 1963. The landfill consists of lined and unlined portions.

3.4 Reason for Significantly Lower Purchase Price

According to information provided by the User, the Property is currently owned by the City of Tucson and its fair market value is not known at this time.

3.5 Commonly Known or Reasonable Ascertainable Information

According to information provided by the User in the Environmental Questionnaire, the User is not aware of other commonly known or reasonably ascertainable information within the local community about the Property, including the following:

- Past uses of the Property
- Specific chemicals that are present or once were present at the Property
- Spills or other chemical releases that have taken place at the Property
- Environmental cleanups that have taken place at the Property

3.6 Degree of Obviousness

The User is aware of a groundwater contamination plume which originates from the Los Reales Landfill on adjoining property to the south. The plume extends under the Property. The City has operated a pump and treat system which decreased the plume size and contaminants.

4.0 RECORDS REVIEW

The following sections are based on public information obtained from various federal, state, tribal and local agencies (as appropriate) that maintain environmental regulatory databases. These databases contain information about facilities or sites that have reported incidents involving hazardous materials or inappropriate use, storage, or transportation of such materials. Information was gathered by CTEC personnel and by a professional data search service (All Lands of Goodyear, Arizona). CTEC personnel reviewed the information that appeared on these lists. In this case, the Property parcel numbers were used to provide a controlled area for the data search. All references to groundwater flow direction are based on an assumed northwesterly direction (City of Tucson Water, 2013). A discussion of the reviewed information

is presented in the following sections. The data provided by All Lands are presented in Appendix D.

REGULATORY DATABASE SEARCH SUMMARY

Database	Date of Database	Approximate Minimum Search Distance (miles)	Reported Facilities
Standard Federal ASTM Environmental Record Sources			
NPL (National Priorities List) / Proposed NPL / DOD (Department of Defense Sites)	10/13	1.0	0
Delisted National Priorities List	10/13	0.5	0
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)/No Further Remedial Action Planned (NFRAP)	10/13	0.5	1
RCRA (Resource Conservation and Recovery Act) Large and Small Quantity Generators	10/13	0.125	2
RCRA – CORRACTS TSDFs (Corrective Action Treatment, Storage, and Disposal Facilities)	10/13	1.0	0
RCRA – Non-CORRACTS TSDFs	10/13	0.5	0
ERNS (Emergency Response Notification System)	10/13	0.125	0
Standard State ASTM Environmental Record Sources			
WQARF (Water Quality Assurance Revolving Fund) Areas	10/13	1.0	1
Superfund Program List (replaces ACIDS)	08/04	0.5	1
Solid Waste Facilities/Landfill Sites – Operating and Closed	05/99 & 05/04	0.5	1
Engineering Control Registries	10/13	Site	0
Brownfields / Voluntary Remediation Program	10/13	0.5	1
Registered USTs (Underground Storage Tanks)	01/10	0.125	0
LUSTs (Leaking Underground Storage Tanks) Incident Reports	01/10	0.5	3
Additional Environmental Record Sources			
RCRA Compliance Facilities	11/09	0.125	0
Hazardous Materials Incidents Emergency Response Logbook	1984-06/01	0.125	1
ADEQ Drywell Registration Database	10/13	0.125	0
Environmental Permits	10/13	Site	0
VEMUR / DEUR / LIENS / DEURTRACKER	10/13	Site	0
DRYCLEANER	06/06	0.125	0

4.1 Standard Environmental Records Sources

The following sections present information concerning the Standard Environmental Records as defined in Section 8.2.1 of ASTM Standard Practice E1527-13. These records are divided between Federal and State. Numerous databases were obtained from All Lands and were

examined by CTEC. A summary of these reports, and the radii from the Property that they cover, are presented below.

4.1.1 National Priorities List

The National Priorities List (NPL), or Superfund Sites List, is the United States Environmental Protection Agency's (EPA's) database of uncontrolled or abandoned hazardous waste sites identified for priority investigations and, as appropriate, remedial actions under the Superfund Program. The US EPA also maintains a database of proposed NPL sites that are awaiting review.

A review of the October 2013 NPL and Proposed NPL databases indicated that the Property is not located within one mile of a NPL site.

4.1.2 Delisted National Priorities List

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR300.425(e), sites may be deleted from the NPL when no further response is appropriate.

A review of the October 2013 Delisted NPL database indicated no sites relative to the Property or the ½-mile search radius.

4.1.3 Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List

The federal CERCLA legislation (Superfund) was authorized to finance the cleanup of abandoned disposal sites throughout the United States.

A search of the October 2013 CERCLIS database indicated no listing for the Property or the ½-mile search radius.

4.1.4 CERCLIS No Further Remedial Action Planned (NFRAP) List

The NFRAP list, also known as the CERCLIS archive, contains information pertaining to sites which have been removed from the US EPA's CERCLIS database. NFRAP sites may be sites where, following an initial investigation, either no contamination was found, contamination was removed quickly without need for the site to be placed on the NPL, or the contamination was not serious enough to require federal Superfund action or NPL consideration.

A search of the October 2013 CERCLIS NFRAP database indicated no listing for the Property and one listing within the ½-mile search radius. The Los Reales Landfill, located on adjoining property to the south, is listed. This site is discussed in detail in Section 4.1.9 of the report.

4.1.5 Resource Conservation and Recovery Information System (RCRIS) Generators

The RCRIS-Generator database, maintained by the US EPA, lists facilities that have notified the US EPA that they generate hazardous waste. There are three categories of hazardous waste generators:

1. Generators of no more than 100 kilograms per month (kg/mo.), known as conditionally-exempt small quantity generators.

2. Generators of 100 to 1,000 kg/mo., known as small quantity generators.

3. Generators of 1,000 kg or more in a month, known as large quantity generators.

A review of the October 2013 RCRIS-Generators database indicated no listing for the Property and the following listings for adjoining properties:

EPA ID	Facility	Address	Notification Date	Status
AZD982436461	Dealers Auto Exchange Of Tucson	7090 S Craycroft	10/31/2008	CEG
AZR000032573	Los Reales Landfill	5300 E Los Reales Rd	2/10/2005	N

CEG: Conditionally exempt small quantity generator (less than 100 kg per month)
N: Not a generator verified or inactive generator

4.1.6 RCRA TSD Corrective Action Sites List

The EPA maintains the RCRA Corrective Action Sites (CORRACTS) list, which identifies facilities that are undergoing "corrective action" under RCRA. A "corrective action order" is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA-regulated facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA.

A review of the October 2013 CORRACTS database indicated no information relative to the Property or the 1-mile search radius.

4.1.7 RCRA Transportation, Storage and Disposal Facilities (TSD)

The US EPA's RCRA Program mandates that a compilation of facilities that receive, transport, store, or dispose of hazardous waste be maintained. The Arizona Department of Environmental Quality (ADEQ) maintains the RCRA TSD Facilities database for the state of Arizona.

A search of the October 2013 RCRIS-TSD database indicated no listings for the Property or the ½-mile search radius.

4.1.8 Emergency Response Notification System (ERNS)

The Emergency Response Notification System (ERNS) is a national database, which compiles information on reported releases of petroleum and hazardous substances. The database contains information from spill reports made to federal authorities including the US EPA, the US Coast Guard, the National Response Center and the Department of Transportation.

A search of the ERNS database, dated October 2013, indicated no listings relative to the Property or adjoining properties.

4.1.9 Water Quality Assurance Revolving Fund (WQARF) Program

The State of Arizona has established the Water Quality Assurance Revolving Fund (WQARF) program to perform investigations and conduct remedial action activities at sites that may have an actual or potential impact upon waters of the state caused by hazardous substances. The WQARF program is the State of Arizona equivalent to the federal Superfund program (CERCLA).

The ADEQ Annual WQARF Registry List dated October 2013 was reviewed to determine if the Property lies within the boundaries of an on-going or proposed project or study area. A review of the project list indicated that the Property lies within the Los Reales WQARF Site.

Los Reales Landfill is an active municipal solid waste landfill located on adjoining property to the south. The site is regulated by the ADEQ under the Solid Waste Unit, the Water Quality Assurance Revolving Fund (WQARF) program and the Voluntary Remediation Program (VRP). Groundwater contamination of tetrachloroethene (PCE) and trichloroethene (TCE) above regulatory standards has been detected along with other volatile organic compounds (VOCs) at concentrations below regulatory standards from the older, unlined portion of the landfill. The City is operating a groundwater pump and treat system to contain and cleanup the contaminated groundwater. Treated water is used for dust control and is also re-injected into the groundwater. The City is required to report the amount of groundwater extracted annually to the Arizona Department of Water Resources (ADWR). The City entered the VRP program for the remediation and closure of the Southwest Disposal Area (SWDA), an area of the landfill which accepted industrial waste from 1977 to 1980. The City briefly operated a deep soil vapor extraction system at the SWDA to remove VOCs to prevent vapors from contaminating groundwater. Methane extracted from the landfill gas system is sent to Tucson Electric Power Company and used to provide electricity to the community.

According to the ADEQ map provided by the WQARF Section, the contaminant plume is located under the western third of the Property. The contaminant plume consists of PCE above the EPA established Maximum Contaminant Level (MCL) of 5 micrograms per liter (µg/L).

4.1.10 Arizona Superfund Program List

The Arizona Superfund Program List replaces the Arizona CERCLIS Information Data System (ACIDS) list. This list is more representative of the sites and potential sites within jurisdiction of the ADEQ Superfund Programs Section (SPS). The inclusion of a particular facility on this

database does not necessarily indicate that the site is contaminated, is causing contamination, or is in violation of state or federal statutes and regulations. The listing implies that, due to the nature of activities conducted at these locations, a potential for the previously mentioned conditions exists.

A review of the August 2004 Arizona Superfund Program List indicated that the Property is located within the ½ mile search radius of the Los Reales Landfill site. This site is discussed in Section 4.1.9 of this report.

4.1.11 Landfills/Solid Waste Facilities

The state of Arizona maintains listings of closed and operating landfills and solid waste dump sites. Lists of closed facilities are not necessarily complete, older dumping areas may not be documented. This database is from the ADEQ Waste Programs Division, Solid Waste Section, Directory of Arizona Active and Inactive Landfills dated May, 1999 and May, 2004, respectively.

A review of these directories indicated one listing involving active or inactive solid waste landfills within the ½-mile search radius. The Los Reales Landfill is an active municipal solid waste landfill located on adjoining property to the south.

4.1.12 Control Registries

The ADEQ has developed the AZURITE Database to track institutional and engineering controls for environmentally impacted sites.

Review of the October 2013 AZURITE Database revealed no institutional or engineering controls for the Property or adjoining properties.

4.1.13 Brownfields / Voluntary Cleanup Program (VRP)

The ADEQ has developed the AZURITE Database which includes the Voluntary Remediation Program and Brownfields Tracking System.

Review of the October 2013 AZURITE Database revealed no listing for the Property and one site within the ½-mile search radius. The Los Reales Landfill is listed as an active VRP site. The Southwest Disposal Area is indicated as having VOC soil contamination.

4.1.14 Underground Storage Tank (UST) List

Under Subtitle I of the 1984 RCRA Amendments, owners of USTs that contained regulated substances were required to notify (register) the designated state agency of the existence of the tank(s) by May 1986. As the designated agency in Arizona, the ADEQ maintains a list of “registered” USTs in the state.

The ADEQ UST list, dated January 2013, was reviewed to determine the number and location of registered USTs on the Property and adjoining properties. A review of the list indicated no listing for the Property or adjoining properties.

4.1.15 Leaking Underground Storage Tank (LUST) List

The ADEQ maintains an inventory of known or reported incidents involving LUSTs. The LUST list, dated January 2013, indicated no listing for the Property and the following sites within the ½-mile search radius.

ID	LUST ID NO	FACILITY	ADDRESS	DATE OPEN	DATE CLOSED	P CODE	DIST./ DIRECTION
0-005199	0183.01 0183.02 0183.03 0183.04	Tucson Truck Terminal Inc	5451 E Benson Hwy	6/2/1986 7/22/1988 7/22/1988 9/15/1997	8/14/2008 11/15/2006 11/15/2006 11/26/1997	5G1 5R1 5R1 5S	0.3 mi. N
0-002022	2213.01	Exxon # 7-6390	5471 E Benson Hwy	3/6/1992	5/17/2000	5R1	0.3 mi. N
0-001331	4139.01 4139.02 4139.03 4139.04	Circle K # 843	6750 S Craycroft	6/30/1995 6/30/1995 6/30/1995 6/30/1995	2/27/1997 2/27/1997 2/27/1997 2/27/1997	5R1 5R1 5R1 5R1	0.4 mi. N

P CODE (Leaking UST Priority):

5R1 Closed soil levels meet RBCA
5S Closed case for suspected release (false alarm)
5G1 Closed soil/groundwater levels meet RBCA Tier I

4.2 Regulatory Agency File and Records Review

According to ASTM Section 8.2.2.1, if the Property or any of the adjoining properties is identified on one or more of the standard environmental records sources, pertinent regulatory files and/or records associated with the listing should be reviewed. Pursuant to ASTM Section 8.2.2.2, as an alternative to the above, the environmental professional may review files/records from an alternative source such as on-site records, user provided records, records from local government agencies, interviews with regulatory officials or other individuals knowledgeable about the environmental conditions that resulted in the standard environmental record source listing.

Review of regulatory databases revealed that there are no listings for the Property. However, the following two adjoining properties are listed: Los Reales Landfill and Dealers Auto Exchange of Tucson.

The Dealers Auto Exchange was listed as a conditionally except small quantity RCRA generator. Review of the EPA Envirofacts Website revealed that there are no violations listed under the Enforcement and Compliance Summary for this facility for the previous five years.

The Los Reales Landfill was found on the Standard Database Search for the following:

- CERCLIS-NFRAP
- RCRA Generator
- WQARF
- Superfund Program List

- VRP
- Operating Solid Waste Landfill

The Los Reales Landfill was listed as an inactive RCRA generator. Review of the EPA Envirofacts Website revealed that there are no violations listed under the Enforcement and Compliance Summary for this facility for the previous five years.

Review of the above list indicates that the CERCLIS-NFRAP, WQARF, Superfund Program List and VRP listed sites are related to VOC-contaminated groundwater and vapor contamination at the site. Ultimately, the WQARF site is the driving factor for the investigation and cleanup of contaminated groundwater at the site. Therefore, CTEC focused on reviewing WQARF-related files.

CTEC contacted Molly Collins, City of Tucson Environmental Services. She is the Los Reales Landfill WQARF Project Manager. Ms. Collins supplied CTEC with information concerning the Los Reales WQARF Site and landfill gas data for the active landfill. The most recent WQARF report for the site was reviewed:

- City of Tucson, Environmental Services, 2013. *January-June 2013 Report: Groundwater Monitoring and Treatment System Progress Report, Los Reales Landfill Water Quality Assurance Revolving Fund Site, Tucson, Arizona*. August 8, 2013.

According to the report, the Los Reales Landfill is an active municipal solid waste landfill, owned and maintained by the City of Tucson. The site is regulated by the ADEQ's Solid Waste Unit for the municipal solid waste activities, the WQARF program for groundwater monitoring and treatment and the VRP for capping the Southwest Disposal Area (SWDA). Groundwater contaminated with PCE and TCE above regulatory standards has been detected beneath the site. Other VOCs have been detected in groundwater at levels below the applicable regulatory standards. The City is operating a groundwater pump and treat system to contain and treat the contaminated groundwater. Soil vapor contaminated with VOCs beneath the SWDA, an area of the landfill which accepted industrial waste from 1977-1980, is periodically removed by deep soil vapor extraction (SVE) to prevent the vapor from further contaminating groundwater.

Review of the above report indicates that PCE-contaminated groundwater is present beneath the western portion of the Property at a concentration above the EPA established MCL of 5 µg/L. The report indicates that a current evaluation of remedial strategies has lead to a proposed long term transition to monitoring only approach which would be consistent with site remedial objectives and with WQARF rules. Of the three wells on the Property, WR-470A is listed as a shallow extraction well, WR-471A is a deep monitoring well and WR-465A is a shallow monitoring well. A copy of the above report is presented in Appendix E.

CTEC reviewed a second document recently completed for the WQARF Site with the following title:

- Montgomery & Associates, 2013. *Evaluation of Remediation Strategies, Los Reales Landfill, Water Quality Assurance Revolving Fund Site.* August 29, 2013.

Review of the above report revealed that detectable PCE and TCE concentrations in groundwater beneath the site ranged from 0.6 to 26.1 µg/L and 0.6 to 12.2 µg/L, respectively. The highest PCE and TCE concentrations were detected in monitor well WR-049A, located in the SWDA. PCE and TCE concentrations beneath the landfill are only characterized by one well, LLM-500. The distribution of PCE in groundwater suggests a broad source area, possibly indicative of a PCE vapor plume in the vadose zone. Laboratory analyses of landfill gas during this study indicated low concentrations of PCE. These data suggest that the landfill gas that migrates into the vadose zone beneath the landfill probably still contains PCE, at least in some areas of the landfill. The existing landfill gas extraction system results in some degree of source control by removing a portion of the landfill gas and reducing pressure in the landfill. The PCE groundwater plume has two distinct lobes that may indicate that more PCE mass flux to groundwater occurs in the southwest and north-central portions of the landfill. A copy of the above report is presented in Appendix E.

Molly Collins with the City of Tucson provided a copy of a figure with landfill gas monitoring points. She additionally submitted results for landfill gas monitoring for the year 2013. The following were reviewed by CTEC:

- City of Tucson, Environmental Services, 2011. Los Reales Landfill Gas Monitoring Probes Location Map. May, 2011.

- City of Tucson, Environmental Services, 2013. Los Reales Landfill Gas Monitoring Data.

Review of the data revealed no detectable methane for the probes located south of the Property. A copy of the landfill probe map is presented in Appendix E.

4.3 Additional Environmental Records Sources

The following sections present information concerning the Additional Environmental Records Sources as defined in Section 8.2.3 of ASTM Standard Practice E1527-13. Additional sources are used to enhance and supplement federal and state sources not identified in the Standard Environmental Record Sources presented above.

4.3.1 Resource Conservation and Recovery Act (RCRA) Compliance Facilities

The ADEQ maintains the RCRA Compliance Log which lists facilities that have been or presently are under investigation for non-compliance with RCRA regulations. Inclusion of any facility on this list indicates a history of compliance problems and RCRA regulatory violation.

A review of the October 2013 RCRA Compliance Log database indicated no information relative to the Property or adjoining properties.

4.3.2 Hazardous Material Incidents

The ADEQ Response Team previously documented spills and incidents involving hazardous materials that are reported to the unit. This database is from the ADEQ Emergency Response Log from 1984 through June, 2001.

A review of the ADEQ Emergency Response Log database indicated no responses for the Property and one response for adjoining properties. An incident occurred on January 30, 1993 at the Los Reales Landfill which reportedly involved an acidic liquid.

4.3.3 Dry Well Registry

A dry well is constructed for the controlled disposal of surface storm water run-off and may act as a conduit for contamination into the subsurface and/or groundwater. The ADEQ maintains the Dry Well Registration List.

Review of the Dry Well Registration List, dated October 2013, indicated no information relative to the Property.

4.3.4 Environmental Permits

Any facility which discharges a material that directly or indirectly adds any pollutant to the waters of the state may be required to obtain a permit. EPA and ADEQ databases containing the following permits were reviewed: Groundwater Permits, Reuse Permits, National Pollutant Discharge Elimination System permitted facilities and Aquifer Protection Permits.

Review of the databases, dated October 2013, indicated no permits issued for the Property.

4.3.5 Voluntary Environmental Mitigation Use Restrictions (VEMUR) & Declaration of Environmental Use Restrictions (DEUR)

Arizona Revised Statute 49-152 states that a property owner who has voluntarily elected to remediate their property for nonresidential uses must record in the applicable county recorder's office a VEMUR limiting the property, as necessary to protect public health and the environment, to nonresidential uses if contamination remains on the property at or above certain levels. In accordance with Arizona Administrative Code R18-7-201 et sec., a DEUR is a voluntary notice to the deed which restricts the use of a property to nonresidential use.

A search of Pima County Recorder's Office records on December 18, 2013 by All Lands revealed no VEMUR, DEUR, environmental liens or activity and use limitations recorded against the Property.

4.3.6 Drycleaners List

The Drycleaner's Inventory list was developed by the ADEQ and is dated June, 2006. Review of the list indicated no information in relation of the Property or adjoining properties.

4.3.7 Groundwater Well Registry

The Arizona Department of Water Resources (ADWR) maintains a groundwater well registry. CTEC's review of the ADWR well registry indicated the following three wells on the Property:

ADWR Registry No.	Well Name	Purpose	Owner	Well Depth	Location on Property
902792	WR-465A	Monitor	City of Tucson	240	North-central Property line
902793	WR-470A	Extraction	City of Tucson	240	Northwest Corner
902795	WR-471A	Monitor	City of Tucson	300	Northwest Corner

Please note that ADWR Well No. 583856, which was presented in the data provided by All Lands with a location on the Property, was permitted but not drilled.

5.0 PHYSICAL SETTING

The following subsections present information regarding the general physiographic, geologic, and hydrogeologic conditions in the Project Vicinity.

5.1 Surface Topography and Drainage

Based on the USGS 7.5-minute series topographic map “Tucson Southwest, Arizona Quadrangle," the Property varies from approximately 2,730 feet above mean sea level in the southeast corner of the Property to 2,710 on the western portion of the Property.

Storm water enters the property via overland flow from adjoining property to the south as apparent by soil which is present at two locations on the former Los Reales Road which is parallel to the south property line. These areas are located from approximately 850 to 1,050 feet east of the southwest corner of the Property. One small wash continues to the northwest and enters a culvert under the new Los Reales Road alignment and continues northwestward across the northwest portion of the Property. This water discharges across Early Avenue and into a concrete-lined channel on adjoining property to the west. A second wash enters the Property approximately 150 feet east of the first wash. This wash continues to the northwest and enters a storm water retention basin located on the west side of parcel 140-39-052F. A storm water culvert is located under Los Reales Road near the northwest corner of the retention basin. At the north end of the culvert, a channelized wash continues to the northwest towards the northwest corner of the Property.

5.2 Regional Geology

CTEC reviewed Water-Resources Report #87-4190, "Cenozoic Stratigraphy and Geologic History of the Tucson Basin, Pima County, Arizona" (Anderson, 1987) for information regarding regional geology. According to the report, the Property is underlain by the Fort Lowell Formation, which consists of approximately 300 feet of gravel and conglomerate, with varying amounts of clay and silt. The Fort Lowell Formation unconformably overlies the Tinaja Beds which consist of gravels, sands, mudstones, and clayey silts. The thickness of this unit, as well as the depth to bedrock beneath the Property, is unknown.

5.3 Regional Hydrogeology

The Property is located within the north-central portion of the Upper Santa Cruz Basin (USCB), in the Tucson Active Management Area (AMA) (Murphy and Hedley, 1984). The Tucson AMA lies within the Basin and Range Physiographic Province of the State of Arizona. The USCB is characterized by a broad, deep alluvial-filled basin bounded by block-faulted mountains. The alluvial fill serves as the primary source of groundwater. The local aquifer is part of the Santa Cruz Basin aquifer that underlies Tucson and surrounding cities and extends from northern Mexico to just north of Tucson. The uses of the groundwater include drinking water, irrigation, industry, and recreation. The primary recharge sources to the local aquifer are precipitation and runoff from nearby mountain ranges.

6.0 HISTORICAL USE OF THE PROPERTY & ADJOINING PROPERTIES

The Property history and land use were evaluated from information provided by the User as well as library research relating to the Property address, interviews with current Property owners/occupants, previous Property owners/occupants, local agencies and review of Sanborn maps, historical aerial photographs and topographical maps (as available). CTEC has attempted to identify obvious uses of the Property back to the first developed use of the Property, or 1940, whichever is earlier. This historical information is documented in the following subsections.

6.1 Previous Property Uses

Review of the above resources indicates that the Property has never been developed. An unpaved Los Reales Road has been presently parallel and near the south property line since at least the late 1940s. Craycroft Road has been parallel and just west of the east property line since at least the early 1950s. Beginning around the same time, an unpaved road was graded just east and parallel to the Craycroft Road alignment and was partly within the Property boundary. Beginning in the 1960s, primitive roads are present across the Property. Beginning in the late 1960s, debris were dumped on the Property, especially near the west property line (Early Avenue) and along the wash on the west portion of the Property from the original Los Reales Road to the northwest. Some minor grading has occurred along the wash on the western portion of the Property in an apparent attempt to channel storm water during this time period. By the late 1970s, Los Reales Road has been paved on the south portion of the Property. The late 1980s saw a decrease in wildcat dumping on the Property. By 2010, Los Reales Road was realigned through the center of the Property as depicted in Figure 2, and a storm water retention basin was located on the southwestern portion of the Property. Wildcat dumping occurred sporadically across the Property during the 2000s.

6.2 Previous Adjoining Property Uses

Los Reales Road has been present on adjoining property to the south since at least the late 1940s. Houses and trailers have been located on adjoining property to the east since at least the early 1950s. Circa 1960, Early Avenue was graded as an unpaved road parallel and just west of the west property line. During the same time, a gravel pit was located on adjoining

property to the south of Los Reales Road, and, circa 1967, this adjoining property is being used as an active landfill. By the late 1980s, commercial businesses were located west of Early Avenue and consisted of roll-off container companies and trash haulers. During the mid-1990s, an auto auction business was constructed north of the northeast portion of the Property. Additional businesses were constructed on adjoining property to the west through the early 2000s, and houses were constructed on adjoining property to the north by 2010.

6.3 Standard Historical Sources

The following sections present a discussion of the standard historical sources reviewed for this Phase I ESA. The scope of the Phase I ESA is not to identify, obtain or review every possible record that might exist with respect to the Property; rather, the scope is to review reasonably ascertainable record sources as defined under ASTM Practice E1527-13. According to Section 8.3.2.3 of the Practice, standard historical sources may be excluded if: (1) the sources are not reasonably ascertainable, or (2) if past experience indicates that the sources are not likely to be sufficiently useful, accurate or complete in terms of satisfying the objectives. This Phase I ESA has excluded the following historical sources as meeting the aforementioned criteria: property tax files, chain-of-title and zoning use records.

6.3.1 Aerial Photograph Review

Recent and historical aerial photographs were reviewed at Cooper Aerial Surveys Company in Tucson, Arizona. The review was completed to evaluate past uses and characteristics of the Property as well as the adjoining properties. The date and a brief description of each photograph are presented below:

1953 Aerial Photograph

The Property
The Property consists of undeveloped land covered with desert vegetation. A wash extends from the south property line in a northwest fashion towards the northwest corner of the Property. A second wash is present on the northeast portion of the Property and extends in a northwest direction. Heavier vegetation is present along the washes. Los Reales Road is unpaved and present parallel to the south property line until it reaches the southeast corner of the Property where it curves northward and becomes the unpaved Craycroft Road which parallels the east property line.

Adjoining Properties
North: undeveloped land
West: undeveloped land
South: Los Reales Road followed by undeveloped land
East: Craycroft Road followed by a parallel unpaved road, vacant land and houses/trailers

1960 Aerial Photograph

The Property
The Property remains undeveloped; however, an unpaved primitive road is present from the southeast corner of the Property towards the northwest.

Adjoining Properties
North: undeveloped land
West: unpaved Early Avenue followed by undeveloped land
South: Los Reales Road followed by a gravel pit
East: Craycroft Road followed by a parallel unpaved road, vacant land and houses/trailers

1967 Aerial Photograph

The Property
A copy of the 1967 aerial photograph is presented as Figure 3 in the Figures Section of this report. Debris is present along the wash from Los Reales Road to the northwest where it intercepts Early Avenue. A primitive road parallels this wash and intersects with Early Avenue on the northwest corner of the Property. A swath of graded soil is present on the west side of the wash halfway between Los Reales Road and Early Avenue. This grading appears to be an attempt to divert storm water.

Adjoining Properties
North: undeveloped land
West: unpaved Early Avenue followed by undeveloped land
South: Los Reales Road followed by a gravel pit with landfill operations to the southwest (no on adjoining property)
East: Craycroft Road followed by a parallel unpaved road, vacant land and houses/trailers

1973 Aerial Photograph

The Property
A copy of the 1973 aerial photograph is presented as Figure 4 in the Figures Section of this report. A small amount of debris is present along the wash discussed above. Vegetation is reappearing on the swath of graded soil present on the west side of the wash half way between Los Reales Road and Early Avenue. A primitive road is present on the northwest corner of the Property.

Adjoining Properties
North: undeveloped land
West: unpaved Early Avenue followed by undeveloped land
South: Los Reales Road followed by large landfill operation
East: Craycroft Road followed by a parallel unpaved road, vacant land and houses/trailers

1979 Aerial Photograph

The Property and Adjoining Properties
A copy of the 1979 aerial photograph is presented as Figure 5 in the Figures Section of this report. No debris is apparent within the Property on the photo. Los Reales Road has been paved on the south portion of the Property. Adjoining properties remain relatively unchanged from the 1973 aerial.

1988 Aerial Photograph

The Property
There is no observed wildcat dumping on the Property. However, dumping is observed along Early Avenue and to the west. Craycroft Road has been paved.

Adjoining Properties
North: graded land north of the east portion of the Property; otherwise undeveloped land
West: unpaved Early Avenue followed by a commercial building, parked trucks and roll-off containers.
South: Los Reales Road followed by large landfill operation
East: Craycroft Road followed by a parallel unpaved road, vacant land and houses/trailers

1994 Aerial Photograph

The Property
There is no observed wildcat dumping on the Property. Several new primitive roads are present on the north portion of the Property.

Adjoining Properties
North: parking lot and commercial building north of the east portion of the Property; otherwise undeveloped land
West: unpaved Early Avenue followed by two commercial buildings, parked trucks and numerous residential trash containers.
South: Los Reales Road followed by large landfill operation
East: Craycroft Road followed by a parallel unpaved road, vacant land and houses/trailers

2000 Aerial Photograph

The Property & Adjoining Properties
There is no observed wildcat dumping on the Property. The Property and adjoining properties remain relatively unchanged with the exception that a total of five commercial buildings are now present west of Early Avenue.

2005 Aerial Photograph

The Property & Adjoining Properties
The Property and adjoining properties remain relatively unchanged with the exception that a an unpaved road is present just north and parallel to the north property line. Areas of wildcat dumping are present throughout the northern portion of the Property. The debris pile is approximately 25 feet in diameter. Some debris is present sporadically on the southeast portion of the Property.

2010 Aerial Photograph

The Property & Adjoining Properties
Los Reales Road has been realigned to pass through the Property (Figure 2). A graded area approximately 400 feet northeast-southwest and 150 feet northwest-southeast is present just east of the road on the west side of the Property. This appears to be a storm water detention basin. Houses have been constructed on adjoining property to the north. Debris is present on the north-central portion of the Property and sporadically on the southeast portion of the Property.

6.3.2 Fire Insurance Map Review

CTEC personnel reviewed Sanborn Map directories at the Arizona Historical Society Museum in Tucson, Arizona. The Property is presented on neither the detailed nor large scale maps for the years 1901 through 1960.

6.3.3 Recorded Land Title Records

A chain-of-title review was not part of the scope of this Phase I ESA.

All Lands, Inc., of Goodyear, Arizona completed a review of title records which is presented in Appendix B. According to research conducted by All Lands, Inc., no Voluntary Environmental Mitigation Use Restriction (VEMUR), Declaration of Environmental Use Restriction (DEUR), environmental liens or activity/use limitations were found recorded against the Property as searched at the Pima County Recorder's Office on December 18, 2013.

6.3.4 Topographic Map Review

CTEC reviewed the U.S. Geological Survey (USGS) maps for the Project Vicinity. The following items were noted:

1905 Tucson 30-Minute Topographic Map
No structures or roads are indicated on the Property or adjoining properties.

1948 Tucson 15-Minute Topographic Map
No structures are indicated on the Property or adjoining properties. Los Reales Road is presented as an unpaved road parallel and near the south property line.

1957 Tucson 15-Minute Topographic Map
No structures are indicated on the Property; three house-size structures are located on adjoining property to the east. Los Reales Road is presented as a paved road parallel and near the south property line and Craycroft Road is present as a paved road parallel and near the east property line.

1968 Tucson Southwest, 7.5-Minute Topographic Map
No structures are indicated on the Property. Early Avenue is located parallel to a near the west property line on adjoining property. No structures are located on adjoining property to the east of Craycroft Road.

1983 Tucson Southwest, 7.5-Minute Topographic Map
No structures are indicated on the Property. A primitive road is present from the southeast corner to the northeast portion of the property line. A sanitary landfill is referenced on adjoining property to the south. Approximately eight house-size structures are indicated on adjoining property to the east.

1992 Tucson Southwest, 7.5-Minute Topographic Map
No structures are indicated on the Property. A primitive road is present along the Early Avenue alignment. Several buildings are now located on adjoining property to the north of the eastern portion of the Property. Adjoining property to the south is labeled as a 'borrow pit'. Adjoining property to the east remains unchanged.

1996 Tucson Southwest, 7.5-Minute Topographic Map
No structures are indicated on the Property. Two commercial buildings are located on adjoining property to the west. An east-west paved road is indicated parallel to the north property line at the auto auction business on adjoining property to the north. Adjoining properties to the south and east remain unchanged.

6.3.5 City Directory Review

CTEC reviewed historical Cole City Directories at the main Pima County Public Library in downtown Tucson, Arizona. The Property has no assigned address. The Property is bounded by the south 7100-7200 blocks of Craycroft Road to the east and South Early Avenue to the west. Adjoining properties to the west appear to have addresses on Frances Avenue rather than Early Avenue. The Property is bounded by the east 5000 to 5500 blocks of Los Reales Road to the south and Desert Straw Lane to the north. Finally, Corona Road is present at the north terminus of Frances Avenue to the west of the Property, and adjoining property to the west of the northwest corner of the Property has an address of 5061 E Corona Road.

1940, 1944, 1953, 1960, 1965, 1971 & 1976 City Directories
There are no listings for the above referenced roads and avenues in the Project Vicinity.

1981 & 1986 City Directories
Adjoining properties to the east are listed as residences in the 7100 and 7200 blocks of South Craycroft Road.

1992 & 1997 City Directories

An auto auction is listed on adjoining property to the north at 7090 South Craycroft Road. Frances Avenue to the west has listings for Roadrunner Roll-offs and APC Equipment. Adjoining properties to the east are listed as residences in the 7100 and 7200 blocks of South Craycroft Road.

2002, 2007 & 2012 City Directories

Adjoining properties to the east remain listed as residences. The 2012 directory indicates houses on adjoining property to the north along Desert Straw Lane. Adjoining properties to the west are listed as fiberglass, equipment, waste transport and septic service companies. The adjoining address on Corona Road to the west is first listed as a glass company in the 2012 directory.

6.3.6 Building Records

Historical building permits were reviewed on the City of Tucson online database. Review of the records was conducted by using the Property's two parcel numbers. No permits related to construction were present. However, a rezoning file and map for were found for parcel 140-39-052F.

6.4 Other Historical Sources

Other historical sources are those other than designated by ASTM E1527-13 as Standard Historical Sources. The following sections present the information revealed though this research process.

6.4.1 City Water Department Records

According to personnel at the Tucson Water, the Project Vicinity is served by the public utility; however, no meter is on record for the Property.

6.4.2 Sewer Department Records

According to Pima County Wastewater records, there is no record of a sewer connection to the two Pima County Parcel Numbers assigned to the Property. A sewer line is indicated extending from Craycroft Road along Los Reales Road for approximately 1,100 feet to the west and then northward across the Property to Desert Straw Lane.

6.4.3 Fire Department Records

CTEC requested a listing of all potential hazardous material (HAZMAT) responses to the Property conducted by the Tucson Fire Department (TFD). In addition, CTEC requested any environmental information (e.g., inspections, above and underground storage tank and chemical storage records) related to the Property from the TFD Fire Prevention & Inspection Unit. TFD staff indicated that records are address based, and, since the Property does not have an assigned address, no files can be matched to the Property.

6.5 Previous Investigations Review

Mr. Barraza stated that he was not aware of a previous Phase I ESA report for the Property. Sampling of groundwater monitoring wells located on the Property is discussed above in Section 4.2.

7.0 SITE RECONNAISSANCE

The purpose of CTEC's site reconnaissance was to obtain visual information which would indicate the presence of a recognized environmental condition. Mr. Gerry Yarab, R.G., of CTEC visited the Property on January 15, 2014.

7.1 Methodology & Limiting Conditions

CTEC personnel observed property conditions by walking the exterior of the Property. Photographs depicting Property conditions at the time of CTEC's assessment are presented in the Photographic Log Section of this report.

7.2 Exterior Observations

The Property Detail Map is presented as Figure 2. In general, the Property is rectangular in shape and has dimensions of approximately 2,630 feet east-west and 1,300 feet north-south. The Property is bisected by East Los Reales Road, which is not considered part of the Property. Pima County Parcel No. 140-39-052E is located to north and 140-39-052F is located south of Los Reales Road.

For the most part, the Property is undeveloped and covered in native desert vegetation. The former alignment of the paved Los Reales Road is presently parallel and near the southern Property line. The road then curves northward at the southeast corner of the Property and parallels the east property boundary as Craycroft Road. An unpaved road parallels Craycroft Road at the east property line.

A storm water retention basin is located on the west side of parcel 140-39-052F. Storm water culverts are located under Los Reales Road at a wash crossing located approximately 100 feet southwest of the retention basin and near the northwest corner of the retention basin. Primitive roads crisscross the north and east portions of parcel 140-39-052F.

The north property line is bounded by a block wall where houses are located on adjoining property and a barbed wire fence to the east. A chain link fence is located along the west property line and the south side of Los Reales Road. Barbed wire fencing encloses a majority of the remainder of the Property.

Two City of Tucson groundwater monitoring/extraction wells (WR-470 & -471A) were observed on the northwest corner of the Property, and monitoring well WR-465A was observed near the north-central property line.

A summary of each exterior area of the Property is presented below. Due to the size of the Property and lack of landmarks, the locations of items discussed below were documented with a handheld GPS. The latitude and longitude of specific locations are presented in parentheses.

7.2.1 Hazardous Substances and Petroleum Products - Use, Storage & Disposal

CTEC visually assessed the exterior portion of the Property for the use, storage or disposal of hazardous and/or other regulated materials. A partially buried five-gallon bucket (Photo 16) was observed on the northwest portion of the Property (32.12218/110.88169). The bucket was observed to be partially filled with soil with unknown additional contents. A pile of white stucco (Photo 12), approximately 15 feet in diameter and six-inches high was observed on the northwest portion of the Property (32.12239/110.88195). The stucco may contain asbestos.

7.2.2 Storage Tanks

During CTEC's site reconnaissance, no visual evidence of a UST (*e.g.*, fill ports, vent pipes or dispensers) or above ground storage tank (AST) was observed on the Property.

7.2.3 Odors

No significant odors were present on the Property.

7.2.4 Pools of Liquid

No pools of liquid were observed on the Property. CTEC did observe standing water within an earthen bermed area on adjoining property to the south (Photo 25). This standing water was located approximately 850 feet east of the southwest corner of the Property and was located south of a portion of the paved former Los Reales Road which was covered with soil.

7.2.5 Drums

No drums were observed on the Property.

7.2.6 Polychlorinated Biphenyls (PCBs) - Electrical Transformers

Electrical distribution transformers tend to be of two types: pole-mounted or pad-mounted. Most pole- and pad-mounted transformers are owned and/or maintained by the local power company. Some older electrical distribution transformers may contain a dielectric fluid containing PCBs, which are regulated by the federal EPA. During the on-site assessment, no transformers were observed on the Property.

7.2.7 Pits, Ponds, Sumps or Lagoons

No ponds, sumps or lagoons were observed on the Property. A storm water retention basis was observed on the west side of parcel 140-39-052F.

7.2.8 Surface Staining or Corrosion

No surface staining or corrosion was observed on the Property. Gray sediment was observed on the surface of a small channelized wash located north of the northern culvert under Los

Reales Road (Photo 11). This wash is located downstream of the storm water basin, and similar sediment was observed at the south entrance to the culvert at the northwest corner of the basin.

7.2.9 Stressed Vegetation

CTEC did not observe any areas of stressed vegetation on the Property.

7.2.10 Solid Waste, Storage and Disposal

Scattered small-size debris, primarily broken glass and metal, are present throughout the Property but are present more abundantly on the north parcel (140-39-052E) and the western portion of the Property. Figure 2 presents two large areas with dense surficial debris consisting primarily of broken glass (Photo 9). The west side of parcel 140-39-052E contains numerous small piles of debris consisting primarily of broken concrete and soil (Photos 4 & 8). Some landscape debris is located on the southwest corner of this parcel, and occasional automobile tires are present throughout the Property. A large pile of soil and concrete (Photo 8) is located just north of Los Reales Road on the northern parcel north of the wash (32.12064/110.88199).

Two areas of potentially buried waste material were observed near the west property line. These two areas are indicated on Figure 2. The northern disturbed area is located from 32.12171/110.88357 to 32.12142 and has dimensions of approximately 100 feet north-south and 20 feet east-west (Photo 5). At the southwest corner of parcel 140-39-052E, partially buried debris (Photos 6 & 7) was observed (32.11975/110.88357).

7.2.11 Wastewater and Septic systems

No concrete caps or other piping indicating a potential septic system were noted. No sewer manholes or other indication of a sewer line was observed on the Property. No sewer manholes were observed on the Property. A sewer manhole was observed on the north side of Los Reales Road.

7.2.12 Wells

Two City of Tucson groundwater monitoring/extraction wells, WR-470 & -471A (Photo 1), are located on the northwest corner of the Property and monitoring well WR-465A (Photo 13) is located near the north-central property line.

7.2.13 Storm Water

Storm water enters the property via overland flow from adjoining property to the south as apparent by soil which is present at two locations on the former Los Reales Road which is parallel to the south property line. One small wash continues to the northwest and enters a culvert under the new Los Reales Road alignment and continues northwestward across the northwest portion of the Property and discharges across Early Avenue. The storm water then enters a concrete-lined channel on adjoining property to the west.

A second wash enters the Property approximately 150 feet east of the first wash. This wash continues to the northwest and enters the storm water retention basin located on the west side of parcel 140-39-052F. A storm water culvert is located under Los Reales Road near the northwest corner of the retention basin. At the north end of the culvert, a small channelized wash continues to the northwest towards the northwest corner of the Property.

7.2.14 Dry Wells/Storm Drains

A dry well is constructed for the discharge of storm water into the subsurface. Dry wells may act as a conduit for contaminated storm water to impact deep soil and groundwater. Storm drains typically direct storm water to off-site waterways or on-site retention areas. No visual evidence of dry wells or storm drains were observed on the Property.

7.3 Interior Observations

No structures were observed on the Property.

8.0 INTERVIEWS

CTEC interviewed persons with significant knowledge of the Property as part of the assessment. The following subsections present a summary of CTEC's interviews.

8.1 Present Owners/Occupants

CTEC interviewed Ms. Molly Collins, City of Tucson Environmental Services. Ms. Collins is the project manager for the Los Reales Landfill WQARF Site. According to Ms. Collins, a groundwater contaminant plume extends from the Los Reales Landfill to under the western portion of the Property. This PCE plume which is present beneath the Property exceeds the EPA MCL for PCE. She stated that the contaminated groundwater is being remediated through an on-going pump and treat system which is overseen by the ADEQ WQARF Program. Ms. Collins stated that there has not been a soil gas sampling program for the Site since 1993; and that sampling occurred within the landfill waste material. She was unaware of any methane detections along the north perimeter monitoring probes south of the Property. Ms. Collins provided landfill gas monitoring records for the landfill which indicated no detectable methane concentrations for the gas probes located along the north perimeter of the landfill closest to the Property. She additionally provided documents relating to the WQARF investigation and remediation which are discussed in Section 4.2 of this report.

CTEC interviewed Mr. David Barraza with the City of Tucson Environmental Services. Mr. Barraza completed the User Questionnaire. In addition, Mr. Barraza completed the owner questionnaire as a representative of the City of Tucson, current owner of the Property. Copies of the completed questionnaires are presented in Appendix C of this report. According to Mr. Barraza, the Property consists of undeveloped land. He is aware that there has been historical wildcat dumping of debris on the Property. The storm water basin on the Property was constructed along with the new Los Reales Road alignment. He stated that the Los Reales Landfill has operated on adjoining property to the south since 1963. According to Mr. Barraza the older portions of the landfill are unlined, and the new cells are being lined per current state

law. He was not aware of any chemical release on the Property, and he had no knowledge of the reported 1993 ADEQ HAZMAT response to the landfill. He is aware that a groundwater contaminant plume is present beneath a portion of the Property and is undergoing pump and treat remediation. According to Mr. Barraza, the Property is planned to be used for the expansion of the Environmental Services administration buildings, scale house and self-hauler collection center. According to Mr. Barraza, he was aware of no drywell, septic systems, buried material or imported fill soils on the Property. He was not aware of the presence or former presence of any UST the Property.

CTEC interviewed Mr. Marin Bey, City of Tucson Environmental Services, Los Reales Landfill Manager. He stated that he has been the landfill manger since May 2013. According to Mr. Bey, the water observed just south of the landfill fence line discussed in Section 7.2.4 was due to overwatering of landscaping. This occurred because of flushing of the groundwater remediation system. He stated that he was not aware of any significant recent wildcat dumping on the Property.

8.2 Previous Owners/Occupants

According to land title documents presented in Appendix B, the Property was purchased by the City of Tucson in 2003 from the Gaudenti & Gaudenti Partnership located in California. An internet search for this partnership did not reveal any readily available contact information for this previous owner. Mr. Barraza with the City of Tucson did not have information concerning contact information for the former owner.

8.3 Others

Other than discussed in previous sections of this report, CTEC interviewed no others during this Phase I ESA.

9.0 PROPERTY SAMPLING

No surface or subsurface exploration or chemical analysis was conducted as part of this Phase I ESA. Traditional exploration techniques and the collection and chemical analysis of soil and/or water samples can be used to obtain additional information regarding surface or subsurface conditions.

10.0 DEVIATIONS FROM ASTM

This report was prepared in accordance with the ASTM Standard E 1527-13. In accordance with Section 12.7 of the Standard, a discussion of significant data gaps which affect the ability to identify recognized environmental conditions and identification of the sources of information that were consulted to address the data gaps is required. The definitions of data gap and data failure follow:

- *Data gap* is a lack of or inability to obtain information required by ASTM E 1527-13 despite *good faith* efforts by the *environmental professional* to gather such information.

Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to *site reconnaissance* (for example, an inability to conduct the *site visit),* and *interviews* (for example, an inability to interview the *key site manager,* regulatory officials, etc.).

- *Data failure i*s a type of data gap in which a failure to achieve the historical research objectives, even after reviewing the *standard historical sources* that are *reasonably ascertainable* and likely to be useful. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Data failure is not uncommon in trying to identify the use of the Property at five year intervals back to first use or 1940, whichever is earliest.

CTEC has identified no data gaps/failures in reference to this Phase I ESA.

11.0 FINDINGS

In general, the Property is rectangular in shape and has dimensions of approximately 2,630 feet east-west and 1,300 feet north-south. The Property is bisected by East Los Reales Road, which is not considered part of the Property. Pima County Parcel No. 140-39-052E is located to north and 140-39-052F is located south of Los Reales Road. For the most part, the Property is undeveloped and covered with native desert vegetation. The former alignment of the paved Los Reales Road is presently parallel and near the southern Property line. The former Los Reales Road curves northward at the southeast corner of the Property and parallels the east property boundary as Craycroft Road. An unpaved road parallels Craycroft Road at the east property line. A storm water retention basin is located on the west side of parcel 140-39-052F. Primitive roads crisscross the north and east portions of parcel 140-39-052F. Storm water culverts are located under the current Los Reales Road at a wash crossing located approximately 100 feet southwest of the retention basin and near the northwest corner of the retention basin. Two City of Tucson-owned WQARF related groundwater monitoring wells (WR-470 & -471A) are located on the northwest corner of the Property, and monitoring well WR-465A is located near the north-central property line.

Historical research has revealed that the Property has never been developed. Los Reales Road has been present parallel and near the south property line since at least the late 1940s. Craycroft Road has been parallel and just west of the east property line since at least the early 1950s. Beginning around the same time, an unpaved road was graded just east and parallel to the Craycroft Road alignment and was partly within the Property boundary. Beginning in the 1960s, primitive roads are present across the Property. Beginning in the late 1960s, debris was dumped on the Property, especially near the west property line (Early Avenue) and along the wash on the west portion of the Property from the original Los Reales Road to the northwest. Some minor grading has occurred along the wash on the western portion of the Property in an apparent attempt to channel storm water during this time period. By the late 1970s, Los Reales Road was paved on the south portion of the Property. The late 1980s saw a decrease in wildcat dumping on the Property. By 2010, Los Reales Road was realigned through the center of the Property as depicted in Figure 2, and a storm water retention basin was constructed on the

southwestern portion of the Property. Wildcat dumping occurred sporadically across the Property during the 2000s.

Historical research for adjoining properties has revealed that Los Reales Road has been present on adjoining property to the south since at least the late 1940s. Houses and trailers have been located on adjoining property to the east since at least the early 1950s. Circa 1960, Early Avenue was graded as an unpaved road parallel and just west of the west property line. During the same time, a gravel pit was located on adjoining property to the south of Los Reales Road, and, circa 1963, this adjoining property was being used as an active landfill. By the late 1980s, commercial businesses were located west of Early Avenue and consisted of roll-off container companies and trash haulers. During the mid-1990s, an auto auction business was constructed north of the northeast portion of the Property. Additional businesses were constructed on adjoining property to the west through the early 2000s, and houses were constructed on adjoining property to the north by 2010.

Database review indicated the Los Reales Landfill is an active municipal solid waste landfill located on adjoining property to the south. The site is regulated by the Arizona Department of Environmental Quality's (ADEQ) under the Solid Waste Unit, the Water Quality Assurance Revolving Fund (WQARF) program and the Voluntary Remediation Program (VRP). Groundwater contamination of tetrachloroethene (PCE) and trichloroethene (TCE) above regulatory standards has been detected along with other volatile organic compounds (VOCs) at concentrations below regulatory standards from the older, unlined portion of the landfill. The City is operating a groundwater pump and treat system to contain and cleanup the contaminated groundwater. Treated water is used for dust control and is also re-injected into the groundwater. The City entered the VRP program for the remediation and closure of the Southwest Disposal Area (SWDA), an area of the landfill which accepted industrial waste from 1977 to 1980. The City briefly operated a deep soil vapor extraction system at the SWDA to remove VOCs to prevent vapors from contaminating groundwater. According to the ADEQ map provided by the WQARF Section, the contaminant plume is located under the western third of the Property. The contaminant plume consists of PCE above the EPA established Maximum Contaminant Level (MCL) of 5 micrograms per liter (µg/L). Methane extracted from the landfill gas system is sent to Tucson Electric Power Company and used to provide electricity to the community.

A review of the ADEQ Emergency Response Log database indicated that an incident occurred on January 30, 1993 at the Los Reales Landfill and reportedly involved an acidic liquid. The Los Reales Landfill is listed as former RCRA hazardous waste generator with no violations and adjoining property to the north (Dealers Auto Exchange of Tucson) is listed as a conditionally exempt small quantity generator with no listed violations. Three LUST sites are listed within ½ mile of the Property have been administratively closed by the ADEQ. A search of Pima County Recorder's Office records by All Lands revealed no VEMUR, DEUR, environmental liens or activity and use limitations recorded against the Property.

An interview with Molly Collins, City of Tucson Environmental Services project manager for the Los Reales Landfill WQARF Site, provided a copy of a figure with landfill gas monitoring points. She additionally submitted results for landfill gas monitoring for the year 2013. Review of the

data revealed no detectable methane for the probes located south of the Property. Interviews revealed no drywell, buried material or imported fill soils on the Property. The interview with the current owner revealed no presence or former presence of any UST, petroleum or hazardous substances on or beneath the Property other than the PCE-contaminated groundwater plume beneath the western portion of the Property.

The site reconnaissance revealed that Storm water appears to enter the property via overland flow from adjoining property to the south as soil covers the old Los Reales Road at two locations. These areas are located from approximately 850 to 1050 feet east of the southwest corner of the Property (Photo 23). A partially buried five-gallon bucket (Photo 16) was observed on the northwest portion of the Property (32.12218/110.88169). The bucket was observed to be partially filled with soil with unknown additional contents. A pile of white stucco (Photo 12), approximately 15 feet in diameter and six-inches high, was observed on the northwest portion of the Property (32.12239/110.88195). The stucco may contain asbestos. Scattered small-size debris, primarily broken glass and metal, are present throughout the Property but are present more abundantly on the north parcel (140-39-052E) and the western portion of the Property. Figure 2 presents two large areas with dense surficial debris consisting primarily of broken glass (Photo 9). The west side of parcel 140-39-052E contains numerous small piles of debris consisting of broken concrete and soil (Photos 4 & 8). Some landscape debris is located on the southwest corner of this parcel. A large pile of soil and concrete is located just north of Los Reales road on the northern parcel north of the wash at 32.12064/110.88199 (Photo 8). Two areas of potentially buried waste material were observed near the west property line. These two areas are indicated on Figure 2. The northern disturbed area is located from 32.12171/110.88357 to 32.12142 and has dimensions of approximately 100 feet north-south and 20 feet east-west (Photo 5). At the southwest corner of parcel 140-39-052E, partially buried debris was observed at 32.11975/110.88357 (Photos 6 & 7). Gray sediment was observed on the surface of the channelized wash located north of the northern culvert under Los Reales Road (Photo 11). This wash is located downstream of the storm water basin, and similar sediment was observed at the south entrance of the culvert at the northwest corner of the basin.

12.0 CONCLUSIONS & RECOMMENDATIONS

ConformaTech, Inc. (CTEC) performed a Phase I Environmental Site Assessment (ESA) for the City of Tucson at the proposed Los Reales Landfill Expansion Project in Tucson, Arizona. The Property consists of Pima County parcel Nos. 140-39-052E & -052F. The Property is currently owned by the City of Tucson and is located north of the active Los Reales Landfill. The Property consists of approximately 73.6 acres of undeveloped land.

This ESA was conducted in accordance with the scope and limitations of ASTM Standard Practice E 1527-13 and limitations presented in Appendix A of this report. Any exceptions to, or deletions from, this practice are described in Section 10.0 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the Property except for the following:

- The Los Reales Landfill WQARF Site is located on adjoining property to the south. A contaminated groundwater plume originating from the Site extends beneath the western portion of the Property. The contaminant plume consists of PCE above the EPA established MCL of 5 µg/L. Two monitoring wells and one groundwater extraction well are located on the Property. CTEC understands that pump and treat remediation of the contaminated groundwater will continue for some time. This cleanup is being conducted under the oversight of the ADEQ WQARF Division.

- A groundwater contamination plume, originating from the Los Reales Landfill WQARF Site, which consists primarily of the solvent PCE is present beneath the Property. The PCE in groundwater beneath the Property exceeds the EPA MCL. CTEC recommends that a Soil Vapor Intrusion Assessment in accordance with ASTM E2600-08 be conducted for the Property prior to development.

- Two areas of sediment were observed to be present across the former Los Reales Road alignment on the south property line. It is apparent that, on occasion, storm water and sediment enters the Property from the adjoining property to the south (Los Reales Landfill) and previously gravel pit operations. These areas are located from approximately 850 feet to 1,050 feet east of the southwest corner of the Property (110.881110 - 110.880403). CTEC recommends the sampling of soil just north of the former Los Reales Road and analyzed for VOCs, polyaromatic hydrocarbons (PAHs) and total RCRA metals.

- Two areas of potentially buried waste material were observed near the west property line. These two areas are indicated on Figure 2. The northern disturbed area is located from 32.12171/110.88357 to 32.12142 and has dimensions of approximately 100 feet north-south and 20 feet east-west (Photo 5). At the southwest corner of parcel 140-39-052E, partially buried debris was observed at 32.11975/110.88357 (Photos 6 & 7). CTEC recommends the physical investigation of these areas to assess the extend and type of potentially buried waste.

- A partially buried five-gallon bucket (Photo 16) was observed on the northwest portion of the Property (32.12218/110.88169). The bucket was observed to be partially filled with soil with unknown additional contents. CTEC recommends a physical assessment of the bucket to ascertain if it contains any potential hazardous substance or petroleum product.

- A pile of white stucco (Photo 12) approximately 15 feet in diameter and six inches high was observed on the northwest portion of the Property (32.12239/110.88195). The stucco may contain asbestos. CTEC recommends the material be sampled and analyzed for asbestos.

This assessment has revealed the following information which CTEC does not consider recognized environmental conditions in connection with the Property as defined in ASTM Standard Practice E 1527-13:

- Review of landfill gas monitoring probe data revealed no methane detected in probes located on adjoining property to the south which is the north side of the Los Reales Landfill. Under City of Tucson ordinance (No. 10037, Amendment Chapter 29 Article IX), future development on the Property will require the submittal of a Landfill Methane Development Plan for review and approval by the City of Tucson prior to the beginning of construction activities.

- Debris piles and areas of broken glass, metal, landscape waste and occasional tires are located throughout the Property. CTEC recommends proper recycling or disposal prior to development.

- Gray sediment was observed on the surface of the channelized wash located north of the northern culvert under the current Los Reales Road. This wash is located downstream of the storm water basin, and similar sediment was observed at the south entrance of the culvert at the northwest corner of the basin. The gray color is likely due to the settlement of fine grained sediments. CTEC recommends no sampling of the material.

- A review of the ADEQ Emergency Response Log database indicated no responses for the Property and one response for adjoining properties. An incident occurred on January 30, 1993 at the Los Reales Landfill and reportedly involved an acidic liquid. Interviews with the Property owner revealed no recollection of this event. There is no current readily available information to indicate that this event has had a negative effect on the Property.

- The Los Reales Landfill is listed as former RCRA hazardous waste generator with no violations and adjoining property to the north (Dealers Auto Exchange of Tucson) is listed as a conditionally exempt small quantity generator with no listed violations. There is no current readily available information to indicate that these sites have had a negative effect on the Property.

- Three LUST sites are listed within ½ mile of the Property and have been administratively closed by the ADEQ. These sites are hydrologically down-gradient of the Property. There is no current readily available information to indicate that these sites have had a negative effect on the Property.

13.0 PROFESSIONAL STATEMENT & QUALIFICATIONS OF PERSONNEL

As required by 40 CFR312.21(d), CTEC declares that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40CFR312, and we have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject Property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Gerry P. Yarab, R.G.
Project Manager
Gerry Yarab has over 15 years of experience in conducting environmental site assessments. His professional work includes hazardous waste and petroleum site investigations and remediations. Mr. Yarab was a member of the US EPA Technical Assistance Team and has worked at numerous Superfund sites in EPA Region X. He has managed and supervised field work for the sampling and monitoring at CERCLA and LUST sites for contaminated soil and groundwater. Mr. Yarab has completed numerous Phase I ESAs throughout the western United States.

14.0 REFERENCES

The following agencies, offices, reports, and publications were used as information sources in the preparation of this report.

AGENCIES AND OFFICES

Arizona Department of Environmental Quality
Environmental Contamination Information
ADEQ State Library, Phoenix, Arizona

Arizona Department of Water Resources
500 North 3rd Avenue
Phoenix, Arizona

City of Tucson
Various Offices
201 North Stone Avenue
Tucson, Arizona

City of Tucson Fire Department
797 East Ajo Way
Tucson, Arizona

All Lands
Goodyear, Arizona
623.535.7800

REPORTS, PUBLICATIONS & INTERVIEWS

Anderson, 1987. Water-Resources Report #87-4150 to 190, 1987. Cenozoic Stratigraphy and Geologic History of the Tucson Basin, Pima County, Arizona.

Bey, Martin. 3014. Los Reales Landfill Manager, City of Tucson, Environmental Services. Personal Communication. January 27, 2014. (520) 419-4394.

City of Tucson, Environmental Services, 2013. January-June 2013 Report: Groundwater Monitoring and Treatment System Progress Report, Los Reales Landfill Water Quality Assurance Revolving Fund Site, Tucson, Arizona. August 8, 2013.

City of Tucson, Environmental Services, 2013. Los Reales Landfill Gas Monitoring Data.

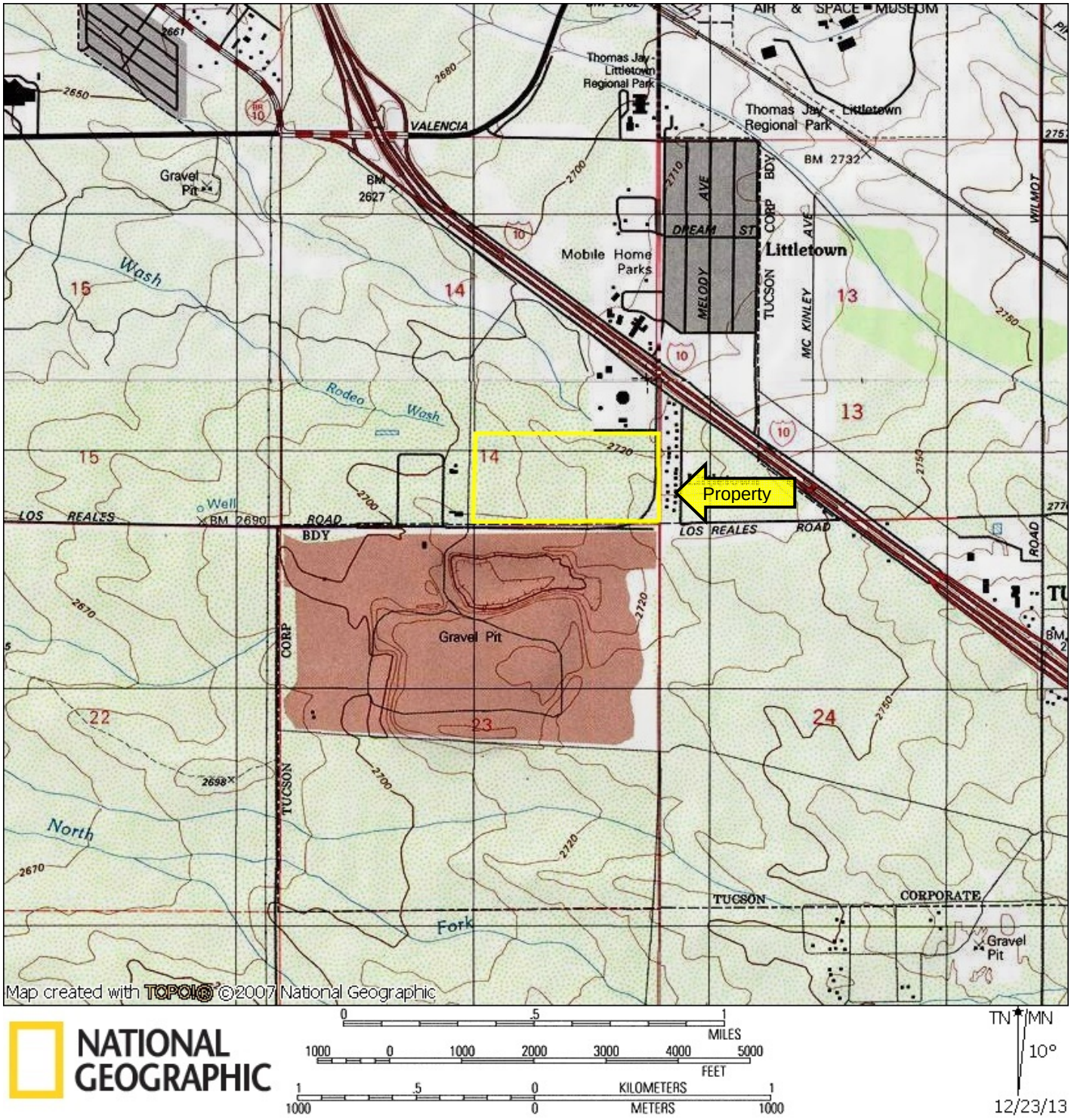
City of Tucson, Environmental Services, 2011. Los Reales Landfill Gas Monitoring Probes. May, 2011.

City of Tucson, Water Planning and Technical Services Division, 2004. Annual Static Water Level Basic Data Report, Tucson Basin and Avra Valley, Pima County, Arizona.

Collins, Molly. Los Reales Landfill WQARF Site Project Manager, City of Tucson Environmental Services (Owner of Property). Personal Communication. January, 10, 2014. (520) 837-3703.

Montgomery & Associates, 2013. Evaluation of Remediation Strategies, Los Reales Landfill, Water Quality Assurance Revolving Fund Site. August 29, 2013.

United States Geological Survey, 1992. Tucson Southwest, Arizona, 7.5 minute topographic map.



REFERENCE: Tucson Southwest, 1996 USGS Topographic Map

ConformaTECH
1425 EAST APACHE PARK PLACE
TUCSON, ARIZONA 85714

JOB NO.: 13-1319
DESIGN: GPY
DRAWN: GPY
DATE: January 2014

FIGURE 1
PROPERTY LOCATION MAP
Los Reales Landfill
Expansion Project
Tucson, Arizona

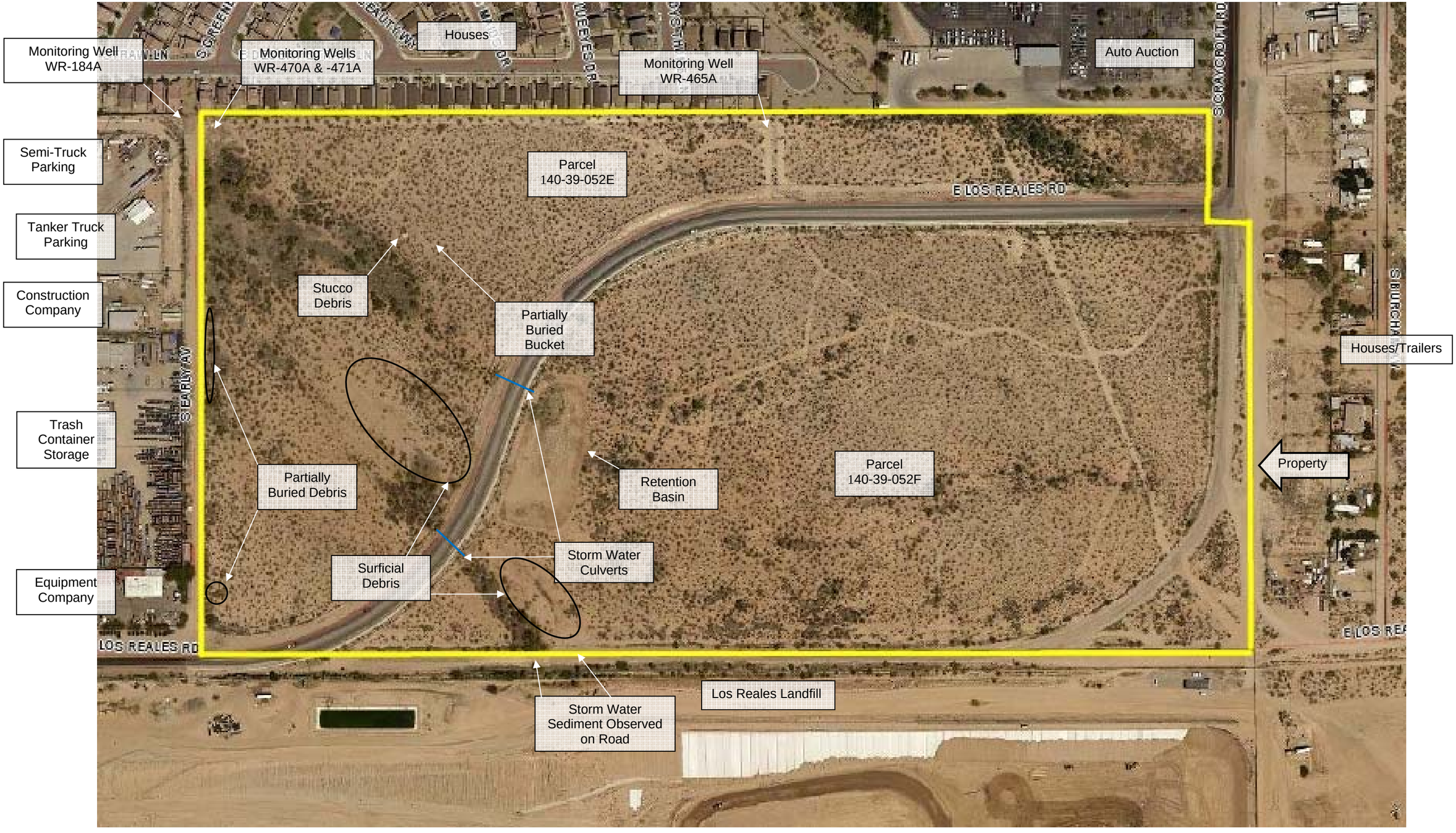


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FIGURE 2
Property Detail Map
Los Reales Landfill Expansion Project
Tucson, Arizona

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FIGURE 3
1979 Aerial Photograph
Los Reales Landfill Expansion Project
Tucson, Arizona

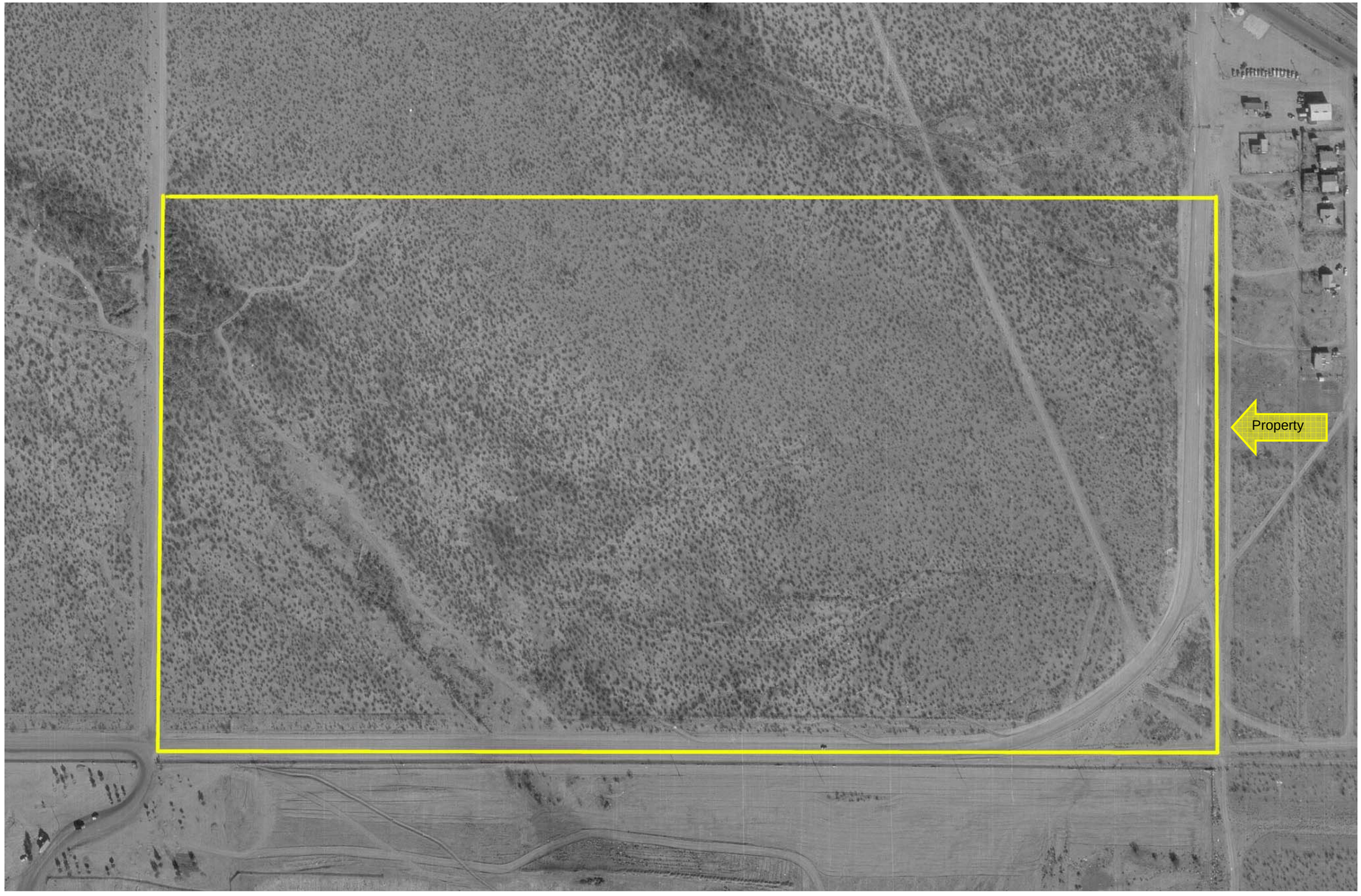

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FIGURE 4
1973 Aerial Photograph
Los Reales Landfill Expansion Project
Tucson, Arizona

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DRAWN:	GPY
DATE:	January, 2014

FIGURE 5
1967 Aerial Photograph
Los Reales Landfill Expansion Project
Tucson, Arizona

Photo 1: Looking east, northwest corner of Property. Monitoring well WR-471A (box) near center of photo and WR-470 (flush mounted) on left side of photo.

Photo 2: Looking south from northwest corner of Property. Unpaved Early Avenue is located west of the Proeprty.

Photo 3: Looking west from northwest corner of the Property. Note concrete-line storm water drainage. White box on right side of photo is monitoring well WR-184A.

Photo 4: Looking east, typical debris pile located on northwest portion of the Property (32.12194/110.88328).

Photo 5: Looking south along west fence line on northwest portion of Property. Partially buried debris observed (32.12171/110.88357 – 32.12142) approximately 100 feet north-south and 20 feet wide.

Photo 6: Looking southwest, southwest portion of the Property. Partially buried debris observed at 32.11975/110.88357).

Photo 7: Looking northwest, southwest corner of Property. Partially buried debris observed here (near Photo 6).

Photo 8: Looking south, pile of soil and concrete north of southern storm water culvert under Los Reales Road (32.12064/110.88199).

Photo 9: Looking south, scattered debris area north of north storm water culvert under Los Reales Road (32.12092/110.88208).

Photo 10: Looking southeast, western storm water culvert under current Los Reales Road.

Photo 11: Looking north, gray sediment in channelized wash originating from northern storm water culvert under Los Reales Road (32.12155/110.88168).

Photo 12: Looking west, debris pile consisting of stucco on northwest portion of Property (32.12230/110.88195).

Photo 13: Looking north, monitoring well WR-465A is located on north-central portion of the Property.

Photo 14: Looking east, northeast portion of Property.

Photo 15: Looking northeast, adjoining auto auction facility to the north of the northeast corner of the Property.

Photo 16: Looking west, buried bucket on northwest portion of Property (32.12218/110.88169).

Photo 17: Looking northwest, tanker truck parking on adjoining property to the west of the northwest corner of the Property. Note concrete storm water drainage between Property and adjoining property.

Photo 18: Looking southwest, several apparently empty 55-gallon drums and buckets stored on adjoining property to the north. Storm water drainage entrance is located just right of photo.

Photo 19: Looking southeast, storm water on Property enters drainage on adjoining property to the west (foreground).

Photo 20: Looking southwest, two trailer-mounted tanks labeled as containing a total of 540 gallons of gasoline and diesel on adjoining property to the west of the southwest corner of the Property.

Photo 21: Looking east from the northeast corner of the Property. Craycroft Road is in foreground.

Photo 22: Looking east from southwest corner of the Property. The former Los Reales Road alignment is present parallel and near the southern property line.

Photo 23: Looking west from approximately 850 feet east of the southwest corner of the Property. Note soil over former Los Reales Road at this point indicates storm water from adjoining property to the south enters the Property.

Photo 24: Looking southwest at the same point as Photo 23. Los Reales Landfill is located on adjoining property to the south.

Photo 25: Looking southwest from a point approximately 850 feet east of the southwest corner of the Property. Standing water behind earthen berm on Los Reales Landfill on adjoining property to the south.

Photo 26: Looking west from southeast corner of the Property.

Photo 27: Looking south from southeast corner of the Property. Los Reales Landfill is on adjoining property to the south.

Photo 28: Looking north from southeast corner of the Property.

Photo 29: Looking north, northeast portion of parcel 140-39-052F. (32.12138/110.87640).

Photo 30: Looking southwest, storm water detention basin on southwest portion of parcel 140-39-052F.

Photo 31: Looking down, storm water culvert on northwest portion of basin. Culvert goes under Los Reales Road.

Photo 32: Looking northwest, west side of storm water detention basin.

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APPENDIX A

LIMITATIONS

LIMITATIONS

CTEC's services have been completed in agreement with our contracted understanding with our Client and User (City of Tucson, Environmental Services). This study and report have been prepared on behalf of, and for the exclusive use of our Client, solely for use in an environmental assessment of the Property. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of CTEC and our Client.

CTEC's site assessment was performed in general accordance with the ASTM E 1527-05 Standard of Practice. CTEC observed the degree of care and skill generally exercised by other consultants under similar circumstances and conditions. CTEC's findings and conclusions should not be considered as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the environmental site assessment. No other warranty, expressed or implied, is made. Specifically, CTEC does not, and cannot, represent that the Property contains no hazardous material, petroleum products, or other latent condition beyond that observed by CTEC during its site assessment. Additional information regarding subsurface conditions can be obtained by traditional subsurface exploration techniques and the collection of soil and/or groundwater samples for chemical analysis. CTEC cannot render a more definitive opinion regarding the impact from on-site activities without conducting subsurface explorations and chemical analyses of soil and groundwater samples obtained from the Property. This report is also subject to the following specific limitations:

1. The observations described in this report were made under the conditions stated herein. The conditions presented in the report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Client. The work described in this report was carried out in accordance with the Statement of Terms and Conditions attached to CTEC’s proposal.

2. CTEC has relied on certain information provided by federal, state, and local officials, and other parties referenced herein, and on information contained in the files of federal, state, and/or local agencies available to CTEC at the time of the site assessment. Although there may have been some degree of overlap in the information provided by these various sources, CTEC did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment.

3. In the event that counsel or title examiner for City of Tucson obtains information on environmental or hazardous waste issues at the Property not contained in this report, such information shall be brought to CTEC's attention forthwith. CTEC will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

4. Observations were made of the Property and/or structures on the Property as indicated within this report. Where access to portions of the Property or direct observation of

structures on the Property was unavailable or limited, CTEC renders no opinion as to the presence of hazardous materials or petroleum products, or to the presence of indirect evidence relating to hazardous material or petroleum products, in that portion of the Property or structure. In addition, CTEC renders no opinion as to the presence of hazardous material or petroleum products, or to the presence of indirect evidence relating to hazardous material or petroleum products, where direct observation of the interior walls, floor, or ceiling of a structure on a Property was obstructed by objects or coverings on or over these surfaces.

5. Unless otherwise specified in this report, CTEC did not perform testing or analyses to determine the presence or concentration of asbestos or PCBs at the Property or in the environment at the Property.

6. The purpose of this report was to assess the physical characteristics of the Property with respect to the presence in the environment of hazardous material or petroleum products. No specific attempt was made to check on the compliance of present or past owners or operators of the Property with federal, state, or local laws and regulations, environmental or otherwise.

7. The focus of the site evaluation was to evaluate the Property and recognize environmental conditions resulting from past or current uses of the Property. As a result, this evaluation does not address the presence of the following conditions unless they were the express concerns of contacted personnel, report and literature authors, or the work scope.

    - Hazardous substances or petroleum products that are not readily apparent upon diligent review.

    - Naturally occurring toxic or hazardous substances in the subsurface soils and water.

    - Toxicity of substances common in current habitable environments, such as stored household products, building materials, and consumables.

    - Contaminants or contaminant concentrations that are not a concern now, but may be under future regulatory standards.

    - Hazardous substances or petroleum products placed on the Property following the site reconnaissance and submission of this report.

    - Occupational health and safety.

8. Any sampling program conducted during the course of the project was designed to be representative of the conditions present at the time of sampling. The sample points were selected according to guidelines described in EPA Field Manual SW-846. The results from a representative sampling program are not a guarantee as to the presence, or lack

thereof, of the constituents of concern. Additionally, extrapolating results between sample points may not accurately reflect actual Property conditions.

9. Where quantitative laboratory testing/analyses performed as part of the site assessment have been conducted by an outside laboratory, CTEC has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

ConformaTECH

APPENDIX B

LEGAL DESCRIPTION / ENVIRONMENTAL LIEN RESEARCH

Allands
14947 W. Piccadilly Road, Goodyear, AZ 85395 • Phone: 623-535-7800 • Fax: 623-535-7900
www.allands.com • e-mail: sharons@allands.com
Historical Title and Environmental Research

TITLE AND JUDICIAL RECORDS FOR ENVIRONMENTAL LIENS AND ACTIVITY AND USE LIMITATIONS; VOLUNTARY ENVIRONMENTAL MITIGATION USE RESTRICTIONS BY OWNERS (VEMUR) AND DECLARATION OF ENVIRONMENTAL USE RESTRICTIONS (DEUR)

YOUR FILE NO:

ALLANDS FILE NO: 2013-12-063E

Date of Report: December 21, 2013
Title Plant Date***: December 18, 2013
***The Title Plant Date reflects the most current data made available by the information sources used at the time the research was performed.

ALL LANDS hereby presents an Environmental Search Report to the land described below The total liability is limited to the fee paid for this report.. Allands is not responsible for errors in the available records. The total liability is limited to the fee paid for this report. This is a confidential, privileged and protected document for the use of ConformaTech.

1. The land referred to in this report is located in Pima County, Arizona.

2. Assessor's No.: 140-39-052E and 052F

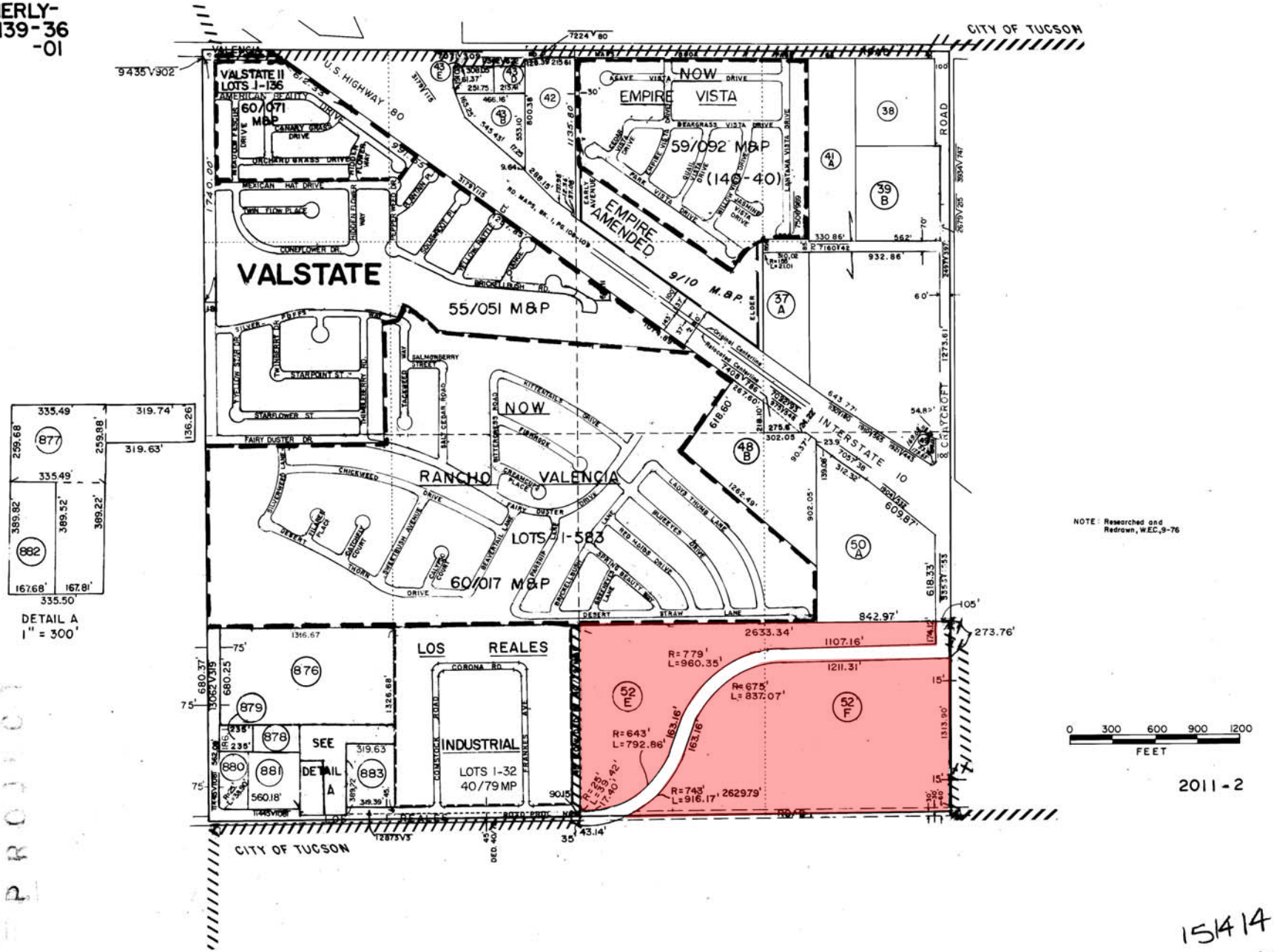
3. No VEMUR'S, DEUR'S; Environmental Liens, Brownfields, institutional controls, engineering controls, or activity and use limitations, if any, were found currently recorded against the property as searched at the subject county recorders office.

ASSESSOR'S RECORD MAP

SECTION 14, TOWNSHIP 15 SOUTH, RANGE 14 EAST

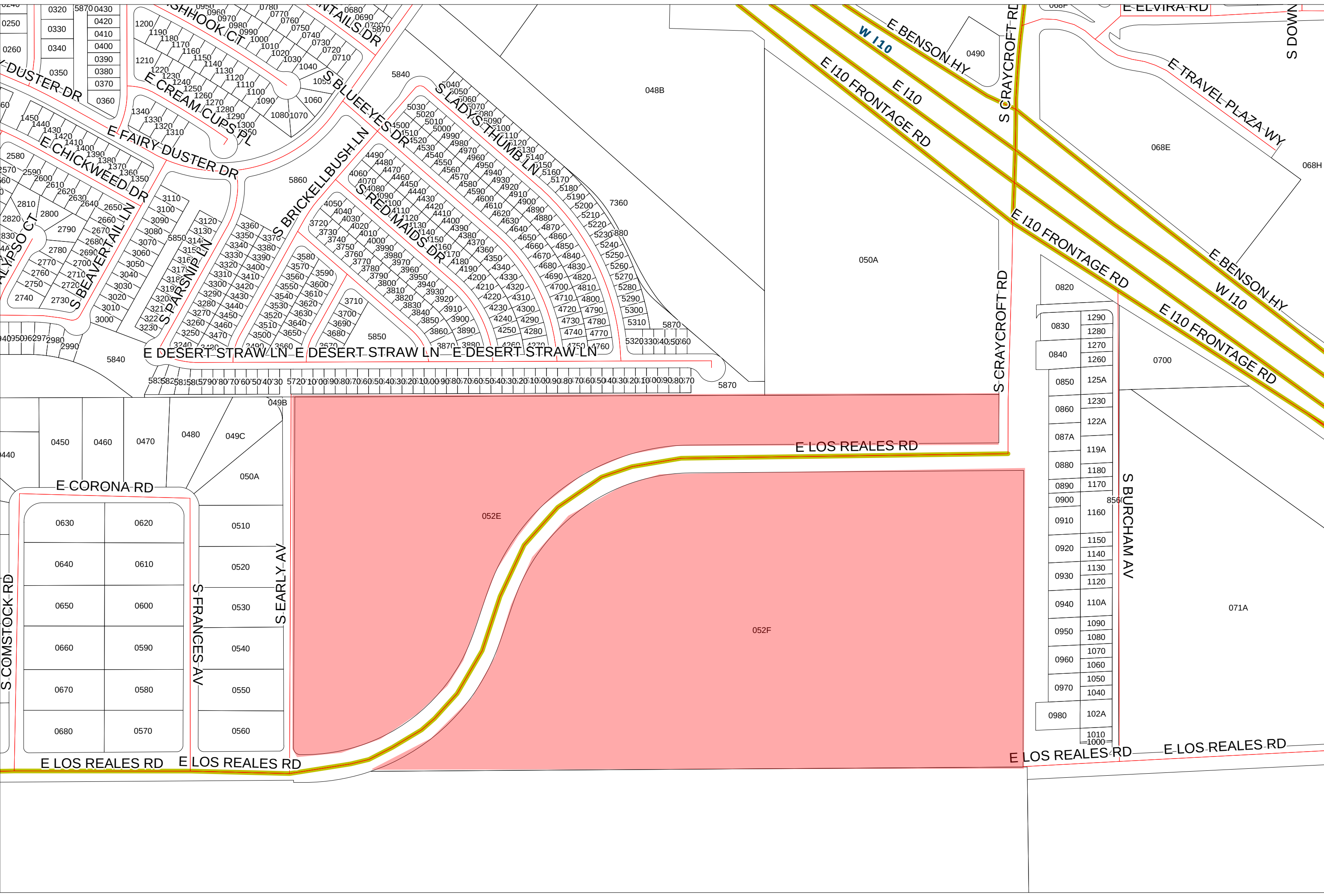
140-39
-40

-FORMERLY-
139-36
-01



15414 SCANNED

~~1074(5)~~



E ELVIRA RD
S DOWN
E BENSON HY
W I10
E I10
E I10 FRONTAGE RD
S CRAYCROFT RD
E TRAVEL PLAZA WY
E FAIRY DUSTER DR
E CHICKWEED DR
E CREAM CUPS PL
S BLUEEYES DR
S LADYS THUMB LN
S BRICKELLBUSH LN
S RED MAIDS DR
S BEAVERTAIL LN
S PARSNIP LN
E DESERT STRAW LN
E LOS REALES RD
E CORONA RD
S COMSTOCK RD
S FRANCES AV
S EARLY AV
S BURCHAM AV
048B
050A
068E
068H
0490
0700
071A
052E
052F
049B
049C
5840
5850
5860
5870
7360

Pima County Geographic Information Systems

Parcel 140-39-052E

Read the Disclaimer. Information on this page is **unofficial**.

Mail name and address

140-39-052E
CITY OF TUCSON
.
. 00000

Legal description

PTN S2 SE4 LYG N RD 28.44 AC SEC 14-15-14

Situs (property) address

(About situs addresses)

Street Address	Jurisdiction	Postal City	Zip Code

There is no situs address information.

Information for this parcel

- Assessor Parcel Detail for tax year 2014 from the Pima County Assessor's Office. Also see Assessor Record Maps.
- Real Estate Property Tax Inquiry and Property Tax Statement from the Pima County Treasurers's Office.
- **Recorded Information** from the Pima County Recorder's Office
  - Recorded Document for Docket 12040, Page 5998, Sequence Number 20040700587.
  - **Voter Precinct and Districts** are not available because there is no parcel situs address information.
- A **Subdivision Plat Map** is not available here because the GIS parcel record does not have subdivision Book/Page or Sequence numbers. The parcel may have an associated subdivision Book/Page or Sequence number that isn't documented here. See "Subdivision" in the "Development" GIS overlay details group results. As another option, the parcel legal description above may have a subdivision name you can search for in Subdivision Final Plats.
- Pima County Sanitary Sewer Connection Search and Connection Records Overview.

- **Permits** from Pima County Development Services.
  - Permit Database Search by Parcel Code since there is no parcel situs address information.
  - Historical Permit Cards - Prior to about 1998

- City of Tucson Development Activity Records are not available because there is no parcel situs address information.

- Section Information and Maps for Township 15S, Range 14E, Section 14

- **Floodplain Information:**
  - Parcel Floodplain Information. See FEMA Digital Flood Insurance Rate Maps (DFIRMs) for more.
  - City of Tucson jurisdiction. See City of Tucson Development Services Site Reviews or call (520) 791-5609.

Over 100 parcel details from GIS overlay analysis

Learn more about parcel GIS overlay details. See a list of *all* details.

Airports Associations Census Comprehensive Plan - Pima County Development Floodplain - Defined by Pima County RFCD Floodplain - FEMA	Governmental Districts and Areas Grids Incentive Zones Jurisdictions Landscape Classifications Miscellaneous Other Regulatory Areas	Public Safety Schools Sonoran Desert Conservation Plan Transportation Utilities Zoning - Base Zoning - Pima County Overlay Zones

Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this disclaimer.

Parcel centroid coordinates	Approximately 32.121903 degrees latitude, -110.881294 degrees longitude.
Parcel area	**This is only an estimate from GIS data.** The Subdivision Plat Map, if any, may also specify parcel area. See Finding Parcel Areas. Approximately 28.21 acres or 1,228,794 square feet.

Zoom to maps of the parcel's area

Autodesk MapGuide	**Oblique Aerial Photos**	

- Main map
- Orthophoto map

You can change the view (N,S,E,W) or pan and zoom the oblique photo.

If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.

PICTOMETRY INTELLIGENT IMAGES

Pictometry Photos

Learn more

bing Bing Maps Photos

If you don't see the oblique photo, pick "2D" then "Bird's Eye".

Google

- [x] Parcel marker
- [ ] Add markers?
- [ ] Add traffic?

Google Maps

Pick "Satellite" for photo.

Help

Pima County Geographic Information Systems

Parcel 140-39-052F

Read the Disclaimer. Information on this page is **unofficial**.

Mail name and address

140-39-052F
CITY OF TUCSON
REAL ESTATE DIVISION
ATTN: PROPERTY MANAGEMENT

PO BOX 27210
TUCSON AZ 85726-7210

Legal description

SELY PTN S2 SE4 & PTN N30' E2 ABAND LOS

REALES RD 44.79 AC SEC 14-15-14

Situs (property) address

(About situs addresses)

Street Address	Jurisdiction	Postal City	Zip Code

There is no situs address information.

Information for this parcel

- Assessor Parcel Detail for tax year 2014 from the Pima County Assessor's Office. Also see Assessor Record Maps.
- Real Estate Property Tax Inquiry and Property Tax Statement from the Pima County Treasurers's Office.
- **Recorded Information** from the Pima County Recorder's Office
  - Recorded Document for Docket 12040, Page 5998.
  - **Voter Precinct and Districts** are not available because there is no parcel situs address information.
- A **Subdivision Plat Map** is not available here because the GIS parcel record does not have subdivision Book/Page or Sequence numbers. The parcel may have an associated subdivision Book/Page or Sequence number that isn't documented here. See "Subdivision" in the "Development" GIS overlay details group results. As another option, the parcel legal description

above may have a subdivision name you can search for in Subdivision Final Plats.

- Pima County Sanitary Sewer Connection Search and Connection Records Overview.
- **Permits** from Pima County Development Services.
  - Permit Database Search by Parcel Code since there is no parcel situs address information.
  - Historical Permit Cards - Prior to about 1998
- City of Tucson Development Activity Records are not available because there is no parcel situs address information.
- Section Information and Maps for Township 15S, Range 14E, Section 14
- **Floodplain Information:**
  - Parcel Floodplain Information. See FEMA Digital Flood Insurance Rate Maps (DFIRMs) for more.
  - City of Tucson jurisdiction. See City of Tucson Development Services Site Reviews or call (520) 791-5609.

Over 100 parcel details from GIS overlay analysis

Learn more about parcel GIS overlay details. See a list of *all* details.

Airports Associations Census Comprehensive Plan - Pima County Development Floodplain - Defined by Pima County RFCD Floodplain - FEMA	Governmental Districts and Areas Grids Incentive Zones Jurisdictions Landscape Classifications Miscellaneous Other Regulatory Areas	Public Safety Schools Sonoran Desert Conservation Plan Transportation Utilities Zoning - Base Zoning - Pima County Overlay Zones

Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this disclaimer.

Parcel centroid coordinates	Approximately 32.120747 degrees latitude, -110.878164 degrees longitude.
Parcel area	**This is only an estimate from GIS data.** The Subdivision Plat Map, if any, may also specify parcel area. See Finding Parcel Areas. Approximately 45.42 acres or 1,978,546 square feet.

Zoom to maps of the parcel's area

Autodesk MapGuide

- Main map
- Orthophoto map

Oblique Aerial Photos

You can change the view (N,S,E,W) or pan and zoom the oblique photo.

If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.

PICTOMETRY INTELLIGENT IMAGES

Pictometry Photos

Learn more

bing Bing Maps Photos

If you don't see the oblique photo, pick "2D" then "Bird's Eye".

Google™

- [x] Parcel marker
- [ ] Add markers?
- [ ] Add traffic?

Google Maps

Pick "Satellite" for photo.

Help

F. ANN RODRIGUEZ, RECORDER
RECORDED BY: YRN
DEPUTY RECORDER
5131 AS2

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TLATI
LAWYERS TITLE
5255 E WILLIAMS CIRCLE STE 1050
TUCSON AZ 85711

DOCKET: 12040
PAGE: 5998
NO. OF PAGES: 2
SEQUENCE: 20030831235
04/30/2003
DEED 16:37

PICKUP

AMOUNT PAID $ 9.00

DEED

For and in consideration of the sum of One Dollar and other valuable considerations the undersigned, Gaudenti & Gaudenti Partnership, a California general partnership do(es) hereby CONVEY unto the CITY OF TUCSON, a municipal corporation, the following described property situate in Pima County, Arizona:

See Attached Exhibit "A"

Affidavit Exempt A.R.S. §11-1134 (A) (3)

AND the undersigned warrant(s) the title against any persons whomsoever.

DATED this 14 day of April, 2003.

By _____
Robert Gaudenti, partner

By _____
Alan Gaudenti, partner

As _____

As _____

STATE OF ARIZONA)
)ss.
COUNTY OF PIMA)

This instrument was acknowledged before me this 14 day of April, 2003, by Robert Gaudenti as Partner and Alan Gaudenti as Partner of Gaudenti & Gaudenti Partnership, a California general partnership.

A. D. MCCAMY
COMM. # 1227607
Notary Public - California
LOS ANGELES COUNTY
MY COMMISSION EXPIRES JULY 4, 2005

A. D. McCamy
Notary Public

Los Reales Landfill Expansion Project

S14-T15S-R14E

WD-WT-RP Rev 3/00

12040 5998

2

EXHIBIT A

The West 631.64 feet of the South Half of the Southeast Quarter of Section 14, Township 15 South, Range 14 East, Gila and Salt River Base and Meridian, Pima County, Arizona; EXCEPT any portion within Los Reales Road.

(JV Arb 72)

ConformaTECH

APPENDIX C

ENVIRONMENTAL USER/OWNER QUESTIONNAIRES

ConformaTECH

PHASE I ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE

Los Reales Landfill Expansion Project
73.6 Acres of Undeveloped Land
Pima County Parcel Nos.: 140-39-052E & -052F
Tucson, Arizona

In order to qualify for one of the *Landowner Liability Protections* (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the *user* of the Phase I Environmental Site Assessment should provide the following information (if available) to the *environmental professional* (ConformaTech, Inc.). Failure to provide this information could result in a *data gap* which will be presented in the final report. CTEC requests that as the "User" of the Phase I Environmental Site Assessment, you be as specific as possible in your responses. A listing of terms (*in italics*) is presented at the end of this questionnaire.

1. *Environmental liens* that are filed or recorded against the Property (40CFR312.25).

Are you aware of any *environmental liens* filed or recorded against the *Property* under federal, tribal, state or local law?	Answer	
If yes, explain.	Y	N (circled)

2. *Activity and use limitations* that are in place on the *Property* or that have been filed or recorded against the Property (40CFR312.26[a][1][v]and[vi]).

Are you aware of any *activity and use limitations* (AULs), such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the Property and/or have been filed or recorded in a registry under federal, tribal, state or local law?	Answer	
If yes, explain.	Y	N (circled)

3. Specialized knowledge or experience of the person seeking to qualify for the LLP (40CFR312.28).

As the *user* of this ESA, do you have any specialized knowledge or experience related to the *Property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the Property or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?	Answer	
If yes, explain.	Y (circled)	N
The City ES dept. operates a municipal solid waste facility adjacent to the 73.6 undeveloped acres. Los Reales landfill has operated since 1963. A portion of LR is unlined with new cells being lined per current solid waste guidelines		

4. Relationship of the purchase price to the fair market value of the *Property* if it were not contaminated (40CFR312.29).

Does the purchase price being paid for this *Property* reasonably reflect the fair market value of the *Property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *Property*?	Answer	
If yes, explain.	Y	N
unknown		

5. Commonly known or *reasonably ascertainable* information about the Property (40 CFR312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the *Property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases?	Answer	
If yes, explain.	Y	(N)

5.a

Do you know the past uses of the *Property*?	Answer	
If yes, explain.	(Y)	N
Undeveloped		

5.b

Do you know of specific chemicals that are present or once were present at the *Property*?	Answer	
If yes, explain.	Y	(N)

5.c

Do you know of spills or other chemical *releases* that have taken place at the *Property*?	Answer	
If yes, explain.	Y	(N)

5.d

Do you know of any environmental cleanups that have taken place at the *Property*?	Answer	
If yes, explain.	Y	(N)

6. The degree of *obviousness* of the presence or likely presence of contamination at the *Property*, and the ability to detect the contamination by appropriate investigation (40CFR 312.31).

Based on your knowledge and experience related to the *Property*, are there any *obvious* indicators that point to the presence or likely presence of contamination at the *Property*?	Answer	
If yes, explain.	(Y)	N
Groundwater plume previously was migrating NE towards the Property. The gw plume has been steadily decreasing with effective pump and treat remedy currently in place		

What is the reason for performing this Phase I ESA?
To develop property for expansion of ES administration building, new state house, and eventual self-hauler collection center

Are you aware of any of the following documents in reference to the Property?	Answer	
Environment site assessment reports	Y	(N)
Environment compliance audit reports	(Y)	N
Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)	(Y)	N
Registrations for underground and above-ground storage tanks	Y	(N)
Registrations for underground injection systems	(Y)	N
Material safety data sheets	(Y)	N

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Community right-to-know plan	Y	(N)
Safety plans; preparedness and prevention plans; spill prevention, countermeasure and control plan	(Y)	(N)
Reports regarding hydrogeologic conditions on the Property or surrounding area	(Y)	N
Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property	Y	(N)
Hazardous waste generator notices or reports	Y	(N)
Geotechnical studies	Y	(N)
Risk assessments	Y	(N)

Do you know of any of the following in reference to the Property:	Answer	
any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the Property;	Y	(N)
any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the Property and	Y	(N)
notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	Y	(N)

Thank you for responding to this questionnaire. Please fax (520.573.0528) or email (gerry.yarab@confomratech.com) back the completed questionnaire to the attention of Gerry Yarab at ConformaTech as soon as possible. If you have any questions, please call Mr. Yarab (520.573.2045).

Please sign and date.

[signature] 1-6-14

Signature Date

David Barraza

Name (printed)

Environmental Project Coordinator

Title

TERMINOLOGY

Activity and use limitations - legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property.

Adjoining properties—any real *property* or properties the border of which is contiguous or partially contiguous with that of the *property*, or that would be contiguous or partially contiguous with that of the *property* but for a street, road, or other public thoroughfare separating them.

All appropriate inquiries—that inquiry constituting *all appropriate inquiries* into the previous ownership and uses of the *property* consistent with good commercial and customary practice as defined in CERCLA, 42 U.S.C §9601(35)(B), that will qualify a party to a *commercial real estate transaction* for one of the threshold criteria for satisfying the *LLPs* to CERCLA liability (42 U.S.C §9601(35)(A) & (B), §9607(b)(3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense.

Data gap—a lack of or inability to obtain information required by this practice despite *good faith* efforts by the *environmental professional* to gather such information. *Data gaps* may result from incompleteness in any of the activities required by this practice, including, but not limited to *site reconnaissance* (for example, an inability to conduct the *site visit*), and *interviews* (for example, an inability to interview the *key site manager*, regulatory officials, etc.).

Engineering controls (EC)—physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to *hazardous substances* or *petroleum products* in the soil or groundwater on the *property*. *engineering controls* are a type of activity and use limitation (AUL).

Environmental lien—a charge, security, or encumbrance upon title to a *property* to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of *hazardous substances* or *petroleum products* upon a *property*, including (but not limited to) liens imposed pursuant to CERCLA 42 U.S.C. §§9607(1) & 9607(r) and similar state or local laws.

Environmental professional—a person meeting the education, training, and experience requirements as set forth in 40 CFR §312.10(b).

Fill dirt—dirt, soil, sand, or other earth, that is obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real *property*. It does not include material that is used in limited quantities for normal landscaping activities.

Hazardous substance—a substance defined as a *hazardous substance* pursuant to CERCLA 42 U.S.C.§9601(14), as interpreted by EPA regulations and the courts:" (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any *hazardous*

waste having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C.§§6901 *et seq.*) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. §7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a *hazardous Substance* under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)."

Institutional controls (IC)—a legal or administrative restriction (for example, "deed restrictions," restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to *(1)* reduce or eliminate potential exposure to *hazardous substances* or *petroleum products* in the soil or groundwater on the *property*, or *(2)* to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. An *institutional control* is a type of *Activity and Use Limitation (AUL)*.

Landowner Liability Protections (LLPs)—landowner liability protections under CERCLA; these protections include the *bona fide prospective purchaser liability protection*, *contiguous property owner liability protection*, and *innocent landowner defense* from CERCLA liability. See 42 U.S.C. §§9601(35)(A), 9601(40), 9607(b), 9607(q), 9607(r).

Obvious—that which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while visually or physically observing the *property*.

Occupants—those tenants, subtenants, or other persons or entities using the *property* or a portion of the *Property*.

Petroleum products – those substances included within the meaning of the *petroleum exclusion* to CERCLA, 42 U.S.C. §9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a *hazardous substance* under Subparagraphs (A) through (F) of 42 U.S.C. § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil,

Pits, ponds, or lagoons—man-made or natural depressions in a ground surface that are likely to hold liquids or sludge containing *hazardous substances* or *petroleum products*. The likelihood of such liquids or sludge being present is determined by evidence of factors associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an *obvious wastewater* discharge.

Property – **approximately 73.6 acres of undeveloped land located north of the current Los Reales Landfill in Tucson, Arizona. The Property is bisected by East Los Reales Road. Pima County Parcel No. 140-39-052E is located west and north and 140-39-052F is located east and south of Los Reales Road.**

Reasonably ascertainable—information that is *(1) publicly available*, *(2)* obtainable from its source within reasonable time and cost constraints, and *(3) practically reviewable*.

Release—a *release* of any *hazardous substance* or *Petroleum product* shall have the same meaning as the definition of "release" in CERCLA 42 U.S.C. § 9601(22)).

User – the party seeking to use Practice E1527 to complete an *environmental site assessment* of the *property*. A *user* may include, without limitation, a potential purchaser of *property*, a potential tenant of *property*, an *owner* of *property*, a lender, or a *property* manager. The *user* has specific obligations for completing a successful application of this practice.

ConformaTECH

PHASE I ENVIRONMENTAL SITE ASSESSMENT
OWNER QUESTIONNAIRE

Los Reales Landfill Expansion Project
73.6 Acres of Undeveloped Land
Pima County Parcel Nos.: 140-39-052E & -052F
Tucson, Arizona

The following questionnaire has been designed to assist in the preparation of a Phase I Environmental Site Assessment by ConformaTech, Inc. (CTEC). CTEC requests that as the owner/occupant of the Property, you be as specific as possible in your responses and circle the appropriate answer. A listing of terms (*in italics*) is presented at the end of this questionnaire.

Question (Pima County Parcels 140-39-052E & -052F)	**Answer**		
1a. Is the *Property* used for an industrial use?	Yes	No	Unk
1b. Is any *adjoining property* used for an industrial use?	Yes	No	Unk
2a. Do you have any prior knowledge that the *Property* has been used for an industrial use in the past?	Yes	No	Unk
2b. Do you have any prior knowledge that any *adjoining property* has been used for an industrial use in the past?	Yes	No	Unk
3a. Is the *Property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, please circle)?	Yes	No	Unk
3b. Is any adjoining property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, please circle)?	Yes	No	Unk
4a. Do you have any prior knowledge that the *Property* has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, please circle)?	Yes	No	Unk
4b. Do you have any prior knowledge that any *adjoining property* has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, please circle)?	Yes	No	Unk
5a. Are there currently any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of greater that 5 gallons (19 liters) in volume or 50 gallons (190 liters) in the aggregate, stored on or used at the *Property* or at the facility?	Yes	No	Unk
5b. Do you have any prior knowledge that there have been previously any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of greater that 5 gallons (19 liters) in volume or 50 gallons (190 liters) in the aggregate, stored on or used at the *Property* or at the facility?	Yes	No	Unk
6a. Are there currently any industrial drums (typically 55 gallons (208 liters)) or sacks of chemicals located on the *Property* or at the facility?	Yes	No	Unk
6b. Do you have any prior knowledge that there have been previously any industrial drums (typically 55 gallons (208 liters)) or sacks of chemicals located on the *Property* or at the facility?	Yes	No	Unk
7a. Do you have any prior knowledge that *fill dirt* has been brought onto the *Property* that originated from a contaminated site?	Yes	No	Unk

Question (Pima County Parcels 140-39-052E & -052F)	Answer		
7b. Do you have any prior knowledge that *fill dirt* has been brought onto the *Property* that is of an unknown origin?	Yes	No	Unk
8a. Are there currently any *pits, ponds, or lagoons* located on the *Property* in connection with waste treatment or waste disposal?	Yes	No	Unk
8b. Do you have any prior knowledge that there have been previously any *pits, ponds, or lagoons* located on the *Property* in connection with waste treatment or waste disposal?	Yes	No	Unk
9a. Is there currently any stained soil on the *Property*?	Yes	No	Unk
9b. Do you have any prior knowledge that there has been previously, any stained soil on the *Property*?	Yes	No	Unk
10a. Are there currently any registered or unregistered storage tanks (above or underground) located on the *Property*?	Yes	No	Unk
10b. Do you have any prior knowledge that there have been previously, any registered or unregistered storage tanks (above or underground) located on the *Property*?	Yes	No	Unk
11a. Are there currently any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *Property* or adjacent to any structure located on the *Property*?	Yes	No	Unk
11b. Do you have any prior knowledge that there have been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *Property* or adjacent to any structure located on the *Property*?	Yes	No	Unk
12a. Are there currently any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	Yes	No	Unk
12b. Do you have any prior knowledge that there have been previously any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting four odors?	Yes	No	Unk
13a. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well or system that exceed guidelines applicable to the water system?	Yes	No	Unk
13b. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that the well has been designated as contaminated by any government environmental/health agency?	Yes	No	Unk
14. Do you have any knowledge of *environmental liens* or governmental notification relating to past or recurrent violations of environmental laws with respect to the *Property* or any facility located on the *Property*?	Yes	No	Unk
15a. Have you been informed of the past existence of *hazardous substances* or *petroleum products* with respect to the *Property* or any facility located on the *Property*?	Yes	No	Unk
15b. Have you been informed of the current existence of *hazardous substances* or *petroleum products* with respect to the *Property* or any facility located on the *Property*?	Yes	No	Unk
15c. Have you been informed of the past existence of environmental violations with respect to the *Property* or any facility located on the *Property*?	Yes	No	Unk
15d. Have you been informed of the current existence of environmental violations with respect to the *Property* or any facility located on the *Property*?	Yes	No	Unk
16. Do you have any knowledge of any *environmental site assessment* of the *Property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *Property* or recommended further assessment of the *Property*?	Yes	No	Unk

Question (Pima County Parcels 140-39-052E & -052F)	Answer		
17. Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *Property* by any owner or occupant of the *Property*?	Yes	No	Unk
18a. Does the *Property* discharge waste water, on or adjacent to the Property, other than storm water, into a storm water sewer system?	Yes	No	Unk
18b. Does the *Property* discharge waste water, on or adjacent to the *Property*, other than storm water, into a sanitary sewer system?	Yes	No	Unk
19. Do you have any prior knowledge that any *hazardous substances or petroleum products*, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials have been dumped above grade, buried and/or burned on the *Property*?	Yes	No	Unk
20. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs?	Yes	No	Unk

Are you aware of any of the following documents in reference to the Property?	Answer	
Environment site assessment reports	Yes	No
Environment compliance audit reports	Yes	No
Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)	Yes	No
Registrations for underground and above-ground storage tanks	Yes	No
Registrations for underground injection systems	Yes	No
Material safety data sheets	Yes	No
Community right-to-know plan	Yes	No
Safety plans; preparedness and prevention plans; spill prevention, countermeasure and control plan	Yes	No
Reports regarding hydrogeologic conditions on the Property or surrounding area	Yes	No
Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property	Yes	No
Hazardous waste generator notices or reports	Yes	No
Geotechnical studies	Yes	No
Risk assessments	Yes	No
Recorded activity and use limitations	Yes	No

Do you know of any of the following in reference to the Property?	Answer	
any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the Property	Yes	No
any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the Property	Yes	No
notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	Yes	No

Thank you for responding to this questionnaire. Please fax (520.573.0528) or email (gerry.yarab@confomratech.com) back the completed questionnaire to the attention of Gerry Yarab at ConformaTech as soon as possible. If you have any questions, please call Mr. Yarab (520.573.2045).

Please sign and date.

Signature

1-6-14
Date

David Barraza
Name (printed)

Environmental Project Coordinator
Title

TERMINOLOGY

Activity and use limitations - legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property.

Adjoining properties—any real *property* or properties the border of which is contiguous or partially contiguous with that of the *property*, or that would be contiguous or partially contiguous with that of the *property* but for a street, road, or other public thoroughfare separating them.

All appropriate inquiries—that inquiry constituting *all appropriate inquiries* into the previous ownership and uses of the *property* consistent with good commercial and customary practice as defined in CERCLA, 42 U.S.C §9601(35)(B), that will qualify a party to a *commercial real estate transaction* for one of the threshold criteria for satisfying the *LLPs* to CERCLA liability (42 U.S.C §9601(35)(A) & (B), §9607(b)(3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense.

Data gap—a lack of or inability to obtain information required by this practice despite *good faith* efforts by the *environmental professional* to gather such information. *Data gaps* may result from incompleteness in any of the activities required by this practice, including, but not limited to *site reconnaissance* (for example, an inability to conduct the *site visit*), and *interviews* (for example, an inability to interview the *key site manager*, regulatory officials, etc.).

Engineering controls (EC)—physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to *hazardous substances* or *petroleum products* in the soil or groundwater on the *property*. *engineering controls* are a type of activity and use limitation (AUL).

Environmental lien—a charge, security, or encumbrance upon title to a *property* to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of *hazardous substances* or *petroleum products* upon a *property*, including (but not limited to) liens imposed pursuant to CERCLA 42 U.S.C. §§9607(1) & 9607(r) and similar state or local laws.

Environmental professional—a person meeting the education, training, and experience requirements as set forth in 40 CFR §312.10(b).

Fill dirt—dirt, soil, sand, or other earth, that is obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real *property*. It does not include material that is used in limited quantities for normal landscaping activities.

Hazardous substance—a substance defined as a *hazardous substance* pursuant to CERCLA 42 U.S.C.§9601(14), as interpreted by EPA regulations and the courts:" (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture,

solution, or substance designated pursuant to section 9602 of this title, (C) any *hazardous waste* having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C.§§6901 *et seq.*) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. §7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a *hazardous*
Substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)."

Institutional controls (IC)—a legal or administrative restriction (for example, "deed restrictions," restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to *(1)* reduce or eliminate potential exposure to *hazardous substances* or *petroleum products* in the soil or groundwater on the *property*, or *(2)* to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. An *institutional control* is a type of *Activity and Use Limitation (AUL)*.

Landowner Liability Protections (LLPs)—landowner liability protections under CERCLA; these protections include the *bona fide prospective purchaser liability protection*, *contiguous property owner liability protection*, and *innocent landowner defense* from CERCLA liability. See 42 U.S.C. §§9601(35)(A), 9601(40), 9607(b), 9607(q), 9607(r).

Obvious—that which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while visually or physically observing the *property*.

Occupants—those tenants, subtenants, or other persons or entities using the *property* or a portion of the *Property*.

PCBs - polychlorinated biphenyls

Petroleum products – those substances included within the meaning of the *petroleum exclusion* to CERCLA, 42 U.S.C. §9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a *hazardous substance* under Subparagraphs (A) through (F) of 42 U.S.C. § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil,

Pits, ponds, or lagoons—man-made or natural depressions in a ground surface that are likely to hold liquids or sludge containing *hazardous substances* or *petroleum products*. The likelihood of such liquids or sludge being present is determined by evidence of factors associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an *obvious wastewater* discharge.

***Property* – approximately 73.6 acres of undeveloped land located north of the current Los Reales Landfill in Tucson, Arizona. The Property is bisected by East Los Reales Road.**

Pima County **Parcel No. 140-39-052E is located west and north and 140-39-052F is located east and south of Los Reales Road.**

Reasonably ascertainable—information that is *(1) publicly available*, *(2)* obtainable from its source within reasonable time and cost constraints, and *(3) practically reviewable*.

Release—a *release* of any *hazardous substance* or *Petroleum product* shall have the same meaning as the definition of "release" in CERCLA 42 U.S.C. § 9601(22)).

User – the party seeking to use Practice E1527 to complete an *environmental site assessment* of the *property*. A *user* may include, without limitation, a potential purchaser of *property*, a potential tenant of *property*, an *owner* of *property*, a lender, or a *property* manager. The *user* has specific obligations for completing a successful application of this practice.

ConformaTECH

APPENDIX D

ENVIRONMENTAL DATABASE INFORMATION

Allands

14947 W. Piccadilly Road, Goodyear, AZ 85395 • Phone: 623-535-7800 • Fax: 623-535-7900
www.allands.com • e-mail: sharon@allands.com

Historical Title and Environmental Research

REGULATORY DATABASE (ASTM) SEARCH

YOUR FILE NO:

ALLANDS FILE NO: 2013-12-063D

DATE OF REPORT: December 21, 2013

ALLANDS hereby reports the search results of Federal and State Databases according to ASTM standards for Phase I Environmental Site Assessments E 1527-13. Allands is not responsible for errors in the available records. The total liability is limited to the fee paid for this report. This is a confidential, privileged and protected document for the use of ConformaTech.

1. The land referred to in this report is located in Pima County, Arizona, described as follows:

Property located North and South of the realigned Los Reales Road, West of Craycroft Road and South of Interstate 10, Tucson, Arizona, being in the Southeast quarter of Section 14, Township 15 South, Range 14 East, Gila and Salt River Base and Meridian.

REGULATORY DATABASE SEARCH SUMMARY

Database	Date of Database	Approximate Minimum Search Distance (miles)	Reported Facilities
Standard Federal ASTM Environmental Record Sources			
NPL (National Priorities List) / Proposed NPL / DOD (Department of Defense Sites)	10/13	1.0	0
Delisted National Priorities List	10/13	0.5	0
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)/No Further Remedial Action Planned (NFRAP)	10/13	0.5	1
RCRA (Resource Conservation and Recovery Act)	10/13	0.125	2
RCRA – CORRACTS TSDFs (Corrective Action Treatment, Storage, and Disposal Facilities)	10/13	1.0	0
RCRA – Non-CORRACTS TSDFs	10/13	0.5	0
ERNS (Emergency Response Notification System)	10/13	0.125	0
Standard State ASTM Environmental Record Sources			
WQARF (Water Quality Assurance Revolving Fund) Areas	10/13	1.0	1
Superfund Program List (replaces ACIDS)	08/04	0.5	1
Solid Waste Facilities/Landfill Sites – Operating and Closed	05/99 & 05/04	0.5	1
Control Registries	10/13	Site and adjoining	0
Brownfields / Voluntary Remediation Program	10/13	0.5	1
Registered USTs (Underground Storage Tanks) (includes Tribal Records)	01/13	0.125	0
LUSTs (Leaking Underground Storage Tanks) Incident Reports (includes Tribal Records)	01/13	0.5	3
Additional Environmental Record Sources			
RCRA Compliance Facilities	10/13	0.125	0
Hazardous Materials Incidents Emergency Response Logbook	1984-06/01	0.125	1
ADEQ Drywell Registration Database (includes Tribal Records)	10/13	0.125	0
Environmental Permits	10/13	Site	0
Fire Insurance Maps	Various	Site and adjoining	0
Topographical / Aerial Maps	See text	Site and adjoining	2
VEMUR / DEUR / LIENS / DEURTRACKER	10/13	Site	0
DRYCLEANER	06/06	0.125	0
Arizona Department of Water Resources Well Registration Database	04/13	Site and adjoining	See Text

Allands contacts the appropriate sources on a quarterly basis to maintain currency of data

Standard Federal ASTM Environmental Record Sources

SUPERFUND NATIONAL PRIORITIES LIST (NPL)

Under Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act the Environmental Protection Agency established a National Priorities List (NPL) of Superfund sites. In addition, Proposed NPL and DOD (Department of Defense) Sites are researched in the section. These databases are provided by the EPA and the Arizona Department of Environmental Quality, dated October, 2013, and searched to identify all NPL/Proposed NPL/ DOD sites within a 1.0 mile search distance from subject property exterior boundaries.

Note: Due to inconsistency between the general area site description in the Narrative site information and the detailed site map, the distance/directions are determined based upon the most current site map available from ADEQ.

No National Priorities List (NPL) / Proposed NPL / DOD Sites were found located within a 1.0 mile search distance from subject property exterior boundaries.

DELISTED NATIONAL PRIORITIES LIST

Site may be delisted from the National Priorities List where no further response is appropriate. This database is provided by the Environmental Protection Agency, dated October, 2013, and searched to identify all Delisted NPL Sites within a 0.5 mile search distance from subject property exterior boundaries.

No Delisted National Priorities List (NPL) Sites were found located within a 0.5 mile search distance from subject property exterior boundaries.

FEDERAL CERCLIS / NFRAP LIST

The CERCLIS list contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. Those sites on the NFRAP list have no further remedial action planned. This database is provided by EPA dated October, 2013, and searched for facilities within a 0.5 mile search distance from subject property exterior boundaries.

EPA ID	NFRAP	FACILITY	ADDRESS	DISTANCE/ DIRECTION
AZD980636104	X	Los Reales Landfill	5300 E Los Reales Rd	0.1 mi. South

RESOURCE CONSERVATION AND RECOVERY ACT FACILITIES (RCRA)

Under RCRA the Environmental Protection Agency compiles a database of facilities that are involved in the generation of hazardous materials. This database is from the Arizona Department of Environmental Quality RCRAInfo Database, dated October, 2013 and checked for Federal RCRA facilities located within a <=0.125 mile search distance from subject property exterior boundaries.

EPA ID	FACILTY	ADDRESS	NOTIF. DATE	STATUS
AZD982436461	Dealers Auto Exchange Of Tucson	7090 S Craycroft	10/31/2008	CEG
AZR000032573	Los Reales Landfill	5300 E Los Reales Rd	2/10/2005	N

CODES:

LQG: Large quantity generator (more than 1000 kg per month)
SQG: Small quantity generator (100 – 1000 kg per month)
CEG: Conditionally exempt small quantity generator (less than 100 kg per month)
N : Not a generator verified or inactive generator

CORRACTS FACILITIES

Under RCRA the Environmental Protection Agency compiles a database of Corrective Action Sites, sites with known contamination. Also known as the RCRA CORRACTS List, this is a list maintained by the EPA of RCRA sites at which contamination has been discovered and where some level of corrective clean-up activity has been undertaken. For example, a site may have been on the RCRA TSD or the RCRA Generators site list, and was placed on the CORRACTS list once contamination was discovered and remediation was underway. This database is dated October, 2013, and checked for facilities which occurred within a 1.0 mile search distance from subject property exterior boundaries.

No Facilities were found which occurred within a 1.0 mile search distance from subject property exterior boundaries.

TSD FACILITIES

Under RCRA the Environmental Protection Agency compiles a database of facilities that are involved in the transportation, treatment, storage, or disposal of hazardous materials. This database is from the Arizona Department of Environmental Quality Arizona Hazardous Waste Treatment, Storage and Disposal Facilities, dated October, 2013, and checked for Facilities which occurred within a 0.5 mile search distance from subject property exterior boundaries.

No TSD Facilities were found which occurred within a 0.5 mile search distance from subject property exterior boundaries.

FEDERAL EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) LIST

The ERNS list is a national database used to collect information on reported releases of oil and hazardous substances. This database is provided by the National Response Center and the EPA through the Right of Know Net by OMB Watch and Unison Institute from 1983 to October, 2013, and checked for incidents located within a <=0.125 mile search distance from subject property exterior boundaries.

No incidents were found located within a <=0.125 mile search distance from subject property exterior boundaries.

Standard State ASTM Environmental Record Sources

WATER QUALITY ASSURANCE REVOLVING FUND (WQARF)

The state of Arizona established a remedial program under A.R.S. 49-282 to facilitate the conservation and clean-up of Arizona drinking water and water sources. Under the authority of the WQARF program, the state actively identifies any actual or potential impact upon state waters, evaluates the extent of contamination, identifies parties responsible, and provides money grants to assist in clean-up activities. This database is provided by the Arizona Department of Environmental Quality dated October, 2013, and searched to identify all WQARF sites within a 1.0 mile search distance from subject property exterior boundaries.

Note: Due to inconsistency between the general area site description in the Narrative site information and the detailed site map, the distance/directions are determined based upon the most current site map available from ADEQ.

Property is located within the Los Reales WQARF Registry List Site. More information attached.

ARIZONA SUPERFUND PROGRAM LIST

The Arizona Superfund Program List replaces the Arizona CERCLIS Information Data System (ACIDS) This list is more representative of the sites and potential sites within jurisdiction of the Arizona Department of Environmental Quality Superfund Programs Section (SPS). This database is provided by the Arizona Department of Environmental Quality, dated August, 2004, and searched to identify all sites within a 0.5 mile search distance from subject property exterior boundaries.

SITE	PROGRAM	PROGRAM STATUS	PROGRAM DATE	DISTANCE/ DIRECTION
WQ - LOS REALES LANDFILL	WQARF	PENDING PI ON REGISTRY	04-29-97 04-23-99	Site located within

Program Status codes:

Pending PI	WQARF Preliminary Investigation (PI) is scheduled or in process
On Registry	PI has resulted in inclusion of a site on the WQARF Registry
ACTIVE	The Department of Defense is presently addressing the site
On NPL	site has been listed on the CERCLA National Priorities List

LANDFILLS

The state of Arizona maintains listings of closed and permitted, operating landfills and solid waste dump sites. Lists of closed facilities are not necessarily complete - older dumping areas may not be documented. This database is from the Arizona Department of Environmental Quality Waste Programs Division; Solid Waste Section Directory of Arizona Active and Inactive Landfills dated May, 1999 and May, 2004, and checked for active and inactive landfills located within a 0.5 mile search distance from subject property exterior boundaries.

FACILITY	SEC/TWN/RNG	LOCATION	DISTANCE/ DIRECTION
Los Reales MSWLF	23/15S/14E	.5 Mi S Of I-10 On Craycroft Rd, .5 Mi W On	0.1 mi. South

Codes:

MSWLF: **Municipal Solid Waste Landfills**
CSWLF: **Closed Solid Waste Landfills**
CSWOD: **Closed Solid Waste Dumps**

CONTROL REGISTRIES

Under ASTM E 1527-05, Federal, State and Tribal institutional control / engineering control registries need to be researched. The Arizona Department of Environmental Quality has developed the AZURITE Database, reviewed through ADEQ GIS eMaps, which retrieves any institutional or engineering controls, dated October, 2013, and searched for sites which occurred at subject property or adjoining properties.

No institutional or engineering controls were found which occurred at subject property or adjoining properties.

BROWNFIELDS / VOLUNTARY CLEANUP PROGRAM

The Arizona Department of Environmental Quality has developed the AZURITE Database, reviewed through ADEQ GIS eMaps, which includes the ADEQ Voluntary Remediation Program and the ADEQ Brownfields Tracking System, dated October, 2013, and searched for sites which occurred within a 0.5 mile search distance from subject property exterior boundaries.

ID	Program	Site Name	Site Status	RIMS #	Site Address	Site Code	VRP Owner Name/BFGS Grantee	Site Type
158	VRP	Los Reales /Southwest Disposal Area	Active	2-34416	5306 E Los Reales Rd	505220-00	City of Tucson Solid Waste Management	Closed Municipal Solid Waste Landfill

Site Name	Site Size (Acres)	Nature of Contamination	Media	Restricted Land Use	Recorded Date	Brownfields Grant Site Specific	Date Accepted	Date Closed	Comments
Los Reales /Southwest Disposal Area		1,1-DCE	Soil				7/25/2003		

REGISTERED UNDERGROUND STORAGE TANKS (UST)

State (A.R.S. 49-1001 to 1014) and Federal (RCRA Subtitle I) laws require that persons who own or have owned underground storage tanks containing “regulated substances” complete a notification form and register the tank with the state. Tribal UST records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the Arizona Department of Environmental Quality UST Log dated January, 2013, and searched for UST sites located within a <=0.125 mile search distance from subject property exterior boundaries.

No registered underground storage tanks were found located within a <=0.125 mile search distance from subject property exterior boundaries.

REGISTERED LEAKING UNDERGROUND STORAGE TANKS (LUST)

Owners of USTs are required to report to the Arizona Department of Environmental Quality any and all releases of tank contents for which ADEQ maintains an ongoing file documenting the nature of contamination and the status of each such incident. Tribal LUST records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the ADEQ LUST Log dated January, 2013, and searched for LUST sites located within a 0.5 mile search distance from subject property exterior boundaries.

ID	LUST ID NO	FACILITY	ADDRESS	DATE OPEN	DATE CLOSED	P CODE	DIST./ DIREC.
0-005199	0183.01 0183.02 0183.03 0183.04	Tucson Truck Terminal Inc	5451 Benson Hwy	6/2/1986 7/22/1988 7/22/1988 9/15/1997	8/14/2008 11/15/2006 11/15/2006 11/26/1997	5G1 5R1 5R1 5S	0.3 mi. N
0-002022	2213.01	Exxon # 7-6390	5471 E Benson Hwy	3/6/1992	5/17/2000	5R1	0.3 mi. N
0-001331	4139.01 4139.02 4139.03 4139.04	Circle K # 843	6750 S Craycroft	6/30/1995 6/30/1995 6/30/1995 6/30/1995	2/27/1997 2/27/1997 2/27/1997 2/27/1997	5R1 5R1 5R1 5R1	0.4 mi. N

P CODE (Leaking UST Priority):

1	Known or probable affects on groundwater (GW) or affects soils to a depth within 30 feet of GW depth
2	Undefined soil contamination (default for newly reported LUSTs)
5R1	Closed soil levels meet RBCA
5S	Closed case for suspected release (false alarm)

Additional Environmental Record Sources

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) COMPLIANCE FACILITIES

The RCRA Compliance Log lists facilities that have been or presently are under investigation for non-compliance with RCRA regulations. Inclusion of any facility on this list indicates a history of compliance problems and RCRA regulatory violation. This database is from the Arizona Department of Environmental Quality RCRA Compliance Log, dated October, 2013, and searched for compliance facilities within a <=0.125 mile search distance from subject property exterior boundaries.

No compliance facilities were found located within a <=0.125 mile search distance from subject property exterior boundaries.

HAZARDOUS MATERIAL INCIDENTS

The Arizona Department of Environmental Quality (ADEQ) Response Team documents spills and incidents involving hazardous materials that are reported to the unit. This database is from the Arizona Department of Environmental Quality Emergency Response Log from 1984 through June, 2001, and checked for hazardous material incidents located within a <=0.125 mile search distance from subject property exterior boundaries.

ID	DATE	FACILITY	ADDRESS	DETAILS
93-015-B	1/30/1993	Unknown	Los Reales Landfill / Craycroft	Acid Liq/Carr. Liq Nose/Pails

ADEQ DRY WELL REGISTRATION DATA BASE

Dry wells are constructed for the purpose of collecting storm waters. Dry wells are required to be registered with ADEQ. Tribal Drywell records are researched when subject property exterior boundaries are within search distance of Tribal lands. This database is from the ADEQ dry well registration database dated October, 2013, and searched for dry wells located within a <=0.125 mile search distance from subject property exterior boundaries.

No registered dry wells were found located within a <=0.125 mile search distance from subject property exterior boundaries.

ENVIRONMENTAL PERMITS

These lists include Groundwater Permits, Reuse Permits; National Pollutant Discharge Elimination System (NPDES) Permitted Facilities and Aquifer Protection Permits. Any facility which discharges a material that directly or indirectly adds any pollutant to the waters of the state may be required to obtain a permit as required by the Aquifer Protection Permit Rules. These databases are from the Arizona Department of Environmental Quality through its AZURITE Database System and the Environmental Protection Agency and updated to October, 2013, and checked for inclusion of subject property.

Subject property was not found on these lists.

FIRE INSURANCE MAPS

A review was made at the Arizona State Capital Archives for Fire Insurance Maps, more commonly known as Sanborn Maps, which covered the area in which the subject property is located. Subject property is not located within the boundaries of available maps.

USGS 7.5 MINUTE TOPOGRAPHICAL MAPS
AERIAL PHOTOS

The United States Geological Survey Topographic maps and Aerial Photos are derived from Terrain Navigator Software from Maptech, Inc. (www.maptech.com) and are for informational purposes only.

NAME	TYPE	DATE	REVISION	CONTOUR INTERVAL
Tucson SW	Topo	1983	None	10 feet
Tucson SW NE	Aerial	6-14-2010		
Tucson SE	Topo	1982	None	10 feet
Tucson SE NW	Aerial	6-14-2010		

VOLUNTARY ENVIRONMENTAL MITIGATION USE RESTRICTIONS BY OWNERS (VEMUR'S); DECLARATION OF ENVIRONMENTAL USE RESTRICTIONS (DEUR); AND ENVIRONMENTAL LIENS

A.R.S. 49-152. This states that the Director of the Arizona Department of Environmental Quality shall allow property owners, who have voluntarily elected to remediate their property for nonresidential uses, to record in the applicable county recorder's office a VEMUR limiting, by legal description, the area necessary to protect public health and the environment to nonresidential uses if contamination remains on the property at or above certain levels. In accordance with Arizona Administrative Code (A.A.C.) R18-7-201 et. Seq., a Declaration of Environmental Use Restriction (DEUR) is a voluntary notice to deed which restricts the use of a property to non-residential use. ADEQ maintains a repository listing of sites remediated under programs administered by the department. This is called the Remediation and DEUR Tracking System (RDT) ADEQ's RDT was researched for inclusion of subject property.

No VEMUR'S, DEUR'S; nor Environmental Liens were found listed for subject property.

DRYCLEANERS

The Drycleaners Inventory List summarizes current and historic dry cleaners sites throughout the state of Arizona and is not all inclusive. This database is from the Report for the Arizona Department of Environmental Quality Dry Cleaners Inventory Project, dated June, 2006, and searched for dry cleaners sites located within a <=0.125 mile search distance from subject property exterior boundaries.

No drycleaners were found located within a <=0.125 mile search distance from subject property exterior boundaries.

ARIZONA DEPARTMENT OF WATER RESOURCES
WELL REPORT

This database is from the Arizona Department of Water Resources Well Report Operations Division Report, dated April, 2013. This report identifies existing wells sequenced by legal description and checked for inclusion of subject site and adjacent properties within 10 Acres.

Imaged Records are available at: http://www.water.az.gov/adwr/Content/ImagedRecords/default.htm

Water Uses (WU)

A	Irrigation
B	Utility (Water Co.)
C	Commercial
D	Domestic
E	Municipal
F	Industrial
G	Recreational
H	Remediation
I	Mining
J	Stock
K	Other - Exploration
L	Drainage
M	Monitoring
N	None
O	Other - Non-Production
P	Remediation
R	Recharge
T	Test
U	Unknown
V	Dewatering

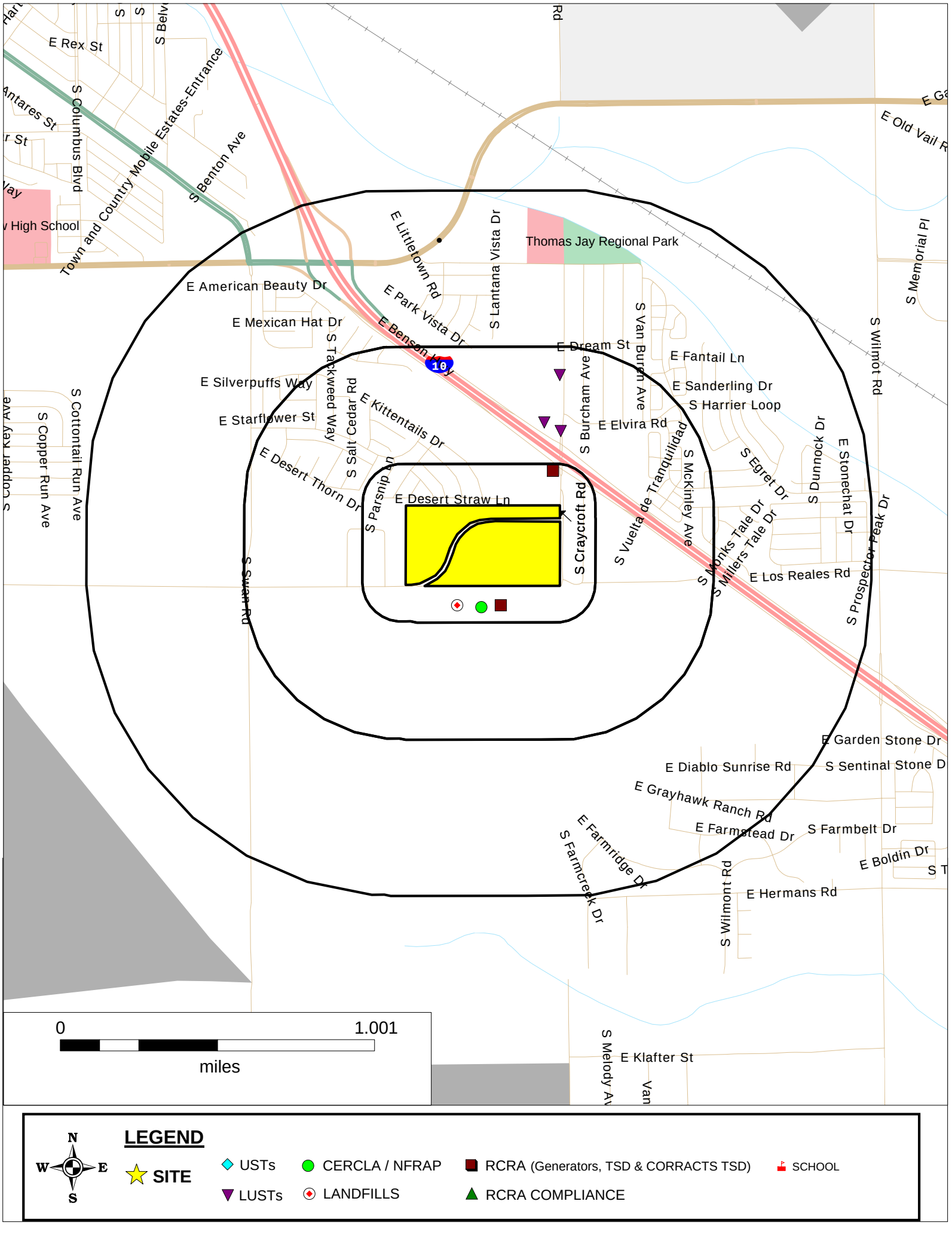
Legal Description

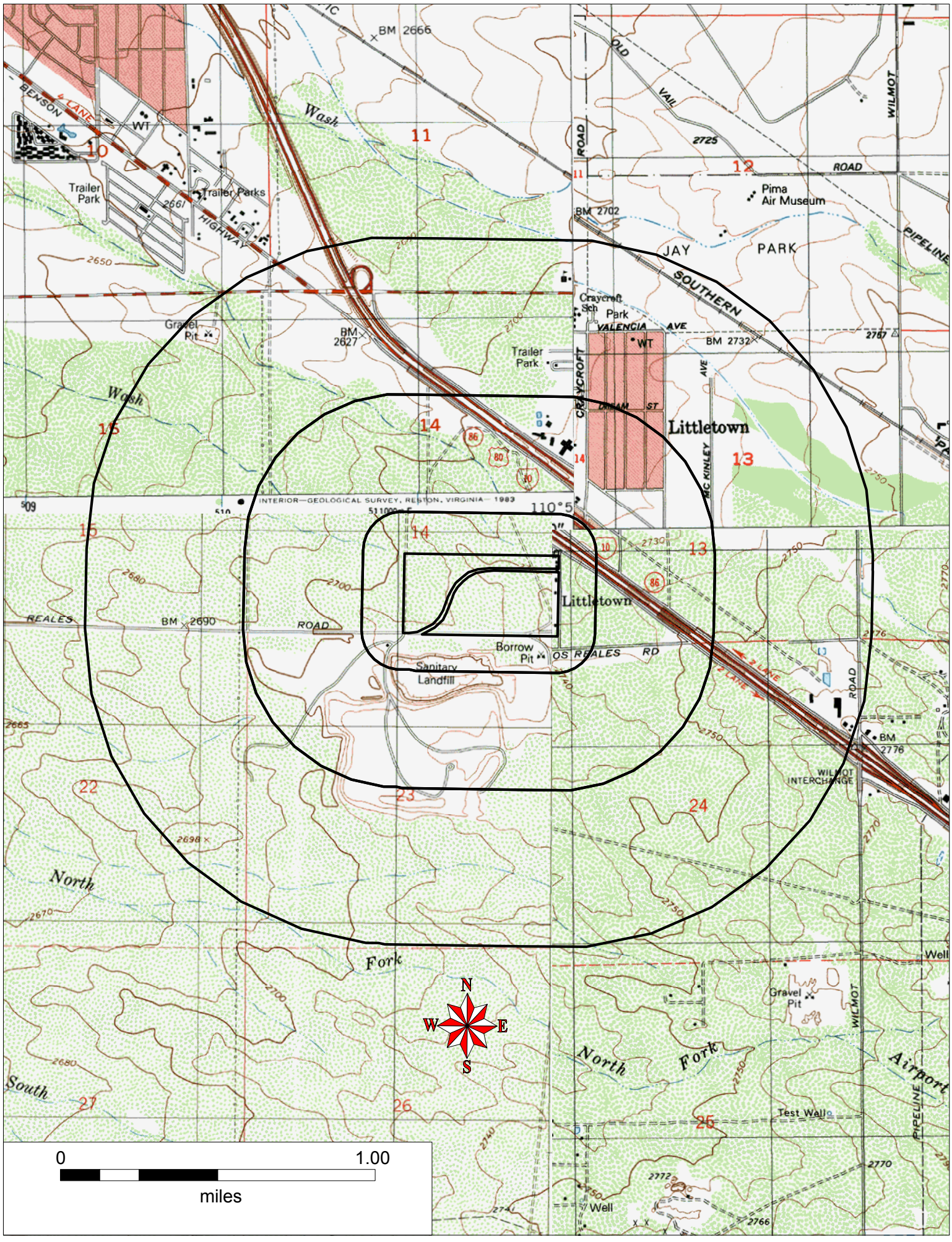
T	Township
N/S	North or South
R	Range
E/W	East or West
S	Section
Q1	Quarter of Section (160 Acres)
Q2	Quarter Quarter of Section (40 Acres)
Q3	Quarter Quarter Quarter of Section (10 acres)
ID	Well Registration Number
WD	Well Depth
WL	Water Level
DIA	Casing width

ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
542190	15	S	14	E	13				N	0	0	0	Santa Fe Pacific,
519858	15	S	14	E	14	SE	NE	SE	F	0	0	0	Anglo American,
902792	15	S	14	E	14	SE	SW	NE	M	240	225	6	City Of Tucson
902795	15	S	14	E	14	SE	SW	NW	M	300	212	6	City Of Tucson
527403	15	S	14	E	14	SE	SW	NW	M	300	185	6	City Of Tucson
902793	15	S	14	E	14	SE	SW	NW	M	240	211	7	City Of Tucson
583856	15	S	14	E	14	SE	SW	SW	T				City Of Tucson - Environmental Management Division
575183	15	S	14	E	14	SW	NE	SE	T				City Of Tucson - Environmental Services
575184	15	S	14	E	14	SW	SE	NW	T				City Of Tucson - Environmental Services
902791	15	S	14	E	14	SW	SE	NW	M	240	205	7	City Of Tucson

ARIZONA DEPARTMENT OF WATER RESOURCES
WELL REPORT (cont.)

ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
584907	15	S	14	E	23	NE	NE	NE	T				City Of Tucson Environmental Management
584906	15	S	14	E	23	NE	NE	NE	T				City Of Tucson Environmental Management
584905	15	S	14	E	23	NE	NE	NE	T				City Of Tucson Environmental Management
584909	15	S	14	E	23	NE	NE	NW	T				City Of Tucson Environmental Management
584904	15	S	14	E	23	NE	NE	NW	T				City Of Tucson Environmental Management
592316	15	S	14	E	23	NE	NE	NW	M	430	220	6	City Of Tucson Environmental Services
584908	15	S	14	E	23	NE	NE	NW	T				City Of Tucson Environmental Management
577005	15	S	14	E	23	NE	NW	NE	T				City Of Tucson - Environmental Services
583859	15	S	14	E	23	NE	NW	NE	T				City Of Tucson - Environmental Management Division
583858	15	S	14	E	23	NE	NW	NE	T	245	195	5	City Of Tucson - Environmental Management Division
577003	15	S	14	E	23	NE	NW	NE	T				City Of Tucson - Environmental Services
577006	15	S	14	E	23	NE	NW	NE	T				City Of Tucson - Environmental Services
575182	15	S	14	E	23	NE	NW	NE	T	240	195	5	City Of Tucson - Environmental Services
575181	15	S	14	E	23	NE	NW	NW	T	245		5	City Of Tucson - Environmental Services
517158	15	S	14	E	23	NE	NW	NW	M	300	204	16	Tucson, City Of,
575180	15	S	14	E	23	NE	NW	NW	T	245	190	5	City Of Tucson - Environmental Services
575179	15	S	14	E	23	NE	NW	NW	T	245	190	5	City Of Tucson - Environmental Services
592317	15	S	14	E	23	NW	NE	NE	M	235	211	6	City Of Tucson Environmental Services
592314	15	S	14	E	23	NW	NE	NE	M	230	207	6	City Of Tucson Environmental Services
575178	15	S	14	E	23	NW	NE	NE	T	245	190	5	City Of Tucson - Environmental Services
592315	15	S	14	E	23	NW	NE	NE	M	235	208	6	City Of Tucson Environmental Services
577004	15	S	14	E	23	NW	NE	NE	T				City Of Tucson - Environmental Services
566879	15	S	14	E	23	NW	NE	NE	M				City Of Tucson/Tucson Water
583864	15	S	14	E	23	NW	NE	NE	T	245	218	5	City Of Tucson - Environmental Management Division


E Rex St
S Columbus Blvd
Antares St
S Benton Ave
Town and Country Mobile Estates-Entrance
High School
E Littletown Rd
S Lantana Vista Dr
Thomas Jay Regional Park
E Old Vail R
S Memorial Pl
E American Beauty Dr
E Mexican Hat Dr
E Park Vista Dr
E Benson Hwy
10
E Dream St
S Van Buren Ave
E Fantail Ln
E Sanderling Dr
S Harrier Loop
S Wilmot Rd
E Silverpuffs Way
S Tarkweed Way
S Salt Cedar Rd
E Kittentails Dr
S Burcham Ave
E Elvira Rd
E Starflower St
E Desert Thorn Dr
S Parsnip Ln
E Desert Straw Ln
S Craycroft Rd
S Vuelta de Tranquilidad
S McKinley Ave
S Egret Dr
S Dunnock Dr
E Stonechat Dr
S Monks Tale Dr
S Millers Tale Dr
E Los Reales Rd
S Prospector Peak Dr
S Cottontail Run Ave
S Copper Run Ave
S Swan Rd
E Garden Stone Dr
E Diablo Sunrise Rd
S Sentinal Stone D
E Grayhawk Ranch Rd
E Farmstead Dr
S Farmbelt Dr
E Farmridge Dr
S Farmcreek Dr
E Boldin Dr
S Wilmont Rd
E Hermans Rd
S Melody Av
E Klafter St
0
1.001
miles
N
W
E
S
LEGEND
SITE
USTs
LUSTs
CERCLA / NFRAP
LANDFILLS
RCRA (Generators, TSD & CORRACTS TSD)
RCRA COMPLIANCE
SCHOOL


BM 2666
Wash
BENSON
LANE
WT
Trailer Park
Trailer Parks
HIGHWAY
2650
Gravel Pit
BM 2627
Wash
Trailer Park
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1983
110°5
REALES
BM 2690
ROAD
Borrow Pit
Sanitary Landfill
OS REALES RD
Littletown
OLD VAIL ROAD
WILMOT
ROAD
Pima Air Museum
BM 2702
JAY
PARK
SOUTHERN
PIPELINE
Craycroft Sch
Park
VALENCIA AVE
WT
BM 2732
CRAYCROFT AVE
DIAMAN ST
MC KINLEY AVE
Littletown
2 LANE
ROAD
BM 2776
WILMOT INTERCHANGE
North Fork
South
Gravel Pit
Test Well
Well
Airport
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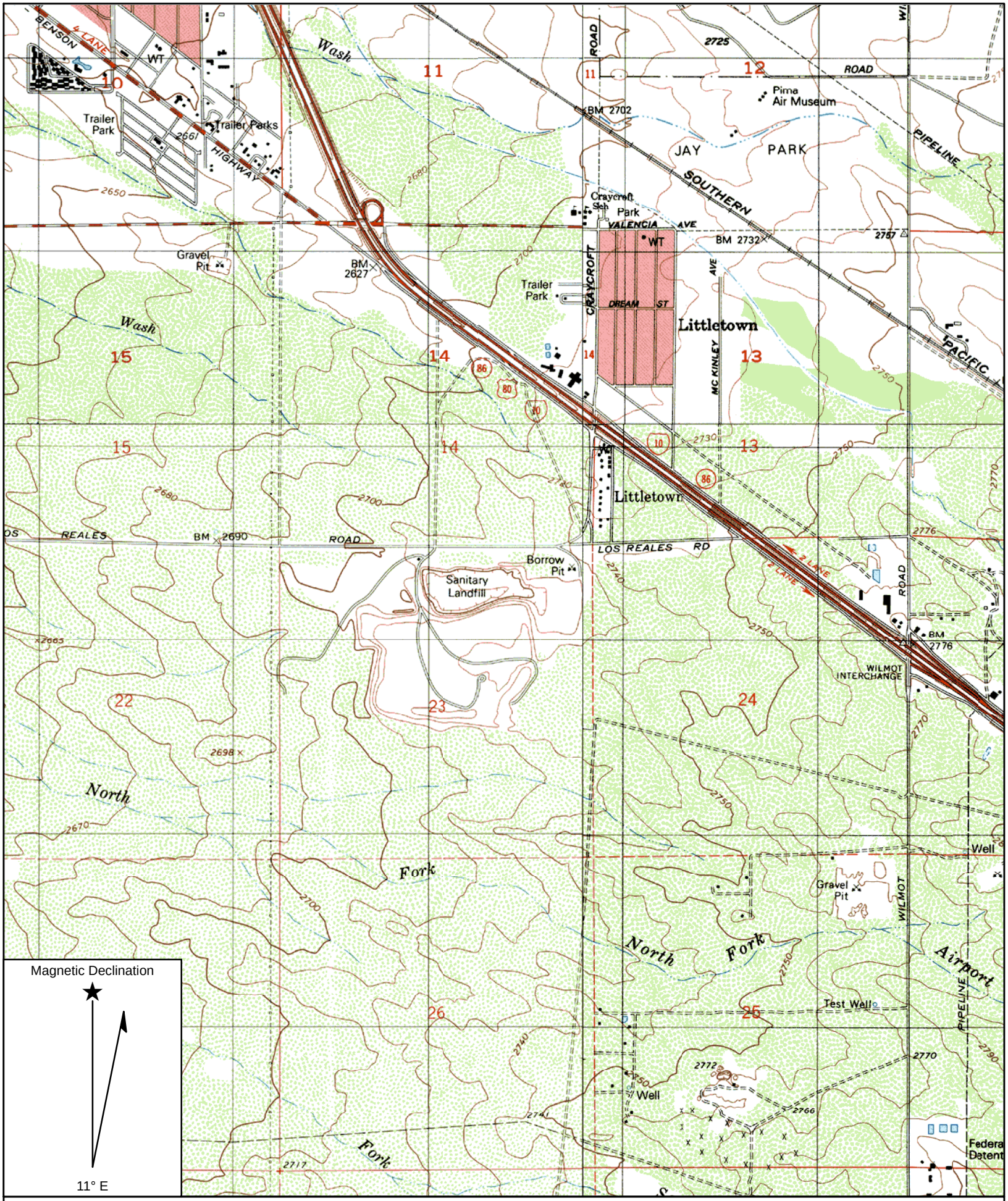
E
S
0
0.50
miles



Magnetic Declination

11° E

Name: TUCSON SW
Date: 12/20/2013
Scale: 1 inch equals 2000 feet

Location: 12 0511328 E 3553395 N NAD83
Caption: Job No. 2013-12-063
Contour interval is 10 feet

Los Reales Landfill

Water Quality Assurance Revolving Fund (WQARF) Site

Boundaries:

The Los Reales Landfill (site) is located on the southeast side of Tucson, Arizona south of Interstate 10 and west of Craycroft Road near the intersection of Swan and Los Reales Roads. The site includes an active municipal sanitary landfill located at 5300 E. Los Reales Road consisting of approximately 380 acres. The City of Tucson (COT) owns and operates the landfill and manages site cleanup activities with oversight from the Arizona Department of Environmental Quality (ADEQ).

The plume geographic boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plume may change in the future as new information becomes available.

Site Status Update:

COT has determined the extent of contamination, and the pump and treat groundwater treatment system (GWTS) has been expanded accordingly. Since the initial startup of the system in 1999, approximately 301 million gallons of groundwater have been treated. Since 2000, approximately 24 pounds of non-Freon volatile organic compounds (VOCs) have been removed.

Landfill Gas Piped to Tucson Electric Power

Since 1999, a landfill gas recovery system has been delivering enough methane to Tucson Electric Power to supply energy for about 4,000 homes.

COT is presently evaluating and ranking remedial strategies, including the present pump and treat system, for addressing the site groundwater contamination. COT expects to complete this evaluation by June 2012.

Community Involvement Activities:

COT involved the community throughout the remedial investigation/feasibility study (RI/FS) process. However, if the remedial action plan (RAP) is significantly modified, additional public comment will be solicited at the appropriate time.

Site History:

1967: The Los Reales Landfill opened and accepted municipal waste.

1977-1980: Low level hazardous waste was deposited in an approximately four acre area of the southwestern portion of the landfill called the SWDA. This area and the main landfill cell area were unlined.

1988: In August, VOCs were first detected in two monitor wells along Los Reales Road (the northern boundary of the landfill).

1991: In October, the RI report from COT revealed a plume of VOC-contaminated groundwater extending northwest approximately one-half mile from the northwest corner of the landfill. The main unlined landfill cell appeared to be the primary source of groundwater contamination.

The Pump and Treat System at the Los Reales Landfill

1994: In September, the FS was submitted to ADEQ analyzing potential remedial strategies for the groundwater contamination.

1995-1997: In April 1995, a letter of determination from ADEQ approved the final RAP which provided for a pump and treat re-inject system. In September 1997, ADEQ approved the conceptual design plan for installation of the treatment system. One year later, COT began construction.

1999: In March, the pump and treat facility began operation. Groundwater was pumped from ten extraction wells, treated by air stripping, and contaminants in the air-stripper exhaust were captured by a carbon filter. A portion of the treated water was reinjected into the aquifer by two injection wells and the other portion was used for dust control at the landfill. The system was designed to handle up to 90 gallons per minute.

The site was placed on the WQARF Registry in April with a score of 32 out of a possible 120. Also in April, COT identified additional contamination while replacing a monitor well for new cell construction to the east of the original remedial system wells. COT addressed the additional contamination by expanding the existing pump and treat system. In August, landfill gas began to be piped to Tucson Electric Power as an alternative fuel source. The landfill produces enough methane energy to power 4,000 homes.

The Soil Vapor Extraction System at the Southwest Disposal Area

2000: In February, COT identified further contamination south of the existing plume while closing out the SWDA.

2003: In May, COT began operating a soil vapor extraction system to address high soil gas concentrations. On July 25th, the SWDA was accepted into the Voluntary Remediation Program (VRP) of ADEQ. Due to co-mingling plumes, this general area is currently regulated under two ADEQ programs. All SWDA soil issues will be reviewed and handled by VRP while all groundwater issues are regulated by WQARF.

2005: In August, COT installed six new groundwater monitor wells to further characterize the extent of groundwater contamination.

2006: In October, COT made modifications to three existing wells (WR-048A, WR-049A and WR-175A) to seal off the lower water bearing zone and prevent contamination from migrating from the upper water bearing zone through these wells into the lower water bearing zone.

2007: To improve contamination capture and containment, COT contracted a consultant to design upgrades to the existing GWTS and incorporate an additional seven extraction wells and one injection well. The upgraded system became fully operational in December.

2008: The upgraded pump and treat system continued to operate. The COT replaced three poorly performing extraction wells to increase plume containment. Also in December, COT installed three new extraction wells along the western property boundary of the landfill to provide better containment in that area.

2009: COT connected three new extraction wells (installed in late 2008) to the treatment system. Also, COT continued to evaluate the feasibility of converting the R-062B deep monitoring well into an extraction well. R-062B is the only deep monitoring well showing contamination above the Aquifer Water Quality Standard (AWQS).

2010: In March, COT completed its conversion of the R-062B deep groundwater monitor well into an extraction well and it was connected to the treatment system. In July, COT installed one replacement extraction well and in December they rehabilitated four extraction wells. To provide additional deep plume delineation at the northern edge of the plume, COT installed deep monitor well LLM-543 in October.

2011: In May, COT restarted the soil vapor extraction system at the Southwest Disposal Area (SWDA) to reduce tetrachloroethene (PCE) groundwater concentrations in the area. COT will conduct performance sampling to see if running the system reduces PCE concentrations.

A new deep groundwater monitor well installed at the northern edge of the site showed no contamination.

2012: COT hired a contractor to review the site history, lithology RAP, and existing treatment system, and to update the conceptual site model and existing groundwater flow model for the site, if necessary. This project includes evaluation of the effectiveness of the existing treatment system and ranking of a list of remedial strategies to more cost effectively address the

groundwater contamination. Potential remedial strategies to be considered include modification of the existing pump and treat system and/or groundwater monitoring program, wellhead treatment, evaluation of alternate water supplies for threatened water supply wells, and monitored natural attenuation.

Contaminants:

The current contaminants of concern in groundwater include PCE and trichloroethene (TCE). Contaminants of concern at the site may change as new data becomes available.

Public Health Impact:

In March 1994, the risk assessment for the site was finalized by Arizona Department of Health Services. Results from the assessment indicate that because contaminated water from the area is not currently being used for drinking water, there are no significant health risks associated with this site; however, if you are drinking water from a private well within the boundaries of the site, please contact the ADEQ project manager.

Site Hydrogeology:

The site is located within the Tucson Basin, a northwest trending alluvial valley covering an area of about 750 square miles in the Santa Cruz River drainage basin of southeastern Arizona. The subsurface lithology generally consists of alluvial deposits of sand, silt, clay, and some gravel. The upper portion of the aquifer consists of sandy silt or sand with gravel and silt, and the lower portion of the aquifer begins 190-205 feet below ground surface (bgs) with a silty clay or a sandy clay. Depth to the regional aquifer occurs at 185 to 235 feet bgs. The groundwater flow direction is to the north/northwest.

Contacts:

Name	Phone/Fax	E-Mail
Gretchen Wagenseller, ADEQ Project Manager	(520) 628-6708*/ (520) 628-6745 fax	wagenseller.gretchen@azdeq.gov
Delfina Olivarez, ADEQ Community Involvement Coordinator	(602) 771-4710*/ (602) 771-4138 fax	olivarez.delfina@azdeq.gov

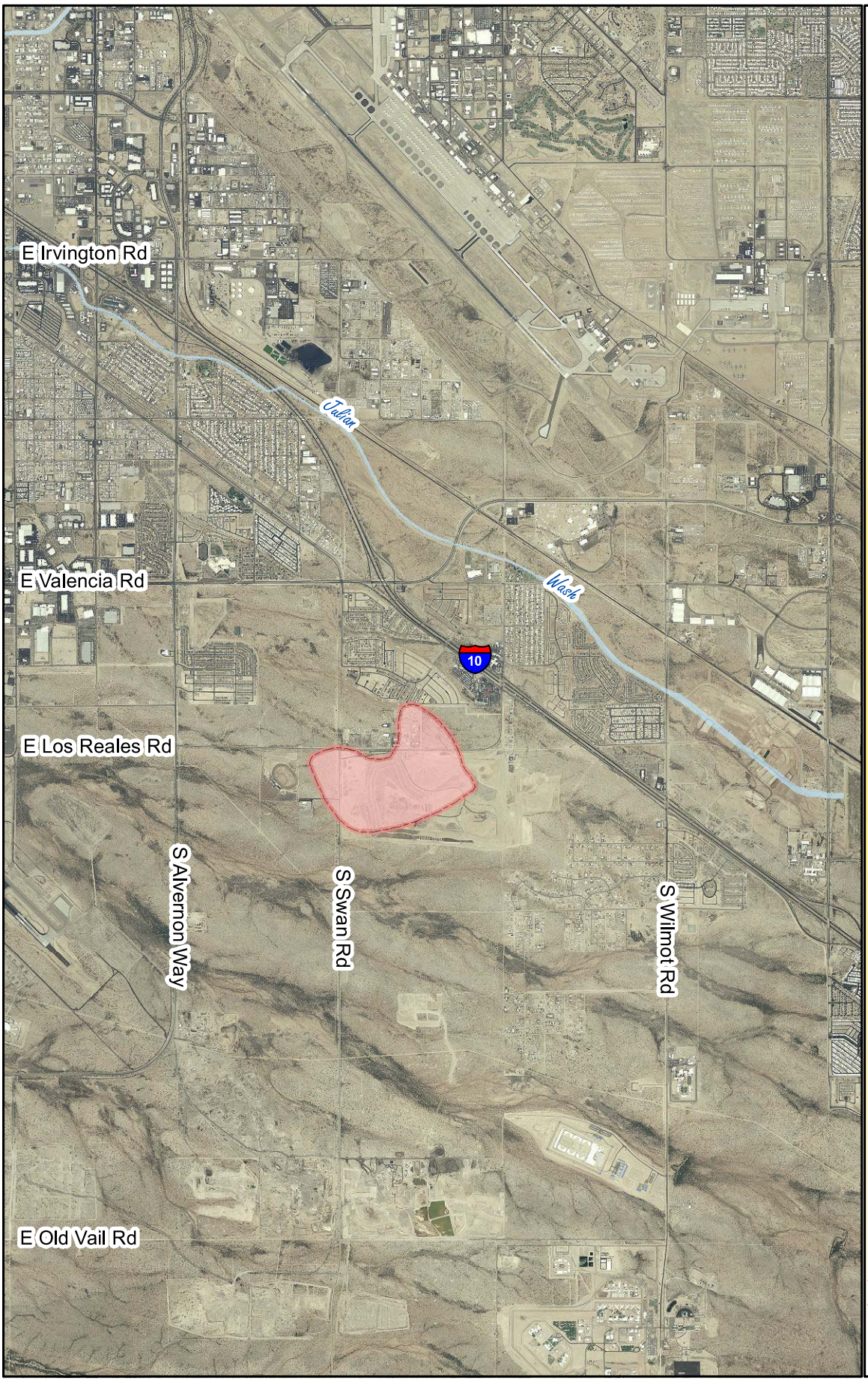
* In Arizona, but outside the Tucson area, call toll-free at (888) 271-9302.

Information Repository:

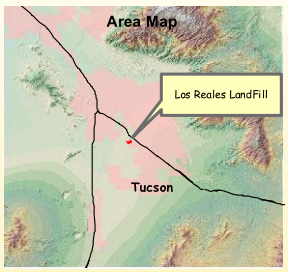
Select documents are available in Tucson at the Southern Regional Office at 400 W. Congress, Suite 433. Please call (520) 628-6715 or toll-free (888) 271-9302 to arrange for a file review appointment at that location.

The complete official site file is in Phoenix at the ADEQ Central Office located at 1110 W. Washington Street, Phoenix, AZ, 85007. To arrange a time to review the site file at the Phoenix office, please call the ADEQ Records Management Center with 24-hour notice at (602) 771-4380 or (800) 234-5677. Once all documents requested have been collected, you will be contacted for a review Monday through Friday from 8:30 A.M. to 4:30 P.M. at the ADEQ Records Management Center.

Los Reales Landfill WQARF Site - Tucson, Arizona



ADEQ Arizona Department of Environmental Quality



Legend

Estimated Plume Boundary

N

0 0.5 1

Miles

Map Date: Junuary, 2013

WASTE PROGRAMS DIVISION
GIS and Data Management Unit

Map produced by Arizona Department of Environmental Quality (ADEQ), GIS and Data Management Unit, TS Summers

S:\gisdev\ts3\superfund2013\tucson\WQARF\Los_realand LosRealesLandfill2013.mxd.
web name: realesmap

Data Sources:
Arizona Department of Environmental Quality
Arizona Land Resources Information System
Arizona Department of Transportation
Map Made: August 2013

"Site boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the geographic boundaires for this site may change in the future as new information becomes available."

Publication #: M 13 - 46

ConformaTECH

APPENDIX E

AGENCY REPORTS

ConformaTECH

CITY OF TUCSON

LOS REALES LANDFILL WQARF SITE
2013 GROUNDWATER MONITORING REPORT

CITY OF TUCSON
ENVIRONMENTAL SERVICES

Do More Blue

August 8, 2013

VIA U.S. CERTIFIED MAIL AND HAND DELIVERY

Mr. David Christiana
Arizona Department of Water Resources
Groundwater Permitting and Wells Section
3550 N. Central Avenue
Phoenix, AZ 85012

Mr. Bill Ellett, Unit Manager
Superfund Program Unit
Southern Regional Office, ADEQ
400 W. Congress Street, Suite 433
Tucson, AZ 85701

Re: Los Reales Landfill, Tucson, AZ – First Half 2013
Semi-annual Groundwater Monitoring Report
Groundwater Treatment System Progress and Performance Report
Soil Vapor Extraction System Performance Report
Semi-annual Poor Water Quality Report: Permit No. 59-209994.0000

Dear Sirs:

The City of Tucson, Environmental Services (COT-ES) prepared this report to document the results of semi-annual groundwater monitoring and site remediation systems as required by the Arizona Department of Environmental Quality (ADEQ). This report also satisfies the semi-annual reporting requirements for the above referenced Los Reales Landfill Poor Water Quality Permit (PWQP). As required by the PWQP, a CD is attached for the Arizona Department of Water Resources (ADWR), which contains a site map and shapefiles in ARCMap (ESRI) format and laboratory analytical data and field sheets in pdf format.

If you have any questions, please contact Molly Collins at (520) 837-3703.

Sincerely,

Nancy Petersen
Deputy Director

NP/MC/nr

Enclosure:
January-June 2013 Report: Groundwater Monitoring and Treatment System Progress Report, Los Reales Landfill Water Quality Assurance Revolving Fund Site; Tucson, AZ

cc: David Christiana, ADWR (1 hardcopy, 1 CD containing: GIS Layers and Full Report in .pdf)
Gretchen Wagenseller, ADEQ, (CD Copy)
Los Reales Operations Record (CD Copy)
Los Reales File (Full Hardcopy)
Wally Wilson, COT, Tucson Water (Email Link)
Jeff Langejans, COT, Tucson Fire Department (Email Link)
Jeff Drumm, COT, ES (Email Link)
Molly Collins, COT, ES (Email Link

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4004 S. PARK AVE. • P.O. BOX 27210 • TUCSON, AZ 85726-7210
(520) 791-3175 • FAX (520) 791-4155
www.cityoftucson.org

JANUARY-JUNE 2013 REPORT: GROUNDWATER MONITORING AND TREATMENT SYSTEM PROGRESS REPORT LOS REALES LANDFILL WATER QUALITY ASSURANCE REVOLVING FUND SITE, TUCSON, AZ

Prepared for:

THE ARIZONA DEPARTMENT OF WATER RESOURCES
POOR WATER QUALITY PERMIT NO. 59-209994.0000
AND
THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY ASSURANCE REVOLVING FUND (WQARF)

AUGUST 8, 2013

Prepared by:
City of Tucson
Environmental Services
P.O. Box 27210
Tucson, Arizona 85726-7210

CITY OF TUCSON
ENVIRONMENTAL SERVICES

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Page No.

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LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

List of Acronyms

1,1-dichloroethane	(1,1 DCA)
Arizona Department of Water Resources	(ADWR)
Aquifer Water Quality Standards	(AWQS)
Arizona Department of Environmental Quality	(ADEQ)
Below Ground Surface	(bgs)
cis-1,2 dichloroethene	(cis-1,2 DCE)
City of Tucson Environmental Services	(COT-ES)
Feet	(ft)
Feet above mean sea level	(ft amsl)
Non-detect	(ND)
Micrograms per liter	(µg/L)
Poor Water Quality Permit	(PWQP)
Quality Control/Quality Assurance	(QA/QC)
Relative Percent Difference	(RPD)
Remedial Objectives	(ROs)
Sampling and Analysis Plan	(SAP)
Soil Vapor Extraction	(SVE)
Southwest Disposal Area	(SWDA)
Tetrachloroethene	(PCE)
Trichloroethene	(TCE)
Volatile Organic Compounds	(VOCs)
Voluntary Remediation Program	(VRP)
Water Quality Assurance Revolving Fund	(WQARF)
Water Table Elevation	(WTE)

1.0 INTRODUCTION

The City of Tucson (COT) Environmental Services (ES) prepared this report to document the results of semi-annual groundwater monitoring and remediation efforts from January-June 2013 as required by the Arizona Department of Environmental Quality (ADEQ) Water Quality Assurance Revolving Fund (WQARF). This report also satisfies the semi-annual reporting requirements for the Arizona Department Water Resources (ADWR) Poor Water Quality Permit (PWQP) No. 59-209994.0000.

Los Reales Landfill is an active municipal solid waste landfill, owned and maintained by the City of Tucson (Figure 1). The site is regulated by the ADEQ's Solid Waste Unit for the municipal solid waste activities, the WQARF program for groundwater monitoring and treatment, and the Voluntary Remediation Program (VRP) for capping the Southwest Disposal Area (SWDA) (Figure 2). Groundwater contaminated with tetrachloroethene (PCE) and trichloroethene (TCE) above regulatory standards has been detected beneath the site. Other volatile organic compounds (VOCs) have been detected in groundwater at levels below the applicable regulatory standards. The City is operating a groundwater pump and treat system to contain and treat the contaminated groundwater. Soil vapor contaminated with VOCs beneath the SWDA, an area of the landfill which accepted industrial waste from 1977 to 1980, is periodically removed by deep soil vapor extraction (SVE) to prevent the vapor from further contaminating groundwater.

1.1 Evaluation of Remedial Strategies

COT-ES retained Engineering and Environmental Consultants, Inc. (EEC) and their subcontractor Montgomery and Associates (M&A) for an evaluation of remedial strategies for the Los Reales Landfill WQARF Site. The evaluation included data review, updated groundwater flow/fate and transport modeling and recommendations for future operations of the system. According to the model results, long term transition to monitoring only is consistent with the site remedial objectives and with WQARF rules. COT-ES submitted the evaluation and recommendations of M&A to ADEQ for review and approval on July 25, 2012[1]. ADEQ responded with questions and comments on December 28, 2012. COT-ES will submit the response in August 2013 and proceed with installation of additional monitoring wells during the second half of 2013. ADEQ has requested that COT-ES comment in each semiannual monitoring report on how the monitoring data supports the recommendation of the M&A report.

2.0 GROUNDWATER MONITORING

The semi-annual January 2013 sampling event was completed in accordance with the site specific *Sampling and Analysis Plan* (SAP), dated December 2010 and updated in February 2013. The SAP should be referenced for sampling and quality control procedures as only the results are discussed in this report. A map showing the locations of all wells at the site is provided in Figure 2, and well completion data are presented in Table 1. Wells screened above

240 feet below ground surface (bgs) are denoted as shallow wells. Those screened below 240 feet bgs are denoted as deep wells. Wells that are screened both above and below 240 feet bgs are denoted long screen wells.

2.1 Water Level Monitoring

Depth to water is measured site wide on a single day prior to semiannual sample collection. Table 2 contains water level data for January 9, 2013. A groundwater contour and flow direction map is provided as Figure 3 showing water level measurements collected on that date. Groundwater flows to the northwest beneath the Los Reales Landfill at an average gradient of 0.002 feet of elevation change per linear foot. A cone of depression is visible in the northwest corner of the site near monitoring well WR-372A due to the operation of nearby extraction wells LLM-530 and LLM-544. Water level data is not collected from extraction wells because the water level in the well changes continuously in response to pumping. Cones of depression are likely also present around extraction wells LLM-538, LLM-539 and LLM-540, but are not visible due to the lack of nearby monitoring wells.

Figure 4 provides a hydrograph for water level data from selected wells of all depths. Water levels beneath the site have stabilized or increased slightly since January 2012. However, due to the long term drought, the water table in the area has declined by approximately 10 feet since 2000, at an average rate of 0.6 feet per year. COT-ES expects this trend to continue. However, should water levels recover to near those observed in 2000, it may affect the recommendation of the M&A report by causing the plume to move farther and faster than predicted by the groundwater flow/fate and transport model. COT-ES will continue to chart water level trends semiannually and will evaluate their impact on the recommended alternative.

2.2 Sampling

During the January 2013 sample event, COT-ES collected samples from 48 groundwater extraction and monitoring wells. Two private wells were also sampled in January. All samples were sent to the Tucson Water Quality Laboratory (TWQL) for analysis. The groundwater monitoring laboratory reports and field sample sheets are included as Appendix A. A map showing concentrations of PCE and TCE is provided as Figure 5.

The January PCE sample result for well WR-374A was below the expected value and the well was resampled on April 23, 2013. The result for the resample event was more consistent with historical values and used in Figure 5.

As summarized in Table 3 and Figure 5, PCE exceeded the AWQS in 17 wells at the site during the January monitoring event (see shaded yellow boxes on Figure 5). TCE exceeded the AWQS of 5 µg/L in one monitoring well.

Graphs showing historical PCE concentrations for selected wells are attached as Figures 6 through 12. The wells are grouped by location into Northwestern, Southwestern, and Eastern areas for ease of viewing trend lines for specific areas. TCE trendlines are similar but at lower concentrations than PCE trendlines, and are not charted. In general, concentrations for PCE are stable or decreasing at the site in northwestern (Figures 6 and 7), and southwestern (Figures 8 and 9) areas. However, PCE concentrations have been increasing in the following central and eastern wells: LLM-500 (Figure 11) since 2010; R-061A (Figure 10) since 2011; and WR-378A (Figure 11) since 2012. LLM-500 was abandoned in April 2013, as discussed in the next section. COT-ES will continue to evaluate PCE trends during each semiannual sample event.

PCE concentrations were non-detect (<0.5 µg/L) in 6 of the 7 deep screened wells sampled in July 2012. Figure 12 shows historically detected PCE concentrations in the deep screen monitor wells and extraction well R-062B. The concentration of PCE in R-062B was reported at 5.2 µg/L in January 2013. Concentrations of PCE in R-062B first exceeded the AWQS in 2008. COT-ES connected the well to the groundwater treatment system as an extraction well in March 2010 in an effort to contain and reduce PCE concentrations in the deep zone in this area. Concentrations of PCE appear to have stabilized at near the AWQS in the well. TCE is below the AWQS in R-062B, and was not detected in the remaining seven deep screened wells sampled (Figure 5, Table 3).

Other VOCs and inorganics were also detected at Los Reales Landfill during this reporting period, but the concentrations were either below the AWQS or the compound detected has no AWQS (Table 3, Table 4, and Appendix A).

COT-ES discovered a private, exempt well in April 2013 (Marble Well) during an update to the well inventory for the landfill as part of a proposed Remedial Action Plan (RAP) modification discussed in more detail in Section 4.0. The well location had been mis-identified by the driller as Township 14, Range 15, Section 14. The well is actually located in Township 15, Range 14, Section 23, and is approximately 500 feet north of the Los Reales Landfill property boundary (Figure 2). COT-ES has forwarded the well information to ADEQ. The water from the well is used as potable supply for the house, which is currently occupied by tenants of the owner. COT-ES has offered to install a meter and water line to connect the property to a Tucson Water main and to properly abandon the well at no cost to the well owner. There has not yet been a response from the owner to this offer. COT-ES obtained permission from the owner to sample the Marble well again, and will sample it semiannually in July and January while negotiations with the owner are ongoing.

COT-ES collected a sample from the wellhead (Marble #1) and another sample from the kitchen faucet (Marble #2) on May 7, 2013. The samples were analyzed for the same compound list used in January each year for wells associated with the landfill. VOCs were not detected in either sample, and all other results were below the associated AWQS (Table 3, Table 4). The sample results were forwarded to the owner in July 2013.

COT-ES contacted the Junque for Jesus well owner in January 2013 and obtained permission to sample the well for VOCs. VOCs were not detected in the sample from the well. According to Mr. Robertson, the property owner, the facility uses bottled water for potable supply. COT-ES will continue to attempt to sample the well semiannually if the property owner is available to allow access. The results were forwarded to the well owner in March 2013.

COT-ES collected a sample from the private well 432P (Figure 2) in January for analysis of VOCs. The well provides potable water for the Town and Country Mobile Home Park. VOCs were not detected in the sample. The results were forwarded to the well owner in March 2013.

2.2.1 QA\QC

Quality assurance/quality control (QA/QC) analyses for the January 2013 sampling event included 4 duplicate sample analyses, and 16 trip blanks. Analytical results for QA/QC samples are presented in the laboratory reports in Appendix A.

No analytes were detected in any of the trip blanks. All duplicate sample analyses were within 30% relative percent difference (RPD) of the original sample analyses. A table listing RPDs for original and duplicate samples is provided in Appendix A.

The laboratory percent recoveries were within laboratory quality assurance objectives for accuracy, except for the data qualifiers listed in the case narratives presented in Appendix A. All were within acceptable quality and would not likely affect data results.

3.0 WELL ABANDONMENT

Well LLM-500 was videologged on March 11, 2013 because the casing appeared to have shifted. The casing was found to be broken at approximately 60 ft bgs and the well was abandoned according to ADWR guidelines on April 15, 2013. A final groundwater sample was collected from the well on March 27 but the result for PCE was less than that measured in January (Table 3, Figure 11), and the January value was used on Figure 5. A copy of the Well Abandonment Completion report and the ADWR approved Notice of Intent to Abandon is provided in Appendix B.

4.0 GROUNDWATER TREATMENT SYSTEM PERFORMANCE

Groundwater effluent and influent samples were collected monthly from the system during this reporting period. These data along with field sampling forms are included in Appendix A. Table 5 provides a system operational summary for January through June 2013. Table 6 provides a summary of extraction and injection volumes for each well as required by the PWQP. During this reporting period, all extraction wells were operational, except as noted below.

The average system extraction rate during this reporting period was 111 gallons per minute (gpm). During this reporting period the system extracted approximately 27 million gallons of water for treatment, and operated 94% of the time. Approximately 73% of the treated water was used for dust control and irrigation, and the remainder was reinjected to the aquifer into deep screened wells IJ-001, IJ-002 and R-105A. The system removed approximately 1.3 pounds (lbs) of PCE and 0.5 lbs TCE during this reporting period (Table 5). Since start-up in 1999, the system has treated approximately 388 million gallons of groundwater. Since 2000, the system has removed approximately 22.4 lbs of PCE and 8 lbs of TCE (Table 5).

Due to scaling, fouling, and electrical issues, WR-376A was not operated during this reporting period except to collect a sample in January. Despite repeated and costly rehabilitation efforts, this well does not produce sufficient water to pump, and COT-ES will use it for monitoring only.

The well screen at WR-379A failed during rehabilitation in March 2013. COT-ES will convert the well to monitor-only status and the well will be sampled in the future using a Hydrasleeve™. COT-ES will defer installing a replacement well for WR-379A until the proposed monitor wells are installed as part of the evaluation of the remediation system discussed in the previous section. At that time, it will be possible to better site a replacement well, if one is needed.

PCE was detected in the groundwater treatment system effluent in May (0.5 ug/L), and June (0.6 ug/L) (Appendix A). As recommended by the manufacturer, COT-ES had installed diffuser sleeves over the stripper bars to improve stripping efficiency in May 2013. The sleeves were removed in June, and the effluent resampled in early July 2013. VOCs were not detected in the effluent resample. As the sleeves appeared to be the cause of the VOC detections in the effluent, they will no longer be used.

PCE has continued to decline in off-site extraction wells WR-173A and WR-174A, and other wells located in the northwest corner of the site, indicating that the plume size has been reduced in this area (Figure 6, Figure 7). In the southwestern area, operation of extraction wells has caused plume concentrations to decline (Figure 8, Figure 9). In the eastern area, PCE concentrations have increased in wells WR-378A, R-061A, and WR-379A (Figure 10, Figure 11), but have stabilized near the AWQS at off-site well WR-184A (Figure 11). These results are consistent with the predictions of the groundwater flow/fate and transport model contained in the evaluation. PCE has been increasing in LLM-500 since 2010 (Figure 11), likely due to a broken casing. LLM-500 was abandoned in April 2013 as described in the previous section. Based on concentrations of PCE and TCE in the farthest downgradient wells (WR-176A, WR-172A, WR-173A, WR-174A, WR-175A, WR-468A, WR-465A, WR-185A, and WR-469A), the remediation system is achieving reduction of these contaminants downgradient of the landfill. COT-ES will continue to monitor and evaluate the water quality results with respect to their impact on the recommended alternative.

5.0 SWDA: SOIL VAPOR EXTRACTION SYSTEM

COT-ES operates the soil vapor extraction and treatment system (SVE) at the SWDA on an as-needed basis to reduce soil vapor concentrations to prevent groundwater contamination. Figure 2 shows the location of the SWDA. The SVE system was not operated during this reporting period. Soil vapor samples were last collected in February 2012. The next soil vapor sampling event is scheduled for February 2014.

6.0 SUMMARY OF PLANNED ACTIVITIES

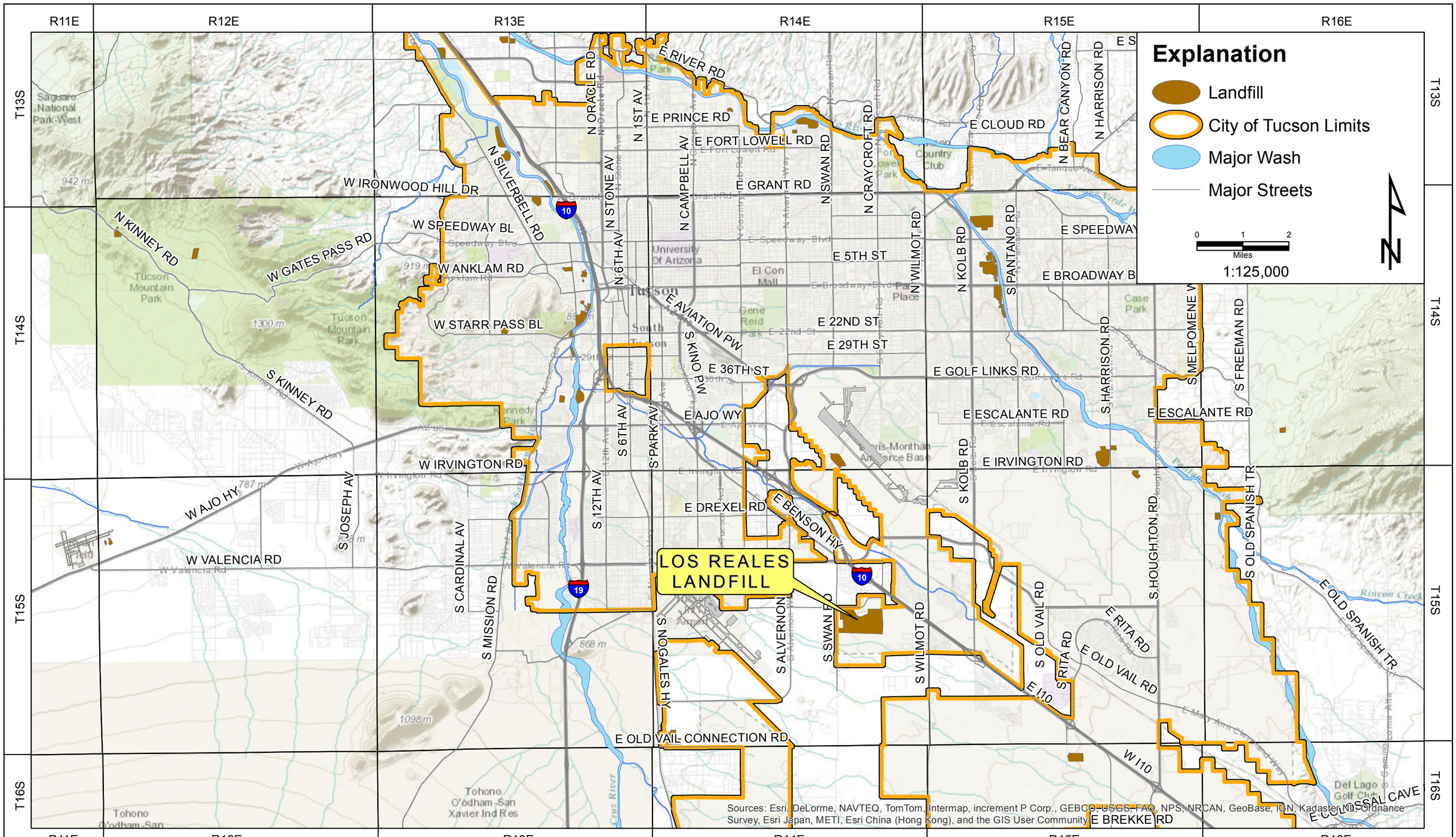
The following list summarizes planned activities at the Los Reales Landfill WQARF site during the second half of 2013:

- Conduct semi-annual groundwater monitoring in July 2013;
- Submit the response for ADEQ December 28, 2012 comments on the evaluation of remedial strategies in August 2013.
- Following ADEQ approval of long term transition to monitoring only as recommended in the evaluation of remedial strategies[1], COT-ES will install the monitor wells proposed in the evaluation report.
- Negotiate with the owner of the Marble Well in order to connect the property to Tucson Water and properly abandon the Marble well.

7.0 REFERENCE

[1]*Montgomery and Associates: Evaluation of Remedial Strategies and Recommendations for Future Operations: Los Reales Landfill WQARF Site, Tucson, Arizona*, July 25, 2012

FIGURES

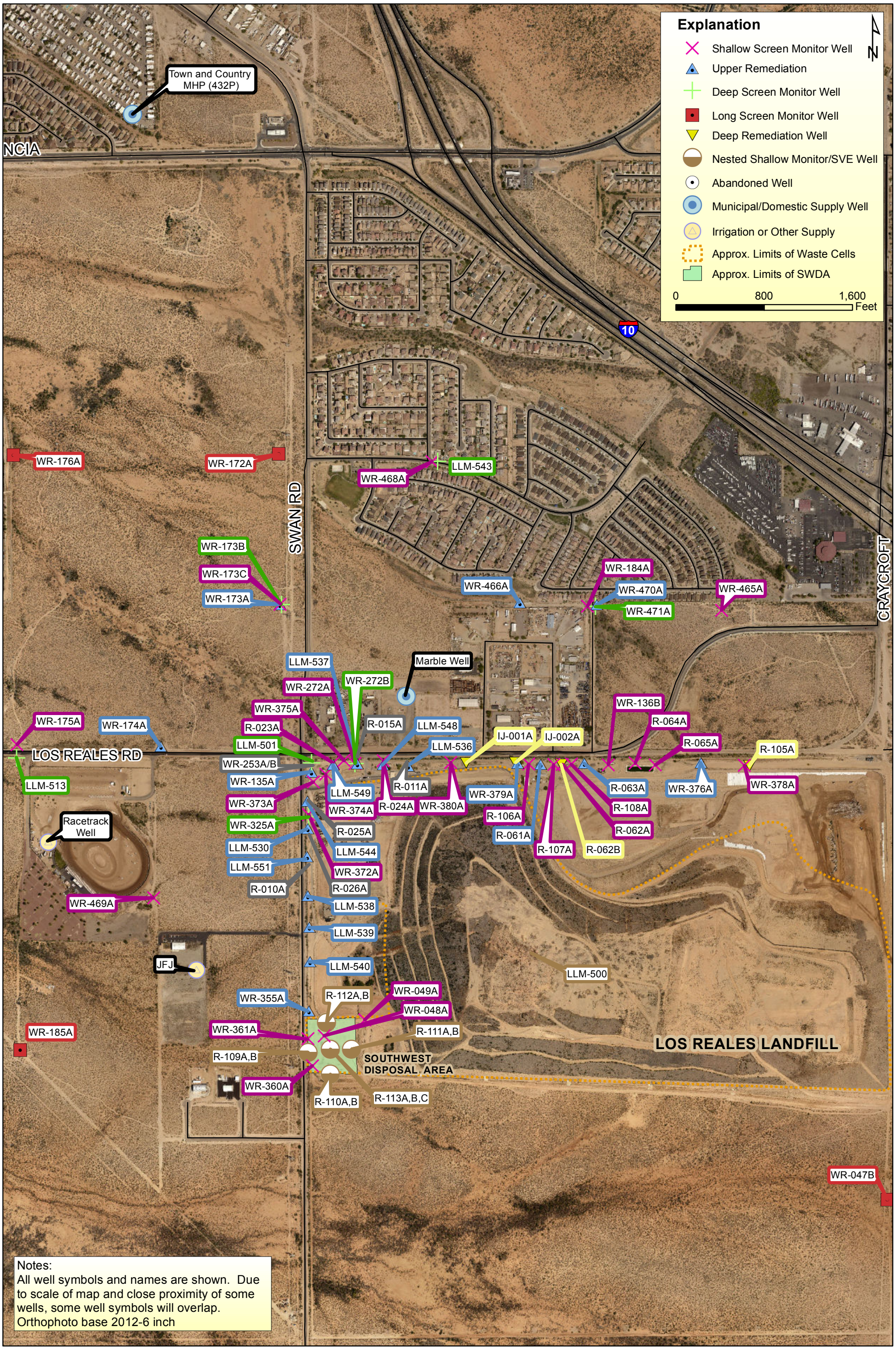


CITY OF TUCSON
ENVIRONMENTAL SERVICES

Figure 1
Location Map
Los Reales Landfill

Drawn By:	LE
Checked:	MC
Approved:	JD
Date:	6/21/2011
File:	See Below

J://GIS/LR/2011/LocationMap.mxd



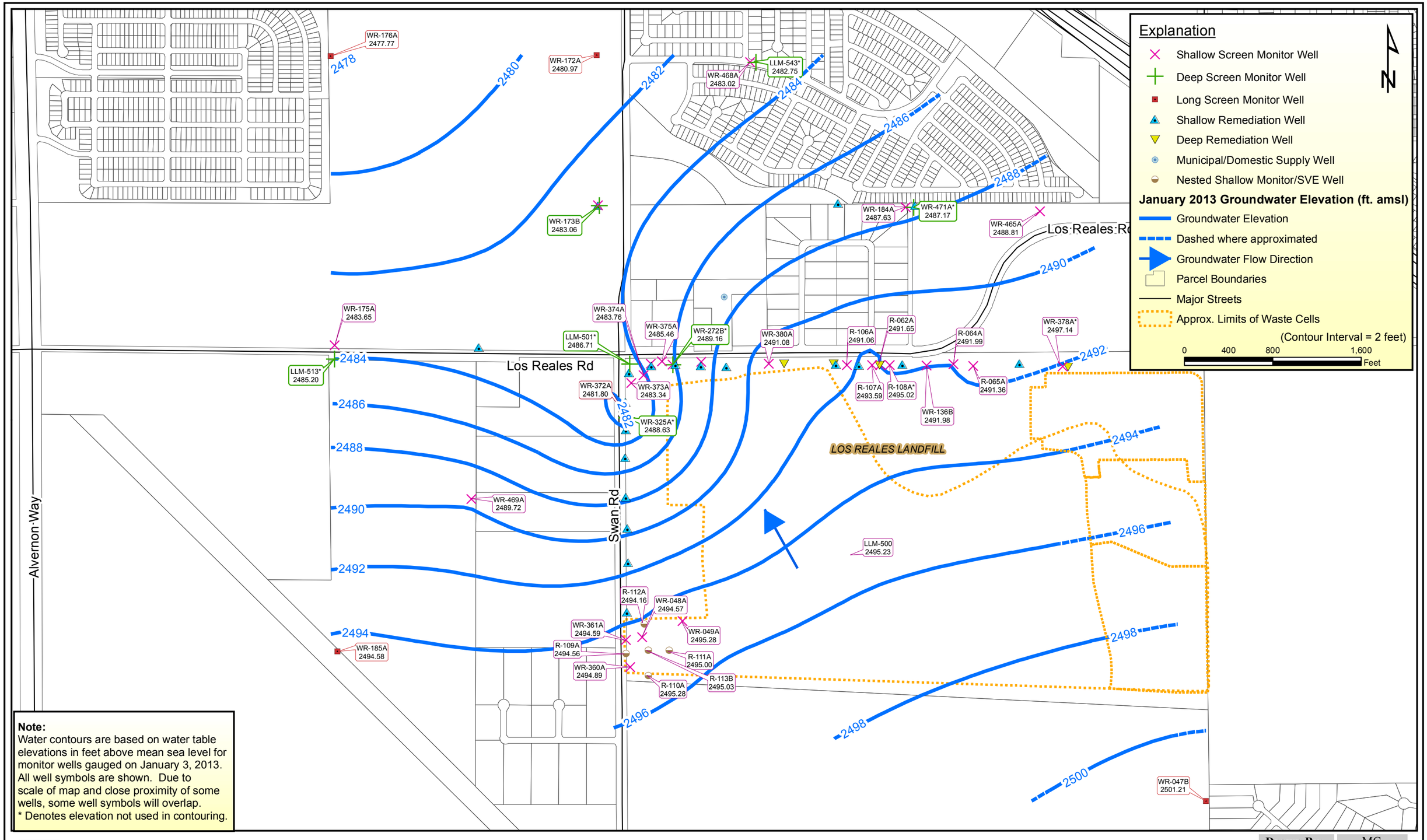
Notes:
All well symbols and names are shown. Due to scale of map and close proximity of some wells, some well symbols will overlap.
Orthophoto base 2012-6 inch

CITY OF TUCSON
ENVIRONMENTAL SERVICES

FIGURE 2
SITE MAP
LOS REALES LANDFILL

Drawn By:	MC
Checked:	LE
Approved:	JD
Date:	5/14/2013
File:	See Below

J:GIS\LosReales\2013\sit_emap.mxd



Note:
Water contours are based on water table elevations in feet above mean sea level for monitor wells gauged on January 3, 2013. All well symbols are shown. Due to scale of map and close proximity of some wells, some well symbols will overlap.
* Denotes elevation not used in contouring.

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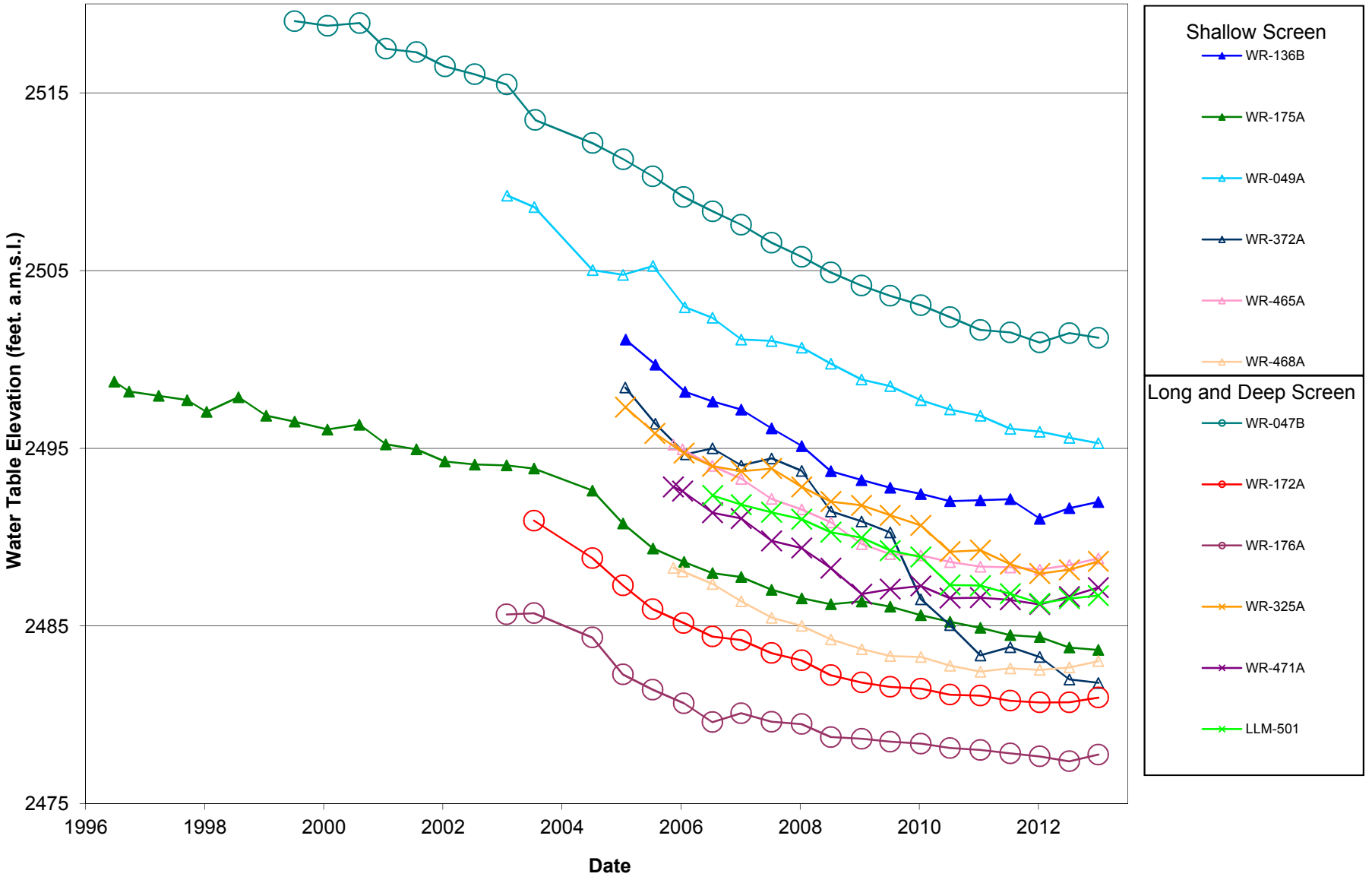
FIGURE 3
LOS REALES LANDFILL GROUNDWATER CONTOUR MAP
JANUARY 2013

Drawn By:	MC
Checked:	LE
Approved:	JD
Date:	7/11/2013
File:	See Below

J:GIS\LosReales\2012\WL_Jan13.mxd

Figure 4
Hydrographs for Selected Shallow, Long and Deep Screened Wells
Los Reales Landfill

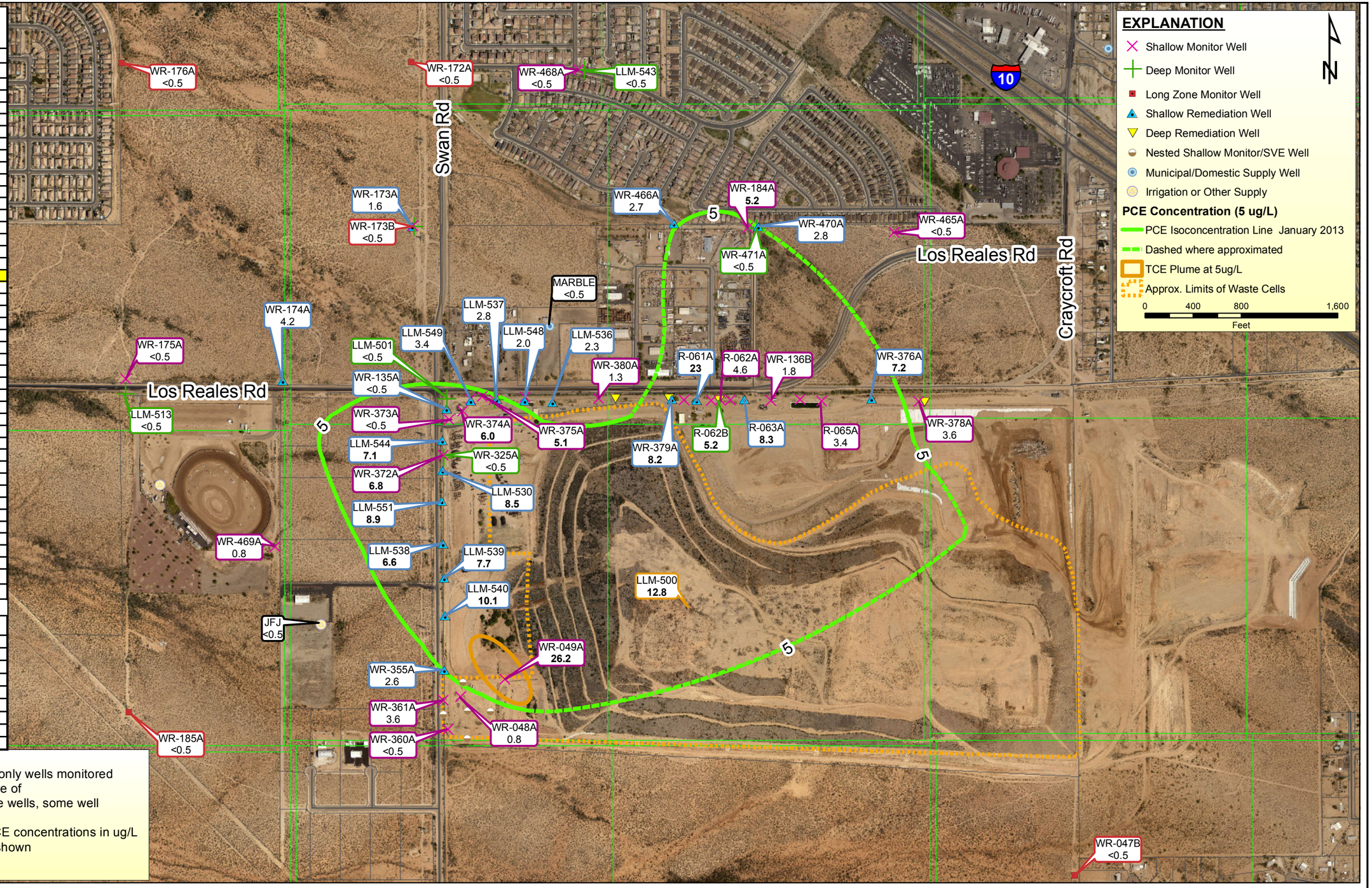


S:\EMCOMMON\LOS REALES\Well and System Info\Water Levels\WL\hydrographs.xls

8/9/2013

Well ID	Date	PCE	TCE
Shallow and Long Screen Monitor Wells			
LLM-500	1/29/13	**12.8**	3.2
LLM-530	1/24/13	**8.5**	3.7
LLM-536	1/23/13	2.3	0.6
LLM-537	1/23/13	2.8	1
LLM-538	1/24/13	**6.6**	2.8
LLM-539	1/24/13	**7.7**	2.9
LLM-540	1/24/13	**10.1**	3.1
LLM-544	1/23/13	**7.1**	3.2
LLM-548	1/23/13	2	<0.5
LLM-549	1/23/13	3.4	1.1
LLM-551	1/23/13	**8.9**	4.2
R-061A	1/24/13	**23**	4.4
R-062A	1/29/13	4.6	<0.5
R-063A	1/24/13	**8.3**	0.7
R-065A	1/17/13	3.4	0.5
WR-047B	1/14/13	<0.5	<0.5
WR-048A	1/18/13	0.8	<0.5
WR-049A	1/24/13	**26.2**	**13.3**
WR-135A	1/23/13	<0.5	<0.5
WR-136B	1/16/13	1.8	<0.5
WR-172A	1/11/13	<0.5	<0.5
WR-173A	1/23/13	1.6	<0.5
WR-173B	1/11/13	<0.5	<0.5
WR-174A	1/23/13	4.2	2.2
WR-175A	1/17/13	<0.5	<0.5
WR-176A	1/11/13	<0.5	<0.5
WR-184A	1/17/13	**5.2**	0.8
WR-185A	1/11/13	<0.5	<0.5
WR-355A	1/24/13	2.6	1.4
WR-360A	1/18/13	<0.5	<0.5
WR-361A	1/17/13	3.6	0.7
WR-372A	1/24/13	**6.8**	3.1
WR-373A	1/18/13	<0.5	<0.5
WR-374A	4/29/13	**6.0**	2.4
WR-375A	1/22/13	**5.1**	1.4
WR-376A	1/24/13	**7.2**	1.2
WR-378A	1/29/13	3.6	<0.5
WR-379A	1/24/13	**8.2**	2.1
WR-380A	1/16/13	1.3	<0.5
WR-465A	1/14/13	<0.5	<0.5
WR-466A	1/24/13	2.7	<0.5
WR-468A	1/15/13	<0.5	<0.5
WR-469A	1/16/13	0.8	<0.5
WR-470A	1/24/13	2.8	<0.5
Deep Monitor or Remediation Wells			
R-062B	1/24/13	**5.2**	1.1
LLM-501	1/14/2013	<0.5	<0.5
LLM-513	1/18/2013	<0.5	<0.5
LLM-543	1/15/13	<0.5	<0.5
WR-325A	1/16/13	<0.5	<0.5
WR-471A	1/14/13	<0.5	<0.5
432P	1/9/13	<0.5	<0.5
JFJ	1/9/13	<0.5	<0.5
Marble Well	5/7/13	<0.5	<0.5

Note:
All well symbols are shown, but only wells monitored in 2013 are labeled. Due to scale of map and close proximity of some wells, some well symbols will overlap.
All values shown on map are PCE concentrations in ug/L
<0.5 = Not detected at the limit shown
Well 432P is not shown.
NS = Not Sampled



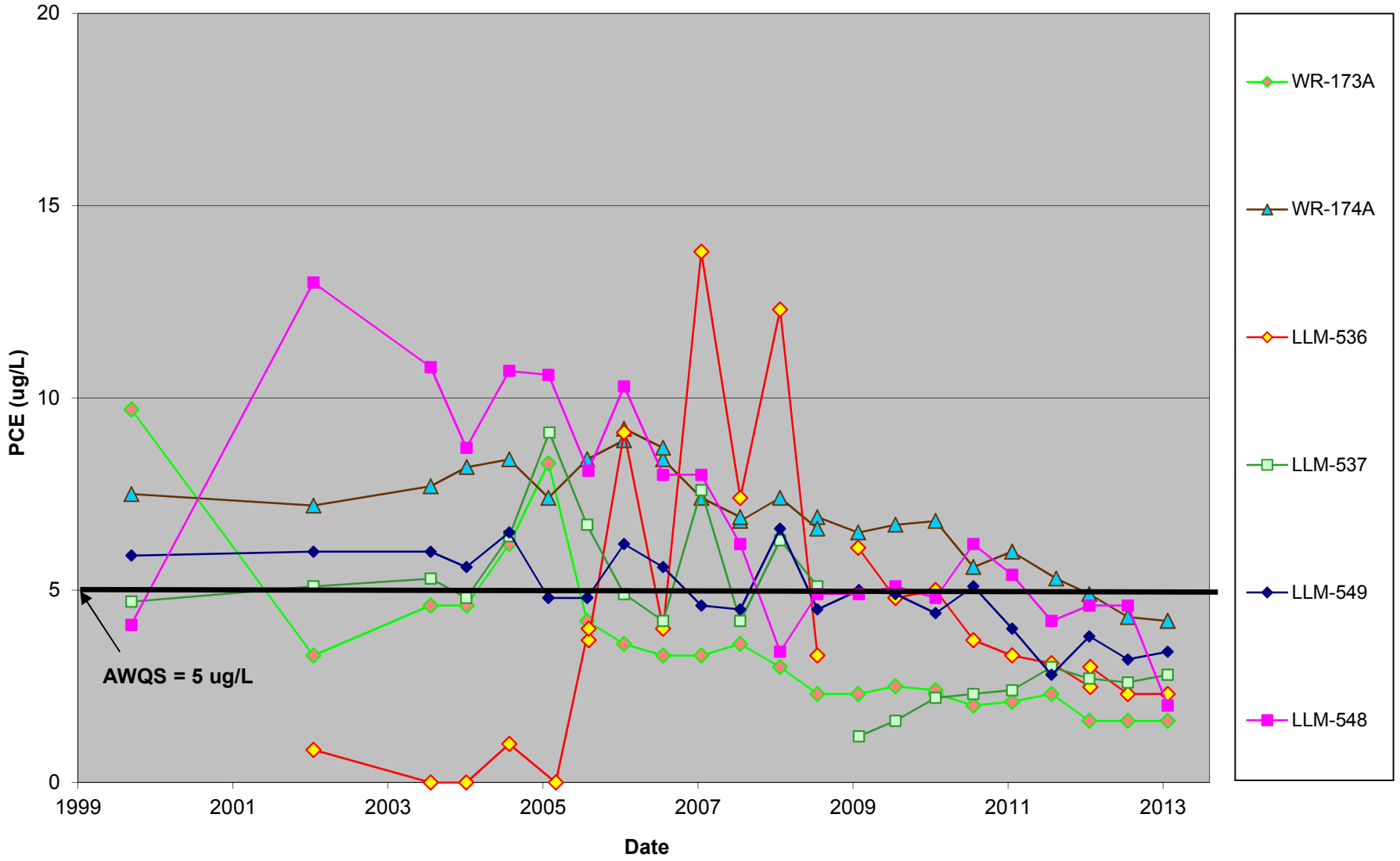
CITY OF TUCSON
ENVIRONMENTAL SERVICES

FIGURE 5
PCE AND TCE CONCENTRATIONS IN GROUNDWATER JANUARY 2013
LOS REALES LANDFILL

Drawn By:	MC
Checked:	LE
Approved:	JD
Date:	1/4/2013
File:	See Below

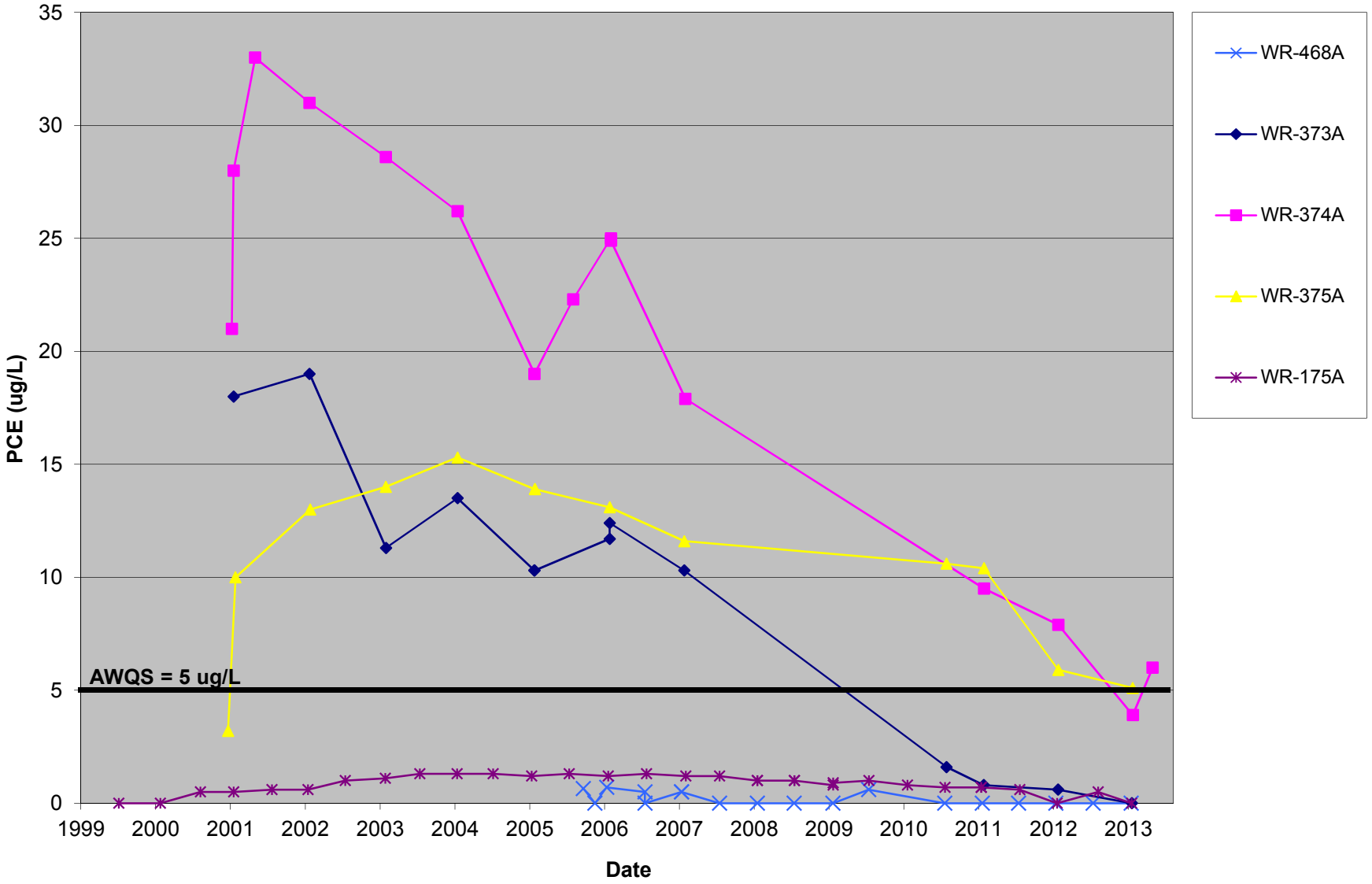
J:GIS\LosReales\2012\PCEMapJul12.mxd

Figure 6
Los Reales Landfill
PCE Concentrations in Northwestern Remediation Wells



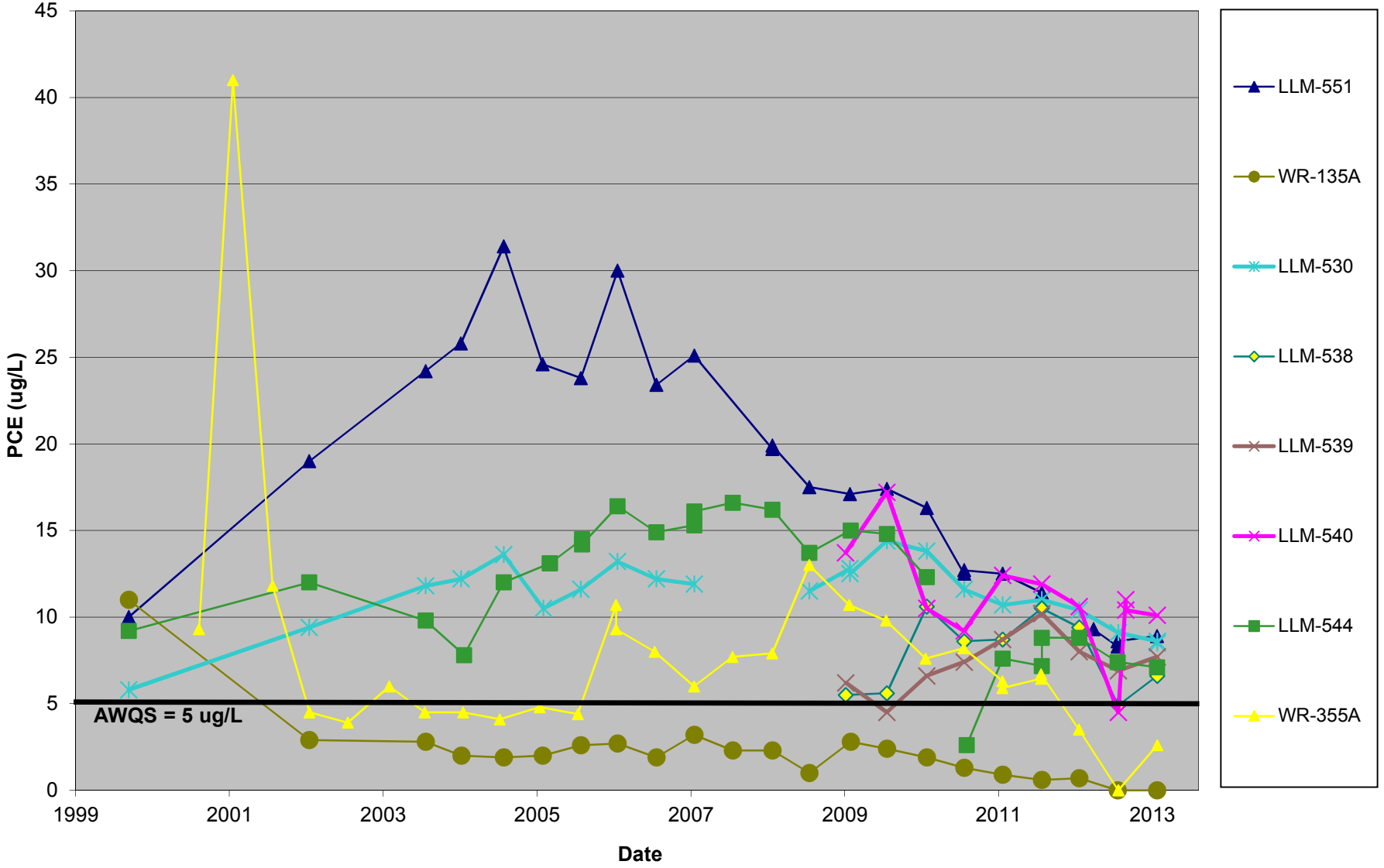
Wells R-011A and R-015B were replaced by wells LLM-536 and LLM-537, respectively. Wells R-023A and R-024A were replaced by LLM-549 and LLM-548 respectively. Table 1 provides the replacement date. Data prior to the replacement date is from the original well.

Figure 7
Los Reales Landfill
PCE Concentration in Northwestern Long Screened and Shallow Screened Monitor Wells



PCE has never been detected in WR-172A. This well was not plotted.

Figure 8
Los Reales Landfill
PCE Concentrations in Southwestern Remediation Wells



R-026A was replaced by LLM-530. R-025A was replaced by LLM-544. R-010A was replaced by LLM-551. Table 1 contains replacement dates. Data prior to the replacement date is from the original well.

Figure 9
Los Reales Landfill
PCE Concentration in Southwestern Long Screened and Shallow Screened Monitor Wells

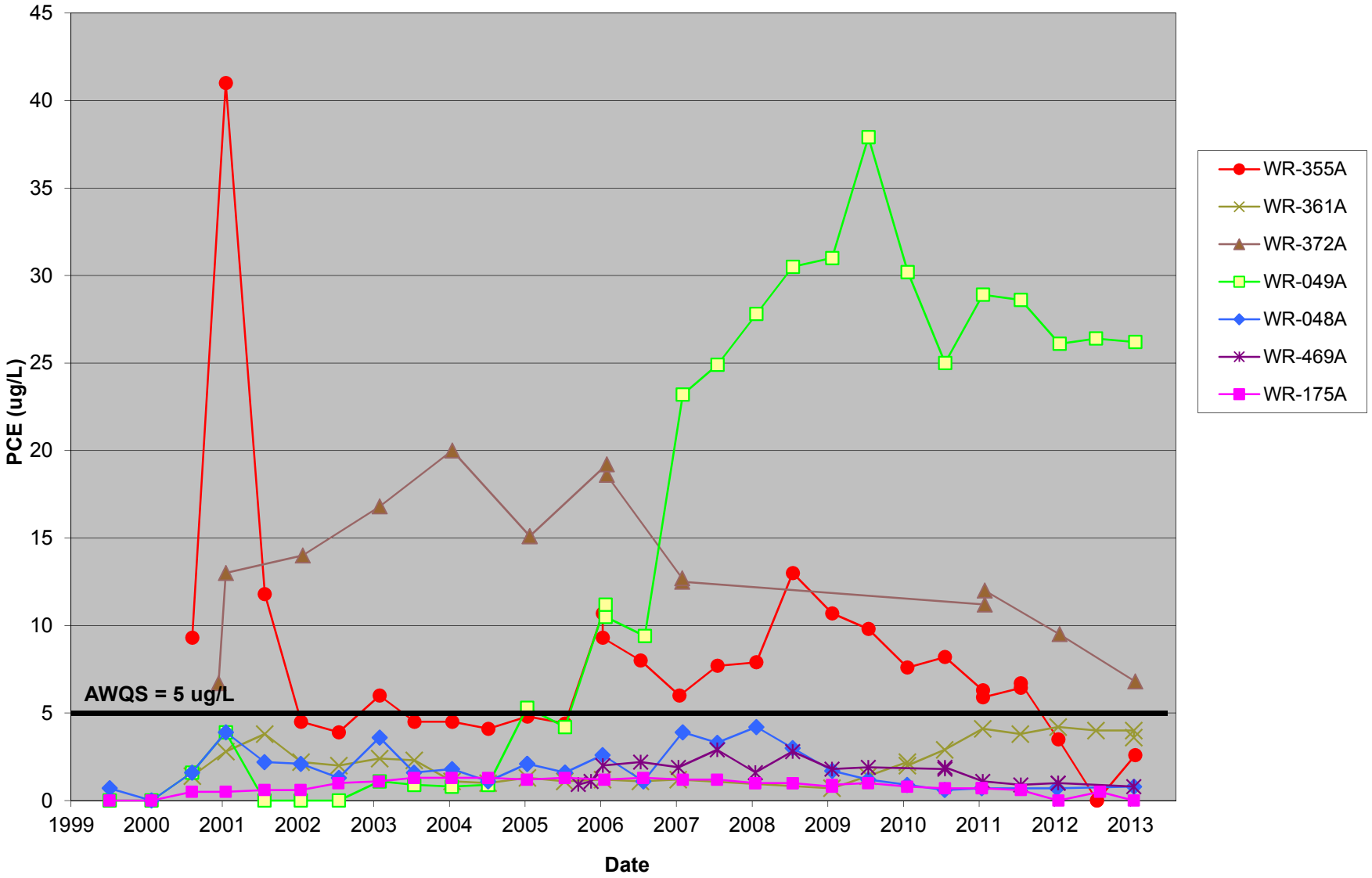


Figure 10
Los Reales Landfill
PCE Concentrations in Eastern Remediation Wells

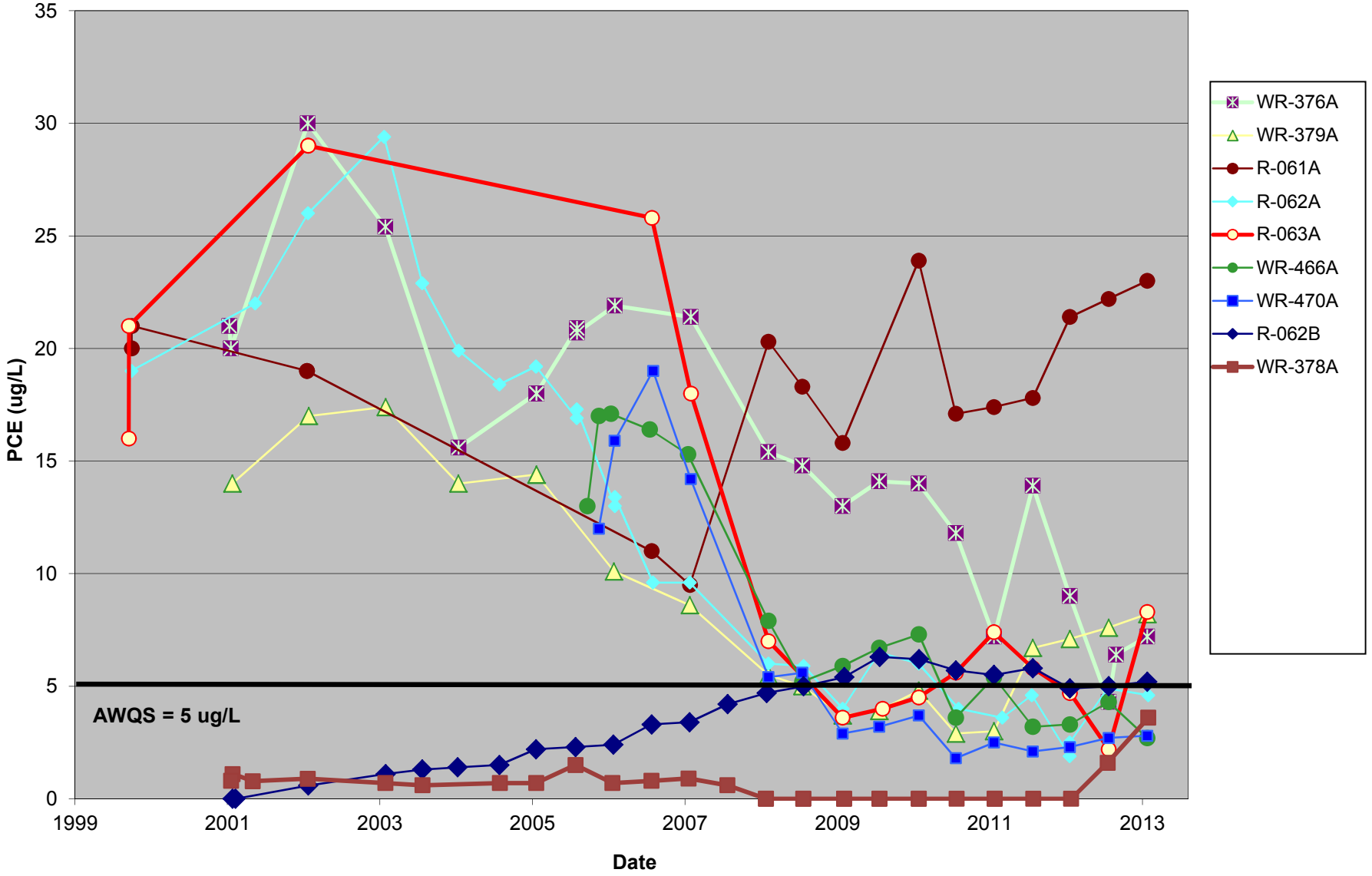
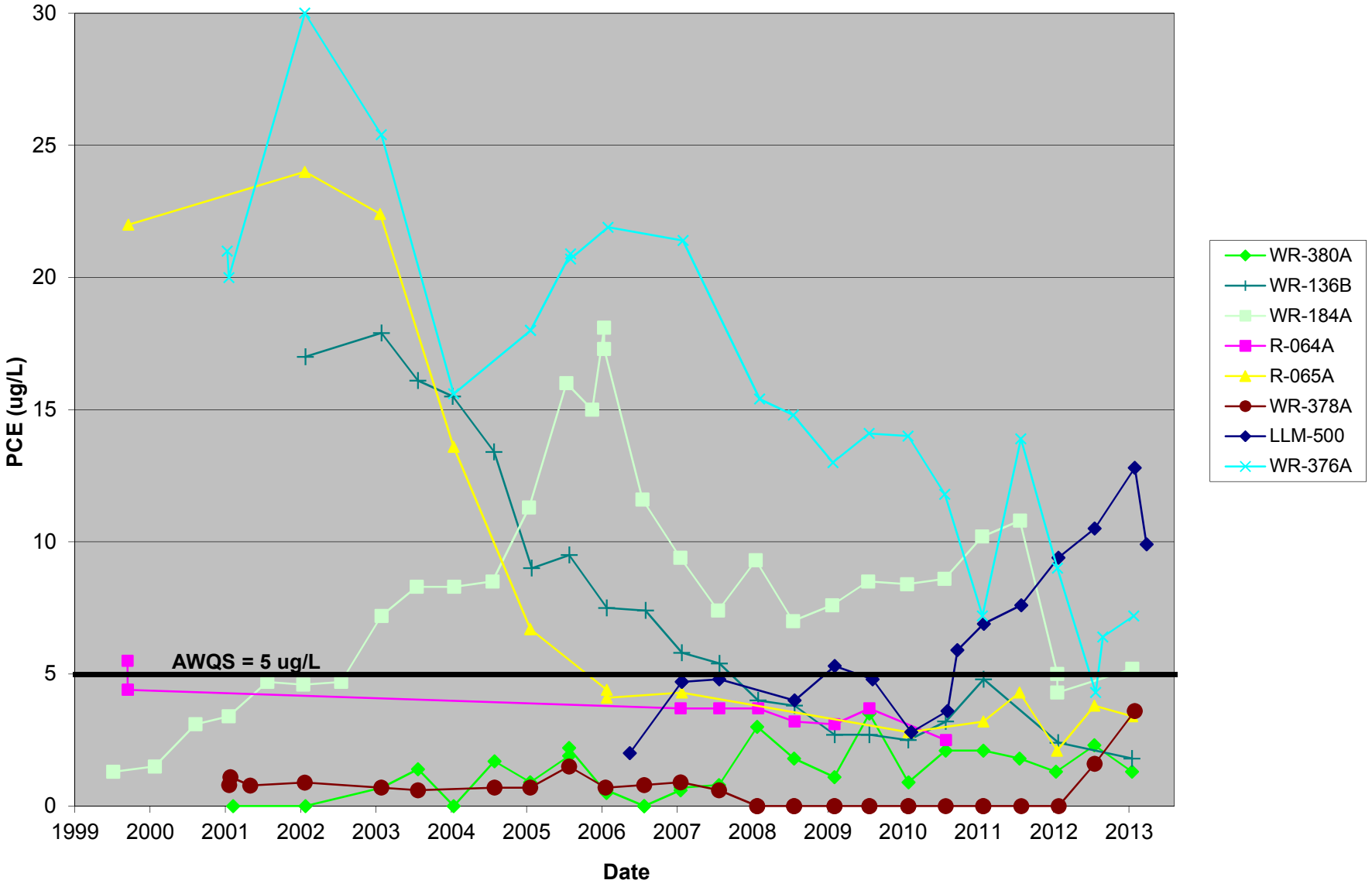
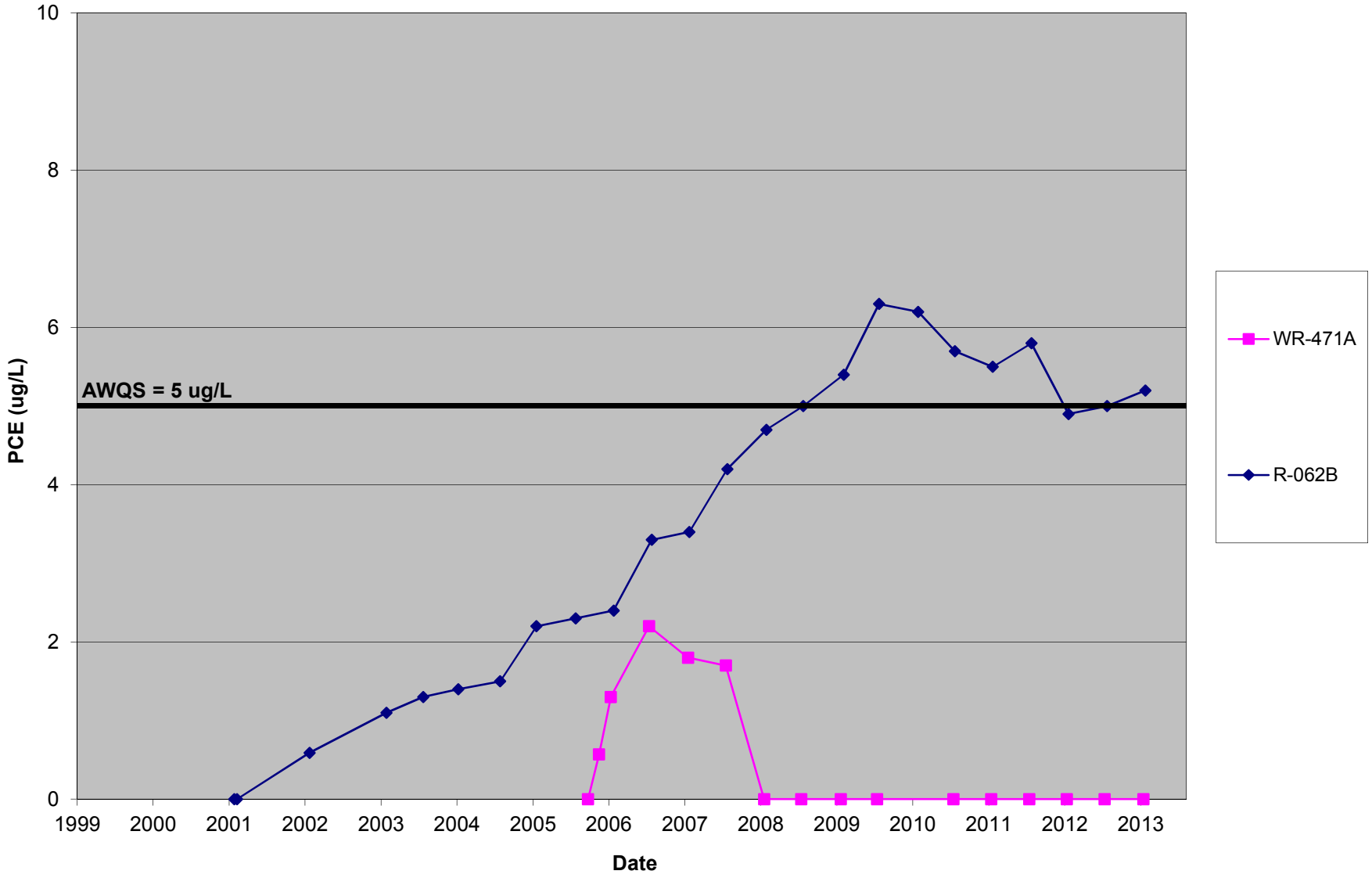


Figure 11
Los Reales Landfill
PCE Concentration in Eastern Long Screened and Shallow Screened Monitor Wells



WR-465A has always been not detect for PCE and is not plotted.

Figure 12
Los Reales Landfill
PCE Concentration in Deep Screened Monitor and Remediation Wells *



*Deep groundwater monitor wells WR-173B, WR-272B, LLM-501, LLM-513, and WR-325A are not-detect for PCE and are not plotted.

TABLES

Table 1
Los Reales Landfill
Well Information

ADWR WELL ID #	CITY OF TUCSON WELL NAME	LAND OWNER	NORTHING (AZ STATE PLANE NAD 83)	EASTING (AZ STATE PLANE NAD 83)	TOP OF CASING (TOC) ELEVATION (ft amsl)	TOC ELEVATION NOTE	APPX. LAND SURFACE ELEVATION (ft amsl)	LAND ELEVATION NOTE	BORING DEPTH (ft)	WELL DEPTH (ft)	PUMP INLET DEPTH (ft)**	SCREEN INTERVAL (ft bgs)	WELL DIAMETER	COMMENT
55-566878	IJ-001A	COT	408600.606	1018664.23	2701.773	TOST[1]	2704.07	COT-BR[1]	324	324	--	268 - 318	6-INCH	Deep Remediation (injection)
55-566879	IJ-002A	COT	408603.64	1019109.457	2706.826	TOST[1]	2709.05	COT-BR[1]	319	319	--	262.5 - 312.5	6-INCH	Deep Remediation (injection)
55-904655	LLM-500	Abandoned	406878.93	1019265.16	2805.984	COT-BR[1] (Not TOC)	2805.44	METAL CASING	325	320	hydrasleeve	220-280, 300-320	5-INCH	Nested Shallow Monitor/SVE/Abandoned 2013
55-904731	LLM-501	COT	408599.973	1017263.622	2697.381	TOST[1]	2696.95	COT-BR[1]	290	280	250[V]	265-280	5-INCH	Deep Monitor
55-216286	LLM-513	COT	408644.246	1014593.273	2672.687	TOST[1]	2673.07	COT-BR[1]	290	290	261.0	260-290	5-INCH	Deep Monitor
55-216285	LLM-530	COT	408005.70	1017225.39	2698.82	TOST	2700.36	COT-BR[1]	232	230	221.6	192-230	5-INCH	Shallow Remediation (extraction)
55-218103	LLM-536	COT	408574.11	1018134.53	2698.41	TOST	2699.60	COT-BR[1]	231	230	228.0	190-230	5-INCH	Shallow Remediation (extraction)
55-218102	LLM-537	COT	408594.21	1017673.49	2696.03	TOST	2697.11	COT-BR[1]	232	230	228.0	190-230	5-INCH	Shallow Remediation (extraction)
55-910171	LLM-538	COT	407398.76	1017226.70	2691.33	TOST	2692.90	COT-BR[1]	230	230	226.0	190-230	5-INCH	Shallow Remediation (extraction)
55-218252	LLM-539	COT	407112.74	1017237.71	2690.22	TOST	2691.71	COT-BR[1]	230	230	226.0	190-230	5-INCH	Shallow Remediation (extraction)
55-218253	LLM-540	COT	406800.85	1017243.89	2689.95	TOST	2691.27	COT-BR[1]	230	230	226.0	190-230	5-INCH	Shallow Remediation (extraction)
55-219962	LLM-543	PC	411329.876	1018405.848	2692.413	TOST[1]	2692.85	COT-BR[1]	301	300	285.0	280-300	5-INCH	Deep Monitor
55-218769	LLM-544	COT	408254.47	1017221.66	2700.14	TOST	2702.05	COT-BR[1]	240	240	236.0	190-240	5-INCH	Shallow Remediation (extraction)
55-220488	LLM-548	COT	408586.64	1017907.30	2697.37	TOST	2699.08	COT-BR[1]	236	236	228.0	185-235	6-INCH	Shallow Remediation (extraction)
55-220489	LLM-549	COT	408584.82	1017456.42	2694.75	TOST	2696.77	COT-BR[1]	236	236	228.0	185-235	6-INCH	Shallow Remediation (extraction)
55-221183	LLM-551	COT	407713.75	1017228.74	2696.65	TOC	2698.63	COT-BR[1]	230	230	227.0	190-230	6-INCH	Shallow Remediation (extraction)
55-553828	R-010A	Abandoned	407687.17	1017234.98	2696.30	SEAL	2698.66	CONCRETE	287	230	220.0	187 - 227.5	6-INCH	Shallow Remediation/Abandoned 2012
55-553824	R-011A	Abandoned	408599.56	1018137.49	2696.89	--	2699.21	--	287	230	--	187 - 227	6-INCH	Shallow Remediation/Abandoned 2008
55-559122	R-015B	Abandoned	408610.96	1017675.53	2694.01	--	2696.43	--	218	218	--	188 - 213	6-INCH	Shallow Remediation/Abandoned 2008
55-565269	R-023A	COT	408599.496	1017457.873	2695.894	TOST[1]	2697.69	COT-BR[1]	230	230	219.0	185 - 225	6-INCH	Shallow Monitor
55-565270	R-024A	COT	408618.482	1017912.695	2697.313	TOST[1]	2699.75	COT-BR[1]	230	230	225.0	185 - 225	6-INCH	Shallow Monitor
55-565271	R-025A	Abandoned	408265.95	1017233.48	2699.41	SEAL	2701.87	CONCRETE	235	235	228.0	189 - 229	6-INCH	Shallow Remediation/Abandoned 2009
55-565272	R-026A	Abandoned	407981.70	1017242.92	2697.53	--	2700.03	--	230	230	--	185 - 225	6-INCH	Shallow Remediation/Abandoned 2008
55-575179	R-061A	COT	408588.10	1019333.29	2711.78	TOST	2715.06	COT-BR[1]	240	240	230.0	195 - 235	5-INCH	Shallow Remediation (extraction)
55-575180	R-062A	COT	408587.522	1019534.999	2712.852	TOC[1]	2716.11	COT-BR[1]	245	245	235.0	200 - 240	5-INCH	Shallow Monitor
55-583862	R-062B	COT	408587.99	1019526.34	2715.71	STEELRING	2716.00	COT-BR[1]	290	290	275	265 - 285	5-INCH	Deep Remediation (extraction)
55-575181	R-063A	COT	408596.45	1019729.65	2715.27	TOST	2718.40	COT-BR[1]	245	245	234.0	200 - 240	5-INCH	Shallow Remediation (extraction)
55-575182	R-064A	COT	408596.707	1020195.962	2720.319	TOC[1]	2719.74	COT-BR[1]	245	245	--	200 - 240	5-INCH	Shallow Monitor
55-575183	R-065A	COT	408581.421	1020375.832	2721.991	TOST[1]	2721.25	COT-BR[1]	245	245	240[V]	200 - 240	5-INCH	Shallow Monitor
55-592316	R-105A	COT	408575.52	1021232.88	2724.91	TOST	2728.50	COT-BR[1]	430	426	--	321 - 421	5-INCH	Deep Remediation (injection)
55-592314	R-106A	COT	408589.986	1019232.832	2713.935	TOC[1]	2713.03	COT-BR[1]	231	230	--	210 - 220	5-INCH	Shallow Monitor
55-592315	R-107A	COT	408586.598	1019458.388	2716.012	TOC[1]	2715.34	COT-BR[1]	236	230	--	210 - 220	5-INCH	Shallow Monitor
55-592317	R-108A	COT	408591.716	1019618.655	2717.817	TOC[1]	2716.57	COT-BR[1]	236	230	--	210 - 220	5-INCH	Shallow Monitor
55-594918	R-109A	COT	405982.528	1017237.145	2688.17	TOC[1]	2689.06	COT-BR[1]	226	220	--	90 - 220	6-INCH	Nested Shallow Monitor/SVE
55-594918	R-109B	COT	405971.15	1017237.98	2687.88	SV	--	--	226	65	--	20 - 60	2-INCH	Nested Shallow Monitor/SVE
55-594919	R-110A	COT	405785.076	1017437.624	2686.312	TOC[1]	2687.36	COT-BR[1]	226	220	--	90 - 220	6-INCH	Nested Shallow Monitor/SVE
55-594919	R-110B	COT	405785.48	1017447.85	2686.07	SV	--	--	226	65	--	20 - 60	2-INCH	Nested Shallow Monitor/SVE
55-594920	R-111A	COT	406010.203	1017628.634	2691.622	TOC[1]	2692.74	COT-BR[1]	226	220	--	90 - 220	6-INCH	Nested Shallow Monitor/SVE
55-594920	R-111B	COT	406020.96	1017628.89	2691.50	SV	--	--	226	65	--	20 - 60	2-INCH	Nested Shallow Monitor/SVE
55-594923	R-112A	COT	406250.69	1017401.845	2687.541	TOC[1]	2688.45	COT-BR[1]	226	220	--	90 - 220	6-INCH	Nested Shallow Monitor/SVE
55-594923	R-112B	COT	406250.77	1017391.03	2687.25	SV	--	--	226	65	--	20 - 60	2-INCH	Nested Shallow Monitor/SVE
55-594921	R-113A	COT	406022.65	1017436.45	2688.82	SV	--	--	226	123	--	90 - 120	2-INCH	Nested Shallow Monitor/SVE
55-594922	R-113B	COT	406011.646	1017437.96	2689.048	TOC[1]	2690.25	COT-BR[1]	226	220	--	160 - 220	6-INCH	Nested Shallow Monitor/SVE
55-594921	R-113C	COT	406022.85	1017436.94	2688.88	SV	--	--	226	62	--	25 - 60	2-INCH	Nested Shallow Monitor/SVE
55-573282	WR-047A/B	COT	404646.506	1022480.746	2730.475	TOST[1]	2730.14	COT-BR[1]	1155	280	274.4	210-280	6-INCH	Long Screen Monitor
55-500457	WR-048A	COT	406127.651	1017378.101	2689.193	TOC[1]	2688.62	COT-BR[1]	355	225	216.0	202 - 225	6-INCH	Shallow Monitor (modified Nov. 06)
55-500458	WR-049A	COT	406275.681	1017746.117	2694.156	TOST[1]	2692.56	COT-BR[1]	355	229	221.5	202 - 229	6-INCH	Shallow Monitor (modified Nov. 06)
55-517157	WR-135A	COT	408519.99	1017255.87	2694.12	TOST	2696.30	COT-BR[1]	285	230	220.0	185 - 228	6-INCH	Shallow Remediation (extraction)
55-566013	WR-136B	COT	408584.729	1019952.632	2719.51	TOST[1]	2718.98	COT-BR[1]	245	245	240[V]	209 - 239	6-INCH	Shallow Monitor

Table 1
Los Reales Landfill
Well Information

ADWR WELL ID #	CITY OF TUCSON WELL NAME	LAND OWNER	NORTHING (AZ STATE PLANE NAD 83)	EASTING (AZ STATE PLANE NAD 83)	TOP OF CASING (TOC) ELEVATION (ft amsl)	TOC ELEVATION NOTE	APPX. LAND SURFACE ELEVATION (ft amsl)	LAND ELEVATION NOTE	BORING DEPTH (ft)	WELL DEPTH (ft)	PUMP INLET DEPTH (ft)**	SCREEN INTERVAL (ft bgs)	WELL DIAMETER	COMMENT
55-527398	WR-172A	ASL	411396.406	1016967.361	2681.731	TOST[1]	2681.25	COT-BR[1]	285	280	231.0	180 - 280	6-INCH	Long Screen Monitor/Raise pump to sample from shallow zone
55-527402	WR-173A	ASL	410033.84	1016972.32	2688.57	TOST	2691.43	COT-BR[1]	280	230	220.0	179 - 222.7	6-INCH	Shallow Remediation (extraction)
55-559121	WR-173B	ASL	410033.41	1016990.582	2692.338	TOST[1]	2691.24	COT-BR[1]	280	280	256.0	260 - 275	4-INCH	Deep Monitor
55-559123	WR-173C	ASL	410038.949	1016980.655	2691.976	TOC[1]	2691.08	COT-BR[1]	211	211	--	190-205	4-INCH	Shallow Monitor
55-527401	WR-174A	ASL	408750.87	1015895.23	2687.70	SEAL	2690.43	COT-BR[1]	285	230	215.0	184 - 221	6-INCH	Shallow Remediation (extraction)
55-527400	WR-175A	ASL	408766.395	1014595.748	2676.545	TOST[1]	2675.83	COT-BR[1]	286	225	217.2	179 - 225	6-INCH	Shallow Monitor (modified Nov. 06)
55-527399	WR-176A	ASL	411388.085	1014561.783	2663.826	TOST[1]	2663.24	COT-BR[1]	277	275	231.0	174 - 275	6-INCH	Long Screen Monitor/Raise pump to sample from shallow zone
55-527403	WR-184A	COT	410018.971	1019762.119	2706.478	TOST[1]	2705.59	COT-BR[1]	305	240	232.5	200-240	6-INCH	Shallow Monitor (modified Aug. 05)
55-527404	WR-185A	COT	405999.209	1014622.668	2682.726	TOST[1]	2682.00	COT-BR[1]	285	280	231.0	180-280	6-INCH	Long Screen Monitor/Raise pump to sample from shallow zone
55-553826	WR-253A	Abandoned	408559.89	1017286.11	2697.81	--	2694.56	--	205	205	--	190 - 205	2-INCH	Shallow Monitor/Abandoned 2006
55-553826	WR-253B	Abandoned	408559.89	1017286.11	2697.83	--	2694.58	--	265	265	--	250 - 265	2-INCH	Deep Monitor/Abandoned 2006
55-553825	WR-272A	COT	408594.624	1017655.788	2698.317	TOC[1]	2697.50	COT-BR[1]	205	205	--	185 - 205	2-INCH	Shallow Monitor (Dry)
55-553825	WR-272B	COT	408594.82	1017656.069	2698.339	TOC[1]	2697.50	COT-BR[1]	280	280	--	253 - 273	4-INCH	Deep Monitor
55-566880	WR-325A	COT	408112.336	1017238.223	2702.199	TOST[1]	2701.14	COT-BR[1]	285	285	227.4	259.5 - 279.5	6-INCH	Deep Monitor
55-579026	*WR-355A	COT	406353.39	1017235.21	2687.54	TOC	2689.30	COT-BR[1]	228	225	222.2	171-219	5-INCH	Shallow Remediation (extraction)/Soil Vapor Monitor
55-579024	*WR-360A	COT	405858.627	1017272.218	2690.7	TOST[1]	2689.76	COT-BR[1]	230	230	212.5	175-225	8-INCH	Shallow Monitor
55-579025	*WR-361A	COT	406100.375	1017232.535	2691.271	TOST[1]	2690.70	COT-BR[1]	228	225	212.5	170-220	8-INCH	Shallow Monitor
55-583861	WR-372A	COT	408133.492	1017235.245	2701.78	TOST[1]	2701.33	COT-BR[1]	234	234	230[V]	189 - 229	5-INCH	Shallow Monitor
55-583865	WR-373A	COT	408428.131	1017281.372	2698.9	TOST[1]	2698.44	COT-BR[1]	234	234	233[V]	189 - 229	5-INCH	Shallow Monitor
55-583866	WR-374A	COT	408499.248	1017391.934	2697.091	TOST[1]	2696.47	COT-BR[1]	229	229	225[V]	194 - 224	5-INCH	Shallow Monitor
55-583867	WR-375A	COT	408621.301	1017558.239	2698.283	TOST[1]	2697.77	COT-BR[1]	229	229	225[V]	194 - 224	5-INCH	Shallow Monitor
55-583858	WR-376A	COT	408603.03	1020787.48	2718.73	TOST	2721.81	COT-BR[1]	244	244	234.0	199 - 239	5-INCH	Shallow Remediation (extraction)
55-583864	WR-378A	COT	408579.492	1021183.001	2727.906	TOC[1]	2727.72	COT-BR[1]	244	244	hydrasleeve	209 - 239	5-INCH	Shallow Monitor
55-583860	WR-379A	COT	408598.85	1019127.40	2707.69	TOST	2710.78	COT-BR[1]	244	244	234.0	199 - 239	5-INCH	Shallow Remediation (extraction)
55-583863	WR-380A	COT	408604.158	1018524.297	2703.113	TOST[1]	2702.07	COT-BR[1]	239	239	237.2	193.5 - 233.5	5-INCH	Shallow Monitor
55-902792	WR-465A	COT	409983.675	1020978.586	2721.046	TOST[1]	2720.37	COT-BR[1]	240	240	234.0	184.4 - 240	5-INCH	Shallow Monitor
55-902791	WR-466A	PC	410053.76	1019145.93	2698.24	TOST	2701.33	COT-BR[1]	235	235	231.0	195 - 235	5-INCH	Shallow Remediation (extraction)
55-902794	WR-468A	PC	411330.946	1018356.179	2692.26	TOST[1]	2692.63	COT-BR[1]	235	235	231.0	180 - 235	5-INCH	Shallow Monitor
55-902819	WR-469A	Raceway Partners	407377.353	1015833.511	2683.106	TOST[1]	2682.10	COT-BR[1]	240	240	231.0	185 - 235	5-INCH	Shallow Monitor
55-902793	WR-470A	COT	410032.92	1019844.41	2703.20	TOST	2706.49	COT-BR[1]	241	240	235.0	200-240	5-INCH	Shallow Remediation (extraction)
55-902795	WR-471A	COT	410016.791	1019834.862	2706.096	TOST[1]	2705.63	COT-BR[1]	300	295	291.0	255 - 295	5-INCH	Deep Monitor
55-591750	Marble Well	Monterra Group	--	--	--	--	--	--	350	320	300.0	280-320	5-INCH	Exempt private well at 4811 E. Los Reales Rd. ADWR database lists in Township 14, Range 15, Section 23
55-568906	Racetrack Well (691)	Raceway Partners	--	--	--	--	--	--	380	--	257	268 - 373	8-INCH	Exempt private well
55-598990	Junque for Jesus/Erler (JFJ)	Erler	--	--	--	--	--	--	340	340	235.0	320 - 340	5 3/4 - INCH	Exempt private well
55-619475	Town & Country (432P)	Town & Country	--	--	--	--	--	--	500	500	--	177-500	12-INCH	Non-exempt private well

* Includes vapor probes; water well diameter is 5-inch

[1] Well position was surveyed in August 2012.

** Pump inlet depth notes: 'V' = temporary pump set by Verdad. '--' = well is not equiped with pump. Bailer = sample collected by bailer, see well field sheet for more details.

--- = Not Surveyed or information not available.

Elevation Notes: CONCRETE = concrete pad; OTOC = outer top of casing; RIM = metal rim of well vault; SEAL = sanitary seal; STEELRING = steelring fitted to TOC; TOC = top of casing; TOST = top of sounding tube

STEEL = steel surface casing

SV= Soil Vapor Well only.

Table 2
Water Table Elevations
Los Reales Landfill

Well ID	Date	Time	DTW (ft)	Corr Factor (ft)	Corr DTW (ft)	Location of Benchmark	Benchmark Elv. (ft. a.m.s.l.)	WTE (ft)	Sounder	Collected by	Groundwater Sample Collected?
R - 062A	1/3/2013	1035	221.61	2.85	224.46	COT-BR	2716.11	2491.65	Sol 2	GB/HV/JB	Yes
R - 064A	1/3/2013	1056	228.33	-0.58	227.75	COT-BR	2719.74	2491.99	Sol 2	GB/HV/JB	No
R - 065A	1/3/2013	1107	230.64	-0.75	229.89	COT-BR	2721.25	2491.36	Sol 2	GB/HV/JB	Yes
R - 105A	1/3/2013		Injecting	3.13		COT-BR	2728.50		Sol 2	GB/HV/JB	No
R - 106A	1/3/2013	1021	222.84	-0.87	221.97	COT-BR	2713.03	2491.06	Sol 2	GB/HV/JB	No
R - 107A	1/3/2013	1027	222.40	-0.65	221.75	COT-BR	2715.34	2493.59	Sol 2	GB/HV/JB	No
R - 108A	1/3/2013	1041	222.74	-1.19	221.55	COT-BR	2716.57	2495.02	Sol 2	GB/HV/JB	No
R-109A	1/3/2013	1130	193.59	0.91	194.50	COT-BR	2689.06	2494.56	Sol 4	GB/HV/JB	No
R-110A	1/3/2013	1045	191.05	1.03	192.08	COT-BR	2687.36	2495.28	Sol 4	GB/HV/JB	No
R-111A	1/3/2013	1055	196.56	1.18	197.74	COT-BR	2692.74	2495.00	Sol 4	GB/HV/JB	No
R-112A	1/3/2013	1120	193.21	1.08	194.29	COT-BR	2688.45	2494.16	Sol 4	GB/HV/JB	No
R-113B	1/3/2013	1100	194.31	0.91	195.22	COT-BR	2690.25	2495.03	Sol 4	GB/HV/JB	No
WR - 47B	1/3/2013	1131	229.26	-0.33	228.93	COT-BR	2730.14	2501.21	Sol 2	GB/HV/JB	Yes
WR - 48A	1/3/2013	1105	194.57	-0.52	194.05	COT-BR	2688.62	2494.57	Sol 4	GB/HV/JB	Yes
WR - 49A	1/3/2013	1115	198.89	-1.61	197.28	COT-BR	2692.56	2495.28	Sol 4	GB/HV/JB	Yes
WR - 136B	1/3/2013	1048	227.51	-0.51	227.00	COT-BR	2718.98	2491.98	Sol 2	GB/HV/JB	Yes
WR - 172A	1/3/2013	915	200.79	-0.51	200.28	COT-BR	2681.25	2480.97	Sol 4	GB/HV/JB	Yes
WR - 173B	1/3/2013	900	209.25	-1.07	208.18	COT-BR	2691.24	2483.06	Sol 4	GB/HV/JB	Yes
WR - 175A	1/3/2013	850	192.89	-0.71	192.18	COT-BR	2675.83	2483.65	Sol 4	GB/HV/JB	Yes
WR - 176A	1/3/2013	930	186.11	-0.64	185.47	COT-BR	2663.24	2477.77	Sol 4	GB/HV/JB	Yes
WR - 184A	1/3/2013	1020	218.77	-0.81	217.96	COT-BR	2705.59	2487.63	Sol 4	GB/HV/JB	Yes
WR - 185A	1/3/2013	820	188.14	-0.72	187.42	COT-BR	2682.00	2494.58	Sol 4	GB/HV/JB	Yes
WR - 272A	1/3/2013		Dry	-0.85	Dry	COT-BR	2697.50	Dry	Sol 2	GB/HV/JB	No
WR - 272B	1/3/2013	951	209.21	-0.87	208.34	COT-BR	2697.50	2489.16	Sol 2	GB/HV/JB	No
WR - 325A	1/3/2013	1200	213.47	-0.96	212.51	COT-BR	2701.14	2488.63	Sol 4	GB/HV/JB	Yes
WR - 360A	1/3/2013	1040	195.84	-0.97	194.87	COT-BR	2689.76	2494.89	Sol 4	GB/HV/JB	Yes
WR - 361A	1/3/2013	1135	196.71	-0.60	196.11	COT-BR	2690.70	2494.59	Sol 4	GB/HV/JB	Yes
WR - 372A	1/3/2013	1205	219.94	-0.41	219.53	COT-BR	2701.33	2481.80	Sol 4	GB/HV/JB	Yes
WR - 373A	1/3/2013	923	215.57	-0.47	215.10	COT-BR	2698.44	2483.34	Sol 2	GB/HV/JB	Yes
WR - 374A	1/3/2013	938	213.29	-0.58	212.71	COT-BR	2696.47	2483.76	Sol 2	GB/HV/JB	Yes
WR - 375A	1/3/2013	945	212.81	-0.50	212.31	COT-BR	2697.77	2485.46	Sol 2	GB/HV/JB	Yes
WR - 378A	1/3/2013	1120	230.82	-0.24	230.58	COT-BR	2727.72	2497.14	Sol 2	GB/HV/JB	Yes
WR - 380A	1/3/2013	1001	212.11	-1.12	210.99	COT-BR	2702.07	2491.08	Sol 2	GB/HV/JB	Yes
WR - 465A	1/3/2013	1000	232.27	-0.71	231.56	COT-BR	2720.37	2488.81	Sol 4	GB/HV/JB	Yes
WR - 468A	1/3/2013	950	209.24	0.37	209.61	COT-BR	2692.63	2483.02	Sol 4	GB/HV/JB	Yes
WR - 469A	1/3/2013	830	193.41	-1.03	192.38	COT-BR	2682.10	2489.72	Sol 4	GB/HV/JB	Yes
WR - 471A	1/3/2013	1025	218.98	-0.52	218.46	COT-BR	2705.63	2487.17	Sol 4	GB/HV/JB	Yes
LLM - 500	1/3/2013	1151	314.79	-4.04	310.75	COT-BR	2805.98	2495.23	Sol 2	GB/HV/JB	Yes
LLM - 501	1/3/2013	930	210.64	-0.40	210.24	COT-BR	2696.95	2486.71	Sol 2	GB/HV/JB	Yes
LLM - 513	1/3/2013	840	187.48	0.39	187.87	COT-BR	2673.07	2485.20	Sol 4	GB/HV/JB	Yes
LLM - 543	1/3/2013	955	209.69	0.41	210.10	COT-BR	2692.85	2482.75	Sol 4	GB/HV/JB	Yes
IJ - 001			Injecting	2.27		COT-BR	2704.07		Sol 2	GB/HV/JB	No
IJ - 002			Injecting	2.29		COT-BR	2709.05		Sol 2	GB/HV/JB	No

Notes:
ft = foot / ft. a.m.s.l. = Feet Above Mean Sea Level WL-NM = water level not monitored.
Elevation Notes: Concrete = X on concrete slab at/near ground surface; RIM = top of metal RIM at/near ground surface.
Twenty-one extraction wells were sampled but not gaged, the wells operate using a variable frequency drive and the water level varies.
Three private wells were sampled, but not gaged.
JB = Barker/ GB = Bejarano/ JM = Montante/ KM = Mendoza/ HV = Hank Vimislik
* Correction factor of -4.01 ft (the difference between outer steel casing to the top of inner casing) is necessary.

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
LLM-500 [3]	3/27/13	<0.5	<0.5	<0.5	4.3	<0.5	**9.9**	2.4	1.1	<0.5
LLM-500 [3]	1/29/13	<0.5	<0.5	0.5	5.2	<0.5	**12.8**	3.2	1.2	<0.5
LLM-500 [3]	7/18/12	<0.5	<0.5	<0.5	6	<0.5	**10.5**	2.4	1.2	<0.5
LLM-500 [3]	1/24/12	<0.5	<0.5	<0.5	8.6	<0.5	**9.4**	2.5	1.2	<0.5
LLM-500 [3]	7/27/11	<0.5	<0.5	<0.5	5.8	<0.5	**7.6**	2.3	1.1	<0.5
LLM-500 [3]	1/27/11	<0.5	<0.5	<0.5	6.8	<0.5	**6.9**	2.3	1.1	<0.5
LLM-500 [3]	9/21/10	<0.5	<0.5	<0.5	3.4	<0.5	**5.9**	2.1	1.0	<0.5
LLM-500 [b]	8/4/10	<0.5	<0.5	<0.5	3.1	<0.5	3.6	1.4	0.7	<0.5
LLM-500	2/10/10	<0.5	<0.5	<0.5	2.2	<0.5	2.8	1.1	<0.5	<0.5
LLM-500 [b]	8/6/09	<0.5	<0.5	2.0	2.2	0.6	4.8	2.2	0.6	<0.5
LLM-500	2/4/09	<0.5	<0.5	1.7	6.4	<0.5	**5.3**	2.4	0.9	<0.5
LLM-500	7/24/08	<0.5	<0.5	<0.5	4.2	<0.5	4.0	1.6	0.8	<0.5
LLM-500	7/24/07	<0.5	<0.5	1.9	5.0	0.6	4.8	2.1	0.6	<0.5
LLM-500	1/23/07	<0.5	<0.5	2.7	4.8	1.8	4.7	2.3	0.7	<0.5
LLM-500	1/23/07	<0.5	<0.5	2.8	4.7	2.0	4.7	2.3	0.8	<0.5
LLM-500	5/16/06	<0.5	<0.5	<0.5	2.1	<0.5	2.0	0.7	0.5	<0.5
LLM-501	1/14/13	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	1/23/12	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501 [5]	1/23/12	<0.5	<0.5	<0.5	<2	<5	<0.5	<0.5	<2	<0.5
LLM-501	1/24/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	7/26/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	7/26/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	1/26/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	7/21/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	7/21/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	1/24/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	7/23/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	1/18/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	7/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-501	5/22/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-513	1/18/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-513	1/11/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-513 [5]	1/11/12	<0.5	<0.5	<0.5	<2	<5	<0.5	<0.5	<2	<0.5
LLM-513	1/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-513	1/26/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-513	7/13/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-530	1/24/13	<0.5	<0.5	<0.5	3.9	<0.5	**8.5**	3.7	1.2	<0.5
LLM-530	1/24/13	<0.5	<0.5	<0.5	3.7	<0.5	**8.6**	3.6	1.2	<0.5
LLM-530	7/23/12	<0.5	<0.5	<0.5	3.7	<0.5	**9.1**	4.1	1.2	<0.5
LLM-530	1/19/12	<0.5	<0.5	<0.5	7.6	<0.5	**10.4**	4.2	1.4	<0.5
LLM-530	7/25/11	<0.5	<0.5	<0.5	7.9	<0.5	**11**	4.6	1.7	<0.5
LLM-530	1/20/11	<0.5	<0.5	<0.5	5.3	<0.5	**10.7**	4.9	1.3	<0.5
LLM-530	7/22/10	<0.5	<0.5	<0.5	6.6	<0.5	**11.6**	**5.5**	1.6	<0.5
LLM-530	1/26/10	0.5	<0.5	<0.5	6.8	<0.5	**13.8**	**6.5**	1.9	<0.5
LLM-530	7/20/09	0.6	<0.5	<0.5	8.5	<0.5	**14.4**	**6.4**	1.8	<0.5
LLM-530	1/26/09	0.5	<0.5	<0.5	9.4	<0.5	**12.5**	**6.0**	1.7	<0.5
LLM-530	1/26/09	0.5	<0.5	<0.5	9.6	<0.5	**12.8**	**6.2**	1.7	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
LLM-530	7/17/08	0.6	<0.5	<0.5	9.3	<0.5	**11.5**	**5.7**	2.0	<0.5
R-026A *	1/17/07	0.5	<0.5	<0.5	7.8	<0.5	**11.9**	**5.5**	1.5	<0.5
R-026A	7/21/06	<0.5	<0.5	<0.5	10.1	<0.5	**12.2**	**6.0**	1.7	<0.5
R-026A	1/18/06	<0.5	<0.5	<0.5	8.0	<0.5	**13.2**	**5.6**	1.9	<0.5
R-026A	7/28/05	<0.5	<0.5	<0.5	7.6	<0.5	**11.6**	**5.3**	2.0	<0.5
R-026A	1/31/05	<0.5	<0.5	<0.5	7.0	<0.5	**10.5**	4.1	1.7	<0.5
R-026A	7/26/04	0.5	<0.5	<0.5	10.2	<0.5	**13.6**	**6.2**	2.4	<0.5
R-026A	1/6/04	<0.5	<0.5	<0.5	11.1	<0.5	**12.2**	**5.9**	2.0	<0.5
R-026A	7/21/03	<0.5	<0.5	<0.5	9.6	<0.5	**11.8**	**5.8**	2.8	<0.5
R-026A	1/15/02	NS	NS	NS	NS	NS	**9.4**	4.1	NS	NS
R-026A	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	**5.8**	2.6	<1.0	<1.0
LLM-536	1/23/13	<0.5	<0.5	<0.5	1.2	<0.5	2.3	0.6	0.5	<0.5
LLM-536	7/19/12	<0.5	<0.5	<0.5	1.1	<0.5	2.3	0.6	0.5	<0.5
LLM-536	1/24/12	<0.5	<0.5	<0.5	2.1	<0.5	3	0.8	0.8	<0.5
LLM-536 [5]	1/24/12	<0.5	<0.5	<0.5	<2	<5	2.48	0.89	<2	<0.5
LLM-536	7/25/11	<0.5	<0.5	<0.5	1.4	<0.5	3.1	0.7	0.8	<0.5
LLM-536	1/20/11	<0.5	<0.5	<0.5	1.3	<0.5	3.3	1	0.7	<0.5
LLM-536	7/22/10	<0.5	<0.5	<0.5	1.2	<0.5	3.7	1.2	0.8	<0.5
LLM-536	1/25/10	<0.5	<0.5	<0.5	1.5	<0.5	**5.0**	1.6	1.1	<0.5
LLM-536	7/20/09	<0.5	0.5	<0.5	1.8	<0.5	4.8	1.5	1	<0.5
LLM-536	7/20/09	<0.5	<0.5	<0.5	1.7	<0.5	4.8	1.5	0.8	<0.5
LLM-536	1/26/09	0.6	0.7	<0.5	3	<0.5	**6.1**	1.9	1.5	<0.5
R-011A *	7/17/08	2.8	1.3	13.4	1.6	<0.5	3.3	0.8	0.7	<0.5
R-011A *	1/23/08	2.2	1.7	<0.5	3.4	<0.5	**12.3**	4.3	1.7	<0.5
R-011A	7/19/07	1.7	1.0	0.6	2.1	<0.5	**7.4**	3.0	1.1	<0.5
R-011A	1/17/07	1.0	1.2	<0.5	5.1	<0.5	**13.8**	3.6	3.8	<0.5
R-011A	7/21/06	1.2	0.7	<0.5	1.8	<0.5	4.0	2.2	0.6	<0.5
R-011A	1/18/06	0.9	0.9	<0.5	2.3	<0.5	**9.1**	2.9	1.2	<0.5
R-011A	8/4/05	0.5	<0.5	0.6	2.2	<0.5	3.7	1.3	1.0	<0.5
R-011A	8/4/05	0.6	<0.5	0.5	2.3	<0.5	4.0	1.3	1.0	<0.5
R-011A	3/3/05	NS	NS	NS	NS	NS	NS	NS	NS	NS
R-011A	7/26/04	<0.5	<0.5	<0.5	0.5	<0.5	1.0	<0.5	<0.5	<0.5
R-011A	1/5/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-011A	7/21/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-011A	1/15/02	NS	NS	NS	NS	NS	0.9	<0.5	NS	NS
LLM-537	1/23/13	<0.5	<0.5	<0.5	1.4	<0.5	2.8	1	0.5	<0.5
LLM-537	7/19/12	<0.5	<0.5	<0.5	1	<0.5	2.6	0.9	<0.5	<0.5
LLM-537	1/19/12	0.7	<0.5	<0.5	2.2	<0.5	2.7	0.9	0.6	<0.5
LLM-537	7/25/11	<0.5	<0.5	<0.5	2.1	<0.5	3	1	0.7	<0.5
LLM-537	1/20/11	<0.5	<0.5	<0.5	1.2	<0.5	2.4	0.9	<0.5	<0.5
LLM-537	7/22/10	<0.5	<0.5	<0.5	1.2	<0.5	2.3	0.6	0.5	<0.5
LLM-537	1/25/10	<0.5	<0.5	<0.5	1.1	<0.5	2.2	0.7	<0.5	<0.5
LLM-537	7/20/09	<0.5	<0.5	<0.5	0.9	<0.5	1.6	0.6	<0.5	<0.5
LLM-537	1/29/09	<0.5	<0.5	<0.5	0.9	<0.5	1.2	<0.5	<0.5	<0.5
R-015B *	7/17/08	0.8	<0.5	<0.5	3.2	<0.5	**5.1**	2.1	1.1	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
R-015B	1/23/08	0.8	<0.5	<0.5	3.3	<0.5	**6.3**	2.2	1.4	<0.5
R-015B	7/19/07	0.5	<0.5	<0.5	1.6	<0.5	4.2	1.6	0.7	<0.5
R-015B	1/17/07	<0.5	<0.5	<0.5	4.2	<0.5	**7.6**	3.0	1.1	<0.5
R-015B	7/21/06	<0.5	<0.5	<0.5	2.1	<0.5	4.2	1.7	0.7	<0.5
R-015B	1/18/06	<0.5	<0.5	<0.5	1.8	<0.5	4.9	1.6	0.8	<0.5
R-015B	7/28/05	<0.5	<0.5	<0.5	3.5	<0.5	**6.7**	2.4	1.0	<0.5
R-015B	1/31/05	0.6	<0.5	<0.5	6.5	<0.5	**9.1**	3.0	1.6	<0.5
R-015B	7/26/04	<0.5	<0.5	<0.5	5.6	<0.5	**6.4**	2.2	1.5	<0.5
R-015B	1/5/04	<0.5	<0.5	<0.5	3.9	<0.5	4.8	1.9	0.8	<0.5
R-015B	7/21/03	<0.5	<0.5	<0.5	3.5	<0.5	**5.3**	2.0	1.0	<0.5
R-015B	1/15/02	NS	NS	NS	NS	NS	**5.1**	1.8	NS	NS
R-015B	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	4.7	1.5	<1.0	<1.0
LLM-538	1/24/13	<0.5	<0.5	<0.5	1.5	<0.5	**6.6**	2.8	<0.5	<0.5
LLM-538	7/23/12	<0.5	<0.5	<0.5	1.8	<0.5	4.9	2	<0.5	<0.5
LLM-538	1/19/12	<0.5	<0.5	<0.5	4.5	<0.5	**9.4**	4	0.6	<0.5
LLM-538	7/25/11	0.6	<0.5	<0.5	3.7	<0.5	**10.5**	4.1	0.8	<0.5
LLM-538	1/20/11	0.5	<0.5	<0.5	3	<0.5	**8.7**	4	0.6	<0.5
LLM-538	7/22/10	<0.5	<0.5	<0.5	2.5	<0.5	**8.6**	3.9	0.6	<0.5
LLM-538	1/25/10	0.5	<0.5	<0.5	3.2	<0.5	**10.6**	4.4	0.8	<0.5
LLM-538	7/20/09	<0.5	<0.5	<0.5	3.8	<0.5	**5.6**	2.3	0.6	<0.5
LLM-538	1/6/09	<0.5	<0.5	<0.5	3.7	<0.5	**5.5**	2.3	0.6	<0.5
LLM-539	1/24/13	<0.5	<0.5	<0.5	1.3	<0.5	**7.7**	2.9	<0.5	<0.5
LLM-539	7/23/12	<0.5	<0.5	<0.5	1.7	<0.5	**6.9**	3.1	<0.5	<0.5
LLM-539	1/19/12	<0.5	<0.5	<0.5	2.6	<0.5	**8**	3.3	<0.5	<0.5
LLM-539	7/25/11	<0.5	<0.5	<0.5	2.7	<0.5	**10.2**	3.8	0.6	<0.5
LLM-539	1/20/11	<0.5	<0.5	<0.5	2.5	<0.5	**8.7**	3.6	<0.5	<0.5
LLM-539	7/22/10	<0.5	<0.5	<0.5	1.7	<0.5	**7.4**	3.2	<0.5	<0.5
LLM-539	1/25/10	<0.5	<0.5	<0.5	2	<0.5	**6.6**	2.8	<0.5	<0.5
LLM-539	7/20/09	<0.5	<0.5	<0.5	1.9	<0.5	4.5	1.9	<0.5	<0.5
LLM-539	1/6/09	<0.5	<0.5	<0.5	2.3	<0.5	**6.2**	2.7	<0.5	<0.5
LLM-540	1/24/13	<0.5	<0.5	<0.5	1.5	<0.5	**10.1**	3.1	<0.5	<0.5
LLM-540	8/27/12	<0.5	<0.5	<0.5	1.4	<0.5	**10.4**	3.2	<0.5	<0.5
LLM-540	8/27/12	<0.5	<0.5	<0.5	1..5	<0.5	**11**	3.4	<0.5	<0.5
LLM-540	7/23/12	<0.5	<0.5	<0.5	1	<0.5	4.5	1.8	<0.5	<0.5
LLM-540	1/19/12	<0.5	<0.5	<0.5	2.9	<0.5	**10.6**	3.3	<0.5	<0.5
LLM-540	7/25/11	<0.5	<0.5	<0.5	2.3	<0.5	**11.9**	3.5	0.6	<0.5
LLM-540	1/20/11	<0.5	<0.5	<0.5	1.7	<0.5	**12.4**	4.1	<0.5	<0.5
LLM-540	7/22/10	<0.5	<0.5	<0.5	1.1	<0.5	**9.2**	3	<0.5	<0.5
LLM-540	1/25/10	<0.5	<0.5	<0.5	1.6	<0.5	**10.5**	3.4	<0.5	<0.5
LLM-540	7/20/09	<0.5	<0.5	<0.5	3.3	<0.5	**17.2**	**5.9**	<0.5	<0.5
LLM-540	1/5/09	<0.5	<0.5	<0.5	2.2	<0.5	**13.7**	4.5	0.6	<0.5
LLM-543	1/15/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-543	7/12/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-543	1/12/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-543	7/14/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LLM-543	1/18/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
LLM-544	1/23/13	<0.5	<0.5	<0.5	4	<0.5	**7.1**	3.2	1	<0.5
LLM-544	7/19/12	<0.5	<0.5	<0.5	4.3	<0.5	**7.4**	3.4	1.2	<0.5
LLM-544	1/19/12	<0.5	<0.5	<0.5	8	<0.5	**8.8**	3.8	1.3	<0.5
LLM-544	7/25/11	<0.5	<0.5	<0.5	5.6	<0.5	**8.8**	3.7	1.6	<0.5
LLM-544 [5]	7/25/11	<0.5	<0.5	<0.5	5.37	<3	**7.17**	3.74	<2	<0.5
LLM-544	1/20/11	<0.5	<0.5	<0.5	6.2	<0.5	**7.6**	3.7	1.5	<0.5
LLM-544 [4]	8/3/10	<0.5	<0.5	<0.5	1.1	0.6	2.6	1.4	<0.5	<0.5
LLM-548	1/23/13	0.6	<0.5	<0.5	1.4	<0.5	2	<0.5	<0.5	<0.5
LLM-548	7/19/12	<0.5	<0.5	<0.5	2.5	<0.5	4.6	1.6	1	<0.5
LLM-548	1/19/12	<0.5	<0.5	<0.5	4.3	<0.5	4.6	1.6	0.9	<0.5
LLM-548	7/25/11	<0.5	<0.5	<0.5	3.1	<0.5	4.2	1.4	1	<0.5
LLM-549	1/23/13	<0.5	<0.5	<0.5	2.1	<0.5	3.4	1.1	0.7	<0.5
LLM-549	7/19/12	<0.5	<0.5	<0.5	2	<0.5	3.2	1	0.6	<0.5
LLM-549	1/19/12	<0.5	<0.5	<0.5	3.2	<0.5	3.8	1.2	0.7	<0.5
LLM-549	7/25/11	<0.5	<0.5	<0.5	2.3	<0.5	2.8	0.8	0.7	<0.5
LLM-551	1/23/13	<0.5	<0.5	<0.5	3.8	<0.5	**8.9**	4.2	0.7	<0.5
LLM-551	7/19/12	<0.5	<0.5	<0.5	4.5	<0.5	**8.6**	4	0.7	<0.5
LLM-551	7/19/12	<0.5	<0.5	<0.5	4.2	<0.5	**8.3**	4	0.7	<0.5
LLM-551	3/27/12	<0.5	<0.5	<0.5	5.7	<0.5	**9.3**	4	0.8	<0.5
R-010A *	7/25/11	0.5	<0.5	<0.5	6.3	<0.5	**11.4**	4.9	1.2	<0.5
R-010A	1/20/11	0.6	<0.5	<0.5	7.1	<0.5	**12.5**	**5.4**	1.1	<0.5
R-010A	7/22/10	0.6	<0.5	<0.5	5.6	<0.5	**12.7**	**5.4**	1.1	<0.5
R-010A	7/22/10	0.6	<0.5	<0.5	5.4	<0.5	**12.5**	**5.3**	1.2	<0.5
R-010A	1/25/10	0.8	<0.5	<0.5	6.1	<0.5	**16.3**	**6.2**	1.5	<0.5
R-010A	7/20/09	0.9	<0.5	<0.5	7.0	<0.5	**17.4**	**6.7**	1.5	<0.5
R-010A	1/26/09	1.0	<0.5	<0.5	8.4	<0.5	**17.1**	**7.0**	1.5	<0.5
R-010A	7/17/08	1.1	<0.5	<0.5	7.8	<0.5	**17.5**	**7.0**	1.7	<0.5
R-010A	1/23/08	1.2	<0.5	<0.5	8.3	<0.5	**19.9**	**7.8**	2.1	<0.5
R-010A	1/23/08	1.1	<0.5	<0.5	8.5	<0.5	**19.7**	**7.6**	2.3	<0.5
R-010A	1/17/07	1.4	<0.5	<0.5	8.5	<0.5	**25.1**	**9.5**	1.9	<0.5
R-010A	7/21/06	1.4	<0.5	<0.5	10.6	<0.5	**23.4**	**9.4**	2.1	<0.5
R-010A	1/18/06	1.5	<0.5	<0.5	9.1	<0.5	**30.0**	**10.7**	2.4	<0.5
R-010A	7/28/05	1.2	<0.5	<0.5	8.1	<0.5	**23.8**	**8.9**	2.1	<0.5
R-010A	1/27/05	1.2	<0.5	<0.5	8.2	<0.5	**24.6**	**8.5**	2.1	<0.5
R-010A	7/26/04	1.7	<0.5	<0.5	9.7	<0.5	**31.4**	**11.2**	2.7	<0.5
R-010A	1/5/04	1.4	<0.5	<0.5	12.9	<0.5	**25.8**	**10.4**	2.2	<0.5
R-010A	7/21/03	1.4	<0.5	<0.5	11.1	<0.5	**24.2**	**9.8**	2.4	<0.5
R-010A	1/15/02	NS	NS	NS	NS	NS	**19.0**	**7.5**	NS	NS
R-010A	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	**10.0**	4.0	<1.0	<1.0
R-010A	4/9/96	<0.5	<2	<0.5	4.1	<2	**1.6**	<0.5	<2	<0.5
R-010A	3/28/96	<0.5	<2	<0.5	9.2	<2	**2.8**	<0.5	<2	<0.5
R-023A	1/20/11	<0.5	<0.5	<0.5	2.7	<0.5	4	1.3	0.8	<0.5
R-023A	7/22/10	<0.5	<0.5	<0.5	2.6	<0.5	**5.1**	1.6	0.8	<0.5
R-023A	1/25/10	<0.5	<0.5	<0.5	2.1	<0.5	4.4	1.3	0.9	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
R-023A	7/20/09	<0.5	<0.5	<0.5	2.5	<0.5	4.9	1.7	1.2	<0.5
R-023A	1/29/09	<0.5	<0.5	<0.5	2.9	<0.5	**5.0**	1.7	0.9	<0.5
R-023A	7/17/08	<0.5	<0.5	<0.5	2.0	<0.5	4.5	1.4	1.0	<0.5
R-023A	1/23/08	<0.5	<0.5	<0.5	2.4	<0.5	**6.6**	2.0	1.4	<0.5
R-023A	7/19/07	<0.5	<0.5	<0.5	2.3	<0.5	4.5	1.4	0.8	<0.5
R-023A	1/17/07	<0.5	<0.5	<0.5	2.0	<0.5	4.6	1.4	0.7	<0.5
R-023A	7/21/06	<0.5	<0.5	<0.5	3.4	<0.5	**5.6**	1.8	1.3	<0.5
R-023A	1/18/06	<0.5	<0.5	<0.5	2.1	<0.5	**6.2**	1.8	1.1	<0.5
R-023A	7/28/05	<0.5	<0.5	<0.5	2.3	<0.5	4.8	1.4	0.8	<0.5
R-023A	7/28/05	<0.5	<0.5	<0.5	2.4	<0.5	4.8	1.4	0.9	<0.5
R-023A	1/27/05	<0.5	<0.5	<0.5	2.4	<0.5	4.8	1.2	1.0	<0.5
R-023A	1/27/05	<0.5	<0.5	<0.5	2.4	<0.5	4.8	1.2	1.0	<0.5
R-023A	7/26/04	<0.5	<0.5	<0.5	3.9	<0.5	**6.5**	1.8	1.6	<0.5
R-023A	1/6/04	<0.5	<0.5	<0.5	4.0	<0.5	**5.6**	1.8	1.2	<0.5
R-023A	7/21/03	<0.5	<0.5	<0.5	3.4	<0.5	**6.0**	1.9	1.2	<0.5
R-023A	1/15/02	NS	NS	NS	NS	NS	**6.0**	1.7	NS	NS
R-023A	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	**5.9**	1.5	<1.0	<1.0
R-024A	1/20/11	<0.5	<0.5	<0.5	2.8	<0.5	**5.4**	2.1	0.9	<0.5
R-024A	7/22/10	<0.5	<0.5	<0.5	3.0	<0.5	**6.2**	2.4	1.1	<0.5
R-024A	1/25/10	<0.5	<0.5	<0.5	1.3	<0.5	4.8	1.8	0.6	<0.5
R-024A	7/20/09	<0.5	<0.5	<0.5	1.6	<0.5	**5.1**	2.1	0.7	<0.5
R-024A	1/29/09	0.6	<0.5	<0.5	2.2	<0.5	4.9	2.0	0.7	<0.5
R-024A	7/17/08	0.6	<0.5	<0.5	1.7	<0.5	4.9	2.0	0.8	<0.5
R-024A	1/23/08	<0.5	<0.5	<0.5	<0.5	<0.5	3.4	1.6	<0.5	<0.5
R-024A	7/19/07	<0.5	<0.5	<0.5	2.0	<0.5	**6.2**	2.4	0.9	<0.5
R-024A	1/17/07	1.0	<0.5	<0.5	3.0	<0.5	**8.0**	3.0	1.0	<0.5
R-024A	7/21/06	0.6	<0.5	<0.5	3.0	<0.5	**8.0**	3.0	1.6	<0.5
R-024A	1/18/06	0.7	<0.5	<0.5	2.2	<0.5	**10.3**	3.5	1.5	<0.5
R-024A	8/3/05	1.3	<0.5	<0.5	4.9	<0.5	**8.1**	2.7	0.6	<0.5
R-024A	1/27/05	0.8	<0.5	<0.5	3.3	<0.5	**10.6**	3.5	1.6	<0.5
R-024A	7/26/04	0.8	<0.5	<0.5	4.2	<0.5	**10.7**	3.7	2.0	<0.5
R-024A	1/6/04	0.9	<0.5	<0.5	5.0	<0.5	**8.7**	3.2	1.5	<0.5
R-024A	7/21/03	0.8	0.6	<0.5	5.0	<0.5	**10.8**	3.9	2.2	<0.5
R-024A	1/15/02	NS	NS	NS	NS	NS	**13.0**	4.3	NS	NS
R-024A	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	4.1	1.6	<1.0	<1.0
R-025A *	1/25/10	<0.5	<0.5	<0.5	4.4	<0.5	**12.3**	**5.5**	2.6	<0.5
R-025A	7/20/09	0.5	<0.5	<0.5	7.2	<0.5	**14.8**	**7.1**	3.2	<0.5
R-025A	1/29/09	0.5	<0.5	<0.5	7.8	<0.5	**15.0**	**7.1**	3.0	<0.5
R-025A	7/17/08	0.5	<0.5	<0.5	6.2	<0.5	**13.7**	**6.8**	3.0	<0.5
R-025A	1/23/08	0.5	<0.5	<0.5	6.5	0.6	**16.2**	**7.4**	3.4	<0.5
R-025A	7/19/07	<0.5	<0.5	<0.5	7.4	<0.5	**16.6**	**7.7**	3.2	<0.5
R-025A	1/17/07	<0.5	<0.5	<0.5	8.4	<0.5	**16.1**	**7.2**	3.1	<0.5
R-025A	1/17/07	<0.5	<0.5	<0.5	8.1	<0.5	**15.3**	**7.0**	3.0	<0.5
R-025A	7/21/06	<0.5	<0.5	<0.5	9.3	<0.5	**14.9**	**7.2**	3.6	<0.5
R-025A	1/18/06	<0.5	<0.5	<0.5	6.1	<0.5	**16.4**	**6.5**	3.3	<0.5
R-025A	8/3/05	0.6	<0.5	<0.5	8.4	<0.5	**14.2**	**7.3**	2.7	<0.5
R-025A	8/3/05	0.6	<0.5	<0.5	8.8	<0.5	**14.5**	**7.5**	2.8	<0.5
R-025A	3/3/05	0.5	<0.5	<0.5	7.7	<0.5	**13.1**	**6.5**	2.2	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
R-025A	3/3/05	0.5	<0.5	<0.5	7.7	<0.5	**13.1**	**6.5**	2.2	<0.5
R-025A	7/26/04	0.7	<0.5	<0.5	9.5	<0.5	**12.0**	**5.8**	2.2	<0.5
R-025A	1/20/04	0.7	<0.5	<0.5	4.7	<0.5	**7.8**	3.3	0.6	<0.5
R-025A	7/21/03	<0.5	<0.5	<0.5	8.0	<0.5	**9.8**	**5.0**	2.2	<0.5
R-025A	1/15/02	NS	NS	NS	NS	NS	**12.0**	**5.6**	NS	NS
R-025A	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	**9.2**	4.6	<1.0	<1.0
R-061A	1/24/13	1.6	<0.5	0.8	9.7	<0.5	**23**	4.4	6	<0.5
R-061A	7/23/12	1.6	<0.5	0.6	10.3	<0.5	**22.2**	3.8	5.9	<0.5
R-061A	1/19/12	1.7	<0.5	0.6	14.8	<0.5	**21.4**	4	6.3	<0.5
R-061A	7/25/11	1.6	<0.5	<0.5	8.6	<0.5	**17.8**	3	5.8	<0.5
R-061A	1/20/11	1.6	<0.5	0.5	8	<0.5	**17.4**	3.4	4.9	<0.5
R-061A	7/22/10	1.7	<0.5	0.6	6.6	<0.5	**17.1**	3.4	4.9	<0.5
R-061A	1/25/10	1.9	<0.5	0.6	8.0	<0.5	**23.9**	4.5	6.7	<0.5
R-061A	1/26/09	1.6	<0.5	<0.5	6.4	<0.5	**15.8**	3.4	4.1	<0.5
R-061A	7/17/08	2.1	<0.5	0.5	8.4	<0.5	**18.3**	3.6	6.4	<0.5
R-061A	2/5/08	2.7	<0.5	0.5	9.4	<0.5	**20.3**	4.0	7.6	<0.5
R-061A	1/25/07	7.5	<0.5	<0.5	5.0	**13.7**	**9.5**	2.4	7.3	<0.5
R-061A	7/26/06	11.2	<0.5	0.7	5.9	<0.5	**11.0**	3.7	8.9	<0.5
R-061A	1/17/02	NS	NS	NS	NS	NS	**19.0**	1.6	NS	NS
R-061A	1/17/02	NS	NS	NS	NS	NS	**19.0**	1.6	NS	NS
R-061A	9/30/99	<0.5	NS	<0.5	<3.0	<1.0	**21.0**	1.9	<1.0	<1.0
R-061A	9/30/99	<0.5	NS	<0.5	15.0	<1.0	**20.0**	2.4	7.7	<1.0
R-062A	1/29/13	0.8	<0.5	<0.5	0.7	<0.5	4.6	<0.5	1	<0.5
R-062A	7/18/12	0.8	<0.5	<0.5	0.6	<0.5	4.9	<0.5	0.9	<0.5
R-062A	1/18/12	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5
R-062A [5]	1/18/12	0.67	<0.5	<0.5	<2	<5	1.89	<0.5	<2	<0.5
R-062A	7/20/11	0.7	<0.5	<0.5	<0.5	<0.5	4.6	<0.5	0.6	<0.5
R-062A	3/1/11	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	<0.5	<0.5	<0.5
R-062A	8/4/10	0.6	<0.5	<0.5	1.0	<0.5	4.0	0.5	0.7	<0.5
R-062A	1/25/10	<0.5	<0.5	<0.5	2.9	<0.5	**6.0**	1.0	2.2	<0.5
R-062A	7/20/09	<0.5	<0.5	<0.5	4	<0.5	**6.5**	1.2	2.5	<0.5
R-062A	1/26/09	<0.5	<0.5	<0.5	2.1	<0.5	4.0	0.8	1.2	<0.5
R-062A	7/23/08	<0.5	<0.5	<0.5	3.6	<0.5	**5.9**	1.0	1.9	<0.5
R-062A	2/5/08	0.8	<0.5	<0.5	3.1	<0.5	**6.0**	1.1	2.6	<0.5
R-062A	1/24/07	4.7	<0.5	<0.5	2.9	<0.5	**9.6**	1.9	3.6	<0.5
R-062A	8/1/06	4.9	<0.5	<0.5	2.1	<0.5	**9.6**	1.9	2.9	<0.5
R-062A	1/31/06	3.0	<0.5	<0.5	2.5	<0.5	**13.4**	1.7	3.8	<0.5
R-062A	1/31/06	2.9	<0.5	<0.5	2.5	<0.5	**13.0**	1.8	3.7	<0.5
R-062A	8/1/05	<0.5	<0.5	<0.5	3.3	<0.5	**17.3**	1.5	2.8	<0.5
R-062A	8/1/05	<0.5	<0.5	<0.5	3.3	<0.5	**16.9**	1.4	2.7	<0.5
R-062A	1/18/05	<0.5	<0.5	<0.5	5.2	<0.5	**19.2**	1.4	3.6	<0.5
R-062A	1/18/05	<0.5	<0.5	<0.5	5.2	<0.5	**19.2**	1.4	3.6	<0.5
R-062A	7/27/04	<0.5	<0.5	<0.5	7.0	<0.5	**18.4**	1.5	3.7	<0.5
R-062A	1/13/04	<0.5	<0.5	<0.5	7.8	<0.5	**19.9**	1.6	3.4	<0.5
R-062A	7/23/03	<0.5	<0.5	<0.5	7.0	<0.5	**22.9**	1.9	3.7	<0.5
R-062A	1/21/03	<0.5	<0.5	<0.5	9.1	<0.5	**29.4**	2.3	4.7	<0.5
R-062A	1/22/02	NS	NS	NS	NS	NS	**26.0**	1.9	NS	NS
R-062A	5/14/01	<0.5	<0.5	<0.5	8.1	<0.5	**22.0**	1.4	4.3	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
R-062A	9/29/99	<0.5	NS	<0.5	<3.0	<1.0	**19.0**	1.7	<1.0	<1.0
R-062B	1/24/13	<0.5	<0.5	<0.5	2.7	<0.5	**5.2**	1.1	1.2	<0.5
R-062B	7/23/12	<0.5	<0.5	<0.5	2.8	<0.5	**5**	1	1.2	<0.5
R-062B	1/19/12	<0.5	<0.5	<0.5	4.4	<0.5	4.9	1	1.4	<0.5
R-062B	7/25/11	<0.5	<0.5	<0.5	3.5	<0.5	**5.8**	1.1	1.8	<0.5
R-062B	1/20/11	<0.5	<0.5	<0.5	3.3	<0.5	**5.5**	1.2	1.3	<0.5
R-062B	7/22/10	<0.5	<0.5	<0.5	2.5	<0.5	**5.7**	1.2	1.6	<0.5
R-062B	1/27/10	<0.5	<0.5	<0.5	2.4	<0.5	**6.2**	1.4	1.4	<0.5
R-062B	7/23/09	<0.5	<0.5	<0.5	3.4	<0.5	**6.3**	1.5	1.8	<0.5
R-062B	2/3/09	<0.5	<0.5	<0.5	3.4	<0.5	**5.4**	1.3	1.6	<0.5
R-062B	7/23/08	<0.5	<0.5	<0.5	2.7	<0.5	**5.0**	1.2	1.3	<0.5
R-062B	1/28/08	<0.5	<0.5	<0.5	2.5	<0.5	4.7	1.2	1.5	<0.5
R-062B	7/24/07	<0.5	<0.5	<0.5	2.8	<0.5	4.2	1.1	1.2	<0.5
R-062B	1/23/07	<0.5	<0.5	<0.5	1.7	<0.5	3.4	0.9	0.9	<0.5
R-062B	7/26/06	<0.5	<0.5	<0.5	2.3	<0.5	3.3	0.8	1.1	<0.5
R-062B	1/24/06	<0.5	<0.5	<0.5	1.4	<0.5	2.4	0.6	0.8	<0.5
R-062B	7/26/05	<0.5	<0.5	<0.5	1.2	<0.5	2.3	0.6	0.7	<0.5
R-062B	1/18/05	<0.5	<0.5	<0.5	1.0	<0.5	2.2	<0.5	0.7	<0.5
R-062B	7/27/04	<0.5	<0.5	<0.5	0.8	<0.5	1.5	<0.5	0.5	<0.5
R-062B	1/8/04	<0.5	<0.5	<0.5	1.1	<0.5	1.4	<0.5	<0.5	<0.5
R-062B	7/23/03	<0.5	<0.5	<0.5	0.9	<0.5	1.3	<0.5	<0.5	<0.5
R-062B	1/28/03	<0.5	<0.5	<0.5	0.7	<0.5	1.1	<0.5	<0.5	<0.5
R-062B	1/23/02	NS	NS	NS	NS	NS	0.6	<0.5	NS	NS
R-062B	2/9/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-062B	1/26/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-063A	1/24/13	<0.5	<0.5	<0.5	1.6	<0.5	**8.3**	0.7	1.6	<0.5
R-063A	7/23/12	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5	<0.5
R-063A	1/19/12	<0.5	<0.5	<0.5	1.5	<0.5	4.7	<0.5	1	<0.5
R-063A	7/25/11	<0.5	<0.5	<0.5	0.7	<0.5	**5.8**	<0.5	1.2	<0.5
R-063A	1/20/11	<0.5	<0.5	<0.5	2.2	<0.5	**7.4**	0.7	1.2	<0.5
R-063A	7/22/10	<0.5	<0.5	<0.5	2.0	<0.5	**5.6**	0.6	1.2	<0.5
R-063A	1/25/10	<0.5	<0.5	<0.5	1.1	<0.5	4.5	<0.5	0.8	<0.5
R-063A	8/6/09	<0.5	<0.5	<0.5	1.1	<0.5	4.0	<0.5	0.9	<0.5
R-063A	1/26/09	<0.5	<0.5	<0.5	1.1	<0.5	3.6	<0.5	0.6	<0.5
R-063A	2/5/08	<0.5	<0.5	<0.5	1.7	<0.5	**7.0**	0.8	1.2	<0.5
R-063A	1/30/07	0.8	<0.5	<0.5	4.9	<0.5	**18.0**	2.3	2.9	<0.5
R-063A	7/27/06	<0.5	<0.5	<0.5	4.1	<0.5	**25.8**	3.1	3.8	<0.5
R-063A	1/23/02	NS	NS	NS	NS	NS	**29.0**	2.1	NS	NS
R-063A	1/23/02	NS	NS	NS	NS	NS	**29.0**	2.1	NS	NS
R-063A	9/17/99	<0.5	NS	<0.5	7.9	<1.0	**21.0**	1.9	6.1	<1.0
R-063A	9/16/99	<0.5	NS	<0.5	7.8	<1.0	**16.0**	1.4	5.8	<1.0
R-064A	7/28/10	<0.5	<0.5	<0.5	0.9	<0.5	2.5	<0.5	<0.5	<0.5
R-064A	7/22/09	<0.5	<0.5	<0.5	2.5	<0.5	3.7	<0.5	0.6	<0.5
R-064A	2/2/09	<0.5	<0.5	<0.5	1.7	<0.5	3.1	<0.5	<0.5	<0.5
R-064A	7/23/08	<0.5	<0.5	<0.5	1.5	<0.5	3.2	<0.5	<0.5	<0.5
R-064A	1/28/08	<0.5	<0.5	<0.5	1.4	<0.5	3.7	<0.5	<0.5	<0.5
R-064A	7/24/07	<0.5	<0.5	<0.5	1.0	<0.5	3.7	<0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
R-064A	1/18/07	<0.5	<0.5	<0.5	1.3	<0.5	3.7	<0.5	<0.5	<0.5
R-064A	9/15/99	<0.5	NS	<0.5	<3.0	<1.0	4.4	0.6	<1.0	<1.0
R-064A	9/15/99	<0.5	NS	<0.5	<3.0	<1.0	4.4	0.6	<1.0	<1.0
R-064A	9/14/99	<0.5	NS	<0.5	<3.0	<1.0	**5.5**	0.8	<1.0	<1.0
R-065A	1/17/13	<0.5	<0.5	<0.5	2.3	<0.5	3.4	0.5	0.5	<0.5
R-065A	7/17/12	<0.5	<0.5	<0.5	3.5	<0.5	3.8	<0.5	0.7	<0.5
R-065A	1/17/12	<0.5	<0.5	<0.5	2.1	<0.5	2.1	<0.5	<0.5	<0.5
R-065A	7/19/11	<0.5	<0.5	<0.5	3.8	<0.5	4.3	<0.5	0.8	<0.5
R-065A	1/25/11	<0.5	<0.5	<0.5	3	<0.5	3.2	<0.5	0.6	<0.5
R-065A	1/27/10	<0.5	<0.5	<0.5	1.5	<0.5	2.8	<0.5	<0.5	<0.5
R-065A	1/23/07	<0.5	<0.5	<0.5	1.8	<0.5	4.3	0.5	<0.5	<0.5
R-065A	1/25/06	<0.5	<0.5	<0.5	1.1	<0.5	4.1	0.6	<0.5	<0.5
R-065A	1/25/06	<0.5	<0.5	<0.5	1.2	<0.5	4.4	0.6	<0.5	<0.5
R-065A	1/19/05	<0.5	<0.5	<0.5	0.1	<0.5	**6.7**	0.6	<0.5	<0.5
R-065A	1/19/05	<0.5	<0.5	<0.5	0.1	<0.5	**6.7**	0.6	<0.5	<0.5
R-065A	1/12/04	<0.5	<0.5	<0.5	4.0	<0.5	**13.6**	1.7	<0.5	<0.5
R-065A	1/21/03	<0.5	<0.5	<0.5	5.8	<0.5	**22.4**	2.8	0.8	<0.5
R-065A	1/21/02	NS	NS	NS	NS	NS	**24.0**	2.7	NS	NS
R-065A	9/18/99	<0.5	NS	<0.5	<3.0	<1.0	**22.0**	2.7	<1.0	<1.0
R-105A	7/27/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-109A	5/7/03	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-110A	5/7/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-111A	5/7/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-112A	5/8/03	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	1.2	<0.5	<0.5
R-112A	5/8/03	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	1.2	<0.5	<0.5
R-113B	5/8/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/14/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/12/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/11/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/18/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B [5]	7/18/11	<0.5	<0.5	<0.5	<2	<3	<0.5	<0.5	<2	<0.5
WR-047B	1/12/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/13/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/9/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/15/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/15/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/26/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/17/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-047B	1/17/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/11/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/11/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/7/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	*07/07/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/13/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/22/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/28/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/16/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	*07/16/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/15/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/24/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/18/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	8/9/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	1/25/00	<.5	<0.5	<.5	<1	<1	<1	<.5	<1	<1
WR-047B	7/7/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-047B	7/7/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-048A	1/18/13	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-048A	1/11/12	<0.5	<0.5	<0.5	0.8	<0.5	0.7	<0.5	<0.5	<0.5
WR-048A	1/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-048A	7/19/10	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-048A	1/19/10	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
WR-048A	7/15/09	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5
WR-048A	1/22/09	<0.5	<0.5	<0.5	0.5	<0.5	1.7	0.8	<0.5	<0.5
WR-048A	7/15/08	<0.5	<0.5	<0.5	0.8	<0.5	3.0	1.5	<0.5	<0.5
WR-048A	1/22/08	<0.5	<0.5	<0.5	1.0	<0.5	4.2	2.3	<0.5	<0.5
WR-048A	7/17/07	<0.5	<0.5	<0.5	1.0	<0.5	3.3	1.7	<0.5	<0.5
WR-048A	2/1/07	<0.5	<0.5	<0.5	1.2	<0.5	3.9	2.2	<0.5	<0.5
WR-048A	7/26/06	<0.5	<0.5	<0.5	0.5	<0.5	1.1	0.7	<0.5	<0.5
WR-048A	1/10/06	<0.5	<0.5	<0.5	1.0	<0.5	2.6	1.6	<0.5	<0.5
WR-048A	7/13/05	<0.5	<0.5	<0.5	0.8	<0.5	1.6	1.0	<0.5	<0.5
WR-048A	7/13/05	<0.5	<0.5	<0.5	0.8	<0.5	1.6	1.0	<0.5	<0.5
WR-048A	1/12/05	<0.5	<0.5	<0.5	0.7	<0.5	2.1	1.2	<0.5	<0.5
WR-048A	1/12/05	<0.5	<0.5	<0.5	0.7	<0.5	2.1	1.2	<0.5	<0.5
WR-048A	7/7/04	<0.5	<0.5	<0.5	0.5	<0.5	1.1	0.7	<0.5	<0.5
WR-048A	1/14/04	<0.5	<0.5	<0.5	1.0	<0.5	1.8	1.2	<0.5	<0.5
WR-048A	7/15/03	<0.5	<0.5	<0.5	0.9	<0.5	1.6	1.0	<0.5	<0.5
WR-048A	1/30/03	<0.5	<0.5	<0.5	1.6	<0.5	3.6	2.6	<0.5	<0.5
WR-048A	7/17/02	<0.5	<0.5	<0.5	0.6	<0.5	1.3	0.9	<0.5	<0.5
WR-048A	1/15/02	<0.5	<0.5	<0.5	0.7	<0.5	2.1	1.6	<0.5	<0.5
WR-048A	7/24/01	<0.5	<0.5	<0.5	0.8	<0.5	2.2	1.7	<0.5	<0.5
WR-048A	1/18/01	<0.5	0.6	<0.5	2.1	<0.5	3.9	3.2	<0.5	<0.5
WR-048A	8/8/00	<0.5	<0.5	<0.5	0.9	<0.5	1.6	0.8	<0.5	<0.5
WR-048A	1/25/00	<0.5	<0.5	<0.5	<1	<1	<1	0.7	<1	<1
WR-048A	7/7/99	<0.5	<0.5	<0.5	0.6	<0.5	0.7	0.5	<0.5	<0.5
WR-048A	7/29/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
WR-048A	1/12/98	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-048A	9/18/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-048A	3/26/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-048A	9/23/96	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-048A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-048A	3/14/96	<0.5	<0.5	NS	<0.5	<0.5	0.6	0.5	<0.5	<0.5
WR-048A	9/28/95	<0.5	<0.5	<0.5	<0.5	<1	0.7	<0.5	<0.5	<0.5
WR-048A	3/21/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-048A	9/26/94	<2	<2	NS	NS	<10	<2	<2	<2	<2
WR-048A	3/30/94	<0.3	<0.3	<0.3	<1	<0.3	0.6	0.6	<1	<1
WR-048A	9/8/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	0.4	<1	<1
WR-048A	4/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	0.7	0.7	<1	<1
WR-048A	8/31/92	<0.3	<0.3	<0.3	<1.1	<0.3	0.7	0.7	<1	<1
WR-048A	3/25/92	<0.3	<0.3	<0.3	<1.1	<0.3	0.3	0.3	<1	<1
WR-048A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	0.4	0.4	<1	<1
WR-048A	4/3/91	<0.3	<0.3	<0.3	<1	<0.3	0.4	0.3	<1	<1
WR-048A	8/14/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-048A	2/5/90	<0.3	<0.3	<0.4	<2	<0.4	0.5	0.5	<1.4	<1
WR-049A	1/24/13	1.2	<0.5	<0.5	4.1	<0.5	**26.2**	**13.3**	<0.5	<0.5
WR-049A	7/18/12	1.2	<0.5	<0.5	4.1	<0.5	**26.4**	**12**	<0.5	<0.5
WR-049A	1/24/12	1.2	<0.5	<0.5	6.7	<0.5	**26.1**	**12.2**	<0.5	<0.5
WR-049A	7/21/11	1.2	<0.5	<0.5	4.3	<0.5	**28.6**	**13.6**	0.6	<0.5
WR-049A	1/19/11	1.2	<0.5	<0.5	4.6	<0.5	**28.9**	**14.9**	<0.5	<0.5
WR-049A	7/21/10	1.1	<0.5	<0.5	2.8	<0.5	**25.0**	**14.5**	<0.5	<0.5
WR-049A	1/21/10	1.2	<0.5	<0.5	3.6	<0.5	**30.2**	**15.4**	0.6	<0.5
WR-049A	7/16/09	1.4	<0.5	<0.5	4.6	<0.5	**37.9**	**14.3**	0.7	<0.5
WR-049A	1/22/09	1.3	<0.5	<0.5	2.0	<0.5	**31.0**	**10.2**	<0.5	<0.5
WR-049A	7/16/08	1.3	<0.5	<0.5	1.7	<0.5	**30.5**	**9.3**	<0.5	<0.5
WR-049A	1/22/08	1.0	<0.5	<0.5	1.3	<0.5	**27.8**	**8.3**	<0.5	<0.5
WR-049A	7/18/07	1.0	<0.5	<0.5	1.2	<0.5	**24.9**	**7.6**	<0.5	<0.5
WR-049A	2/1/07	1.0	<0.5	<0.5	1.3	<0.5	**23.2**	**8.7**	<0.5	<0.5
WR-049A	8/2/06	0.5	<0.5	<0.5	1.7	<0.5	**9.4**	3.5	<0.5	<0.5
WR-049A	1/24/06	0.5	<0.5	<0.5	2.0	<0.5	**10.5**	3.5	<0.5	<0.5
WR-049A	1/24/06	0.5	<0.5	<0.5	2.0	<0.5	**11.2**	3.8	<0.5	<0.5
WR-049A	7/13/05	<0.5	<0.5	<0.5	1.1	<0.5	4.2	2.0	<0.5	<0.5
WR-049A	1/11/05	<0.5	<0.5	<0.5	1.0	<0.5	**5.3**	2.4	<0.5	<0.5
WR-049A	7/7/04	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	0.7	<0.5	<0.5
WR-049A	1/13/04	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.6	<0.5	<0.5
WR-049A	7/16/03	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	0.6	<0.5	<0.5
WR-049A	1/30/03	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	1.0	<0.5	<0.5
WR-049A	7/17/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	1/15/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	7/24/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	1/18/01	<0.5	<0.5	<0.5	2.0	<0.5	3.9	3.6	<0.5	<0.5
WR-049A	8/8/00	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	1.0	<0.5	<0.5
WR-049A	1/25/00	<.5	<0.5	<.5	<1	<1	<1	<.5	<1	<1
WR-049A	7/7/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	7/29/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	1/12/98	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1
WR-049A	9/18/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-049A	3/26/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	9/23/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	3/15/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	9/28/95	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
WR-049A	3/21/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-049A	9/26/94	<2	<2	NS	NS	<10	<2	<2	NS	<2
WR-049A	3/30/94	<0.3	<0.3	<0.3	<1	<0.3	<0.3	0.4	<1	<1
WR-049A	9/8/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-049A	4/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.3	<0.3	<1	<1
WR-049A	8/31/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-049A	3/25/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-049A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	<0.4	<0.3	<1	<1
WR-049A	4/2/91	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-049A	10/22/90	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<2
WR-135A	1/23/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-135A	7/19/12	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-135A	1/19/12	<0.5	<0.5	<0.5	0.7	<0.5	0.7	<0.5	<0.5	<0.5
WR-135A	7/25/11	<0.5	<0.5	<0.5	0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-135A	1/20/11	<0.5	<0.5	<0.5	0.6	<0.5	0.9	<0.5	<0.5	<0.5
WR-135A	7/22/10	<0.5	<0.5	<0.5	0.6	<0.5	1.3	0.5	<0.5	<0.5
WR-135A	1/25/10	<0.5	<0.5	<0.5	0.5	<0.5	1.9	0.8	<0.5	<0.5
WR-135A	7/20/09	<0.5	<0.5	<0.5	0.6	<0.5	2.4	1.2	<0.5	<0.5
WR-135A	1/29/09	<0.5	<0.5	<0.5	1	<0.5	2.8	1.3	<0.5	<0.5
WR-135A	7/17/08	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	<0.5
WR-135A	1/23/08	<0.5	<0.5	<0.5	0.6	<0.5	2.3	1.0	<0.5	<0.5
WR-135A	7/19/07	<0.5	<0.5	<0.5	0.9	<0.5	2.3	1.0	<0.5	<0.5
WR-135A	1/17/07	<0.5	<0.5	<0.5	1.1	<0.5	3.2	1.3	0.5	<0.5
WR-135A	7/21/06	<0.5	<0.5	<0.5	0.8	<0.5	1.9	0.8	<0.5	<0.5
WR-135A	1/18/06	<0.5	<0.5	<0.5	0.8	<0.5	2.7	1.0	<0.5	<0.5
WR-135A	7/28/05	<0.5	<0.5	<0.5	0.8	<0.5	2.6	1.0	<0.5	<0.5
WR-135A	1/27/05	<0.5	<0.5	<0.5	0.7	<0.5	2.0	0.8	<0.5	<0.5
WR-135A	7/26/04	<0.5	<0.5	<0.5	0.8	<0.5	1.9	0.8	<0.5	<0.5
WR-135A	1/7/04	<0.5	<0.5	<0.5	0.8	<0.5	2.0	0.9	<0.5	<0.5
WR-135A	7/21/03	<0.5	<0.5	<0.5	0.8	<0.5	2.8	1.3	<0.5	<0.5
WR-135A	1/15/02	NS	NS	NS	NS	NS	2.9	1.3	NS	NS
WR-135A	9/10/99	0.6	NS	0.6	<3.0	1.0	**11.0**	**5.4**	<1.0	<1.0
WR-135A	3/24/97	1.2	<0.5	1.3	5.5	4.7	**30.8**	**14.0**	1.1	0.7
WR-135A	9/23/96	1.5	<0.5	1.4	9.0	**5.5**	**34.0**	**12.2**	1.1	1.1
WR-135A	6/27/96	1.2	<0.5	1.0	5.2	**5.2**	**36.0**	**9.1**	0.8	0.7
WR-135A	3/14/96	0.8	<0.5	NS	8.2	3.3	**24.3**	**8.9**	<0.5	0.6
WR-135A	12/20/95	0.7	<0.3	0.5	3.8	2.8	**25.0**	**6.6**	0.6	0.6
WR-135A	9/28/95	1.0	<0.5	0.6	3.8	2.6	**26.0**	**9.9**	0.6	0.7
WR-135A	7/11/95	0.9	<0.5	0.6	7.9	**5.2**	**22.9**	**12.4**	0.5	0.7
WR-135A	3/16/95	0.7	<0.5	<0.5	7.7	3.4	**18.5**	**8.9**	<0.5	<0.5
WR-135A	1/18/95	0.8	<0.5	<0.5	3.0	2.8	**23.0**	**9.7**	0.9	<0.5
WR-135A	9/26/94	<2	<2	NS	NS	<10	**48.0**	**12.0**	<2	<2
WR-135A	8/1/94	<1	<1	<1	<10	2.2	**17.0**	**7.1**	<1	<1
WR-135A	3/4/94	0.9	0.4	0.4	<1	2.3	**24.0**	**7.1**	1.0	0.6

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-135A	1/27/94	<0.2	<0.2	<0.2	NS	<2	**20.0**	**6.5**	NS	1.1
WR-135A	9/7/93	0.7	<0.3	<0.3	4.5	2.4	**23.9**	**7.7**	<1	<1
WR-135A	4/6/93	0.8	<0.3	<0.3	2.8	2.4	**24.5**	**8.2**	<1	<1
WR-135A	9/1/92	0.9	0.4	<0.3	9.3	3.3	**30.4**	**10.8**	1.7	<1
WR-135A	3/25/92	<0.3	<0.3	<0.3	4.7	0.9	**19.4**	**5.0**	<1	<1
WR-135A	9/17/91	0.3	<0.3	<0.3	10.1	1.1	**18.1**	**4.8**	<1	<1
WR-135A	4/2/91	0.3	<0.3	<0.3	11.0	0.3	**15.6**	3.7	<1	<1
WR-135A	8/14/90	<0.4	<0.4	<0.4	48.3	0.6	**18.8**	4.4	2.1	<1
WR-136A *	1/15/02	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-136A	1/15/02	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-136A	7/24/01	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-136A	1/18/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-136A	8/8/00	<0.5	<0.5	<0.5	0.6	<0.5	0.9	<0.5	<0.5	<0.5
WR-136A	1/25/00	<.5	<0.5	<.5	<1	<1	<1	<.5	<1	<1
WR-136A	7/7/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-136A	7/29/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-136A	1/12/98	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1
WR-136A	9/18/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-136A	3/24/97	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-136A	9/23/96	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-136A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-136A	3/14/96	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	
WR-136A	12/20/95	<0.4	<0.3	<0.2	0.5	<2	1.7	<0.4	0.5	<0.4
WR-136A	9/27/95	<0.5	<0.5	<0.5	0.6	<1	2.0	<0.5	<0.5	<0.5
WR-136A	3/21/95	<0.5	<0.5	<0.5	2.3	<0.5	2.8	<0.5	1.0	<0.5
WR-136A	9/26/94	<2	<2	NS	NS	<10	<2	<2	<2	<2
WR-136A	3/30/94	<0.3	<0.3	<0.3	<1	<0.3	1.8	<0.3	0.7	<1
WR-136A	9/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	3.2	<0.3	<1	<1
WR-136A	4/6/93	<0.3	<0.3	<0.3	<1.1	<0.3	3.5	<0.3	<1	<1
WR-136A	8/31/92	<0.3	<0.3	<0.3	1.6	<0.3	2.9	<0.3	<1	<1
WR-136A	3/25/92	<0.3	<0.3	<0.3	1.3	<0.3	3.6	<0.3	<1	<1
WR-136A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	3.3	<0.3	<1	<1
WR-136A	4/2/91	<0.3	<0.3	<0.3	2.2	<0.3	3.2	0.2	<1	<1
WR-136A	8/14/90	<0.4	<0.4	<0.4	<2	<0.4	2.9	<0.4	<0.4	<1
WR-136A	2/5/90	<0.3	<0.3	<0.4	<2	<0.4	3.2	<0.3	<1.4	<1
WR-136B	1/16/13	<0.5	<0.5	<0.5	1	<0.5	1.8	<0.5	<0.5	<0.5
WR-136B	1/23/12	<0.5	<0.5	<0.5	2.7	<0.5	2.4	<0.5	<0.5	<0.5
WR-136B	1/26/11	<0.5	<0.5	<0.5	3.4	<0.5	4.8	0.5	1.1	<0.5
WR-136B	7/27/10	<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5	<0.5	<0.5
WR-136B	1/26/10	<0.5	<0.5	<0.5	0.6	<0.5	2.5	<0.5	<0.5	<0.5
WR-136B	7/22/09	<0.5	<0.5	<0.5	1.6	<0.5	2.7	<0.5	<0.5	<0.5
WR-136B	2/3/09	<0.5	<0.5	<0.5	1.7	<0.5	2.7	<0.5	<0.5	<0.5
WR-136B	7/24/08	<0.5	<0.5	<0.5	2.0	<0.5	3.8	<0.5	<0.5	<0.5
WR-136B	1/29/08	<0.5	<0.5	<0.5	1.6	<0.5	4	<0.5	0.8	<0.5
WR-136B	7/25/07	<0.5	<0.5	<0.5	2.3	<0.5	**5.4**	<0.5	0.5	<0.5
WR-136B	1/24/07	<0.5	<0.5	<0.5	2.2	<0.5	**5.8**	0.6	<0.5	<0.5
WR-136B	8/1/06	<0.5	<0.5	<0.5	2.2	<0.5	**7.4**	0.7	<0.5	<0.5
WR-136B	1/25/06	<0.5	<0.5	<0.5	0.6	<0.5	**7.5**	0.7	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-136B	7/27/05	<0.5	<0.5	<0.5	1.1	<0.5	**9.5**	0.9	<0.5	<0.5
WR-136B	1/26/05	<0.5	<0.5	<0.5	0.8	<0.5	**9.0**	0.8	<0.5	<0.5
WR-136B	7/27/04	<0.5	<0.5	<0.5	2.4	<0.5	**13.4**	1.4	0.6	<0.5
WR-136B	1/8/04	<0.5	<0.5	<0.5	3.6	<0.5	**15.5**	1.7	0.6	<0.5
WR-136B	7/23/03	<0.5	<0.5	<0.5	3.7	<0.5	**16.1**	1.8	0.7	<0.5
WR-136B	1/28/03	<0.5	<0.5	<0.5	2.7	<0.5	**17.9**	2.1	0.6	<0.5
WR-136B	1/24/02	NS	NS	NS	NS	NS	**17.0**	1.8	NS	NS
WR-172A	1/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/11/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/9/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/11/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/19/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/13/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/16/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/26/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/26/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/17/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/11/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/10/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/6/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/12/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/14/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/27/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/15/02	<0.5	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/14/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/23/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/17/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	8/7/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/24/00	<.5	<0.5	<.5	<1	<1	<1	<.5	<1	<1
WR-172A	7/6/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	7/28/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/13/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	9/16/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	3/26/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	9/25/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	3/14/96	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	12/20/95	<0.4	<0.3	<0.2	<0.3	<2	<0.4	<0.4	<0.3	<0.4
WR-172A	9/18/95	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
WR-172A	3/22/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-172A	1/18/95	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5
WR-172A	8/1/94	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-172A	3/29/94	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-172A	9/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-172A	4/5/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.3	<0.3	<1	<1
WR-172A	8/31/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-172A	3/26/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-172A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	<0.4	<0.3	<1	<1
WR-172A	4/3/91	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-172A	10/22/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-172A	7/5/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-173A	1/23/13	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5
WR-173A	7/19/12	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5
WR-173A	1/19/12	<0.5	<0.5	<0.5	0.8	<0.5	1.6	<0.5	<0.5	<0.5
WR-173A	7/25/11	<0.5	<0.5	<0.5	0.8	<0.5	2.3	<0.5	0.5	<0.5
WR-173A	1/20/11	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5
WR-173A	7/22/10	<0.5	<0.5	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5
WR-173A	1/25/10	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	<0.5
WR-173A	1/25/10	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5	<0.5
WR-173A	7/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5
WR-173A	1/26/09	<0.5	<0.5	<0.5	0.5	<0.5	2.3	<0.5	<0.5	<0.5
WR-173A	7/17/08	<0.5	<0.5	<0.5	0.6	<0.5	2.3	<0.5	<0.5	<0.5
WR-173A	1/23/08	<0.5	<0.5	<0.5	0.7	<0.5	3.0	<0.5	0.6	<0.5
WR-173A	7/19/07	<0.5	<0.5	<0.5	1.0	<0.5	3.6	0.6	0.7	<0.5
WR-173A	1/17/07	<0.5	<0.5	<0.5	0.8	<0.5	3.3	<0.5	0.6	<0.5
WR-173A	7/21/06	<0.5	<0.5	<0.5	1.0	<0.5	3.3	<0.5	0.7	<0.5
WR-173A	1/18/06	<0.5	<0.5	<0.5	0.9	<0.5	3.6	<0.5	0.8	<0.5
WR-173A	7/28/05	<0.5	<0.5	<0.5	1.0	<0.5	4.2	0.6	0.9	<0.5
WR-173A	1/27/05	<0.5	<0.5	<0.5	1.6	<0.5	**8.3**	1.0	1.6	<0.5
WR-173A	7/26/04	<0.5	<0.5	<0.5	1.8	<0.5	**6.2**	0.9	1.4	<0.5
WR-173A	1/7/04	<0.5	<0.5	<0.5	1.6	<0.5	4.6	0.7	0.8	<0.5
WR-173A	7/21/03	<0.5	<0.5	<0.5	1.3	<0.5	4.6	0.6	0.8	<0.5
WR-173A	7/21/03	<0.5	<0.5	<0.5	1.3	<0.5	4.6	0.9	0.9	<0.5
WR-173A	1/15/02	NS	NS	NS	NS	NS	3.3	<0.5	NS	NS
WR-173A	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	**9.7**	1.4	<1.0	<1.0
WR-173A	3/24/97	<0.5	<0.5	<0.5	3.5	<0.5	**15.9**	2.9	3.3	<0.5
WR-173A	9/23/96	0.6	<0.5	<0.5	5.9	<0.5	**19.4**	2.7	3.3	<0.5
WR-173A	6/27/96	0.5	<0.5	<0.5	2.9	<0.5	**21.0**	1.8	2.4	<0.5
WR-173A	3/14/96	0.5	<0.5	NS	5.9	<0.5	**19.6**	2.6	2.4	<0.5
WR-173A	12/20/95	0.4	<0.3	<0.2	3.3	<2	**17.0**	1.7	2.8	<0.4
WR-173A	9/27/95	0.5	<0.5	<0.5	2.6	<1	**20.0**	2.8	2.3	<0.5
WR-173A	3/22/95	0.5	<0.5	<0.5	6.9	<0.5	**21.5**	3.6	2.9	<0.5
WR-173A	1/18/95	0.5	<0.5	<0.5	2.3	<2	**19.0**	2.9	1.8	<0.5
WR-173A	9/26/94	<2	<2	NS	NS	<10	**21.0**	2.2	<2	<2
WR-173A	8/1/94	<0.5	<0.5	<0.5	<5	<0.5	**15.0**	2.3	1.4	<0.5
WR-173A	3/29/94	0.7	0.4	<0.3	<1	<0.3	**23.9**	2.7	3.6	<1
WR-173A	1/27/94	<0.2	0.2	<0.2	NS	<2	**17.0**	1.8	NS	<0.2
WR-173A	9/7/93	0.4	<0.3	<0.3	3.4	<0.3	**21.5**	3.0	4.5	<1
WR-173A	4/5/93	0.6	<0.3	<0.3	3.1	<0.3	**23.6**	2.7	<1	<1
WR-173A	8/31/92	0.5	<0.3	<0.3	5.1	<0.3	**22.0**	3.0	2.8	<1
WR-173A	3/26/92	0.4	<0.3	<0.3	3.2	<0.3	**22.8**	2.8	3.7	<1

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-173A	9/17/91	0.5	<0.3	<0.3	6.8	<0.3	**25.1**	3.5	3.0	<1
WR-173A	4/3/91	0.4	<0.3	<0.3	8.4	<0.3	**22.3**	2.9	4.0	<1
WR-173A	10/22/90	0.4	<0.4	<0.4	11.8	<0.4	**22.6**	2.9	3.6	<1
WR-173A	7/12/90	<0.4	<0.4	<0.4	<2	<0.4	**5.7**	0.6	0.9	<1
WR-173B	1/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/9/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/11/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/11/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/12/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/8/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/14/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/14/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/8/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/9/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/11/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/10/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/12/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/14/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/27/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/15/02	<0.5	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/14/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/23/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/17/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	8/7/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	1/26/00	<.5	<0.5	<.5	<1	<1	<1	<.5	<1	<1
WR-173B	7/6/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-173B	7/28/98	<0.5	<0.5	<0.5	NS	<0.5	0.9	<0.5	<0.5	<0.5
WR-173B	1/13/98	<0.5	<0.5	<0.5	<1	<1	2.0	<0.5	<1	<1
WR-174A	1/23/13	<0.5	<0.5	<0.5	1.4	<0.5	4.2	2.2	<0.5	<0.5
WR-174A	1/23/13	<0.5	<0.5	<0.5	1.5	<0.5	4.2	2.3	<0.5	<0.5
WR-174A	7/19/12	<0.5	<0.5	<0.5	1.9	<0.5	4.3	2.1	<0.5	<0.5
WR-174A	1/19/12	<0.5	<0.5	<0.5	2.8	<0.5	4.9	2.3	<0.5	<0.5
WR-174A	8/16/11	<0.5	<0.5	<0.5	2.5	<0.5	**5.3**	2.4	<0.5	<0.5
WR-174A	1/20/11	<0.5	<0.5	<0.5	2.5	<0.5	**6**	2.9	<0.5	<0.5
WR-174A	1/20/11	<0.5	<0.5	<0.5	2.5	<0.5	**6**	2.8	<0.5	<0.5
WR-174A	7/22/10	<0.5	<0.5	<0.5	1.9	<0.5	**5.6**	2.3	0.5	<0.5
WR-174A	1/25/10	<0.5	<0.5	<0.5	2.4	<0.5	**6.8**	3.0	0.6	<0.5
WR-174A	7/20/09	<0.5	<0.5	<0.5	2.7	<0.5	**6.7**	3.2	0.6	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-174A	1/26/09	<0.5	<0.5	<0.5	3.5	<0.5	**6.5**	2.9	0.6	<0.5
WR-174A	7/17/08	<0.5	<0.5	<0.5	2.9	<0.5	**6.9**	3.0	0.7	<0.5
WR-174A	7/17/08	<0.5	<0.5	<0.5	2.8	<0.5	**6.6**	2.9	0.6	<0.5
WR-174A	1/23/08	<0.5	<0.5	<0.5	3.2	<0.5	**7.4**	3.0	0.8	<0.5
WR-174A	7/19/07	<0.5	<0.5	<0.5	3.3	<0.5	**6.8**	3.1	0.7	<0.5
WR-174A	7/19/07	<0.5	<0.5	<0.5	3.3	<0.5	**6.9**	3.0	0.7	<0.5
WR-174A	1/17/07	<0.5	<0.5	<0.5	3.1	<0.5	**7.4**	3.2	0.6	<0.5
WR-174A	7/21/06	<0.5	<0.5	<0.5	4.3	<0.5	**8.4**	3.6	0.8	<0.5
WR-174A	7/21/06	<0.5	<0.5	<0.5	4.4	<0.5	**8.7**	3.7	1.0	<0.5
WR-174A	1/18/06	<0.5	<0.5	<0.5	3.4	<0.5	**9.2**	3.2	1.0	<0.5
WR-174A	1/18/06	<0.5	<0.5	<0.5	3.6	<0.5	**8.9**	3.2	0.9	<0.5
WR-174A	7/28/05	<0.5	<0.5	<0.5	3.4	<0.5	**8.4**	3.1	0.8	<0.5
WR-174A	1/27/05	<0.5	<0.5	<0.5	3.0	<0.5	**7.4**	2.8	0.8	<0.5
WR-174A	7/26/04	<0.5	<0.5	<0.5	4.4	<0.5	**8.4**	3.4	1.0	<0.5
WR-174A	1/7/04	<0.5	<0.5	<0.5	5.0	<0.5	**8.2**	3.2	0.8	<0.5
WR-174A	7/21/03	<0.5	<0.5	<0.5	4.3	<0.5	**7.7**	3.2	1.0	<0.5
WR-174A	1/15/02	NS	NS	NS	NS	NS	**7.2**	2.7	NS	NS
WR-174A	9/10/99	<0.5	NS	<0.5	<3.0	<1.0	**7.5**	2.7	<1.0	<1.0
WR-174A	3/26/97	<0.5	<0.5	<0.5	6.4	<0.5	**5.6**	2.0	1.0	<0.5
WR-174A	9/25/96	<0.5	<0.5	<0.5	8.3	<0.5	**6.1**	1.6	1.1	<0.5
WR-174A	6/27/96	<0.5	<0.5	<0.5	5.0	<0.5	**5.9**	0.9	0.9	<0.5
WR-174A	3/13/96	<0.5	<0.5	NS	8.5	<0.5	<0.5	<0.5	0.9	<0.5
WR-174A	12/20/95	<0.4	<0.3	<0.2	5.0	<2	4.6	0.7	0.9	<0.4
WR-174A	9/28/95	<0.5	<0.5	<0.5	3.7	<1	4.7	1.1	0.7	<0.5
WR-174A	3/22/95	<0.5	<0.5	<0.5	10.3	<0.5	**5.2**	1.3	1.0	<0.5
WR-174A	1/18/95	<0.5	<0.5	<0.5	4.4	<2	4.3	1.1	1.1	<0.5
WR-174A	9/26/94	<2	<2	NS	NS	<10	3.3	<2	<2	<2
WR-174A	8/1/94	<0.5	<0.5	<0.5	<5	<0.5	3.2	<0.5	<0.5	<0.5
WR-174A	3/30/94	<0.3	<0.3	<0.3	<1	<0.3	4.5	1.0	0.8	<1
WR-174A	1/27/94	<0.2	<0.2	<0.2	NS	<2	3.0	0.3	NS	<0.2
WR-174A	9/7/93	<0.3	<0.3	<0.3	2.4	<0.3	**5.1**	0.9	<1	<1
WR-174A	4/3/93	<0.3	<0.3	<0.3	2.4	<0.3	4.7	0.9	<1	<1
WR-174A	8/31/92	<0.3	<0.3	<0.3	3.7	<0.3	4.6	0.9	<1	<1
WR-174A	3/26/92	<0.3	<0.3	<0.3	2.3	<0.3	4.5	0.7	<1	<1
WR-174A	9/17/91	<0.3	<0.3	<0.3	5.8	<0.3	**5.4**	0.8	<1	<1
WR-174A	4/3/91	<0.3	<0.3	<0.3	7.7	<0.3	3.5	0.6	<1	<1
WR-174A	10/22/90	<0.4	<0.4	<0.4	18.0	<0.4	4.3	0.7	0.4	<1
WR-174A	716/90	<0.4	<0.4	<0.4	2.6	<0.4	1.6	<0.4	<0.4	<1
WR-175A	1/17/13	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	8/6/12	<0.5	1	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-175A	1/18/12	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	7/20/11	<0.5	1.3	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-175A	1/13/11	<0.5	1.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-175A	1/13/11	<0.5	1.4	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-175A	7/20/10	<0.5	1.2	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-175A	1/19/10	<0.5	1.6	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-175A	7/14/09	<0.5	1.5	<0.5	<0.5	<0.5	1.0	0.5	<0.5	<0.5
WR-175A	1/21/09	<0.5	1.8	<0.5	<0.5	<0.5	0.9	0.6	<0.5	<0.5
WR-175A	1/21/09	<0.5	1.8	<0.5	<0.5	<0.5	0.8	0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-175A	7/15/08	<0.5	2.3	<0.5	<0.5	<0.5	1.0	0.6	<0.5	<0.5
WR-175A	7/15/08	<0.5	2.2	<0.5	<0.5	<0.5	1.0	0.6	<0.5	<0.5
WR-175A	1/16/08	<0.5	2.4	<0.5	<0.5	<0.5	1.0	0.6	<0.5	<0.5
WR-175A	1/16/08	<0.5	2.4	<0.5	<0.5	<0.5	1.0	0.6	<0.5	<0.5
WR-175A	7/16/07	<0.5	2.3	<0.5	<0.5	<0.5	1.2	0.7	<0.5	<0.5
WR-175A	2/1/07	<0.5	3.4	<0.5	0.6	<0.5	1.2	0.8	<0.5	<0.5
WR-175A	7/25/06	<0.5	2.6	<0.5	0.6	<0.5	1.3	0.9	<0.5	<0.5
WR-175A	1/19/06	<0.5	2.4	<0.5	<0.5	<0.5	1.2	0.8	<0.5	<0.5
WR-175A	7/12/05	<0.5	2.5	<0.5	0.6	<0.5	1.3	0.9	<0.5	<0.5
WR-175A	1/10/05	<0.5	2.0	<0.5	<0.5	<0.5	1.2	0.8	<0.5	<0.5
WR-175A	7/6/04	<0.5	1.9	<0.5	<0.5	<0.5	1.3	0.9	<0.5	<0.5
WR-175A	1/12/04	<0.5	1.8	<0.5	0.6	<0.5	1.3	0.9	<0.5	<0.5
WR-175A	7/14/03	<0.5	1.5	<0.5	0.5	<0.5	1.3	0.8	<0.5	<0.5
WR-175A	1/27/03	<0.5	1.5	<0.5	0.7	<0.5	1.1	0.8	<0.5	<0.5
WR-175A	7/15/02	<0.5	1.0	<0.5	NS	<0.5	1.0	0.8	<0.5	<0.5
WR-175A	1/14/02	<0.5	0.7	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-175A	7/23/01	<0.5	0.6	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-175A	1/17/01	<0.5	0.7	<0.5	0.6	<0.5	0.5	<0.5	<0.5	<0.5
WR-175A	8/7/00	<0.5	0.6	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-175A	1/24/00	<.5	<0.5	<.5	<1	<1	<1	<.5	<1	<1
WR-175A	7/6/99	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	7/28/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	1/13/98	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1
WR-175A	9/16/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	3/26/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	9/25/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	3/13/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	12/21/95	<0.4	<0.3	<0.2	<0.3	<2	0.6	<0.4	<0.3	<0.4
WR-175A	9/27/95	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
WR-175A	3/22/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	1/18/95	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5
WR-175A	8/1/94	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-175A	3/30/94	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-175A	1/27/94	<0.2	<0.2	<0.2	NS	<2	<0.2	<0.2	NS	<0.2
WR-175A	9/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-175A	4/6/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.3	<0.3	<1	<1
WR-175A	9/1/92	<0.3	<0.3	<0.3	<1.1	0.6	<0.4	<0.3	<1	<1
WR-175A	3/26/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-175A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	<0.4	<0.3	<1	<1
WR-175A	4/3/91	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-175A	10/22/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-175A	7/18/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-176A	1/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/10/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/10/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/9/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A [5]	7/13/11	<0.5	<0.5	<0.5	<2	<3	<0.5	<0.5	<2	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-176A	1/11/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/12/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/8/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/14/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/8/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/26/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/18/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/11/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/10/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/6/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/12/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/14/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/27/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	8/5/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/14/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/23/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/17/01	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	8/8/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/24/00	<0.5	<0.5	<.5	<1	<1	<1	<0.5	<1	<1
WR-176A	7/6/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	7/28/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/13/98	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1
WR-176A	9/16/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	3/26/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	9/25/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	3/13/96	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	12/20/95	<0.4	<0.3	<0.2	<0.3	<2	<0.4	<0.4	<0.3	<0.4
WR-176A	9/27/95	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
WR-176A	3/22/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	1/18/95	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5
WR-176A	8/1/94	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-176A	3/29/94	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-176A	1/27/94	<0.2	<0.2	<0.2	NS	<2	<0.2	<0.2	NS	<0.2
WR-176A	9/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-176A	4/6/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.3	<0.3	<1	<1
WR-176A	9/1/92	<0.3	<0.3	<0.3	<1.1	0.6	<0.4	<0.3	<1	<1
WR-176A	3/26/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-176A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	<0.4	<0.3	<1	<1
WR-176A	4/3/91	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-176A	10/22/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-176A	7/23/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-184A	1/17/13	<0.5	<0.5	<0.5	1.1	<0.5	**5.2**	0.8	<0.5	<0.5
WR-184A	8/6/12	<0.5	<0.5	<0.5	0.6	<0.5	4.3	0.6	<0.5	<0.5
WR-184A	1/18/12	<0.5	<0.5	<0.5	1.5	<0.5	**5**	0.7	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-184A	7/21/11	<0.5	<0.5	<0.5	1.6	<0.5	**10.8**	1.4	<0.5	<0.5
WR-184A	1/19/11	<0.5	<0.5	<0.5	1.8	<0.5	**10.2**	1.5	<0.5	<0.5
WR-184A	7/21/10	<0.5	<0.5	<0.5	0.8	<0.5	**8.6**	1.4	<0.5	<0.5
WR-184A	1/20/10	<0.5	<0.5	<0.5	1.3	<0.5	**8.4**	1.2	<0.5	<0.5
WR-184A	7/15/09	<0.5	<0.5	<0.5	1.8	<0.5	**8.5**	1.3	<0.5	<0.5
WR-184A	1/22/09	<0.5	<0.5	<0.5	2.0	<0.5	**7.6**	1.1	<0.5	<0.5
WR-184A	7/16/08	<0.5	<0.5	<0.5	2.1	<0.5	**7.0**	1.0	<0.5	<0.5
WR-184A	1/17/08	<0.5	<0.5	<0.5	2.3	<0.5	**9.3**	1.3	<0.5	<0.5
WR-184A	7/18/07	<0.5	<0.5	<0.5	2.1	<0.5	**7.4**	1	<0.5	<0.5
WR-184A	1/16/07	<0.5	<0.5	<0.5	2.3	<0.5	**9.4**	1.2	<0.5	<0.5
WR-184A	7/17/06	<0.5	<0.5	<0.5	3.2	<0.5	**11.6**	1.6	<0.5	<0.5
WR-184A	1/12/06	<0.5	<0.5	<0.5	3.6	<0.5	**17.3**	2.2	0.5	<0.5
WR-184A	1/12/06	<0.5	<0.5	<0.5	3.6	<0.5	**18.1**	2.5	0.6	<0.5
WR-184A	11/15/05	<1.0	<0.5	<0.5	4.7	<3.0	**15.0**	2.2	<2.0	<0.5
WR-184A	7/13/05	<0.5	<0.5	<0.5	4.0	<0.5	**16.0**	2.6	0.5	<0.5
WR-184A	1/13/05	<0.5	<0.5	<0.5	1.9	<0.5	**11.3**	1.6	<0.5	<0.5
WR-184A	7/19/04	<0.5	<0.5	<0.5	1.6	<0.5	**8.5**	1.4	<0.5	<0.5
WR-184A	1/15/04	<0.5	<0.5	<0.5	2.4	<0.5	**8.3**	1.6	<0.5	<0.5
WR-184A	7/17/03	<0.5	<0.5	<0.5	2.6	<0.5	**8.3**	1.5	<0.5	<0.5
WR-184A	1/28/03	<0.5	<0.5	<0.5	1.4	<0.5	**7.2**	1.2	<0.5	<0.5
WR-184A	7/16/02	<0.5	<0.5	<0.5	1.2	<0.5	4.7	1.0	<0.5	<0.5
WR-184A	1/14/02	<0.5	<0.5	<0.5	0.9	<0.5	4.6	0.9	<0.5	<0.5
WR-184A	7/23/01	<0.5	<0.5	<0.5	0.9	<0.5	4.7	1.0	<0.5	<0.5
WR-184A	1/17/01	<0.5	<0.5	<0.5	1.2	<0.5	3.4	0.8	<0.5	<0.5
WR-184A	8/9/00	<0.5	<0.5	<0.5	1.0	<0.5	3.1	0.6	<0.5	<0.5
WR-184A	1/24/00	<.5	<0.5	<.5	<1	<1	1.5	<.5	<1	<1
WR-184A	7/6/99	<0.5	<0.5	<0.5	0.7	<0.5	1.3	<0.5	<0.5	<0.5
WR-184A	7/28/98	<0.5	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	<0.5
WR-184A	1/12/98	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1
WR-184A	9/16/97	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-184A	3/26/97	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-184A	9/25/96	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-184A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-184A	3/13/96	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-184A	12/20/95	<0.4	<0.3	<0.2	<0.3	<2	<0.4	<0.4	<0.3	<0.4
WR-184A	9/27/95	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
WR-184A	3/21/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-184A	9/26/94	<2	<2	NS	NS	<10	<2	<2	<2	<2
WR-184A	3/29/94	<0.3	<0.3	<0.3	<1	<0.3	0.4	<0.3	<1	<1
WR-184A	9/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-184A	4/6/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.3	<0.3	<1	<1
WR-184A	8/31/92	<0.3	<0.3	<0.3	<1.1	<0.3	0.4	<0.3	<1	<1
WR-184A	3/26/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-184A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	0.3	<0.3	<1	<1
WR-184A	4/3/91	<0.3	<0.3	<0.3	<1	<0.3	0.4	<0.3	<1	<1
WR-184A	1/28/91	<0.4	<0.4	<0.4	<2	<0.4	0.4	<0.4	<0.4	<1
WR-184A	12/19/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-185A	1/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/11/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-185A	1/9/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A [5]	1/9/12	<0.5	<0.5	<0.5	<2	<5	<0.5	<0.5	<2	<0.5
WR-185A	7/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/11/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/12/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/12/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/9/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/15/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/26/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/18/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/7/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/13/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/15/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/28/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/16/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/14/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/23/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/17/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	8/8/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/24/00	<.5	<0.5	<.5	<1	<1	<1	<0.5	<1	<1
WR-185A	7/6/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	7/28/98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	1/13/98	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1
WR-185A	9/16/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	3/26/97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	9/25/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	6/27/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	3/13/96	<0.5	<0.5	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	9/27/95	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
WR-185A	3/23/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-185A	9/27/94	<2	<2	NS	NS	<10	<2	<2	<2	<2
WR-185A	3/30/94	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-185A	9/7/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-185A	4/6/93	<0.3	<0.3	<0.3	<1.1	<0.3	<0.3	<0.3	<1	<1
WR-185A	9/1/92	<0.3	<0.3	<0.3	<1.1	0.6	<0.4	<0.3	<1	<1
WR-185A	3/26/92	<0.3	<0.3	<0.3	<1.1	<0.3	<0.4	<0.3	<1	<1
WR-185A	9/17/91	<0.3	<0.3	<0.3	<1	<0.3	<0.4	<0.3	<1	<1
WR-185A	4/3/91	<0.3	<0.3	<0.3	<1	<0.3	<0.3	<0.3	<1	<1
WR-185A	1/28/91	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1
WR-185A	12/21/90	<0.4	<0.4	<0.4	<2	<0.4	<0.4	<0.4	<0.4	<1

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-253B *	7/25/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-253B	1/25/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-253B	7/28/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-253B	1/20/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-253B	7/29/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-253B	1/31/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-253B	1/25/02	NS	NS	NS	NS	NS	<0.5	<0.5	NS	NS
WR-272B	1/17/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	7/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	7/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	1/18/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	1/18/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	7/25/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	1/25/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	7/28/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	1/15/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	7/24/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	1/30/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-272B	1/23/02	NS	NS	NS	NS	NS	<0.5	<0.5	NS	NS
WR-325A	1/16/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/17/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/18/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/19/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/24/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/17/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/24/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/19/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/19/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/25/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/25/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/25/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/28/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/15/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	7/29/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/30/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-325A	1/23/02	NS	NS	NS	NS	NS	<0.5	<0.5	NS	NS
WR-355A	1/24/13	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	1.4	<0.5	<0.5
WR-355A	7/23/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-355A	7/23/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-355A	1/18/12	<0.5	<0.5	<0.5	1.5	<0.5	3.5	2.1	<0.5	<0.5
WR-355A	7/21/11	<0.5	<0.5	<0.5	2.1	<0.5	**6.7**	3.7	<0.5	<0.5
WR-355A [5]	7/21/11	<0.5	<0.5	<0.5	2.3	<3	**6.44**	3.59	<2	<0.5
WR-355A	1/19/11	<0.5	<0.5	<0.5	1.4	<0.5	**5.9**	3.5	<0.5	<0.5
WR-355A	1/19/11	<0.5	<0.5	<0.5	1.8	<0.5	**6.3**	3.6	<0.5	<0.5
WR-355A	7/20/10	<0.5	<0.5	<0.5	2.3	<0.5	**8.2**	4.7	0.6	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-355A	1/20/10	<0.5	<0.5	<0.5	0.8	<0.5	**7.6**	4.3	<0.5	<0.5
WR-355A	7/16/09	<0.5	<0.5	<0.5	1.7	<0.5	**9.8**	4.4	<0.5	<0.5
WR-355A	1/22/09	<0.5	<0.5	<0.5	1.7	<0.5	**10.7**	4.3	<0.5	<0.5
WR-355A	7/16/08	<0.5	<0.5	<0.5	1.7	<0.5	**13.0**	4.2	<0.5	<0.5
WR-355A	1/22/08	<0.5	<0.5	<0.5	1.0	<0.5	**7.9**	2.4	<0.5	<0.5
WR-355A	7/18/07	<0.5	<0.5	<0.5	1.2	<0.5	**7.7**	2.5	<0.5	<0.5
WR-355A	1/16/07	<0.5	<0.5	<0.5	0.7	<0.5	**6.0**	2.1	<0.5	<0.5
WR-355A	7/13/06	<0.5	<0.5	<0.5	1.6	<0.5	**8.0**	4.2	<0.5	<0.5
WR-355A	1/11/06	<0.5	<0.5	<0.5	1.2	<0.5	**9.3**	4.1	<0.5	<0.5
WR-355A	1/11/06	<0.5	<0.5	<0.5	1.6	<0.5	**10.7**	4.4	<0.5	<0.5
WR-355A	7/13/05	<0.5	<0.5	<0.5	1.0	<0.5	4.4	2.7	<0.5	<0.5
WR-355A	1/13/05	<0.5	<0.5	<0.5	0.7	<0.5	4.8	2.5	<0.5	<0.5
WR-355A	7/8/04	<0.5	<0.5	<0.5	0.9	<0.5	4.1	2.8	<0.5	<0.5
WR-355A	1/15/04	<0.5	<0.5	<0.5	1.2	<0.5	4.5	3.0	<0.5	<0.5
WR-355A	7/17/03	<0.5	0.8	<0.5	1.0	<0.5	4.5	3.0	<0.5	<0.5
WR-355A	1/30/03	<0.5	0.8	<0.5	1.1	<0.5	**6.0**	3.6	<0.5	<0.5
WR-355A	7/17/02	<0.5	<0.5	<0.5	1.0	<0.5	3.9	2.8	<0.5	<0.5
WR-355A	1/16/02	<0.5	<0.5	<0.5	0.8	<0.5	4.5	2.3	<0.5	<0.5
WR-355A	7/25/01	<0.5	0.9	<0.5	1.2	<0.5	**11.8**	4.3	0.5	<0.5
WR-355A	1/18/01	2.3	4.4	<0.5	6.2	<0.5	**41.0**	**14.4**	2.1	<0.5
WR-355A	8/9/00	<0.5	1.8	<0.5	3.0	<0.5	**9.3**	**6.9**	0.6	<0.5
WR-360A	1/18/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/11/12	<0.5	<0.5	<0.5	0.8	<0.5	0.5	<0.5	<0.5	<0.5
WR-360A	1/12/11	<0.5	0.5	<0.5	0.8	<0.5	0.6	<0.5	<0.5	<0.5
WR-360A	7/14/09	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	7/14/09	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/8/07	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/8/07	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	7/11/06	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/9/06	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/9/06	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	7/12/05	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/11/05	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	7/8/04	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/14/04	<0.5	2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	7/15/03	<0.5	4.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/30/03	<0.5	6.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	7/17/02	<0.5	5.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/16/02	<0.5	**7.3**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	7/25/01	<0.5	**8.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	1/18/01	<0.5	**22.4**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-360A	8/9/00	<0.5	**13.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-361A	1/17/13	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	0.7	<0.5	<0.5
WR-361A	1/17/13	<0.5	<0.5	<0.5	<0.5	<0.5	4	0.7	<0.5	<0.5
WR-361A	7/18/12	<0.5	<0.5	<0.5	0.8	<0.5	4	0.7	<0.5	<0.5
WR-361A	1/17/12	<0.5	<0.5	<0.5	1.5	<0.5	4.2	0.8	<0.5	<0.5
WR-361A	7/18/11	<0.5	<0.5	<0.5	0.8	<0.5	3.8	0.7	<0.5	<0.5
WR-361A	1/18/11	<0.5	<0.5	<0.5	1.2	<0.5	4.1	0.8	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-361A	7/19/10	<0.5	<0.5	<0.5	0.9	<0.5	2.9	0.5	<0.5	<0.5
WR-361A	1/20/10	<0.5	<0.5	<0.5	0.7	<0.5	2.0	<0.5	<0.5	<0.5
WR-361A	1/20/10	<0.5	<0.5	<0.5	0.7	<0.5	2.2	<0.5	<0.5	<0.5
WR-361A	7/14/09	<0.5	<0.5	<0.5	0.6	<0.5	1.4	<0.5	<0.5	<0.5
WR-361A	1/21/09	<0.5	<0.5	<0.5	0.6	<0.5	0.7	<0.5	<0.5	<0.5
WR-361A	1/10/07	0.6	1.9	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5
WR-361A	7/11/06	0.8	3.6	<0.5	0.5	<0.5	1.1	0.6	<0.5	<0.5
WR-361A	1/10/06	1.3	3.7	<0.5	0.5	<0.5	1.2	0.6	<0.5	<0.5
WR-361A	7/12/05	1.2	3.3	<0.5	0.5	<0.5	1.1	0.7	<0.5	<0.5
WR-361A	1/13/05	1.1	3.9	<0.5	<0.5	<0.5	1.3	0.8	<0.5	<0.5
WR-361A	7/7/04	0.8	4.8	<0.5	0.5	<0.5	1.0	0.6	<0.5	<0.5
WR-361A	1/14/04	<0.5	**8.8**	<0.5	0.7	<0.5	1.1	0.6	<0.5	<0.5
WR-361A	7/16/03	1.0	**25.4**	<0.5	0.8	<0.5	2.3	1.2	<0.5	<0.5
WR-361A	1/30/03	0.8	**22.4**	<0.5	1.2	<0.5	2.4	1.4	0.5	<0.5
WR-361A	7/17/02	0.8	**19.1**	<0.5	0.9	<0.5	2.0	1.2	<0.5	<0.5
WR-361A	1/16/02	<0.5	**15.7**	<0.5	1.1	<0.5	2.2	1.4	<0.5	<0.5
WR-361A	7/25/01	<0.5	6.4	<0.5	1.7	<0.5	3.8	2.9	0.6	<0.5
WR-361A	1/18/01	<0.5	4.2	<0.5	2.6	<0.5	2.8	2.1	0.6	<0.5
WR-361A	8/9/00	<0.5	**10.8**	<0.5	1.2	<0.5	1.4	0.8	0.5	<0.5
WR-372A	1/24/13	<0.5	<0.5	<0.5	2.5	<0.5	**6.8**	3.1	0.7	<0.5
WR-372A	1/24/12	<0.5	<0.5	<0.5	4.9	<0.5	**9.5**	4.2	1.1	<0.5
WR-372A	1/27/11	<0.5	<0.5	<0.5	6	<0.5	**12**	**5.5**	1.8	<0.5
WR-372A	1/27/11	<0.5	<0.5	<0.5	5.6	<0.5	**11.2**	**5.2**	1.7	<0.5
WR-372A	1/29/07	<0.5	<0.5	<0.5	9.4	<0.5	**12.5**	**6.9**	2.7	<0.5
WR-372A	1/29/07	<0.5	<0.5	<0.5	9.2	<0.5	**12.7**	**6.8**	2.5	<0.5
WR-372A	1/30/06	0.5	0.6	<0.5	10.7	<0.5	**18.6**	**7.9**	5.0	<0.5
WR-372A	1/30/06	0.6	0.5	<0.5	11.1	<0.5	**19.2**	**8.1**	5.2	<0.5
WR-372A	1/24/05	<0.5	<0.5	<0.5	8.2	<0.5	**15.1**	**6.6**	3.6	<0.5
WR-372A	1/24/05	<0.5	<0.5	<0.5	8.2	<0.5	**15.1**	**6.6**	3.6	<0.5
WR-372A	1/15/04	0.6	0.7	<0.5	18.9	<0.5	**20.0**	**10.4**	5.1	0.6
WR-372A	1/30/03	<0.5	0.6	<0.5	12.2	<0.5	**16.8**	**9.2**	4.4	<0.5
WR-372A	1/24/02	NS	NS	NS	NS	NS	**14.0**	**7.3**	NS	NS
WR-372A	1/18/01	<0.5	<0.5	<0.5	7.2	<0.5	**13.0**	**6.4**	2.9	<0.5
WR-372A	12/14/00	<0.5	<0.5	<0.5	1.4	<0.5	**6.7**	3.9	1.0	<0.5
WR-373A	1/18/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-373A	1/23/12	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-373A	1/25/11	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-373A	7/28/10	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	0.6	<0.5	<0.5
WR-373A	1/25/07	0.7	<0.5	0.6	3.5	<0.5	**10.3**	**5.7**	1.9	<0.5
WR-373A	1/26/06	<0.5	<0.5	0.5	3.6	<0.5	**12.4**	**5.4**	2.8	<0.5
WR-373A	1/26/06	<0.5	<0.5	0.6	3.6	<0.5	**11.7**	**5.2**	2.6	<0.5
WR-373A	1/24/05	0.5	<0.5	0.7	3.0	<0.5	**10.3**	4.4	2.0	<0.5
WR-373A	1/24/05	0.5	<0.5	0.7	3.0	<0.5	**10.3**	4.4	2.0	<0.5
WR-373A	1/14/04	0.9	<0.5	1.8	6.2	<0.5	**13.5**	**6.9**	2.6	<0.5
WR-373A	1/30/03	1.0	<0.5	2.8	3.2	<0.5	**11.3**	**6.2**	1.9	<0.5
WR-373A	1/22/02	NS	NS	NS	NS	NS	**19.0**	**11.0**	NS	NS
WR-373A	1/17/01	1.3	<0.5	2.7	3.4	**9.0**	**18.0**	**9.5**	3.2	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-374A	4/29/13	<0.5	<0.5	<0.5	2.9	<0.5	**6**	2.4	1.4	<0.5
WR-374A	1/23/13	<0.5	<0.5	<0.5	1.5	<0.5	3.9	1.8	<0.5	<0.5
WR-374A	1/24/12	<0.5	<0.5	<0.5	4.3	<0.5	**7.9**	3.2	1.4	<0.5
WR-374A	1/27/11	0.5	0.7	<0.5	3.6	<0.5	**9.5**	4	1.5	<0.5
WR-374A	1/30/07	1.0	2.1	<0.5	6.9	0.7	**17.9**	**8.1**	5.4	<0.5
WR-374A	2/1/06	1.1	2.9	<0.5	9.4	1.9	**24.9**	**10.6**	8.6	<0.5
WR-374A	2/1/06	1.2	3.0	<0.5	9.4	2.0	**25.0**	**10.5**	8.5	0.6
WR-374A	8/1/05	1.0	2.4	<0.5	5.8	1.8	**22.3**	**9.3**	6.2	<0.5
WR-374A	1/24/05	0.9	2.0	<0.5	4.8	2.3	**19.0**	**7.7**	4.9	<0.5
WR-374A	1/14/04	1.4	3.0	<0.5	9.8	4.8	**26.2**	**11.5**	8.3	<0.5
WR-374A	1/29/03	1.6	3.6	<0.5	8.4	**8.4**	**28.6**	**13.5**	9.2	0.7
WR-374A	1/22/02	NS	NS	NS	NS	NS	**31.0**	**13.0**	NS	NS
WR-374A	5/2/01	1.8	3.5	<0.5	17.0	**9.1**	**33.0**	**14.0**	15.0	1.1
WR-374A	1/17/01	1.2	2.1	<0.5	8.0	**8.5**	**28.0**	**11.0**	8.7	0.5
WR-374A	1/8/01	0.8	1.4	<0.5	6.0	**5.0**	**21.0**	**8.2**	5.2	<0.5
WR-375A	1/22/13	<0.5	<0.5	<0.5	1.6	<0.5	**5.1**	1.4	0.7	<0.5
WR-375A	1/24/12	<0.5	<0.5	<0.5	5.2	<0.5	**5.9**	1.7	1	<0.5
WR-375A	1/26/11	<0.5	<0.5	<0.5	6.6	<0.5	**10.4**	3	1.6	<0.5
WR-375A	7/28/10	<0.5	<0.5	<0.5	5.4	<0.5	**10.6**	2.2	1.8	<0.5
WR-375A	1/25/07	<0.5	<0.5	<0.5	6.7	<0.5	**11.6**	3.9	2.2	<0.5
WR-375A	1/26/06	<0.5	<0.5	<0.5	5.9	<0.5	**13.1**	3.7	2.3	<0.5
WR-375A	1/26/05	<0.5	<0.5	<0.5	6.3	<0.5	**13.9**	3.3	3.0	<0.5
WR-375A	1/26/05	<0.5	<0.5	<0.5	6.3	<0.5	**13.9**	3.3	3.0	<0.5
WR-375A	1/14/04	<0.5	<0.5	<0.5	11.6	<0.5	**15.3**	4.2	3.7	<0.5
WR-375A	1/29/03	<0.5	<0.5	<0.5	7.3	<0.5	**14.0**	3.7	2.8	<0.5
WR-375A	1/25/02	NS	NS	NS	NS	NS	**13.0**	3.1	NS	NS
WR-375A	1/26/01	<0.5	<0.5	<0.5	4.6	<0.5	**10.0**	2.3	0.9	<0.5
WR-375A	12/21/00	<0.5	<0.5	<0.5	<0.5	<0.5	3.2	0.9	<0.5	<0.5
WR-376A	1/24/13	<0.5	<0.5	<0.5	1.7	<0.5	**7.2**	1.2	<0.5	<0.5
WR-376A	8/27/12	<0.5	<0.5	<0.5	1.2	<0.5	**6.4**	1	<0.5	<0.5
WR-376A	7/23/12	<0.5	<0.5	<0.5	1.5	<0.5	4.3	0.6	<0.5	<0.5
WR-376A	1/19/12	<0.5	<0.5	<0.5	2.5	<0.5	**9**	1.5	<0.5	<0.5
WR-376A	7/25/11	<0.5	<0.5	<0.5	4.1	<0.5	**13.9**	1.8	<0.5	<0.5
WR-376A	1/20/11	<0.5	<0.5	<0.5	1.7	<0.5	**7.2**	1.2	<0.5	<0.5
WR-376A	7/22/10	<0.5	<0.5	<0.5	2.6	<0.5	**11.8**	1.7	<0.5	<0.5
WR-376A	1/25/10	<0.5	<0.5	<0.5	2.8	<0.5	**14.0**	2.0	<0.5	<0.5
WR-376A	7/20/09	<0.5	<0.5	<0.5	3.0	<0.5	**14.1**	2.1	<0.5	<0.5
WR-376A	1/26/09	<0.5	<0.5	<0.5	3.8	<0.5	**13.0**	1.9	<0.5	<0.5
WR-376A	7/17/08	<0.5	<0.5	<0.5	3.5	<0.5	**14.8**	2.2	<0.5	<0.5
WR-376A	2/5/08	<0.5	<0.5	<0.5	2.7	<0.5	**15.4**	2.2	<0.5	<0.5
WR-376A	1/29/07	<0.5	<0.5	<0.5	6.2	<0.5	**21.4**	3.0	0.5	<0.5
WR-376A	1/31/06	<0.5	<0.5	<0.5	6.0	<0.5	**21.9**	3.0	0.6	<0.5
WR-376A	8/2/05	<0.5	<0.5	<0.5	3.9	<0.5	**20.7**	3.0	<0.5	<0.5
WR-376A	8/2/05	<0.5	<0.5	<0.5	3.8	<0.5	**20.9**	3.0	<0.5	<0.5
WR-376A	1/20/05	<0.5	<0.5	<0.5	2.8	<0.5	**18.0**	2.2	<0.5	<0.5
WR-376A	1/20/05	<0.5	<0.5	<0.5	2.8	<0.5	**18.0**	2.2	<0.5	<0.5
WR-376A	1/13/04	<0.5	<0.5	<0.5	2.8	<0.5	**15.6**	2.4	<0.5	<0.5
WR-376A	1/27/03	<0.5	<0.5	<0.5	4.2	<0.5	**25.4**	3.7	0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-376A	1/21/02	NS	NS	NS	NS	NS	**30.0**	4.0	NS	NS
WR-376A	1/18/01	<0.5	<0.5	<0.5	2.3	<0.5	**20.0**	2.7	<0.5	<0.5
WR-376A	1/10/01	<0.5	<0.5	<0.5	1.6	<0.5	**21.0**	2.8	<0.5	<0.5
WR-378A	1/29/13	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	<0.5	<0.5	<0.5
WR-378A	7/18/12	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5
WR-378A	1/25/12	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	7/27/11	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	1/24/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	1/24/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	7/26/10	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	1/26/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	1/26/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	7/21/09	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	7/21/09	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	2/2/09	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	2/2/09	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	7/21/08	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	7/21/08	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	1/24/08	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	1/24/08	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-378A	7/23/07	<0.5	<0.5	<0.5	1.0	<0.5	0.6	<0.5	<0.5	<0.5
WR-378A	1/18/07	<0.5	<0.5	<0.5	1.4	<0.5	0.9	<0.5	<0.5	<0.5
WR-378A	7/25/06	<0.5	<0.5	<0.5	1.2	<0.5	0.8	<0.5	<0.5	<0.5
WR-378A	1/19/06	<0.5	<0.5	<0.5	1.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-378A	7/26/05	<0.5	<0.5	<0.5	1.9	<0.5	1.5	<0.5	<0.5	<0.5
WR-378A	1/19/05	<0.5	<0.5	<0.5	0.6	<0.5	0.7	<0.5	<0.5	<0.5
WR-378A	7/29/04	<0.5	<0.5	<0.5	1.7	<0.5	0.7	<0.5	<0.5	<0.5
WR-378A	7/24/03	<0.5	<0.5	<0.5	0.7	<0.5	0.6	<0.5	<0.5	<0.5
WR-378A	1/27/03	<0.5	<0.5	<0.5	0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-378A	1/21/02	NS	NS	NS	NS	NS	0.9	<0.5	NS	NS
WR-378A	5/2/01	<0.5	<0.5	<0.5	1.8	<0.5	0.8	<0.5	<0.5	<0.5
WR-378A	1/26/01	<0.5	<0.5	<0.5	1.0	<0.5	1.1	<0.5	<0.5	<0.5
WR-378A	1/19/01	<0.5	<0.5	<0.5	0.6	<0.5	0.8	<0.5	<0.5	<0.5
WR-379A	1/24/13	1.6	<0.5	<0.5	2.5	<0.5	**8.2**	2.1	1.7	<0.5
WR-379A	7/23/12	1.6	<0.5	<0.5	2.3	<0.5	**7.6**	2	1.6	<0.5
WR-379A	1/19/12	1.7	<0.5	<0.5	4.6	<0.5	**7.1**	1.8	2.1	<0.5
WR-379A	7/25/11	1	<0.5	<0.5	2.6	<0.5	**6.7**	1.3	1.9	<0.5
WR-379A	1/20/11	0.7	<0.5	<0.5	1	<0.5	3	0.6	0.9	<0.5
WR-379A	7/22/10	0.8	<0.5	<0.5	0.6	<0.5	2.9	0.7	0.8	<0.5
WR-379A	1/25/10	1.3	<0.5	<0.5	1.5	<0.5	4.8	1.1	1.6	<0.5
WR-379A	7/20/09	1.0	<0.5	<0.5	1.8	<0.5	3.9	0.9	1.3	<0.5
WR-379A	1/26/09	1.2	<0.5	<0.5	1.8	<0.5	3.7	1.0	1.5	<0.5
WR-379A	7/17/08	2.5	<0.5	<0.5	1.9	<0.5	**5.0**	1.4	2.0	<0.5
WR-379A	2/5/08	3.0	<0.5	<0.5	1.9	<0.5	**5.5**	1.5	2.6	<0.5
WR-379A	1/24/07	10.5	<0.5	1.0	7.4	**32.4**	**8.6**	3.6	8.9	<0.5
WR-379A	1/26/06	5.3	<0.5	<0.5	2.6	<0.5	**10.1**	2.0	4.8	<0.5
WR-379A	1/20/05	0.6	<0.5	<0.5	3.6	<0.5	**14.4**	1.8	3.7	<0.5
WR-379A	1/20/05	0.6	<0.5	<0.5	3.6	<0.5	**14.4**	1.8	3.7	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-379A	1/12/04	<0.5	<0.5	<0.5	5.7	<0.5	**14.0**	1.8	3.3	<0.5
WR-379A	1/28/03	<0.5	<0.5	<0.5	5.0	<0.5	**17.4**	1.8	3.9	<0.5
WR-379A	1/25/02	NS	NS	NS	NS	NS	**17.0**	1.7	NS	NS
WR-379A	1/24/01	<0.5	<0.5	<0.5	3.8	<0.5	**14.0**	1.8	3.0	<0.5
WR-380A	1/16/13	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5
WR-380A	7/17/12	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	0.5	0.5	<0.5
WR-380A	1/12/12	<0.5	<0.5	<0.5	0.5	<0.5	1.3	<0.5	<0.5	<0.5
WR-380A	7/19/11	<0.5	<0.5	<0.5	0.6	<0.5	1.8	<0.5	0.7	<0.5
WR-380A	1/25/11	<0.5	<0.5	<0.5	0.6	<0.5	2.1	<0.5	0.6	<0.5
WR-380A	7/26/10	<0.5	<0.5	<0.5	0.6	<0.5	2.1	<0.5	0.7	<0.5
WR-380A	1/27/10	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
WR-380A	7/22/09	<0.5	<0.5	<0.5	1.1	<0.5	3.5	0.6	1.3	<0.5
WR-380A	2/2/09	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
WR-380A	7/21/08	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	0.6	<0.5
WR-380A	1/24/08	<0.5	<0.5	<0.5	0.5	<0.5	3.0	0.6	0.7	<0.5
WR-380A	7/23/07	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-380A	1/17/07	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-380A	1/17/07	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-380A	7/25/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-380A	7/25/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-380A	1/23/06	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-380A	1/23/06	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-380A	7/26/05	<0.5	<0.5	<0.5	1.0	<0.5	2.2	<0.5	1.5	<0.5
WR-380A	7/26/05	<0.5	<0.5	<0.5	1.1	<0.5	1.9	<0.5	1.5	<0.5
WR-380A	1/19/05	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
WR-380A	1/19/05	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
WR-380A	7/29/04	<0.5	<0.5	<0.5	0.7	<0.5	1.7	<0.5	0.8	<0.5
WR-380A	1/13/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-380A	7/24/03	<0.5	<0.5	<0.5	0.8	<0.5	1.4	<0.5	1.0	<0.5
WR-380A	1/29/03	<0.5	<0.5	<0.5	0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-380A	1/24/02	NS	NS	NS	NS	NS	<0.5	<0.5	NS	NS
WR-380A	2/8/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	1/14/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	7/16/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	1/10/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	7/14/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	1/12/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	7/9/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	1/14/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	7/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	1/15/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	7/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	7/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	1/10/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	1/10/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-465A	11/15/05	<1.0	<0.5	<0.5	<2.0	<3.0	<0.5	<0.5	<2.0	<0.5
WR-465A	11/15/05	<1.0	<0.5	<0.5	<2.0	<3.0	<0.5	<0.5	<2.0	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-465A	9/22/05	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	<1.0	<0.5
WR-466A	1/24/13	<0.5	<0.5	<0.5	0.5	<0.5	2.7	<0.5	<0.5	<0.5
WR-466A	7/23/12	<0.5	<0.5	<0.5	1.3	<0.5	4.3	0.5	<0.5	<0.5
WR-466A	1/19/12	<0.5	<0.5	<0.5	1	<0.5	3.3	<0.5	<0.5	<0.5
WR-466A	7/25/11	<0.5	<0.5	<0.5	0.7	<0.5	3.2	<0.5	<0.5	<0.5
WR-466A	1/20/11	<0.5	<0.5	<0.5	1.5	<0.5	**5.4**	0.8	<0.5	<0.5
WR-466A	7/22/10	<0.5	<0.5	<0.5	0.6	<0.5	3.6	0.5	<0.5	<0.5
WR-466A	1/26/10	<0.5	<0.5	<0.5	1.4	<0.5	**7.3**	0.8	<0.5	<0.5
WR-466A	7/20/09	<0.5	<0.5	<0.5	1.5	<0.5	**6.7**	0.9	<0.5	<0.5
WR-466A	1/26/09	<0.5	<0.5	<0.5	1.4	<0.5	**5.9**	0.8	<0.5	<0.5
WR-466A	7/17/08	<0.5	<0.5	<0.5	1.5	<0.5	**5.2**	0.7	<0.5	<0.5
WR-466A	2/5/08	<0.5	<0.5	<0.5	1.7	<0.5	**7.9**	1.2	<0.5	<0.5
WR-466A	1/16/07	<0.5	<0.5	<0.5	3.6	<0.5	**15.3**	2.0	0.6	<0.5
WR-466A	7/17/06	<0.5	<0.5	<0.5	4.3	<0.5	**16.4**	2.2	0.7	<0.5
WR-466A	1/12/06	<0.5	<0.5	<0.5	3.3	<0.5	**17.1**	2.1	0.6	<0.5
WR-466A	11/15/05	<1.0	<0.5	<0.5	5.4	<3.0	**17.0**	2.0	<2.0	<0.5
WR-466A	9/21/05	<0.5	<0.5	<0.5	3.1	<2.0	**13.0**	1.8	<1.0	<0.5
WR-468A	1/15/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	7/12/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	1/12/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	7/14/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	1/18/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	7/19/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	7/13/09	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-468A	1/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	7/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	1/16/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	>0.5
WR-468A	7/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	>0.5
WR-468A	1/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	0.50	<0.5	<0.5	<0.5
WR-468A	1/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	0.50	<0.5	<0.5	<0.5
WR-468A	7/17/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-468A	7/17/06	<0.5	<0.5	<0.5	<0.5	<0.5	0.50	<0.5	<0.5	<0.5
WR-468A	1/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	0.70	<0.5	<0.5	<0.5
WR-468A	11/15/05	<1.0	<0.5	<0.5	<2.0	<3.0	<0.5	<0.5	<2.0	<0.5
WR-468A	9/19/05	<1.0	<0.5	<0.5	<2.0	<3.0	0.65	<0.5	<2.0	<0.5
WR-469A	1/16/13	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-469A	8/6/12	<0.5	0.6	<0.5	<0.5	<0.5	1	0.6	<0.5	<0.5
WR-469A	1/17/12	<0.5	0.6	<0.5	<0.5	<0.5	1	0.6	<0.5	<0.5
WR-469A	7/20/11	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	0.5	<0.5	<0.5
WR-469A	1/18/11	<0.5	0.5	<0.5	<0.5	<0.5	1.1	0.7	<0.5	<0.5
WR-469A	7/20/10	<0.5	1.0	<0.5	<0.5	<0.5	1.9	1.2	<0.5	<0.5
WR-469A	7/20/10	<0.5	1.0	<0.5	<0.5	<0.5	1.8	1.1	<0.5	<0.5
WR-469A	7/15/09	<0.5	1.1	<0.5	<0.5	<0.5	1.9	1.2	<0.5	<0.5
WR-469A	1/21/09	<0.5	0.9	<0.5	<0.5	<0.5	1.8	1.2	<0.5	<0.5
WR-469A	7/15/08	<0.5	1.7	<0.5	0.7	<0.5	2.8	1.7	<0.5	<0.5
WR-469A	1/17/08	<0.5	1.2	<0.5	<0.5	<0.5	1.6	0.9	<0.5	<0.5
WR-469A	7/17/07	<0.5	2.0	<0.5	0.8	<0.5	2.9	1.9	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
WR-469A	1/11/07	<0.5	1.4	<0.5	<0.5	<0.5	1.9	1.2	<0.5	<0.5
WR-469A	7/13/06	<0.5	1.6	<0.5	0.6	<0.5	2.2	1.5	<0.5	<0.5
WR-469A	1/11/06	<0.5	1.6	<0.5	0.5	<0.5	2.0	1.4	<0.5	<0.5
WR-469A	11/15/05	<1.0	0.71	<0.5	<2.0	<3.0	1.1	0.78	<2.0	<0.5
WR-469A	9/15/05	<1.0	0.58	<0.5	<2.0	<3.0	0.92	0.66	<2.0	<0.5
WR-470A	1/24/13	<0.5	<0.5	<0.5	0.6	<0.5	2.8	<0.5	<0.5	<0.5
WR-470A	7/23/12	<0.5	<0.5	<0.5	0.6	<0.5	2.7	<0.5	<0.5	<0.5
WR-470A	1/19/12	<0.5	<0.5	<0.5	0.5	<0.5	2.3	<0.5	<0.5	<0.5
WR-470A	7/25/11	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5
WR-470A	1/20/11	<0.5	<0.5	<0.5	0.6	<0.5	2.5	<0.5	<0.5	<0.5
WR-470A	7/22/10	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5
WR-470A	1/26/10	<0.5	<0.5	<0.5	0.5	<0.5	3.7	0.5	<0.5	<0.5
WR-470A	7/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5	<0.5	<0.5
WR-470A	1/26/09	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5	<0.5	<0.5
WR-470A	7/17/08	<0.5	<0.5	<0.5	1.4	<0.5	**5.6**	0.9	<0.5	<0.5
WR-470A	2/5/08	<0.5	<0.5	<0.5	1.0	<0.5	**5.4**	0.8	<0.5	<0.5
WR-470A	1/29/07	<0.5	<0.5	<0.5	3.7	<0.5	**14.2**	2.1	<0.5	<0.5
WR-470A	8/2/06	<0.5	<0.5	<0.5	4.7	<0.5	**19**	2.9	0.6	<0.5
WR-470A	1/30/06	<0.5	<0.5	<0.5	3.1	<0.5	**15.9**	2.3	<0.5	<0.5
WR-470A	11/15/05	<1.0	<0.5	<0.5	3.1	<3.0	**12.0**	2.2	<2.0	<0.5
WR-471A	1/14/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	7/11/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	1/11/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	7/14/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	1/12/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	7/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	7/13/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	1/20/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	7/14/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	1/17/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-471A	7/17/07	<0.5	<0.5	<0.5	0.5	<0.5	1.7	<0.5	<0.5	<0.5
WR-471A	1/16/07	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5
WR-471A	7/13/06	<0.5	<0.5	<0.5	0.6	<0.5	2.2	<0.5	<0.5	<0.5
WR-471A	1/10/06	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5
WR-471A	11/15/05	<1.0	<0.5	<0.5	<2.0	<3.0	0.57	<0.5	<2.0	<0.5
WR-471A	9/23/05	<0.5	<0.5	<0.5	<1.0	<2.0	<0.5	<0.5	<1.0	<0.5
T & C MHP (432P)	1/9/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/12/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/13/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/8/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/8/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/15/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/15/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/9/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
Los Reales Landfill
Selected VOC Concentrations in Groundwater

WELL ID	DATE	1,1-DCA	1,1-DCE	cis-1,2-DCE	DCFA	Methylene Chloride	PCE	TCE	TCFA	VC
T & C MHP (432P)	7/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/9/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/14/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/14/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/11/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/6/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/14/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/16/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/28/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	8/5/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/16/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	7/23/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/17/01	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	8/10/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
T & C MHP (432P)	1/26/00	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<1	<1
T & C MHP (432P)	7/8/99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JFJ (985)	1/9/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JFJ (985)	7/17/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JFJ (985)	1/19/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JFJ (985)	2/11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JFJ (985)	1/15/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JFJ (985)	1/9/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
JFJ (985)	7/20/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Racetrack Well	1/13/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
(691)	3/16/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Marble Well #1	5/7/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Marble Well #2	5/7/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes: **Values in Bold exceed the Arizona Aquifer Water Quality Standard (AWQS)**

PCE	tetrachloroethene	methylene chloride
TCE	trichloroethene	1,1-dichloroethane
CDCE	cis-1,2-dichloroethene	benzene
VC	vinyl chloride	1,1-dichloroethene
DCFA	dichlorodifluoromethane	trichlorofluoromethane

T&C MHP	Town & Country Mobile Home Park
JFJ	Junque for Jesus
<0.5	Not Detected above detection limit shown
NS	Not Sampled
All units =	mg/L

***Well abandoned.**

[1]**Sample collected with passive diffusion bag and analyzed by Transwest Geochem**

[2]**Sample collected with one time grab sample (thief-type) and analayzed by Transwest Geochem**

[3]**Sample collected with one time grab sample (thief-type) and analyzed by Tucson Water Quality Laboratory**

[4] **Development Sample**

[5] **Duplicate Sample analyzed by Xenco Laboratories**

[b] **Well bailed by hand or rig and sample collected by bailer.**

TABLE 4
Los Reales Landfill
Selected Metals Concentrations in Groundwater

Well ID	Date	Arsenic	Chromium	Lead
432P	1/9/07	0.0027	< 0.02	< 0.002
Marble Well #1	5/7/13	0.0025	< 0.02	< 0.001
Marble Well #2	5/7/13	0.002	< 0.02	< 0.001
LLM-500	1/29/13	0.0032	< 0.02	0.0034
LLM-500	1/24/12	0.0045	< 0.02	0.0054
LLM-500	1/27/11	0.0044	< 0.02	0.0049
LLM-501	1/26/10	0.0024	< 0.02	< 0.002
LLM-501	1/24/08	0.0022	< 0.02	< 0.002
LLM-501	1/18/07	0.0023	< 0.02	< 0.002
LLM-513	1/13/10	0.0029	< 0.02	< 0.002
LLM-530	1/24/13	0.003	< 0.02	< 0.001
LLM-530	1/24/13	0.0018	< 0.02	< 0.001
LLM-530	1/19/12	0.0025	< 0.02	< 0.002
LLM-530	1/20/11	0.0023	< 0.02	< 0.002
LLM-536	1/23/13	0.0025	< 0.02	< 0.001
LLM-536	1/19/12	< 0.002	< 0.02	< 0.002
LLM-536	1/20/11	0.0028	< 0.02	< 0.002
LLM-537	1/23/13	0.0017	< 0.02	< 0.001
LLM-537	1/19/12	< 0.002	< 0.02	< 0.002
LLM-537	1/20/11	0.0031	< 0.02	< 0.002
LLM-538	1/24/13	0.002	< 0.02	0.001
LLM-538	1/19/12	0.0024	< 0.02	0.0024
LLM-538	1/20/11	0.0024	< 0.02	< 0.002
LLM-539	1/24/13	0.0019	< 0.02	0.034
LLM-539	1/19/12	0.0026	< 0.02	0.0042
LLM-539	1/20/11	0.0026	< 0.02	< 0.002
LLM-540	1/24/13	0.0019	< 0.02	< 0.001
LLM-540	1/19/12	0.0023	< 0.02	0.016
LLM-540	1/20/11	0.0025	< 0.02	< 0.002
LLM-544	1/23/13	0.0032	< 0.02	< 0.001
LLM-544	1/19/12	0.003	< 0.02	< 0.002
LLM-544	1/20/11	0.0028	< 0.02	< 0.002
LLM-548	1/23/13	0.0094	< 0.02	< 0.001
LLM-548	1/19/12	0.0022	< 0.02	< 0.002
LLM-549	1/23/13	0.0035	< 0.02	< 0.001
LLM-549	1/19/12	0.003	< 0.02	< 0.002
LLM-551	1/23/13	0.0028	< 0.02	< 0.001
R-010A	1/20/11	0.0023	< 0.02	< 0.002
R-023A	1/20/11	< 0.002	< 0.02	< 0.002

Well ID	Date	Arsenic	Chromium	Lead
WR-049A	1/21/10	0.01	< 0.02	0.037
WR-049A	1/22/09	0.002	< 0.02	0.0041
WR-049A	1/22/08	0.003	< 0.02	0.0084
WR-049A	2/1/07	0.004	< 0.02	0.0065
WR-049A	1/24/06	0.004	< 0.02	0.019
WR-049A	1/24/06	0.004	< 0.02	0.018
WR-049A	1/11/05	0.002	< 0.02	0.0028
WR-049A	1/13/04	0.002	< 0.02	< 0.002
WR-049A	1/13/04	< 0.002	< 0.02	< 0.002
WR-049A	1/30/03	< 0.002	< 0.02	0.0037
WR-049A	1/30/03	< 0.002	< 0.02	0.0092
WR-049A	1/15/02	0.002	< 0.02	0.0033
WR-049A	1/18/01	< 0.002	< 0.02	0.011
WR-049A	1/25/00	0.004	< 0.02	0.0091
WR-135A	1/23/13	0.0022	< 0.02	< 0.001
WR-135A	1/19/12	0.0026	< 0.02	< 0.002
WR-135A	1/20/11	0.0027	< 0.02	< 0.002
WR-136A	1/23/12	< 0.001	< 0.02	< 0.001
WR-136A	1/15/02	0.002	< 0.02	0.0048
WR-136A	1/18/01	0.003	< 0.02	0.0026
WR-136A	1/18/01	0.003	< 0.02	0.0084
WR-136A	1/25/00	0.004	< 0.02	0.014
WR-136A	1/25/00	0.005	< 0.02	0.015
WR-136B	1/16/13	< 0.001	< 0.02	0.001
WR-136B	1/26/11	< 0.002	< 0.02	< 0.002
WR-136B	7/27/10	< 0.002	< 0.02	0.0029
WR-136B	1/26/10	< 0.002	0.022	0.0074
WR-136B	7/22/09	< 0.002	0.046	0.008
WR-136B	2/3/09	< 0.002	< 0.02	< 0.002
WR-136B	7/24/08	< 0.002	< 0.02	< 0.002
WR-136B	1/29/08	< 0.002	< 0.02	< 0.002
WR-136B	7/25/07	< 0.002	0.032	0.0026
WR-136B	1/24/07	0.004	< 0.02	0.0043
WR-136B	8/1/06	< 0.002	< 0.02	< 0.002
WR-136B	1/25/06	< 0.002	< 0.02	< 0.002
WR-136B	7/27/05	< 0.002	< 0.02	< 0.002
WR-136B	1/26/05	< 0.002	< 0.02	< 0.002
WR-136B	7/27/04	< 0.002	< 0.02	< 0.002
WR-136B	1/8/04	< 0.002	0.033	< 0.002
WR-136B	7/23/03	< 0.002	< 0.02	< 0.002
WR-136B	1/28/03	< 0.002	< 0.02	< 0.002
WR-172A	1/19/10	0.003	< 0.02	0.0022
WR-172A	1/20/09	0.003	< 0.02	0.0026
WR-172A	1/16/08	< 0.002	< 0.02	0.0038
WR-172A	1/11/07	< 0.002	< 0.02	< 0.002
WR-172A	1/17/06	0.022	< 0.02	0.0031
WR-172A	1/10/05	0.002	< 0.02	0.0036
WR-172A	1/12/04	0.002	< 0.02	< 0.002
WR-172A	1/27/03	< 0.002	< 0.02	0.0045
WR-172A	1/27/03	0.002	< 0.02	0.0077
WR-172A	1/14/02	0.033	0.094	**1.3**

TABLE 4
Los Reales Landfill
Selected Metals Concentrations in Groundwater

Well ID	Date	Arsenic	Chromium	Lead
R-024A	1/20/11	< 0.002	< 0.02	< 0.002
R-061A	1/24/13	0.0024	< 0.02	< 0.001
R-061A	1/19/12	0.002	< 0.02	< 0.002
R-061A	1/20/11	< 0.002	< 0.02	< 0.002
R-062B	1/24/13	0.0028	< 0.02	< 0.001
R-062B	1/19/12	0.0025	< 0.02	< 0.002
R-062B	1/20/11	0.0021	< 0.02	< 0.002
R-063A	1/24/13	0.0014	< 0.02	0.0012
R-063A	1/19/12	< 0.002	< 0.02	0.0028
R-063A	1/20/11	< 0.002	< 0.02	< 0.002
R-065A	1/17/13	0.0045	< 0.02	0.01
R-065A	1/17/12	0.004	< 0.02	0.011
R-065A	1/25/11	< 0.002	< 0.02	< 0.002
WR-047B	1/14/13	0.0078	< 0.02	0.0039
WR-047B	1/11/12	0.0048	< 0.02	0.0018
WR-047B	1/12/11	0.003	< 0.02	0.0031
WR-047B	1/13/10	0.0028	< 0.02	< 0.002
WR-047B	1/15/09	0.0062	< 0.02	0.0042
WR-047B	1/15/08	0.0024	< 0.02	0.0056
WR-047B	1/10/07	0.0026	< 0.02	0.0072
WR-047B	1/17/06	0.0023	< 0.02	< 0.002
WR-047B	1/17/06	0.0023	< 0.02	< 0.002
WR-047B	1/12/05	0.0025	< 0.02	< 0.002
WR-047B	1/13/04	0.0033	< 0.02	< 0.002
WR-047B	1/28/03	0.0033	< 0.02	0.025
WR-047B	1/15/02	< 0.002	< 0.02	0.0043
WR-047B	1/18/01	0.0025	< 0.02	< 0.002
WR-047B	1/25/00	0.0034	< 0.02	0.0064
WR-048A	1/19/10	0.002	< 0.02	< 0.002
WR-048A	1/22/09	0.0021	< 0.02	< 0.002
WR-048A	1/22/08	< 0.002	< 0.02	< 0.002
WR-048A	2/1/07	0.0039	< 0.02	< 0.002
WR-048A	1/23/06	0.0043	< 0.02	< 0.002
WR-048A	1/12/05	0.0029	< 0.02	< 0.002
WR-048A	1/14/04	0.0026	< 0.02	< 0.002
WR-048A	1/30/03	0.0026	< 0.02	< 0.002
WR-048A	1/15/02	0.0021	< 0.02	< 0.002
WR-048A	1/15/02	0.0021	< 0.02	< 0.002
WR-048A	1/18/01	0.0027	< 0.02	< 0.002
WR-048A	1/25/00	0.0028	< 0.02	< 0.002
WR-174A	1/23/13	0.0021	< 0.02	< 0.001
WR-174A	1/23/13	0.0022	< 0.02	< 0.001
WR-174A	1/19/12	0.0024	< 0.02	< 0.002
WR-174A	1/20/11	0.0025	< 0.02	< 0.002

Well ID	Date	Arsenic	Chromium	Lead
WR-172A	1/17/01	0.003	< 0.02	0.0052
WR-172A	1/24/00	0.002	< 0.02	0.0034
WR-173A	1/23/13	0.0025	< 0.02	< 0.001
WR-173A	1/19/12	0.0024	< 0.02	< 0.002
WR-173A	1/20/11	0.0024	< 0.02	< 0.002
WR-173B	1/8/07	< 0.0020	< 0.02	0.0043
WR-173B	1/9/06	0.0023	< 0.02	0.0035
WR-173B	1/10/05	< 0.0020	< 0.02	0.0046
WR-173B	1/12/04	< 0.0020	< 0.02	0.0047
WR-173B	1/27/03	< 0.0020	< 0.02	0.0065
WR-173B	1/14/02	0.0022	< 0.02	0.0096
WR-173B	1/17/01	0.0021	< 0.02	0.0086
WR-173B	1/26/00	0.0022	< 0.02	0.014
WR-325A	1/16/13	< 0.001	< 0.02	0.022
WR-325A	1/18/12	0.0014	< 0.02	0.044
WR-355A	1/24/13	0.0020	< 0.02	< 0.001
WR-355A	1/18/12	0.0051	< 0.02	0.0049
WR-355A	1/19/11	0.0030	< 0.02	0.0026
WR-355A	1/19/11	0.0030	< 0.02	0.0028
WR-355A	1/20/10	0.0025	< 0.02	< 0.002
WR-355A	1/22/09	0.0028	< 0.02	< 0.002
WR-355A	1/22/08	0.0024	< 0.02	< 0.002
WR-355A	1/16/07	0.0025	< 0.02	0.0024
WR-355A	1/11/06	0.0027	< 0.02	0.0049
WR-355A	1/11/06	0.0028	< 0.02	0.0035
WR-355A	1/13/05	0.0028	< 0.02	0.0026
WR-355A	1/15/04	0.0028	< 0.02	< 0.002
WR-355A	1/30/03	0.0032	< 0.02	< 0.002
WR-355A	1/16/02	0.0021	< 0.02	0.0047
WR-355A	1/18/01	< 0.0020	< 0.02	0.0034
WR-360A	1/8/07	< 0.002	< 0.02	0.0026
WR-360A	1/8/07	< 0.002	< 0.02	0.0027
WR-360A	1/9/06	0.003	< 0.02	0.0051
WR-360A	1/9/06	0.003	< 0.02	0.0074
WR-360A	1/11/05	0.003	< 0.02	0.019
WR-360A	1/11/05	0.003	< 0.02	0.02
WR-360A	1/14/04	0.003	< 0.02	0.0094
WR-360A	1/30/03	< 0.002	< 0.02	0.0026
WR-360A	1/16/02	0.002	< 0.02	0.003
WR-360A	1/18/01	0.002	< 0.02	0.0028
WR-361A	1/17/13	0.0023	< 0.02	0.0041
WR-361A	1/17/13	0.0019	< 0.02	0.004
WR-361A	1/17/12	0.0025	< 0.02	< 0.002
WR-361A	1/18/11	0.0024	< 0.02	0.0033
WR-361A	1/10/07	0.0028	< 0.02	< 0.002
WR-361A	1/10/06	0.0025	< 0.02	0.0034
WR-361A	1/13/05	0.0026	< 0.02	0.0035

TABLE 4
Los Reales Landfill
Selected Metals Concentrations in Groundwater

Well ID	Date	Arsenic	Chromium	Lead
WR-174A	1/20/11	0.0025	< 0.02	< 0.002
WR-175A	1/17/13	0.0017	< 0.02	0.0016
WR-175A	1/18/12	0.0017	< 0.02	0.0024
WR-175A	1/13/11	< 0.002	< 0.02	< 0.002
WR-175A	1/13/11	< 0.002	< 0.02	< 0.002
WR-175A	1/19/10	< 0.002	< 0.02	< 0.002
WR-175A	1/21/09	0.002	< 0.02	< 0.002
WR-175A	1/21/09	< 0.002	< 0.02	< 0.002
WR-175A	1/16/08	< 0.002	< 0.02	< 0.002
WR-175A	1/16/08	0.0022	< 0.02	< 0.002
WR-175A	2/1/07	0.002	< 0.02	< 0.002
WR-175A	1/19/06	0.0029	< 0.02	< 0.002
WR-175A	1/10/05	0.0021	< 0.02	< 0.002
WR-175A	1/10/05	0.002	< 0.02	< 0.002
WR-175A	1/12/04	0.0026	< 0.02	< 0.002
WR-175A	1/27/03	0.0024	< 0.02	0.004
WR-175A	1/14/02	0.003	< 0.02	< 0.002
WR-175A	1/17/01	0.0036	< 0.02	< 0.002
WR-175A	1/17/01	0.0036	< 0.02	< 0.002
WR-175A	1/24/00	0.0027	< 0.02	< 0.002
WR-175A	1/24/00	0.0027	< 0.02	0.0023

Well ID	Date	Arsenic	Chromium	Lead
WR-176A	1/12/10	0.0029	< 0.02	0.0026
WR-176A	1/14/09	0.0028	< 0.02	< 0.002
WR-176A	1/14/08	0.0026	< 0.02	< 0.002
WR-176A	1/8/07	0.0028	< 0.02	< 0.002
WR-176A	1/18/06	0.0099	< 0.02	0.0057
WR-176A	1/10/05	0.025	< 0.02	0.0078
WR-176A	1/12/04	0.024	< 0.02	0.0081
WR-176A	1/27/03	0.0048	< 0.02	0.0054
WR-176A	1/14/02	0.011	< 0.02	0.0058
WR-176A	1/17/01	0.019	< 0.02	0.0056
WR-176A	1/24/00	0.019	< 0.02	0.0053
WR-184A	1/20/10	0.004	< 0.02	0.0034
WR-184A	1/22/09	< 0.002	< 0.02	< 0.002
WR-184A	1/17/08	< 0.002	< 0.02	< 0.002
WR-184A	1/16/07	< 0.002	< 0.02	0.02
WR-184A	1/12/06	0.0025	< 0.02	0.0048
WR-184A	1/12/06	0.0029	< 0.02	0.0079
WR-184A	1/13/05	0.002	< 0.02	< 0.002
WR-184A	1/13/05	< 0.002	< 0.02	0.0022
WR-184A	1/15/04	0.0024	< 0.02	< 0.002
WR-184A	1/15/04	0.0025	< 0.02	< 0.002
WR-184A	1/28/03	< 0.002	< 0.02	0.0086
WR-184A	1/28/03	< 0.002	< 0.02	< 0.002
WR-184A	1/14/02	0.003	< 0.02	0.003
WR-184A	1/14/02	0.0034	< 0.02	0.0032
WR-184A	1/17/01	0.0032	< 0.02	< 0.002
WR-184A	1/24/00	0.0024	< 0.02	< 0.002

Well ID	Date	Arsenic	Chromium	Lead
WR-361A	1/14/04	0.0030	< 0.02	0.0021
WR-361A	1/30/03	0.0027	< 0.02	0.0021
WR-361A	1/16/02	< 0.002	< 0.02	0.0026
WR-361A	1/16/02	0.0022	< 0.02	0.0027
WR-361A	1/18/01	0.0024	< 0.02	0.0032
WR-376A	1/24/13	0.0041	< 0.02	0.018
WR-376A	1/19/12	< 0.002	< 0.02	< 0.002
WR-376A	1/20/11	< 0.002	< 0.02	< 0.002
WR-378A	1/29/13	0.0033	< 0.02	0.0019
WR-378A	1/25/12	0.0011	< 0.02	0.0061
WR-378A	7/27/11	<0.002	< 0.02	0.0072
WR-378A	1/24/11	0.0120	**0.12**	**0.075**
WR-378A	1/24/11	0.0110	**0.12**	**0.077**
WR-379A	1/24/13	0.0028	< 0.02	< 0.001
WR-379A	1/19/12	0.0024	< 0.02	< 0.002
WR-379A	1/20/11	0.0024	< 0.02	< 0.002
WR-380A	1/16/13	0.016	< 0.02	0.0089
WR-380A	1/12/12	0.0021	< 0.02	0.003
WR-380A	1/25/11	0.0021	< 0.02	0.0022
WR-465A	1/14/13	0.0035	< 0.02	0.0024
WR-465A	1/10/12	< 0.0020	< 0.02	0.0025
WR-465A	1/12/11	0.0026	< 0.02	0.0028
WR-465A	1/14/09	< 0.0020	< 0.02	0.0024
WR-465A	1/15/08	0.0026	< 0.02	0.0091
WR-465A	1/10/06	< 0.0020	< 0.02	0.0049
WR-465A	1/10/06	< 0.0020	< 0.02	0.0032
WR-466A	1/24/13	0.0026	< 0.02	0.0018
WR-466A	1/19/12	0.0023	< 0.02	< 0.002
WR-466A	1/20/11	< 0.0020	< 0.02	< 0.002
WR-466A	1/16/07	0.0051	< 0.02	< 0.002
WR-466A	1/12/06	0.0040	< 0.02	0.0037
WR-468A	1/20/09	< 0.002	< 0.02	< 0.002
WR-468A	1/16/08	< 0.002	< 0.02	0.0032
WR-468A	1/11/07	< 0.002	< 0.02	< 0.002
WR-468A	1/11/07	0.002	< 0.02	< 0.002
WR-468A	1/11/06	0.003	< 0.02	< 0.002
WR-469A	1/16/13	0.0032	< 0.02	0.01
WR-469A	1/17/12	0.0022	< 0.02	0.017
WR-469A	1/18/11	0.0023	< 0.02	< 0.002
WR-469A	1/21/09	< 0.0020	< 0.02	< 0.002
WR-469A	1/17/08	< 0.0020	< 0.02	< 0.002
WR-469A	1/11/07	0.0022	< 0.02	< 0.002
WR-469A	1/11/06	0.0028	< 0.02	0.0045

TABLE 4
Los Reales Landfill
Selected Metals Concentrations in Groundwater

Well ID	Date	Arsenic	Chromium	Lead
WR-185A	1/12/10	0.0022	< 0.02	0.0022
WR-185A	1/12/10	0.0025	< 0.02	0.0023
WR-185A	1/15/09	0.0093	< 0.02	0.018
WR-185A	1/14/08	0.0047	< 0.02	0.0079
WR-185A	1/10/07	0.0096	< 0.02	0.02
WR-185A	1/18/06	0.019	< 0.02	**0.12**
WR-185A	1/12/05	0.0033	< 0.02	0.0024
WR-185A	1/12/05	0.0047	< 0.02	0.0028
WR-185A	1/13/04	0.0054	< 0.02	0.003
WR-185A	1/28/03	0.0046	< 0.02	0.0053
WR-185A	1/14/02	0.005	< 0.02	0.0085
WR-185A	1/17/01	0.0038	< 0.02	0.0039
WR-185A	1/24/00	0.0039	< 0.02	0.0044

Well ID	Date	Arsenic	Chromium	Lead
WR-470A	1/24/13	0.0026	< 0.02	< 0.001
WR-470A	1/19/12	0.0025	< 0.02	0.0033
WR-470A	1/20/11	< 0.0020	< 0.02	< 0.002
WR-470A	1/29/07	0.0025	< 0.02	< 0.002
WR-470A	1/30/06	0.0026	< 0.02	< 0.002
WR-471A	1/20/09	< 0.002	< 0.02	< 0.002
WR-471A	1/17/08	0.002	< 0.02	< 0.002
WR-471A	1/16/07	0.002	< 0.02	< 0.002
WR-471A	1/10/06	0.003	< 0.02	0.003

Note: All Results are in mg/L
Bold values exceed the Aquifer Water Quality Standard

Table 5
Groundwater Treatment System
Summary of Monthly Extraction, Injection and Mass Removed
Los Reales Landfill

Well ID	Beginning Date	End Date	Number Days Operate	Total Extracted (gal)	Average Pumping Rate [2]	Monthly System Summary
January 2013						
System Influent	1/1/13	1/31/13	27	4450450	114.5	
LLM-530	1/1/13	1/31/13	25	673444	18.7	Total Extracted Since System Start Up [3] (gal)
LLM-536	1/1/13	1/31/13	8	34255	2.8	365,524,398
LLM-537	1/1/13	1/31/13	3	14040	2.9	
LLM-538	1/1/13	1/31/13	9	117644	9.1	
LLM-539	1/1/13	1/31/13	24	137787	4.0	PCE Concentration [4] (ug/L)
LLM-540	1/1/13	1/31/13	26	234570	6.2	6.5
LLM-544	1/1/13	1/31/13	23	56546	1.7	TCE Concentration [4] (ug/L)
LLM-548	1/1/13	1/31/13	2	1628	0.5	2.3
LLM-549	1/1/13	1/31/13	4	29360	4.7	PCE Removed (lbs)
LLM-551	1/1/13	1/31/13	27	500261	12.8	0.2414
R-061A	1/1/13	1/31/13	24	129926	3.7	TCE Removed (lbs)
R-062B	1/1/13	1/31/13	23	395063	11.9	0.0854
R-063A	1/1/13	1/31/13	0.4	2863	5.0	Total PCE Removed since 2000 [3] (lbs)
WR-135A	1/1/13	1/31/13	27	174758	4.5	21.25
WR-173A	1/1/13	1/31/13	25	185421	5.1	Total TCE Removed since 2000 [3] (lbs)
WR-174A	1/1/13	1/31/13	25	214450	6.0	7.58
WR-355A	1/1/13	1/31/13	26	677860	18.0	
WR-376A	1/1/13	1/31/13	0	0	0	
WR-379A	1/1/13	1/31/13	24	80686	2.3	
WR-466A	1/1/13	1/31/13	25	294446	8.0	
WR-470A	1/1/13	1/31/13	25	495438	13.6	Total Reinjected to Aquifer
IJ-01	1/1/13	1/31/13	N/A	557688	N/A	2497831
IJ-02	1/1/13	1/31/13	N/A	943014	N/A	Percentage Reinjected to Aquifer
R-105A	1/1/13	1/31/13	N/A	997130	N/A	56%
February 2013						
System Influent	2/1/13	2/28/13	27	4113966	105.8	
LLM-530	2/1/13	2/28/13	20	632474	22.0	Total Extracted Since System Start Up [3] (gal)
LLM-536	2/1/13	2/28/13	10	34916	2.5	369,638,364
LLM-537	2/1/13	2/28/13	4	14562	2.6	
LLM-538	2/1/13	2/28/13	0	0	0.0	
LLM-539	2/1/13	2/28/13	18	136121	5.1	PCE Concentration [4] (ug/L)
LLM-540	2/1/13	2/28/13	24	233080	6.6	6.3
LLM-544	2/1/13	2/28/13	17	53874	2.2	TCE Concentration [4] (ug/L)
LLM-548	2/1/13	2/28/13	19	26069	0.9	2.3
LLM-549	2/1/13	2/28/13	5	30487	4.5	PCE Removed (lbs)
LLM-551	2/1/13	2/28/13	27	453774	0.0	0.2163
R-061A	2/1/13	2/28/13	24	124810	3.6	TCE Removed (lbs)
R-062B	2/1/13	2/28/13	23	395752	11.8	0.0790
R-063A	2/1/13	2/28/13	0	2372	5.2	Total PCE Removed since 2000 [3] (lbs)
WR-135A	2/1/13	2/28/13	27	169919	4.4	21.46
WR-173A	2/1/13	2/28/13	27	190802	4.9	Total TCE Removed since 2000 [3] (lbs)
WR-174A	2/1/13	2/28/13	23	203522	6.2	7.66
WR-355A	2/1/13	2/28/13	24	614211	17.4	
WR-376A	2/1/13	2/28/13	0	0	0.0	
WR-379A	2/1/13	2/28/13	13	44921	2.4	
WR-466A	2/1/13	2/28/13	24	287340	8.3	
WR-470A	2/1/13	2/28/13	23	464960	13.9	Total Reinjected to Aquifer
IJ-01	2/1/13	2/28/13	NA	497538	N/A	2242923
IJ-02	2/1/13	2/28/13	NA	633661	N/A	Percentage Reinjected to Aquifer
R-105A	2/1/13	2/28/13	NA	1111723	N/A	55%

Table 5
Groundwater Treatment System
Summary of Monthly Extraction, Injection and Mass Removed
Los Reales Landfill

Well ID	Beginning Date	End Date	Number Days Operate	Total Extracted (gal)	Average Pumping Rate [2]	Monthly System Summary
March 2013						
System Influent	3/1/13	3/31/13	29	4719939	113.0	
LLM-530	3/1/13	3/31/13	27	819522	20.8	Total Extracted Since System Start Up [3] (gal)
LLM-536	3/1/13	3/31/13	10	36752	2.6	374,358,303
LLM-537	3/1/13	3/31/13	9	14234	1.1	
LLM-538	3/1/13	3/31/13	12	185996	11.1	
LLM-539	3/1/13	3/31/13	23	151239	4.5	PCE Concentration [4] (ug/L)
LLM-540	3/1/13	3/31/13	25	238912	6.5	5.4
LLM-544	3/1/13	3/31/13	22	56705	1.8	TCE Concentration [4] (ug/L)
LLM-548	3/1/13	3/31/13	23	31391	0.9	2.3
LLM-549	3/1/13	3/31/13	5	32928	5.0	PCE Removed (lbs)
LLM-551	3/1/13	3/31/13	29	511794	12.3	0.2127
R-061A	3/1/13	3/31/13	27	136192	3.5	TCE Removed (lbs)
R-062B	3/1/13	3/31/13	26	412077	10.9	0.0906
R-063A	3/1/13	3/31/13	1	2026	2.8	Total PCE Removed since 2000 [3] (lbs)
WR-135A	3/1/13	3/31/13	29	176938	4.2	
WR-173A	3/1/13	3/31/13	29	194360	4.7	21.68
WR-174A	3/1/13	3/31/13	26	223325	6.1	Total TCE Removed since 2000 [3] (lbs)
WR-355A	3/1/13	3/31/13	27	686560	17.3	7.75
WR-376A	3/1/13	3/31/13	0	0	0.0	
WR-379A	3/1/13	3/31/13	0	0	0.0	
WR-466A	3/1/13	3/31/13	27	296802	7.5	
WR-470A	3/1/13	3/31/13	27	512186	13.4	Total Reinjected to Aquifer
IJ-01	3/1/13	3/31/13	NA	276381	N/A	1259367
IJ-02	3/1/13	3/31/13	NA	361754	N/A	Percentage Reinjected to Aquifer
R-105A	3/1/13	3/31/13	NA	621232	N/A	27%
April 2013						
System Influent	4/1/13	4/30/13	29	4771202	114.3	
LLM-530	4/1/13	4/30/13	28	751578	18.9	Total Extracted Since System Start Up [3] (gal)
LLM-536	4/1/13	4/30/13	10	35923	2.6	379,129,505
LLM-537	4/1/13	4/30/13	7	13771	1.4	
LLM-538	4/1/13	4/30/13	27	359615	9.2	
LLM-539	4/1/13	4/30/13	25	138074	3.8	PCE Concentration [4] (ug/L)
LLM-540	4/1/13	4/30/13	26	231614	6.1	5.8
LLM-544	4/1/13	4/30/13	24	55200	1.6	TCE Concentration [4] (ug/L)
LLM-548	4/1/13	4/30/13	26	35183	1.0	2.3
LLM-549	4/1/13	4/30/13	4	32286	5.2	PCE Removed (lbs)
LLM-551	4/1/13	4/30/13	29	545996	13.1	0.2309
R-061A	4/1/13	4/30/13	28	126625	3.2	TCE Removed (lbs)
R-062B	4/1/13	4/30/13	27	405451	10.4	0.0916
R-063A	4/1/13	4/30/13	0	2176	5.2	Total PCE Removed since 2000 [3] (lbs)
WR-135A	4/1/13	4/30/13	29	172858	4.2	21.91
WR-173A	4/1/13	4/30/13	29	191812	4.6	
WR-174A	4/1/13	4/30/13	26	203276	5.4	Total TCE Removed since 2000 [3] (lbs)
WR-355A	4/1/13	4/30/13	28	694438	17.2	7.85
WR-376A	4/1/13	4/30/13	0	0	0.0	
WR-379A	4/1/13	4/30/13	0	0	0.0	
WR-466A	4/1/13	4/30/13	27	283175	7.2	
WR-470A	4/1/13	4/30/13	27	492151	12.6	Total Reinjected to Aquifer
IJ-01	4/1/13	4/30/13	N/A	168451	N/A	760445
IJ-02	4/1/13	4/30/13	N/A	212753	N/A	Percentage Reinjected to Aquifer
R-105A	4/1/13	4/30/13	N/A	379240	N/A	16%

Table 5
Groundwater Treatment System
Summary of Monthly Extraction, Injection and Mass Removed
Los Reales Landfill

Well ID	Beginning Date	End Date	Number Days Operate	Total Extracted (gal)	Average Pumping Rate [2]	Monthly System Summary
May 2013						
System Influent	5/1/13	5/31/13	29	4579575	110.4	
LLM-530	5/1/13	5/31/13	28	733928	18.1	Total Extracted Since System Start Up [3] (gal)
LLM-536	5/1/13	5/31/13	10	35179	2.4	383,709,080
LLM-537	5/1/13	5/31/13	6	12402	1.6	
LLM-538	5/1/13	5/31/13	28	344189	8.7	
LLM-539	5/1/13	5/31/13	27	135342	3.5	PCE Concentration [4] (ug/L)
LLM-540	5/1/13	5/31/13	28	228830	5.7	6.6
LLM-544	5/1/13	5/31/13	12	37763	2.2	TCE Concentration [4] (ug/L)
LLM-548	5/1/13	5/31/13	27	34882	0.9	2.5
LLM-549	5/1/13	5/31/13	4	32062	5.2	PCE Removed (lbs)
LLM-551	5/1/13	5/31/13	29	527833	12.7	0.2522
R-061A	5/1/13	5/31/13	28	116338	2.9	TCE Removed (lbs)
R-062B	5/1/13	5/31/13	24	379464	10.8	0.0955
R-063A	5/1/13	5/31/13	0	2144	0.0	Total PCE Removed since 2000 [3] (lbs)
WR-135A	5/1/13	5/31/13	29	173928	4.2	22.16
WR-173A	5/1/13	5/31/13	29	187685	4.5	
WR-174A	5/1/13	5/31/13	27	195349	5.0	Total TCE Removed since 2000 [3] (lbs)
WR-355A	5/1/13	5/31/13	29	676279	16.4	7.94
WR-376A	5/1/13	5/31/13	0	0	0.0	
WR-379A	5/1/13	5/31/13	0	0	0.0	
WR-466A	5/1/13	5/31/13	24	232174	6.7	
WR-470A	5/1/13	5/31/13	28	493803	12.0	Total Reinjected to Aquifer
IJ-01	5/1/13	5/31/13	N/A	25894	N/A	332551
IJ-02	5/1/13	5/31/13	N/A	110039	N/A	Percentage Reinjected to Aquifer
R-105A	5/1/13	5/31/13	N/A	196618	N/A	7%
June 2013						
System Influent	6/1/13	6/30/13	28	4307187	106.8	
LLM-530	6/1/13	6/30/13	28	714286	17.8	Total Extracted Since System Start Up [3] (gal)
LLM-536	6/1/13	6/30/13	8	32704	2.7	388,016,267
LLM-537	6/1/13	6/30/13	4	12130	2.3	
LLM-538	6/1/13	6/30/13	28	318444	7.8	
LLM-539	6/1/13	6/30/13	28	128148	3.2	PCE Concentration [4] (ug/L)
LLM-540	6/1/13	6/30/13	28	218870	5.4	5.3
LLM-544	6/1/13	6/30/13	12	37822	2.1	TCE Concentration [4] (ug/L)
LLM-548	6/1/13	6/30/13	28	33620	0.8	2.2
LLM-549	6/1/13	6/30/13	5	31008	4.8	PCE Removed (lbs)
LLM-551	6/1/13	6/30/13	28	536024	13.4	0.1905
R-061A	6/1/13	6/30/13	28	105238	2.6	TCE Removed (lbs)
R-062B	6/1/13	6/30/13	26	387701	10.3	0.0791
R-063A	6/1/13	6/30/13	1	2949	0.0	Total PCE Removed since 2000 [3] (lbs)
WR-135A	6/1/13	6/30/13	29	165989	4.0	22.35
WR-173A	6/1/13	6/30/13	23	148638	4.5	Total TCE Removed since 2000 [3] (lbs)
WR-174A	6/1/13	6/30/13	28	188181	4.7	8.02
WR-355A	6/1/13	6/30/13	26	577463	15.6	
WR-376A	6/1/13	6/30/13	0	0	0.0	
WR-379A	6/1/13	6/30/13	0	0	0.0	
WR-466A	6/1/13	6/30/13	20	226539	7.8	
WR-470A	6/1/13	6/30/13	28	441436	11.0	Total Reinjected to Aquifer
IJ-01	6/1/13	6/30/13	N/A	141081	N/A	290354
IJ-02	6/1/13	6/30/13	N/A	53685	N/A	Percentage Reinjected to Aquifer
R-105A	6/1/13	6/30/13	N/A	95588	N/A	7%

Total volume extracted from each well, number of hours of operation and volume of system effluent is recorded by computer da

[1] Many wells do not operate continuously due to slow recharge. The number of days each well operated is used with the total volume extracted to calculate the actual pumping rate during operation. The number of days each well operates is roun presentation but not rounded for calculation.

[2] Average pumping rate during the time that the well was operational.

[3] - System went on-line in February 1999. However, PCE and TCE totals do not include 1999 data

[4] - Influent and Effluent samples are collected monthly and analyzed for VOCs

WR-376A does no longer produces sufficient water to operate and is only operated long enough to sample semiannually.
The screen at WR-379A failed in March 2013.

Table 6
Groundwater Treatment System
Annual Summary of Extraction and Injection
Los Reales Landfill

	Month	January 2013	Feburary 2013	March 2013	April 2013	May 2013	June 2013	**First Half 2013 Total Extracted**	
COT WELL ID	ADWR WELL ID	Gallons Extracted						Gallons	Acre-Feet
	Extraction Wells								
LLM-530	55-216285	673444	632474	819522	751578	733928	714286	4325232	13.27
LLM-536	55-218103	34255	34916	36752	35923	35179	32704	209730	0.64
LLM-537	55-218102	14040	14562	14234	13771	12402	12130	81139	0.25
LLM-538	55-910171	117644	0	185996	359615	344189	318444	1325887	4.07
LLM-539	55-218252	137787	136121	151239	138074	135342	128148	826711	2.54
LLM-540	55-218253	234570	233080	238912	231614	228830	218870	1385876	4.25
LLM-544	55-218769	56546	53874	56705	55200	37763	37822	297911	0.9
LLM-548	55-220488	1628	26069	31391	35183	34882	33620	162773	0.50
LLM-549	55-220489	29360	30487	32928	32286	32062.4	31008	188132	0.58
LLM-551	55-221183	500261	453774	511794	545996	527833	536024	3075682	9.44
R-061A	55-575179	129926	124810	136192	126625	116338	105238	739128	2.27
R-062B	55-583862	395063	395752	412077	405451	379464	387701	2375507	7.29
R-063A	55-575181	2863	2372	2026	2176	2144	2949	14529	0.04
WR-135A	55-517157	174758	169919	176938	172858	173928	165989	1034390	3.17
WR-173A	55-527402	185421	190802	194360	191812	187685	148638	1098719	3.37
WR-174A	55-527401	214450	203522	223325	203276	195349	188181	1228104	3.77
WR-355A	55-579026	677860	614211	686560	694438	676279	577463	3926812	12.05
WR-376A	55-583858	0	0	0	0	0	0	0	0.00
WR-379A	55-583860	80686	44921	0	0	0	0	125607	0.39
WR-466A	55-902791	294446	287340	296802	283175	232174	226539	1620475	4.97
WR-470A	55-902793	495438	464960	512186	492151	493803	441436	2899974	8.90
								First Half 2013 Total Injected	
COT WELL ID	ADWR WELL ID	Gallons Injected						Gallons	Acre-Feet
	Injection Wells								
IJ-001	55-566878	557688	497538	276381	168451	25894	141081	1667033	5.12
IJ-002	55-566879	943014	633661	361754	212753	110039	53685	2314906	7.10
R-105A	55-592316	997130	1111723	621232	379240	196618	95588	3401531	10.44

COT = City of Tucson
Acre-feet extracted from WR-173A and WR-174A are reported to Arizona State Land Department monthly.
Total volume extracted and injected at each well and total volume of effluent is recorded by computer daily.
WR-376A no longer produces sufficient water to operate.
The well screen at WR-379A failed in March 2013.

ConformaTECH

MONTGOMERY & ASSOCIATES
EVALUATION OF REMEDIATION STRATEGIES
LOS REALES LANDFILL WQARF SITE

CITY OF TUCSON
ENVIRONMENTAL SERVICES

Do More Blue

September 5, 2013

VIA HAND DELIVERY

Mr. Bill Ellett, Unit Manager
Superfund Program Unit
Southern Regional Office, ADEQ
400 W. Congress Street, Suite 433
Tucson, AZ 85701

Re: Los Reales Landfill Water Quality Revolving Fund Site, Tucson, AZ – Response to Comments: Evaluation of Remedial Strategies and Recommendations for Future Operations

Dear Mr. Ellett:

The City of Tucson, Environmental Services (COT-ES) retained Engineering and Environmental Consultants, Inc. (EEC) and their subcontractor Montgomery and Associates (M&A) for an evaluation of remedial strategies for the Los Reales Landfill Water Quality Revolving Fund (WQARF) site. The evaluation report was delivered to the Arizona Department of Environmental Quality (ADEQ) on July 25, 2012 for review. ADEQ requested revisions and clarifications in a letter dated December 28, 2012. Attached is a copy of the revised report dated August 29, 2013 for your review. A copy of the December 28, 2012 ADEQ letter is provided, along with responses to comments in Appendix D of the report. COT-ES is seeking approval from ADEQ to implement the report recommendations.

If ADEQ approves the proposed modified pump and treat approach, COT-ES will install the additional monitoring wells as proposed in the report during the second half of 2013. In addition, COT-ES may retire wells that produce less than 2 gallons per minute. These wells are costly to operate and do not provide containment or remove a significant amount of mass from the aquifer. The wells are: R-063A, WR-376A, LLM-537, LLM-538, LLM-548 and LLM-549. The remainder of the extraction wells will continue to be rehabilitated or replaced as needed while COT-ES proceeds with installation of the new monitoring wells and preparation of a performance monitoring and contingency plan.

Thank you for your ongoing review of the site. If you have any questions, please contact Molly Collins at (520) 837-3703. We look forward to obtaining your comments and approval.

Sincerely,

Nancy Petersen
Deputy Director

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NP/MC/nr

Enclosures

Montgomery and Associates: *Revised Evaluation of Remediation Strategies, Los Reales Landfill Water Quality Revolving Fund Site,* August 29, 2013

cc: Gretchen Wagenseller, Arizona Department of Environmental Quality (CD Copy)
Wally Wilson, COT, Tucson Water (Email Link)
Martin Bey, COT-ES (Email Link)
Molly Collins, COT-ES (Email Link)
Jeffrey Drumm, COT-ES (Email Link)
Los Reales Operations Record (CD Copy only)
Los Reales File (Hard Copy)

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MONTGOMERY
& ASSOCIATES
Water Resource Consultants

Report

August 29, 2013

Prepared for:
City of Tucson, Environmental Services

Evaluation of Remediation Strategies
Los Reales Landfill
Water Quality Assurance Revolving Fund Site

www.elmontgomery.com 520-881-4912 1550 East Prince Road, Tucson AZ 85719

MONTGOMERY & ASSOCIATES
Water Resource Consultants

August 29, 2013
REVISED REPORT

EVALUATION OF REMEDIATION STRATEGIES
LOS REALES LANDFILL WATER QUALITY ASSURANCE REVOLVING FUND SITE

Original Report Date: July 25, 2012

Revised Report Date: August 29, 2013

Prepared for:
CITY OF TUCSON
ENVIRONMENTAL SERVICES

MONTGOMERY & ASSOCIATES

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MONTGOMERY & ASSOCIATES

August 29, 2013
REVISED REPORT

EVALUATION OF REMEDIATION STRATEGIES
LOS REALES LANDFILL WATER QUALITY ASSURANCE REVOLVING FUND SITE

INTRODUCTION

Montgomery & Associates (M&A) conducted an evaluation of remediation strategies for the Los Reales Landfill (Site). The project was conducted for the City of Tucson, Environmental Services Department (COT-ES) in accordance with a scope of work outlined in a request for proposal dated October 10, 2011. The project goal was to evaluate the existing remedial action plan (RAP) and provide a ranked list of remedial strategies to more cost effectively address groundwater contamination at the Site. All remedial strategies considered were consistent with the Arizona Water Quality Assurance Revolving Fund (WQARF) rules. Any changes to the remedial operations must be acceptable to the Arizona Department of Environmental Quality (ADEQ).

A report summarizing the evaluation was submitted to the COT-ES on July 25, 2012. This report was subsequently provided to the ADEQ for review. ADEQ provided comments on the report in a letter to the COT-ES dated December 28, 2012. This final report includes revisions requested by ADEQ and includes a summary of responses to ADEQ comments in **Appendix D,** an updated well inventory in **Appendix E**, and lithologic logs for Site wells in **Appendix F**.

BACKGROUND

Selected maps prepared by COT-ES are included in **Appendix A** to support the narrative discussion on project approach and data evaluation. COT-ES Figure 2 in **Appendix A** shows a Site map. The Los Reales Landfill began operating in 1967 for the disposal of municipal waste. From 1977 to 1980, low-level hazardous waste was disposed of in the Southwest Disposal Area (SWDA), which comprises an area of about 4 acres in the southwestern portion of the landfill. The SWDA and the main landfill cell are unlined. Groundwater contamination was first discovered at the Site in 1988. The Site was first registered in the WQARF in 1989. The original remedial investigation was completed in 1991 by the Tucson Water Department (Wilson and Meyerson, 1991). The Remedial Investigation (RI) identified a volatile organic compound (VOC) plume that extended to the northwest about 1 quarter of a mile beyond the landfill property. Between 1991 and 1994, additional site characterization and analyses were conducted to support evaluation and development of a remedial action. A Phase II Remedial Action Plan – Feasibility Study was completed in 1994 (RAP/FS; Camp, Dresser, and McKee [CDM], 1994) and a pump and treat remedial action for the Site was approved by ADEQ in 1995. From 1995 through 1999, the pump and treat system was designed, permitted, and constructed.

The pump and treat groundwater remediation system began operating in 1999. Operation of the pump and treat system has encountered several challenges since startup. The operational challenges include fouling and scaling in the extraction wells and a declining regional water table[1]. In response, the COT-ES has actively managed and evaluated the remedial operation since startup. These challenges increase the operation and maintenance costs for the system. Fouling and scaling of the extraction wells has been addressed with reasonable success through periodic aggressive rehabilitation efforts. The declining regional water table is reducing the available drawdown in the extraction wells, which reduces the extraction rate over time. Over the past several years, many of the extraction wells have been replaced because extraction rates had declined to ineffective rates due to fouling, scaling, and small screen slot size. Overall, these

[1] The water table at the Site has declined approximately 25 feet since 1982 (about 0.8 feet per year [ft/y]). Recent water level data indicate that the water table is declining about 1.2 ft/y.

challenges and the high cost of continued remedial operations led the COT-ES to implement this evaluation.

The mechanism for impact to groundwater from the landfill is believed to be vapor migration through the vadose zone and not leachate infiltration. A “gas to energy” program exists at the landfill, where landfill gas is collected from a network of gas wells and conveyed to a nearby Tucson Electric Power plant for use. Removing the landfill gas helps depressurize the landfill, which reduces the potential for landfill gas to migrate into the vadose zone. A soil vapor extraction (SVE) system has operated periodically in the SWDA since 2003, with a total run time of about 760 days. To date, a total of about 490 pounds (lbs) of VOCs have been removed by the SVE system, including about 17 lbs in 2011.

PROJECT APPROACH

The project approach was outlined in our proposal dated December 21, 2011. The project included the following activities:

- Evaluation of 1994 RAP
- Data Evaluation
- Groundwater Modeling
- Development, Screening and Analysis of Remedial Alternatives
- Development of Recommended Alternative

The following sections summarize these activities.

EVALUATION OF 1994 REMEDIAL ACTION PLAN

The 1994 RAP was a combination of the RAP and FS (CDM, 1994). The RAP/FS included proposed remedial objectives (ROs), identification and screening of remedial technologies and process options, development and analysis of remedial alternatives, a recommended remedial action. The 1994 RAP/FS proposed the following ROs:

- Prevent human exposure (through ingestion, inhalation, and dermal adsorption) to contaminated groundwater in excess of Federal Drinking Water Maximum Contaminant Levels (MCLs) for VOCs
- Limit further lateral migration of VOCs in groundwater beyond existing affected area
- Reduce, to the extent practicable, the concentration of VOCs in groundwater within the defined affected area

To achieve these ROs, the RAP/FS considered a range of general response actions, remedial technologies, and process options to develop remedial alternatives. Ten remedial alternatives were developed and analyzed in the FS. Based on detailed and comparative analyses of the alternatives, *Contaminant Mass Control with Treatment and Reinjection* was selected as the preferred remedial action. Specifically, the preferred remedial action recommended continuous groundwater extraction from three wells, treatment by air stripping, and treated water reuse by injection and dust control at the Site. The preferred remedial action was considered conceptual and recommendations were made to build a modular and flexible system so that it could be readily adapted to changes in site conditions observed during operations.

UPDATED WELL INVENTORY

At the request of ADEQ, COT-ES updated the 1991 well inventory that was included in the Remedial Investigation Report (CDM, 1994). The updated well inventory is included in **Appendix E**. The area for the updated well inventory included Township 15, Range 14, Sections 10 (south of Benson Highway), 14, 15, and 22.

DATA EVALUATION

A substantial amount of data and information was reviewed by M&A during this project, including:

- Lithologic logs and well construction schematics
- Water level data
- Water quality data
- Pump and treat operational and cost data
- SVE system operational data

- Well rehabilitation records
- Monitor well sampling records
- Selected groundwater monitoring reports
- Document and files from a previous groundwater modeling effort
- Previous Site investigation reports

The following subsections briefly summarize relevant results of the data evaluation:

Hydrogeologic Conditions

The most comprehensive previous evaluation of hydrogeologic conditions at the Site was conducted by M&A in 1994 (M&A, 1994). At the time of this evaluation, only 12 monitor wells existed at the Site. The 1994 evaluation included an inventory of data from other nearby wells, which were used to supplement the Site-specific information. The principal geologic unit beneath the Site is the Fort Lowell Formation. At the Site, the Fort Lowell Formation is composed of a complex and heterogeneous assemblage of coarse- and fine-grained strata. Two groundwater zones were identified at the Site in Fort Lowell Formation: (1) and upper coarse-grained zone and (2) a lower fine-grained zone.

Since the 1994 study, many more monitor and extraction wells were installed at the Site. M&A reviewed over 60 lithologic logs and well construction diagrams during this project to:

- Assess the areal extent of the previously conceptualized coarse-grained and fine-grained groundwater zones;
- Characterize the heterogeneity of the groundwater zone being actively remediated; and
- Develop a conceptual framework of the hydrostratigraphy and screened intervals of the wells for the groundwater model.

It is important to note that the lithologic logs were prepared by several different geologists. The level of detail and nomenclature reported on the logs varies widely, which limits the degree to which stratigraphic zones can be spatially correlated in some areas. Even with this limitation, M&A believes that the evaluation conducted for this study improved upon the 1994 characterization.

Review of logs during this study broadly confirmed the characterization developed in the 1994 M&A study. The hydrostratigraphy beneath the Site is a complex and heterogeneous assemblage of fine- and coarse-grained zones. **Figures 1 through 4** show hydrogeologic cross-sections that were prepared based on the lithologic logs. **Appendix F** includes lithologic logs for Site wells. Areally extensive continuous zones of fine- and coarse-grained zones are generally not present beneath the Site. The hydrostratigraphic zone where most of the extraction and monitor wells are screened becomes more fine-grained with increasing depth. Additional information about the hydrostratigraphy is presented in the summary of groundwater modeling included in **Appendix B**.

Slug tests and constant rate pumping tests have been conducted in selected wells at the Site. The estimated horizontal hydraulic conductivity of the hydrostratigraphic zones screened by the wells ranges from approximately 1 to 250 feet per day (ft/d) (Clear Creek Associates (CCA), 2004), with a geometric mean value of approximately 23 ft/d. The wide range in estimated horizontal hydraulic conductivities reflects the heterogeneous conditions at the Site. Data do not exist to estimate vertical hydraulic conductivity at the Site. Values used in the model were assumed based on experience on similar sites and typical ratios of horizontal to vertical hydraulic conductivity. Horizontal to vertical hydraulic conductivity ratios ranged from 5:1 for coarse-grained sediments to 100:1 for fine-grained sediments.

Groundwater Conditions

Regional groundwater is currently encountered in the Fort Lowell Formation at a depth ranging from about 185 to 310 feet below ground surface, with an average depth of approximately 210 feet. Groundwater flow is generally to the northwest across the Site. Groundwater levels at the Site have steadily declined over the past 30 years. The rate of decline during this period has been about 0.8 feet per year (ft/y). Water level data over the past 10 years indicate a steeper average decline of about 1.2 ft/y. The water table decline appears to be a regional condition, but some portion of the decline at the Site may be due to local dewatering caused by the remedial extraction. In general, the water table at the Site has declined from the upper coarse-grained groundwater zone into the lower fine-grained groundwater zone. Declining water levels have made sustained operation of the remedial extraction wells challenging. Discussions with Tucson Water staff indicate that water levels in the vicinity of the Site are expected to continue to decline over the next several to many years.

The average horizontal hydraulic gradient at the Site is approximately 0.003 (COT-ES Figure 3 in **Appendix A**). Water level data indicate that areas of upward and downward vertical gradients exist at the Site. In addition, spinner logging in selected wells during previous investigations indicated areas of upward and downward vertical gradients (CCA, 2006). Using the average horizontal gradient of 0.003 and geometric mean horizontal hydraulic conductivity value of 23 ft/d, and assuming an effective porosity of 0.2, the average groundwater velocity at the site is estimated to be on the order of 100 ft/y. Groundwater velocities vary across the Site as a result of variations in horizontal hydraulic conductivity. Based on the current understanding of Site conditions, groundwater velocities probably range from a few ft/y to localized areas of several hundred ft/y.

Based on a review of the groundwater sampling records, groundwater at the Site is aerobic and neutral.

Water Quality

The primary contaminants of concern in groundwater are tetrachloroethene (PCE) and trichloroethene (TCE). COT-ES Figure 5 in **Appendix A** shows the January 2012 extent of PCE and TCE in groundwater at the Site. Based on the January 2012 groundwater sampling event, detectable PCE and TCE concentrations in groundwater ranged from 0.6 to 26.1 micrograms per liter (µg/L) and 0.6 to 12.2 µg/L, respectively. The highest PCE and TCE concentrations were detected in monitor well WR-049A, located in the SWDA. PCE and TCE concentrations beneath the landfill are only characterized by one well, LLM-500. The distribution of PCE in groundwater suggests a broad source area, possibly indicative of a PCE vapor plume in the vadose zone. Laboratory analyses of landfill gas during this study indicated low concentrations of PCE. These data suggest that the landfill gas that migrates into the vadose zone beneath the landfill probably still contains PCE, at least in some areas of the landfill. The existing landfill gas extraction system results in some degree of source control by removing a portion of the landfill gas and reducing pressure in the landfill. The PCE groundwater plume has two distinct lobes that may indicate that more PCE mass flux to groundwater occurs in the southwest and north-central portions of the landfill.

Graphs of extraction rate, PCE, and TCE concentrations were prepared for the extraction wells to determine whether trends have been observed between extraction rate and water quality. These graphs are included in **Appendix C**. In general, there does not appear to be a strong or obvious correlation between extraction rates and PCE and TCE concentrations.

Graphs of water level, PCE, and TCE concentrations in groundwater were prepared for the monitor wells (**Appendix C**). In general, there does not appear to be a strong or obvious correlation between groundwater level and PCE and TCE concentration. Monitor wells with notable decreasing PCE concentrations over the past 10 years or so include WR-373A, WR-374A, R-062A, R-065A, and WR-136B (although recent increasing trends are observed in this well). WR-373A and WR-374A are located near the intersection of Los Reales Road and

Swan Road; concentration decreases in these wells may be the result of remedial extraction from wells with higher pumping rates along Swan Road (e.g., LLM-530), where a notable cone of depression exists based on the January 2012 water level data. R-062A and WR-136B are located in the eastern PCE plume lobe and are adjacent to or near R-062B, a former deep monitor well that was retrofitted to an extraction well in early 2010. R-062B had an increasing PCE concentration trend over the similar period that R-062A and WR-136B had a decreasing PCE concentration trend. There reason for these observed trends is inconclusive based on the available data. Extraction from R-62B appears to have stabilized PCE concentrations.

Monitor wells with notable long-term or recent increasing PCE trends include WR-184A, WR-361A, LLM-500, and WR-049A. WR-184A is located adjacent to extraction well WR-470A; increasing PCE concentrations could be result of WR-470A capturing groundwater with higher PCE concentrations. WR-361A and WR-049A are located in the SWDA; increasing concentrations could indicate increasing PCE vapor mass flux coming from the vadose zone beneath the SWDA or other areas of the landfill near this well. The SVE system in the SWDA was operated in 2011 to abate the observed increasing concentration trends. LLM-500 is a dual vadose zone/groundwater zone monitor well located near the center of the landfill; increasing concentrations could indicate an increasing PCE vapor mass flux near the well, or it could be the result of cross contamination through a break in the well casing within the waste, which was discovered during a video log in March 2013. The well was abandoned in April 2013.

Overall, water quality data collected over the past 5 years or so indicate that the PCE and TCE plumes are relatively stable, with the exception of two areas: (1) in deep groundwater near R-062B and (2) near the SWDA. Response actions to mitigate increasing concentrations in these areas have been implemented. Pumping from R-062B since early 2010 has stabilized PCE concentrations in this well. In 2012, pumping was initiated in WR-355A to expand hydraulic capture near the SWDA. Future water quality data will indicate whether pumping from this well is sufficient to mitigate increasing concentrations near the SWDA.

Seven monitor wells serve as sentinel sampling locations: WR-185A, WR-175A/ LLM-513 (paired wells), WR-176A, WR-172A, and WR-468A/LLM-543 (paired wells) (see Figure 2, Site Map, in **Appendix A**). In general, these individual or paired wells are screened in the upper coarse-grained and lower fine-grained units within the interval from approximately 2,510 to 2,390 feet above mean sea level. PCE and TCE concentrations have been less than detection limits in all of these wells except WR-175A and WR-468A. Low concentrations (approximately 1 µg/L or less) of PCE and TCE have been consistently detected in WR-175A since 2002. PCE concentrations in WR-175A have declined in the last few years and TCE concentrations have been less than detection limits since 2010. Low concentrations of PCE have been periodically detected in WR-468A since about 2005; current PCE concentrations in this well are less than detection limits.

The nearest active water supply wells downgradient of the Site are the Marble Well located approximately 500 feet north of the Site boundary and the Town and Country Well located over 1 mile northwest of the Site boundary. The Marble well was discovered during the updated well inventory (**Appendix E**). The well was previously undiscovered by COT-ES because the well location was listed by the driller in the wrong range, township and section, and was therefore located incorrectly by Arizona Department of Water Resources (ADWR).

COT-ES sampled the Marble well at the wellhead and inside the house at the kitchen faucet on May 7, 2013. Samples were analyzed for VOCs, total organic carbon, selected metals, and selected inorganic constituents. The samples were analyzed under standard chain of custody protocols at Tucson Water Quality Laboratory. The laboratory reports for the samples are included in **Appendix E**. The laboratory analytical results indicated that all VOC concentrations were less than the reporting limit of 0.5 µg/L and applicable Arizona Aquifer Water Quality Standards (AWQSs) and all metals and inorganic constituent concentrations were less than applicable AWQSs. COT-ES provided the sampling results to ADEQ on June 24, 2013. In consultation with and as approved by ADEQ, COT-ES initiated semi-annual sampling of the Marble Well in July 2013. If the concentration of a contaminant from the Los Reales Landfill

exceeds half of its MCL in the Marble Well, the sampling frequency will be increased to quarterly. If the concentration of a contaminant from the Los Reales Landfill exceeds its MCL in the Marble Well, COT-ES will initiate remedial actions to address the exceedence. The sampling program will be eliminated if the well is no longer used for potable supply.

Remedial Operations

Remedial operations began in 1999 with the initiation of extraction in 10 wells. The total volume treated in 2000, the first full year of operation, was approximately 13 million gallons (MG). The extracted groundwater is treated by air stripping and the treated water is either injected into a deep groundwater zone or used for dust control at the Site. Between startup in 1999 and 2011, the number of extraction wells increased to 21, and the total annual volume of groundwater treatment increased to approximately 47 MG. The current system also includes about 50 monitor wells and 3 injection wells. In 2011, the average extraction rate for the system was approximately 92 gallons per minute (gpm), with a runtime of greater 95 percent[2]. In early 2012, the COT-ES brought several new wells online and increased the total extraction rate to as high as 140 gpm. To date, approximately 325 MG of groundwater have been treated and approximately 19 lbs of PCE and 7 lbs of TCE have been removed[3].

During the 12-year operation, fouling and scaling of the extraction wells, in combination with declining regional water levels, have made sustained operation of some of the extraction wells difficult and expensive. Added operational expense resulted from periodic and aggressive rehabilitation measures in the wells. Over the operational period, many of the original extraction wells have been replaced due to low pumping capacity. The challenging operational conditions are not optimal for maintaining effective capture and removal of contaminants from the groundwater. Operations in the future are projected to become more challenging as the water table declines further into fine-grained sediments.

[2] Runtime estimated as the ratio of actual operational time and the available operational time.
[3] PCE and TCE are the primary contaminants of concern at the Site. Other VOCs detected in groundwater at lower frequency and concentrations include 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, benzene, dichlorodifluoromethane, trichlorofluoromethane, and methylene chloride.

Annual operating costs for the system have ranged from approximately $200,000 in fiscal year 2010 to approximately $480,000 in fiscal year 2012. Over the period 2010 through 2012, the average annual cost for routine operation, maintenance, and monitoring is approximately $220,000. The additional costs incurred above this average cost have been primarily for replacement and rehabilitation of the poorly performing extraction wells. Based on information provided by Tucson Water in May 2012 (Wilson, 2012), water levels are projected to continue declining at the Site. In addition, extraction well fouling is expected to continue. The effects of declining water levels and well fouling will lead to additional expenditures in the future for rehabilitation and replacement wells.

Currently, treated water is an economical source of dust control water at the landfill. A nominal 30 MG per year (MGY) are used for dust control and landscape irrigation. If treated water was not available, potable water would need to be purchased for dust control. Currently, 30 MGY of potable water would cost approximately $100,000[4]. The nominal 30 MGY rate equates to approximately 60 gpm of extraction and treatment.

Despite the challenging operational conditions, the current remedial objectives appear to be largely achieved. The plume appears to be relatively stable based on water quality data collected since 2009, and extraction and treatment have reduced the contaminant mass in groundwater compared to conditions that would exist without the remedial operations. One active potable water supply well (the Marble Well) was recently discovered near the Site during an update to the well inventory requested by ADEQ (**Appendix E**). This well was previously undiscovered due to an error in records at the ADWR. Recent sample results from the Marble Well indicated that all VOCs (by Method 8260) were less than 0.5 µg/L and less than applicable AWQSs.

[4] Cost and dust control usage rate provided by COT-ES; potable water would be the primary source of dust control water if treated water was not available; a small volume of blow-down water from the Tucson Electric Power Plant may be available to the landfill.

GROUNDWATER MODELING

Groundwater modeling was conducted to support analysis of selected remedial alternatives. Details of the groundwater modeling are included in **Appendix B**. M&A evaluated the previous groundwater flow and contaminant model constructed by CCA for potential use on this project. After this review, and evaluation of other site data, it was determined that a higher resolution flow and transport model was needed to adequately simulate the declining water table conditions, extraction well capture, and transport of contaminants. A comparison between the M&A and CCA models is included in **Appendix B**. M&A increased the model resolution by reducing the node spacing throughout the model domain and adding layers. The model was calibrated to groundwater level data from the monitor wells over the period 1999 through 2011. Model calibration was limited by the strong boundary head control imparted by the declining water table conditions. Despite this limitation, the model is adequate for comparative simulation of the selected remedial alternatives developed for this project.

DEVELOPMENT, SCREENING, AND ANALYSIS OF REMEDIAL ALTERNATIVES

Potential remedial alternatives for the Site were developed based on project objectives and general accordance with 1997 WQARF requirements. The COT-ES' project objective was to evaluate remedial alternatives that could reduce remedy costs while maintaining a remedy that would be protective of public health and the environment. The 1997 WQARF requirements most relevant to this study are those pertaining to the FS and remedy selection (AAC. R18-7-108).

DEVELOPMENT OF RECOMMENDED ALTERNATIVES

The remedial strategies and remedial measures that make up the remedial alternatives are summarized in **Table 1**. Remedial strategies considered included source control, plume containment, groundwater restoration, monitoring, and institutional controls. Remedial measures included groundwater extraction, enhanced in situ treatment, and ex situ treatment. The following five remedial alternatives were assembled from the remedial strategies and remedial measures:

1. **No Action** – cease all remedial operations including monitoring and eliminating institutional controls.
2. **Monitoring Only** – adopt a monitoring-only remedy and rely on dilution and dispersion to stabilize groundwater quality. Water quality data do not indicate biodegradation of PCE is significantly reducing PCE and daughter product mass. Monitoring of groundwater conditions will ensure that public health and the environment are protected.
3. **Modified Current Operation with Transition to Monitoring Only** – both ex situ and partial enhanced in situ treatment were considered for this alternative.
    A. Ex Situ Treatment – continue current extraction, ex situ treatment (air stripping), and reuse operation; retire and do not replace or aggressively rehabilitate wells that become inoperable due to declining water levels that reach less than 2 feet above pump intake, fouling, or deterioration; transition to a monitoring-only program as wellfield extraction rate decreases; enhance monitoring network as required to characterize future water quality; periodically operate SWDA SVE system to control SWDA source; and leave institutional controls in place. Pumping depth to water in the extraction wells will be monitored for changes that indicate well fouling. Institutional controls include the limitation on well drilling near the Site, which results from consultation between the ADWR and ADEQ on notices of intent to drill a well[5]. Restrictions exist in Arizona statute that limit

[5] See Arizona Revised Statute § 45-596(I), Notice of intention to drill; fee

drilling of exempt wells (less than 35 gpm) within 100 feet of an operating water distribution system of a municipal water provider with an assured water supply designation within an active management area[6]. As long as these institutional controls are in place, they will significantly reduce or eliminate the possibility of drilling water supply wells near the Site. This is important because this remedial alternative will increasingly rely on groundwater monitoring only in the future. Information has not been readily identified that indicates that other institutional controls impact the Site at this time.

B. Partial Enhanced In Situ Treatment – same as Alternative 3A; implement enhanced in situ treatment along the landfill property boundary using bioremediation, chemical oxidation, or a nanoscale zero-valent iron permeable reactive barrier wall; extract groundwater from the leading edge wells (i.e., WR-174A, WR-466A, and WR-470A) and treat using air stripper.

4. **Continued Current Operation** – both ex situ and enhanced in situ treatment were considered for this alternative.
   A. Ex Situ Treatment – continue current extraction, monitoring, ex situ treatment, and reuse operation; replace and rehabilitate extraction wells to maintain scale of remedial operation; leave institutional controls in place.
   B. Partial Enhanced In Situ Treatment – same as Alternative 4A; implement enhanced in situ treatment along the landfill property boundary using bioremediation, chemical oxidation, or a nanoscale zero-valent iron permeable reactive barrier wall; extract groundwater from the leading edge wells (i.e., WR-174A, WR-466A, and WR-470A) and treat using air stripper.
5. **Enhanced Active Remediation** – both ex situ and enhanced in situ treatment were considered for this alternative.
   A. Ex Situ Treatment – same as Alternative 4A; begin operation of a landfill-wide source control remedy using SVE.

[6] See Arizona Revised Statute § 45-454(C) and (D)

B. Partial Enhanced In Situ Treatment – same as Alternative 4A; implement enhanced in situ treatment along the landfill property boundary using bioremediation, chemical oxidation, or a nanoscale zero-valent iron permeable reactive barrier wall; extract groundwater from the leading edge wells and treat using air stripper.

Screening of Alternatives

The remedial alternatives were screened against the following three criteria: (1) Likelihood to achieve current ROs, (2) Implementability, and (3) Rough Order of Magnitude (ROM) costs. **Table 2** summarizes the results of the screening analysis. Alternatives 2 (Monitoring Only), 3A (Modified Current Operation with Transition to Monitoring Only) and 4A (Continued Current Operation) were retained for further analysis. Alternative 1, No Action, was not retained because it would not achieve the current ROs. Alternative 3B, Partial Enhanced In Situ Treatment for the Current Operation and Alternative 4B, Partial Enhanced In Situ Treatment for the Modified Operation, were not retained because pilot testing of the enhanced in situ treatment approaches would be required before their feasibility could be completely assessed. Pilot testing of enhanced in situ treatment could be beneficial in the future if in situ remediation along the property boundary is required. The current network of extraction and monitor wells along the property boundary is particularly amenable to economical pilot testing of enhanced in situ treatment methods. Alternative 5, Enhanced Active Remediation, was not retained because implementing a landfill-wide source control remedy is believed to be impracticable because the extent of current and future waste cells, as depicted on **Figure 5**, limit access to the vadose zone for the necessary characterization work that would be required to evaluate the potential feasibility of SVE and construction and operation of an SVE system.

Analysis of Alternatives

The retained alternatives were further analyzed to assess their feasibility for implementation at the Site. The primary objectives of this analysis were to assess the effect of the declining water table on remedy performance and whether monitoring only is feasible as a Site remedy. Based on evaluation of regional water levels and discussions with Tucson Water staff about future pumping conditions near the Site, the water table is expected to continue declining at the Site over the next several years and possibly longer.

If the water table declines over the next 20 years (the planning timeframe used in this study), it would decline through predominantly silts and clays. As the water table declines, groundwater impacted by PCE and TCE would be move into deeper, fine-grained zones, where the rate of transport would be slow (on the order of feet per year). The effectiveness of the current pump and treat operation is expected to diminish as the water table declines, which will progressively reduce the pumping capacity and hydraulic capture of the extraction wells. Fouling, scaling, and deterioration of the wells could further diminish effectiveness and increase operational costs. Maintaining an effective pump and treat operation as the water table declines into more fine-grained zones would likely require many new, deeper, low flow rate extraction wells. Given the scenario of declining water table conditions and limited effectiveness of deeper extraction wells, it could become cost prohibitive, and probably impracticable, to maintain an effective pump and treat operation at the Site. Therefore, transition to monitoring only may become imminent, and may be the only practicable remedy, unless a yet to be determined remedial approach is identified.

The analysis included an empirical evaluation of existing data, groundwater modeling, and cost analyses. An empirical analysis of existing water level and well construction data was conducted to evaluate Alternative 3A. Groundwater modeling was conducted to evaluate Alternatives 2 and 3A (**Appendix B**). Cost analyses were conducted for Alternatives 3A and 4A. Groundwater modeling was not conducted for Alternative 4A because it is currently the

active remedy at the Site and it has been demonstrated to be effective at achieving ROs and the operational costs are known.

Empirical Evaluation of Future Wellfield Performance

Future remedial wellfield performance empirically evaluated based on available data and assuming that the water table will continue to decline at the current rate (1.2 ft/y) over the next 20 years. This evaluation was conducted to estimate the future operational duration of the extraction wells. **Tables 3 and 4** summarize the data and results of the empirical analysis, respectively[7]. The future operational duration of each extraction well was estimated based on the following information, data, and assumptions:

- January 2012 water level data; the water table elevation at each extraction well was estimated based on a January 2012 water level contour map; interpolated water levels were used because pumping depths to water in the extraction wells are not recorded during operation due to the temporal variability of the depth to water.
- Depth of the pump intakes for each extraction well.
- Extraction wells have an assumed well efficiency[8] of 75 percent.
- Extraction wells become inoperable when the water level in the well drops below 2 feet above the pump intake.

The following observations were made based on the empirical evaluation:

- Average 2011-2012 extraction rates[9] range from 0.1 gpm at WR-376A to 17.8 gpm at LLM-530.

[7] R-062B is not included in **Table 3** because it is screened in a deeper groundwater zone and is not expected to become inoperable due to the declining water table in the next 20 years.
[8] For this study, well efficiency was assumed to be the ratio of water level elevation in the extraction well and the water level elevation in the aquifer formation immediately outside the filter pack. Site-specific data do not exist to estimate well efficiency.
[9] Average extraction rates were assumed to be continuous and computed as the ratio of total volume pumped and operational time.

- Seven extraction wells had an extraction rate less than 2 gpm during 2011 and early 2012.
- Estimated future operational duration of the extraction wells ranges from approximately 2 to 17 years.
- Extraction wells WR-174A, R-061A, LLM-530, WR-376A, and WR-135A have an estimated future operational duration of 5 years or less.
- Fourteen of the 20 extraction wells screened in the shallow groundwater zone are projected to become inoperable in the next 10 years.
- During the next 10 years, the total extraction rate of the remedial wellfield is projected to decline to approximately 35 gpm.
- For seven extraction wells, it appears that sufficient distance exists (greater than 5 feet) between the current pump intake depth and the bottom of the well to lower the pump and prolong well operation.

Groundwater Modeling Evaluation

The groundwater flow and transport model was used to evaluate and compare Alternative 2 and Alternative 3A. **Appendix B** summarizes the model development and the methods and limitation of model calibration. This section of the report summarizes use of the model for comparative evaluation of the two remedial alternatives.

The following model conditions were common to simulation of both alternatives:

- A future simulation period of 20 years (2012 through 2031).
- Two different boundary conditions were simulated - one with declining boundary heads and one with steady boundary heads at 2011 groundwater levels.
- Simulated PCE transport processes included retardation and dispersion
- Attenuation of PCE by natural biodegradation was not simulated. Existing water quality data indicate that widespread and complete natural biodegradation of PCE to

ethene in groundwater is not occurring to a significant degree at the Site. Specifically, the groundwater is typically aerobic, which is usually not conducive for natural biodegradation, and the typical intermediate daughter products of reductive dechlorination of PCE, cis-1,2 dichloroethene and vinyl chloride, are not routinely detected in groundwater at the Site.

- Two constant PCE source areas were assumed beneath the unlined landfill. One source area was assumed to exist beneath the north-central portion of the landfill and was simulated with a constant concentration of 20 µg/L. A second source area was assumed to exist in the SWDA and was simulated with a constant concentration of 30 µg/L.

For Alternative 2, the model was used to simulate groundwater flow and PCE transport in groundwater without operation of the pump and treat system. For Alternative 3A, the model was used to simulate groundwater flow and PCE transport in groundwater with the remedial wellfield initially operating at current extraction rates.

Under Alternative 3A, extraction wells that become inoperable due to the declining water table, severe fouling, or deterioration will be retired and not replaced. This differs from the ongoing remedial operation where extraction wells with severely declining performance are rehabilitated or replaced. In order to simulate the expected decline in remedial extraction for Alternative 3A, the Multi-Node Well 2 (MNW2) package was used. The MNW2 package is a more robust simulator of extraction well operation than the original MODFLOW well package. The MNW2 package was used because it could sustain or progressively reduce the extraction well flow rates as the boundary heads decline, which is an important for projecting the future performance of the modified pump and treat operation under Alternative 3A.

Figures 6 and 7 compare the projected extent of PCE concentration in groundwater above the Arizona Aquifer Water Quality Standard of 5 µg/L (PCE plume) for Alternatives 2 and 3A for both boundary condition simulations. The figures show the concentration contours from

the shallowest model layer that is fully saturated over the plume area at 5-year increments. The model results indicate the following:

- The projected expansion of the PCE plume over the next 20 years for the Monitoring Only alternative is minimal for both declining and steady boundary conditions; the projected extent of the PCE plume in 20 years is within the existing monitor well network.
- The declining water table, combined with continued operation of the remedial wellfield with a progressively declining extraction rate, is projected to result in a reduction in size of the PCE plume compared to current conditions and the Monitoring Only alternative; the size reduction is most pronounced in the western plume lobe south of Los Reales Road and west of Swan Road.
- Remedial extraction along Swan Road is projected to be effective at reducing the extent of the PCE plume.
- Remedial extraction along and north of Los Reales Road is projected to minimally reduce the extent of the eastern PCE plume lobe.

The model results suggest that it would be feasible to transition the current remedy to a Monitoring Only remedy as extraction wells are retired due to poor performance.

Table 4 shows the model-projected decline in remedial wellfield extraction rate and number of operable extraction wells compared to that of the empirical data evaluation for the declining head boundary conditions. This comparison was only done for the declining boundary head simulation because the projected decline in remedial extraction rate for the steady boundary head simulation is minimal. Within the expected resolution of the analysis, the model-projected and empirically-projected future extraction rates and number of operable wells are consistent. The average percentage of remaining pumping and number of operable wells was computed for use in the cost analysis discussed below.

The model-projected decline in remedial wellfield pumping and number of operable extraction wells is more progressive and slower than the empirical analysis because the model is able to reduce extraction rate as the projected water level in the well declines. The average of the empirical evaluation and model results indicate that the total wellfield extraction rate would be less than 10 gpm after 2028 if the water table continues to decline at current rates.

As previously discussed, approximately 60 gpm of clean water supply are needed at the Site for dust control and irrigation. The empirical evaluation and modeling results suggest that this operational rate would be reached in about 2020 (**Table 4**). The model results also indicate that the projected PCE plume migration under the Monitoring Only alternative would be minimal and within the current monitor well network for both steady and declining boundary conditions. Based on these results, the following future operational scheme is projected to be feasible: (1) phase-out pump and treat system from 2013 to 2020 and use treated water for dust control and irrigation, and (2) in 2020 (or at time when total extraction rate drops below 60 gpm), cease pump and treat operation, adopt Monitoring Only remedy, and begin purchasing potable water for dust control and irrigation. This operational scheme will allow sufficient time to collect additional monitoring data to verify the model projections, install additional monitor wells in support of monitoring only, and develop a performance monitoring plan with contingencies to restart active remediation if needed. The number and location of additional monitor wells are provided in the recommendations.

Cost Analysis

Table 5 summarizes an analysis of estimated future remediation costs. The basis for the cost analysis was actual O&M expenditures for the fiscal years 2010 through 2012 provided by the COT-ES. Other key assumptions for each alternative are listed on the table. The analysis included estimating the annual future remedial costs for Alternatives 2, 3A, and 4A. Future remedial costs for Alternative 3A were reduced by an empirical *cost reduction factor*. The *cost reduction factor* was computed as the average of the projected percentage of remaining remedial

extraction and operable extraction wells from the empirical and modeling analyses (**Table 4**). The *cost reduction factor* was only applied to electrical power and contractor costs.

The results of the cost analysis are summarized below:

- The estimated O&M cost over the next 20 years for the current operation (Alternative 4A) is approximately $6,000,000; contractor and sampling, well rehabilitation, and replacement are projected to comprise over 40 percent of future costs.
- The estimated O&M cost over the next 20 years for Monitoring Only (Alternative 2) is approximately $3,400,000; laboratory and potable water costs comprise almost 80 percent of future costs.
- The estimated O&M cost over the next 20 years for the Modified Operation with Transition to Monitoring Only (Alternative 3A) is approximately $3,500,000; laboratory, contractor, and potable water costs comprise over 70 percent of future costs.
- Adopting Alternative 3A, with a progressive transition to Monitoring Only in about 2020, could result in an estimated reduction in future O&M costs of approximately $2,500,000; the majority of this reduction results from less contractor and well rehabilitation and replacement costs.
- The estimated future O&M costs from Alternative 2 and Alternative 3A are similar because the cost of potable water for Alternative 2 during the period 2012 through 2020 ($800,000) is about the same as the difference in cost between Alternative 2 and 3A for the same time period.

SUMMARY AND CONCLUSIONS

This section summarizes the results and conclusions from the study:

HYDROGEOLOGIC/GROUNDWATER CONDITIONS

- Groundwater occurs in a complex heterogeneous assemblage of fine- to coarse-grained sediments within the Fort Lowell Formation; sediments appear to become more fine-grained with increasing depth over the interval screened by most of the extraction wells.
- Groundwater flow is to the northwest; groundwater flow velocities range from a few ft/y to several hundred ft/y, with an estimated average of 120 ft/y.
- Based on evaluation of regional water levels and discussions with Tucson Water staff about future pumping conditions near the Site, the water table is expected to continue declining at the Site over the next several years and possibly longer.

GROUNDWATER QUALITY

- PCE is the primary contaminant of concern because it is the most prevalent compound detected in groundwater and it is distributed over a large area in a relatively low concentration plume; TCE is also detected in groundwater in a relatively localized areas beneath and north of the SWDA.
- The source of PCE and TCE to groundwater is believed to be from vapor transport; sampling of landfill gas during this study indicated low concentrations of PCE, which suggests that a continuing source exists at the landfill.
- Overall, the PCE plume appears to be stable. Areas of recent increasing concentrations include the SWDA (WR-361A and WR-049A, the center of the landfill (LLM-500), and

in deep groundwater at R-062B. Extraction from R-062B appears to have stabilized PCE concentrations in that area.

- Based on data collected since 2009, the current extent of PCE and TCE in groundwater does not appear to pose a wide-spread threat of public exposure to impacted groundwater associated with the Site. The closest active potable water supply well known to exist prior to this study and located downgradient of the Site is the Town and Country Well located over 1 mile from the Site boundary and over one-half mile from the inferred extent of detectable PCE concentrations in groundwater. Groundwater contamination associated with the Site is not considered to be a threat to the Town and Country Well.
- One additional potable water supply well (the Marble Well) was discovered during an update to the well inventory conducted in early 2013. This well was previously undiscovered by COT-ES due to errors in records at ADWR. COT-ES sampled the Marble Well on May 7, 2013 and all VOCs were reported by the laboratory at concentrations less than reporting limits. COT-ES has initiated a semi-annual sampling program for the Marble Well, and will continue the program as long as the well is used for potable supply. Results of the sampling will be provided to the property owner, tenant, and ADEQ.

REMEDIAL OPERATIONS

- In 2011, the average wellfield extraction rate was approximately 92 gpm; the wellfield operated about 95 percent of the available time.
- To date, approximately 325 MG of groundwater have been treated, with the removal of approximately 19 lbs of PCE and 7 lbs of TCE.
- Recent annual O&M costs range from about $200,000 to $480,000, with an average annual cost of about $220,000.
- Treated water is an economical source of dust control water at the landfill; the cost of sufficient potable water for dust control would be about $100,000 per year.

- Future operation of the remedial wellfield is expected to become more challenging and expensive because the water table is expected to continue declining and fouling of the extraction wells is expected to require continued rehabilitation.
- The current remedial operations are achieving the ROs established in the 1994 RAP.

GROUNDWATER MODELING

- The spatial resolution of the existing groundwater model was too coarse to meet project objectives.
- A new groundwater model was constructed and calibrated to historical groundwater levels; limitations exist on use of the model due to limitations noted on model calibration.

REMEDIAL ALTERNATIVES

- Development, screening, and analysis of remedial alternatives lead to the identification of three feasible remedial alternatives: (1) Alternative 4A - continuing current operations, which attempts to maintain extraction in about 20 well and a total wellfield extraction rate between 100 and 140 gpm; (2) Alternative 3A - modifying the current operations by retiring extraction wells that become inoperable due to declining water levels, fouling, or deterioration; and (3) Alternative 2 - monitoring only as a partial transition remedy when combined with Alternative 3A.
- Monitoring Only appears to be a potentially viable remedy at the Site. Groundwater model results indicate that downgradient expansion of the PCE plume over the next 20 years under either declining or steady water table conditions would be relatively minimal. The projected extent of PCE above AWQSs after 20 years is well within the existing monitor well network.

- In 2011, seven extraction wells had an average extraction rate less than 2 gpm, including WR-376A, R-063A, WR-379A, LLM-536, LLM-548, LLM-537, and LLM-549. All of these wells are located on the north side of the landfill along Los Reales Road. The total average extraction rate in 2011 from these seven wells was approximately 5 gpm. Except for WR-376A and WR-379A, all of these wells had PCE concentrations less than AWQSs. All of these wells had TCE concentrations less than AWQS. Using the January 2012 PCE and TCE concentrations from these wells, the total PCE and TCE mass extracted annually from these wells is about 0.1 lbs, or less than 4 percent of the total PCE and TCE mass removed in 2011. Based on this evaluation, these wells do not significantly benefit the remedial operations in achieving ROs.
- The effectiveness of the current pump and treat operation is expected to diminish as the water table declines into more fine-grained hydrostratigraphic zones, which will progressively reduce the pumping capacity and hydraulic capture of the extraction wells. Fouling, scaling, and deterioration of the wells will further diminish effectiveness and increase operational costs. Under declining water table conditions, it could become cost prohibitive, and probably impracticable, to maintain an effective pump and treat operation at the Site. Therefore, transition to a Monitoring Only remedy may become imminent, and may be the only practicable remedy, unless a yet to be determined remedial approach is identified.
- Empirical evaluation of future extraction well pumping and the results of groundwater modeling assuming the water table will continue to decline at current rates indicated that wellfield extraction will progressively decline to less than 10 gpm by 2028.
- Cost analyses indicated that adopting Alternative 3A, and transitioning to Monitoring Only by in about 2020 could reduce future O&M costs by approximately $2,500,000 compared to continuing the current remedial operations; the majority of this cost reduction results from reducing contractor and well replacement/rehabilitation costs.

RECOMMENDATIONS

The following specific recommendations are based on the results of this study:

- Continue the pump and treat operation until the total wellfield extraction rate decreases to less than 60 gpm, which is projected to be in about 2020. From now until 2020, retire extraction wells that become inoperable due to lost pumping capacity from the declining water table, fouling, or deterioration; continue treating groundwater with the air stripper; and use treated water for dust control and irrigation. Transitioning from pump and treat to Monitoring Only over the next 8 years or so is recommended instead of an immediate change to Monitoring Only because additional monitoring data are needed to verify the model projections, install additional monitor wells and collect additional monitoring data to evaluate the efficacy of Monitoring Only, and to develop a contingency plan for restart of active remediation if needed.
- From now until 2020, prioritize and modify remedial extraction as follows:
    - Operate extraction wells along Swan Road including WR-135A, LLM-544, LLM-530, LLM-550, LLM-538, LLM-539, LLM-540, and WR-355A. Site data and groundwater model results indicate that these wells are effective at removing PCE and TCE mass from the groundwater. In addition, operating these wells will initially provide about 55 gpm of dust control/irrigation water based on average 2011 rates. The total extraction rate of these wells is projected to decline due to the declining water table conditions.
    - Operate well R-061A located along Los Reales Road. This well currently has a PCE concentration of approximately 21 µg/L. This well will initially provide about 5 gpm of dust control/irrigation water.
    - Operate the downgradient extraction wells WR-174A, WR-466A, and WR-470A. These wells provide some degree of off-site plume containment and would initially provide about 23 gpm of dust control/irrigation water.

  - Operate deep extraction well R-062B. This well is effective at controlling deep migration of PCE and TCE in the north-central area of the landfill along Los Reales Road.
  - Cease operation of wells extracting less than 2 gpm including WR-376A, R-063A, WR-379A, LLM-536, LLM-548, LLM-537, and LLM-549. These wells currently pump a total of about 5 gpm and are not projected to provide a substantial benefit to the remedy. Continue monitoring water quality in these wells.
  - Cease operation of downgradient extraction well WR-173A because PCE and TCE concentrations in this well are less than AWQSs. Continue groundwater monitoring in WR-173A.
- In 2013, begin process of siting and installing additional monitor wells to enhance monitoring of the PCE and TCE plumes. Beginning the process and installation of these new monitor wells in 2013 will enable sufficient time to collect additional monitoring data to verify the model projections and provide important data to assess the efficacy of a Monitoring Only remedy. **Figure 8** shows two areas where additional monitor wells are recommended, the relative depth and number of monitor wells recommended for each area, and the rationale for proposing new wells in these areas. Monitor wells may be needed in other areas in the future depending on trends observed in water quality.
- Continue the current groundwater monitoring, data evaluation, and reporting program. Incorporate the new monitor wells into the monitoring program. Evaluate the monitoring data to determine whether the monitoring program can be revised to reduce cost while maintaining effectiveness.
- Evaluate VOC concentration trends in vapor and groundwater near the SWDA to determine if periodic source control is needed. If source control is needed, operate the SWDA SVE system as deemed appropriate.
- As agreed to with ADEQ, implement a semi-annual sampling program for the Marble Well for as long as the well is used for potable supply. As part of the program, report sampling results to the owner of the property owner, tenant, and ADEQ. If the

concentration of a contaminant from the Los Reales Landfill exceeds its MCL in a potable water supply well, initiate remedial actions to address the impacts to the well.

- Develop a performance monitoring plan that includes the conditions and criteria under which active remediation would be resumed. The plan will include information on proposed new monitor wells to enhance performance monitoring, criteria for determining unacceptable performance of the selected remedy; indicate when to implement a contingency remedy(ies); and specify at least one contingency remedy which has been determined to be technically feasible/practicable for achieving the Remedial Objectives.

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TABLE 1. REMEDIAL ALTERNATIVES
LOS REALES LANDFILL
CITY OF TUCSON, ENVIRONMENTAL SERVICES

	ALTERNATIVES	SOURCE CONTROL		PLUME CONTAINMENT	GROUNDWATER RESTORATION		MONITORING	INSTITUTIONAL CONTROLS
		Partial [a]	Complete [b]	Leading Edge P&T&D [c]	Property Boundary P&T&D	Property Boundary In Situ Treatment		
1	No Action							
2	Monitoring Only						x	x
3	Modified Current Operation with Transition to Monitoring Only							
	A – Ex Situ Treatment by P&T	x		x	x [d]		x	x
	B – In Situ Treatment by ISB, ISCO, or PRBW [e]	x		x		x	x	x
4	Continue Current Operation							
	A – Ex Situ Treatment by P&T	x		x	x		x	x
	B – In Situ Treatment by ISB, ISCO, or PRBW	x		x		x	x	x
5	Enhanced Active Remediation							
	A – Ex Situ Treatment by P&T		x	x	x		x	x
	B – In Situ Treatment by ISB, ISCO, or PRBW		x	x		x	x	x

Notes:

[a] Partial source control would include periodic operation of the existing soil vapor extraction (SVE) system in the Southwest Disposal Area (SWDA).

[b] Complete source control would include operating the SWDA SVE system and implementing a landfill-wide SVE operation.

[c] P&T&D - Pump, treat, and disposal

[d] For the Alternative 3, wells that become inoperable due to declining water levels or lost capacity due to fouling or well deterioration would not be replaced.

[e] In situ bioremediation (ISB), in situ chemical oxidation (ISCO), or permeable reactive barrier wall (PRBW) with nanoscale zero-valent iron along landfill property boundary; continue P&T operation for leading edge wells.

TABLE 2. SUMMARY OF REMEDIAL ALTERNATIVES SCREENING
LOS REALES LANDFILL
CITY OF TUCSON, ENVIRONMENTAL SERVICES

	ALTERNATIVES	LIKELIHOOD TO ACHIEVE CURRENT REMEDIAL OBJECTIVES	IMPLEMENTABILITY	ROUGH ORDER OF MAGNITUDE COSTS	RETAINED FOR FURTHER CONSIDERATION
1	No Action	Low	Easy	Low	No
2	Monitoring Only	Moderate	Easy	Low	Yes
3	Modified Current Operation with Transition to Monitoring Only				
	A – Ex Situ Treatment by P&T[a]	Moderate to High	Easy	Moderate	Yes[b]
	B – In Situ Treatment by ISB, ISCO, or PRBW[c]	Moderate	Moderate to Difficult	Moderate to High	No
4	Continue Current Operation				
	A – Ex Situ Treatment by P&T	High	Moderate	High	Yes
	B – In Situ Treatment by ISB, ISCO, or PRBW	Moderate	Difficult	High	No
5	Enhanced Active Remediation				
	A – Ex Situ Treatment by P&T	High	Difficult	High	No
	B – In Situ Treatment by ISB, ISCO, or PRBW	Moderate	Difficult	High	No

Notes:

[a] Pump and treat with disposal

[b] Alternative 4A is currently operating at the Site. In the context of WQARF Feasibility Study rules, Alternative 4A is considered the reference remedy and was retained for comparison to other retained alternatives.

[c] In situ bioremediation (ISB), in situ chemical oxidation (ISCO), or permeable reactive barrier wall (PRBW) with nanoscale zero-valent iron along landfill property boundary; continue P&T operation for leading edge wells.

P&T - Pump and treat
WQARF - Water Quality Assurance Revolving Fund

TABLE 3. EVALUATION OF REMEDIAL EXTRACTION WELL OPERATION
LOS REALES LANDFILL
CITY OF TUCSON, ENVIRONMENTAL SERVICES

WELL NAME	EASTING	NORTHING	GROUND SURFACE ELEVATION (ft msl)	TOP OF CASING ELEVATION (ft msl)	ESTIMATED JANUARY 2012 WATER LEVEL ELEVATION AT PUMPING WELL LOCATION [a] (ft msl)	WELL DEPTH (ft bgs)	PUMP INTAKE DEPTH (ft btoc)	PUMP INTAKE ELEVATION (ft msl)	TOP OF SCREEN ELEVATION (ft msl)	WELL BOTTOM ELEVATION (ft msl)	WELL SCREEN SLOT [b]/MATERIAL	LITHOLOGIC STATA SCREENED	DISTANCE BETWEEN PUMP INTAKE AND WELL BOTTOM (ft)	HEIGHT OF WATER COLUMN ABOVE PUMP (ft)	HEIGHT OF WATER COLUMN ABOVE PUMP (WE = 75%) (ft)	HEIGHT OF WATER COLUMN ABOVE WELL BOTTOM (WE = 75%) (ft)	AVERAGE 2011 - 12 PUMPING RATE (gpm)	PROJECTED DURATION OF OPERATION [c] (years)
WR-174A	1,015,895	408,751	2,690	2687.70	2,484.2	221	210	2,478	2,506	2,469	Perf Steel?	sandy gravel; gravelly sand (15 ft); sandy clay; silty sand w/gravel; sandy clay	8	7	5	11	6.6	2
R-061A	1,019,333	408,588	2,715	2711.78	2,492.0	240	228	2,484	2,520	2,475	10; WRSS	gravelly sand; gravel/cobbles w/silt; silty clay	9	8	6	13	5.3	3
LLM-530	1,017,225	408,006	2,700	2698.82	2,484.3	232	223	2,476	2,508	2,468	60; WRSS	gravel and sand	8	8	6	12	17.8	4
WR-376A	1,020,787	408,603	2,721	2718.73	2,491.0	244	238	2,481	2,522	2,477	10; SS?	silty clay to clayey silt (clayey sand 260-275 ft in R-105 log)	3	10	8	10	0.1	5
WR-135A	1,017,256	408,520	2,696	2694.12	2,484.4	230	221	2,473	2,511	2,466	Perf Steel	mostly in sandy clay to clay; top 5 feet more coarse	7	11	8	14	2.2	5
LLM-537	1,017,673	408,594	2,697	2696.03	2,486.0	230	224	2,472	2,507	2,467	60; WRSS	clayey sand (10 ft), sandy silt, clay	5	14	10	14	0.4	7
LLM-536	1,018,135	408,574	2,699	2698.41	2,487.9	230	225	2,473	2,509	2,469	60; WRSS	clayey sand and gravels	4	14	11	14	1.0	7
WR-173A	1,016,972	410,034	2,691	2688.57	2,482.5	223	221	2,468	2,512	2,468	Perf Steel?	gravelly sand (silt) to 195; sandy clay and clay to 223	0	15	11	11	4.8	8
WR-466A	1,019,146	410,054	2,701	2698.24	2,486.2	240	228	2,470	2,506	2,461	60; WRSS	sandy clay, sand 215-220	9	16	12	19	7.5	8
WR-470A	1,019,844	410,033	2,706	2703.20	2,486.9	240	233	2,470	2,506	2,466	60; WRSS	clayey gravelly sand/sandy gravel/sand; silty clay bottom 10	4	17	13	16	9.3	9
LLM-551	1,017,229	407,714	2,698	2696.65	2,486.6	230	227	2,470	2,508	2,469	0.04 / WRSS	silty sand with gravel	1	17	13	13	15	9
R-063A	1,019,730	408,596	2,718	2715.27	2,493.5	245	239	2,476	2,518	2,473	10: wire wrap	sandy gravel w/silt; silty sand; silty clay w/sand; gravel dewatered?	3	17	13	15	0.3	9
LLM-549	1,017,458	408,600	2,697	2694.75	2,485.1	236	227	2,468	2,512	2,462	40; WRSS	dense sandy/clayey silt	6	17	13	18	1.0	9
LLM-544	1,017,222	408,254	2,702	2700.14	2,484.0	240	234	2,466	2,512	2,462	0.06 / WRSS	gravel; clayey gravel/ gravelly clay; clay	4	18	13	17	2	9
LLM-548	1,017,907	408,587	2,699	2697.37	2,486.9	236	229	2,468	2,513	2,463	0.04 / WRSS	sandy silt/silty sand w/gravel and clay	5	19	14	18	0.9	10
WR-379A	1,019,127	408,599	2,710	2707.69	2,490.6	244	238	2,470	2,511	2,466	unk?	no log; use IJ-02; silty gravel w/sand; silt,clay,sand mixture; well graded sand w/gravel	3	21	16	18	1.3	11
LLM-538	1,017,227	407,399	2,693	2691.33	2,488.8	230	225	2,466	2,503	2,463	60; WRSS	silty gravelly sand (10 ft), silt w/sand and gravel	4	22	17	20	9.4	12
LLM-539	1,017,238	407,113	2,692	2690.22	2,490.8	230	226	2,464	2,502	2,462	60; WRSS	clayey silt w/10-30% coarse fraction	3	27	20	22	3.0	15
LLM-540	1,017,244	406,801	2,691	2689.95	2,492.7	230	226	2,464	2,501	2,461	60; WRSS	clayey silt w/20-40% coarse fraction	3	29	22	24	3.7	16
WR-355A	1,017,235	406,353	2,689	2687.54	2,495.0	225	222	2,466	2,518	2,464	SCH 80 0.02 Slot	sand; gravel; clay	2	29	22	23	17.2	17

NOTES:

[a] The January 2012 water table elevations were contoured using Surfer; the approximate water table elevation at the extraction well locations was interpolated based on the contoured water table surface.

[b] Well screen slot size in inches

[c] Projected based on a rate of water table decline of 1.2 feet per year, and assuming that well will become inoperable when water level in well drops to below 2 feet above pump intake.

ft = feet
ft msl = feet above mean sea level
ft bgs = feet below ground surface
ft btoc = feet below top of casing
Perf = perforated
WRSS = wire wrap stainless steel
SS = stainless steel
unk = unknown
SCH = schedule
WE = well efficiency; assumed value to account for seepage face that exists between water level in well and water level in formation outside filter pack
gpm = gallons per minute

TABLE 4. PROJECTED FUTURE REMEDIAL WELLFIELD PERFORMANCE
DECLINING WATER LEVELS
LOS REALES LANDFILL
CITY OF TUCSON, ENVIRONMENTAL SERVICES

YEAR	EMPIRICAL ANALYSIS				GROUNDWATER MODELING				AVERAGE EXTRACTION RATE	AVERAGE PERCENTAGE [b]
	PROJECTED WELLFIELD EXTRACTION RATE (gpm)[a]	PERCENTAGE OF 2012 EXTRACTION RATE	PROJECTED NUMBER OF OPERABLE WELLS	PERCENTAGE OF OPERABLE WELLS	PROJECTED WELLFIELD EXTRACTION RATE (gpm)	PERCENTAGE OF 2012 EXTRACTION RATE	PROJECTED NUMBER OF OPERABLE WELLS	PERCENTAGE OF OPERABLE WELLS		
2012	109	100%	21	100%	109	100%	21	100%	109	100%
2013	109	100%	21	100%	99	91%	21	100%	104	98%
2014	102	94%	20	95%	90	82%	20	95%	96	92%
2015	79	73%	18	86%	79	73%	20	95%	79	82%
2016	79	73%	17	81%	71	65%	19	90%	75	77%
2017	77	71%	16	76%	67	62%	18	86%	72	74%
2018	77	71%	16	76%	64	59%	18	86%	70	73%
2019	71	65%	13	62%	60	55%	17	81%	65	66%
2020	39	36%	10	48%	54	50%	17	81%	46	53%
2021	35	32%	6	29%	48	44%	17	81%	41	46%
2022	35	32%	6	29%	42	39%	15	71%	38	43%
2023	33	31%	5	24%	37	34%	15	71%	35	40%
2024	24	22%	4	19%	33	30%	12	57%	28	32%
2025	24	22%	4	19%	29	27%	10	48%	26	29%
2026	21	19%	3	14%	25	23%	10	48%	23	26%
2027	21	19%	3	14%	22	20%	9	43%	21	24%
2028	0	0%	1	5%	19	17%	9	43%	9	16%
2029	0	0%	1	5%	17	15%	7	33%	8	13%
2030	0	0%	1	5%	15	14%	6	29%	8	12%
2031	0	0%	1	5%	14	13%	5	24%	7	10%

Notes:

[a] gpm = gallons per minute

[b] Average of percentage of 2012 extraction rate and percentage of operable wells for both methods; average percentage used to index future remedial costs.

TABLE 5. ESTIMATED FUTURE OPERATION AND MAINTENANCE COSTS FOR REMEDIAL ALTERNATIVES 2, 3A AND 4A
LOS REALES LANDFILL
CITY OF TUCSON, ENVIRONMENTAL SERVICES

REMEDIAL ALTERNATIVE	O&M COST [a]	BASE COST (x 1,000) [b]	UNIT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL	% of TOTAL COST
2 Monitoring Only	Electrical Power: GW and SVE	$0	year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0%
Assumptions:	Laboratory Costs	$35	year	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$700	20%
Cease P&T operation	Programming and Electrical	$1	year	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$20	1%
Continue monitoring program	Professional Consultant Services	$0	year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0%
Purchase potable water for dust control/irrigation	Contractor (routine O&M services)	$10	year	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$200	6%
	Sampling	$10	year	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$200	6%
	Well Installation/Abandonment	$0	year	$0	$80	$80	$40	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200	6%
	Miscellaneous	$5	year	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$100	3%
	SUBTOTAL	$61	year	$61	$141	$141	$101	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$1,420	
	Potable Water Cost (dust control/irrigation) [c]	$1.67	gpm	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$2,000	58%
	TOTAL		year	$161	$241	$241	$201	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$3,420	

REMEDIAL ALTERNATIVE	O&M COST	BASE COST (x 1,000)	UNIT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL	% of TOTAL COST
3A Modified Current Operation with Transition to Monitoring Only	Electrical Power: GW and SVE	$23	year	$23	$22	$21	$19	$18	$17	$17	$15	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$152	4%
Assumptions:	Laboratory Costs	$35	year	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$700	20%
Pump operable wells until 2020	Programming and Electrical	$25	year	$25	$25	$25	$25	$25	$25	$25	$25	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$1	$212	6%
Shut down P&T system; transition to Monitoring Only in 2020	Professional Consultant Services	$0	year	$0	$0	$25	$0	$0	$25	$0	$0	$25	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$75	2%
Limited well rehabilitation	Contractor (routine O&M services)	$70	year	$70	$68	$64	$57	$54	$51	$51	$46	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$582	17%
Add 5 new monitor wells to enhance monitoring	Sampling	$15	year	$15	$15	$15	$15	$15	$15	$15	$15	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$240	7%
No well abandonment	Well Installation/Abandonment	$0	year	$0	$80	$80	$40	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200	6%
Consultant evaluates system every 3 years	Miscellaneous	$5	year	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$100	3%
Costs decline with extraction rate/no. operating wells	SUBTOTAL	$173	year	$173	$251	$270	$196	$152	$173	$148	$141	$86	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$61	$2,261	
Potable water purchased for dust control after 2019	Potable Water Cost (dust control/irrigation) [c]	$1.67	gpm	$0	$0	$0	$0	$0	$0	$0	$0	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	$1,200	35%
Operate SWDA SVE (6 months every 3 years)	TOTAL		year	$173	$251	$270	$196	$152	$173	$148	$141	$186	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$161	$3,461	
	Cost Reduction Factor [d]			100%	98%	92%	82%	77%	74%	73%	66%	53%	46%	43%	40%	32%	29%	26%	24%	16%	13%	12%	10%		
	Projected Wellfield Extraction Rate [e]			109	104	96	79	75	72	70	65	46	41	38	35	28	26	23	21	9	8	8	7		

REMEDIAL ALTERNATIVE	O&M COST	BASE COST (x 1,000)	UNIT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL	% of TOTAL COST
4A Continue Current Operation	Electrical Power: GW and SVE	$23	year	$23	$23	$43	$23	$23	$43	$23	$23	$43	$23	$23	$43	$23	$23	$43	$23	$23	$43	$23	$23	$580	10%
Assumptions:	Laboratory Costs	$35	year	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$35	$700	12%
Operate P&T system (~100-120 gpm)	Programming and Electrical	$25	year	$25	$25	$25	$45	$25	$45	$25	$45	$25	$45	$25	$45	$25	$45	$25	$45	$25	$45	$25	$45	$680	11%
Maintain 21 extraction wells	Professional Consultant Services	$0	year	$0	$0	$50	$0	$0	$50	$0	$0	$50	$0	$0	$50	$0	$0	$50	$0	$0	$50	$0	$0	$300	5%
Replace/add 2 wells biannually	Contractor (Routine O&M Services)	$70	year	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$70	$1,400	23%
Rehabilitate wells annually	Sampling, Well Rehab and Well Repair	$60	year	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60	$1,200	20%
Operate SWDA SVE (6 months every 3 years)	Well Installation/Abandonment	$0	year	$0	$0	$0	$100	$0	$100	$0	$100	$0	$100	$0	$100	$0	$100	$0	$100	$0	$100	$0	$100	$900	15%
No new monitor wells	Miscellaneous	$10	year	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10	$200	3%
Consultant evaluates system every 3 years	TOTAL	$223	year	$223	$223	$293	$343	$223	$413	$223	$343	$293	$343	$223	$413	$223	$343	$293	$343	$223	$413	$223	$343	$5,960	
	Operate SVE	$20	6 months	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0		
	Replace/Add EWs	$50	per well	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2		
	Programming and Electrical	$10	per well	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2		

Notes:
gpm = gallons per minute
O&M = operation and maintenance
P&T = pump and treat
SWDA = Southwest Disposal Area
GW = groundwater
SVE = Soil vapor extraction
EWs= extraction wells
no. = number

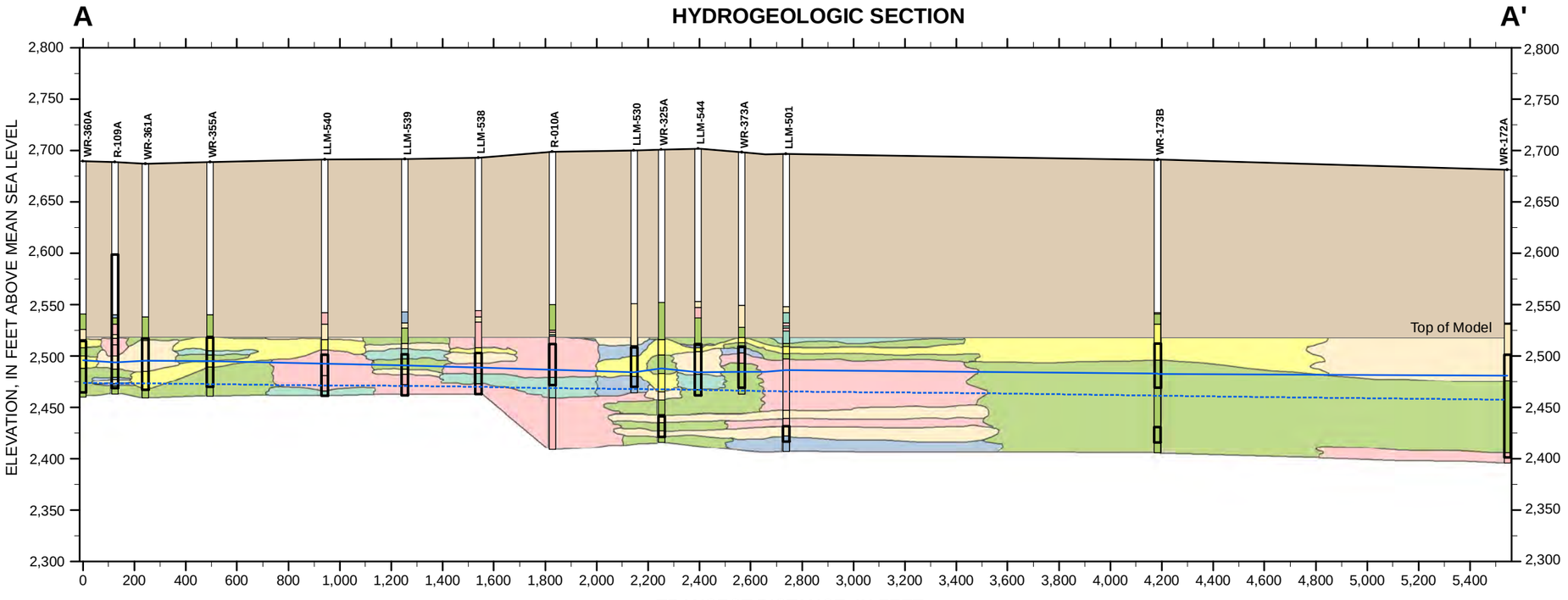
[a] Operations and maintenance (O&M) cost information provided by City of Tucson, Environmental Services Department; inflation was not included in future costs.

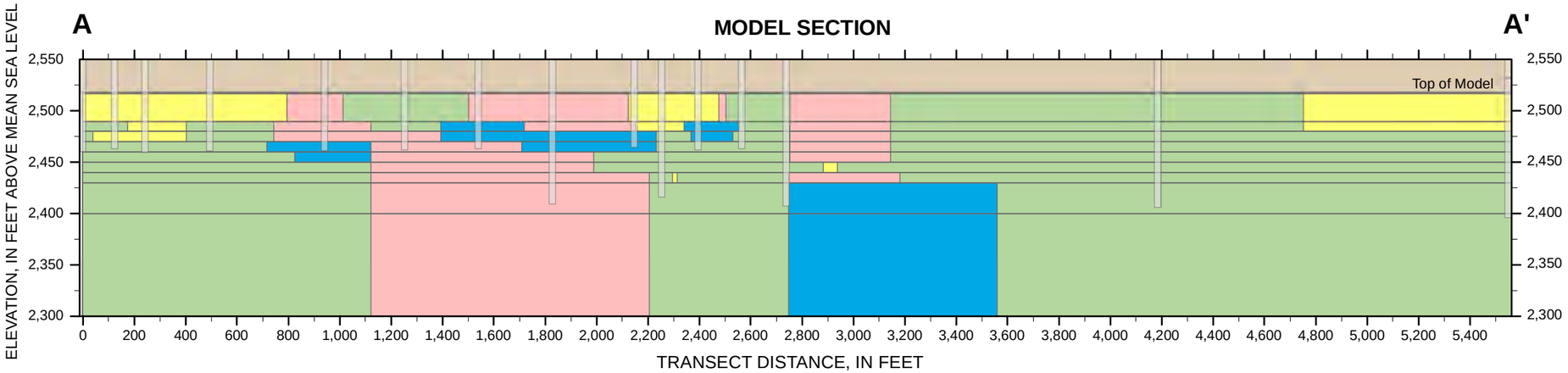
[b] Base costs estimated from 2010 through 2012 expenditures.

[c] If total wellfield extraction rate is below 60 gpm, potable water would need to be purchased for dust control.

[d] Cost reduction factor based on empirical analysis of projected well performance and results of groundwater modeling (See**Table 4**).
System operations and maintenance costs were assumed to decline as system flowrate and number of operating wells decline.

[e] See **Table 4**





EXPLANATION FOR HYDROGEOLOGIC SECTION

Geologic Units

- Predominantly Clay
- Predominantly Silt
- Clayey and Silty Sand
- Predominantly Sand
- Clayey and Silty Gravel
- Predominantly Gravel
- January 2012 Water Table
- 2032 Model-Projected Water Table
- Screened Interval

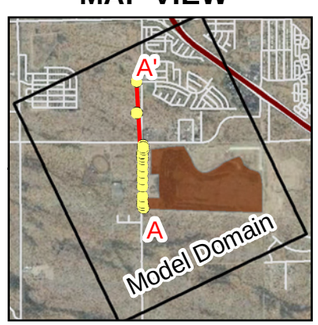
EXPLANATION FOR MODEL SECTION

Model Hydrogeologic Units

- Clay with Varying Amounts of Silt, Sand, and Gravel (7.3, 0.2 - 15.1 feet per day)*
- Silt with Varying Amounts of Clay, Sand, and Gravel (7.6, 0.9 - 21.7 feet per day)*
- Sand with Varying Amounts of Clay, Silt, and Gravel (19.2, 4.4 - 51.1 feet per day)*
- Gravel with Varying Amounts of Clay, Silt, and Sand (100.1, 25.0 - 268.3 feet per day)*
- Model Layer Boundary

*Geometric Mean and Range for Model Hydraulic Conductivity

MAP VIEW



0 250 500 750 1,000

Feet

Vertical Exaggeration: 4

FIGURE 1. HYDROGEOLOGIC AND MODEL SECTION A - A'

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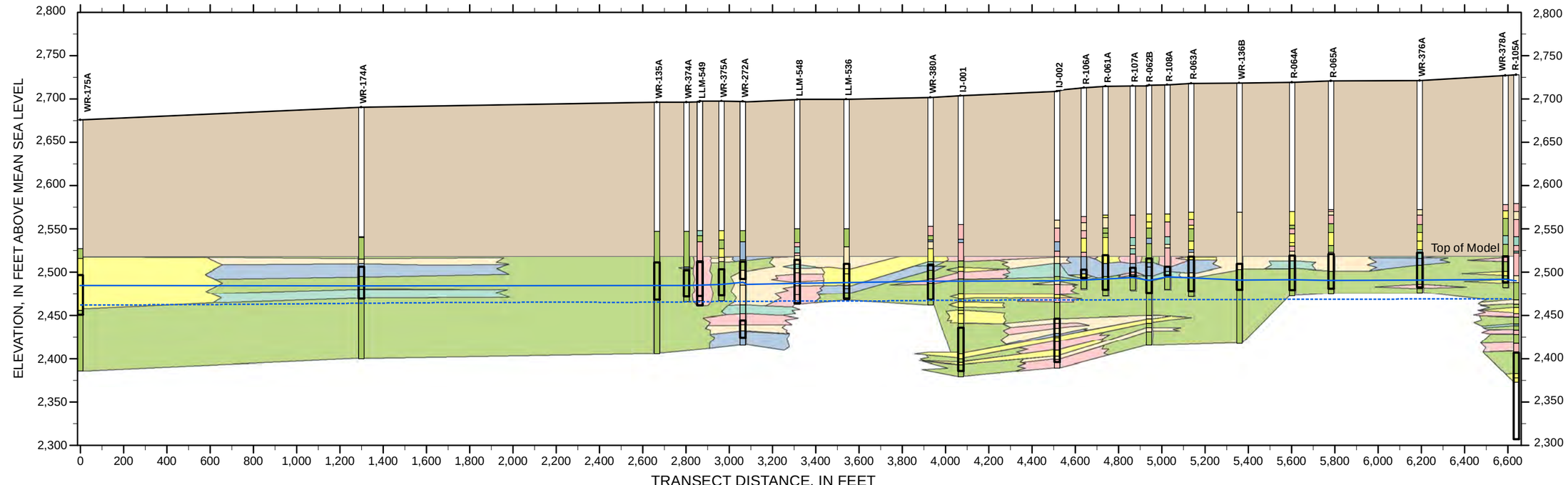
MONTGOMERY & ASSOCIATES

HYDROGEOLOGIC SECTION

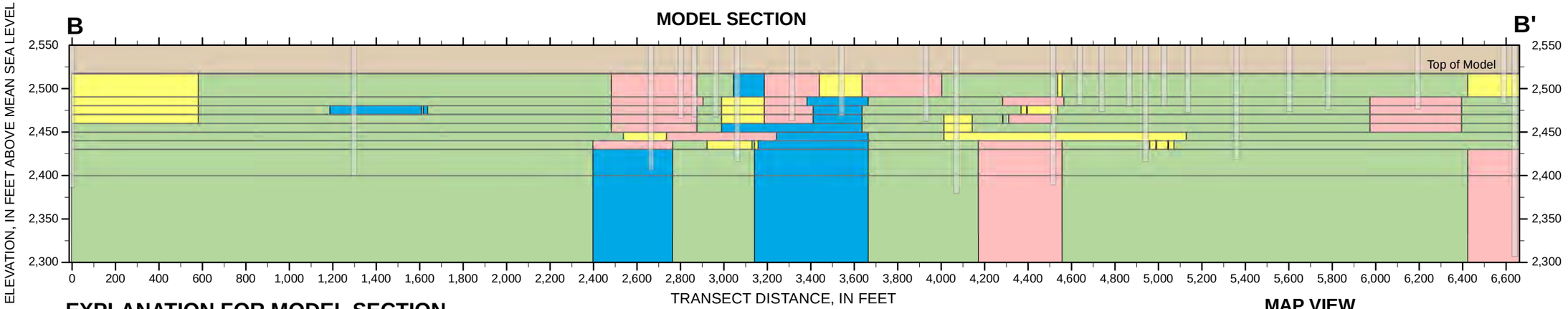


EXPLANATION FOR HYDROGEOLOGIC SECTION

Geologic Units

- Predominantly Clay
- Predominantly Silt
- Clayey and Silty Sand
- Predominantly Sand
- Clayey and Silty Gravel
- Predominantly Gravel
- January 2012 Water Table
- 2032 Model-Projected Water Table
- Screened Interval

MODEL SECTION



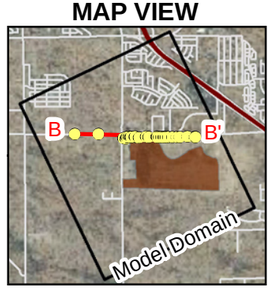
EXPLANATION FOR MODEL SECTION

Model Hydrogeologic Units

- Clay with Varying Amounts of Silt, Sand, and Gravel (7.3, 0.2 - 15.1 feet per day)*
- Silt with Varying Amounts of Clay, Sand, and Gravel (7.6, 0.9 - 21.7 feet per day)*
- Sand with Varying Amounts of Clay, Silt, and Gravel (19.2, 4.4 - 51.1 feet per day)*
- Gravel with Varying Amounts of Clay, Silt, and Sand (100.1, 25.0 - 268.3 feet per day)*
- Model Layer Boundary

*Geometric Mean and Range for Model Hydraulic Conductivity

MAP VIEW



0 250 500 750 1,000
Feet
Vertical Exaggeration: 4

MONTGOMERY & ASSOCIATES

FIGURE 2. HYDROGEOLOGIC AND MODEL SECTION B - B'

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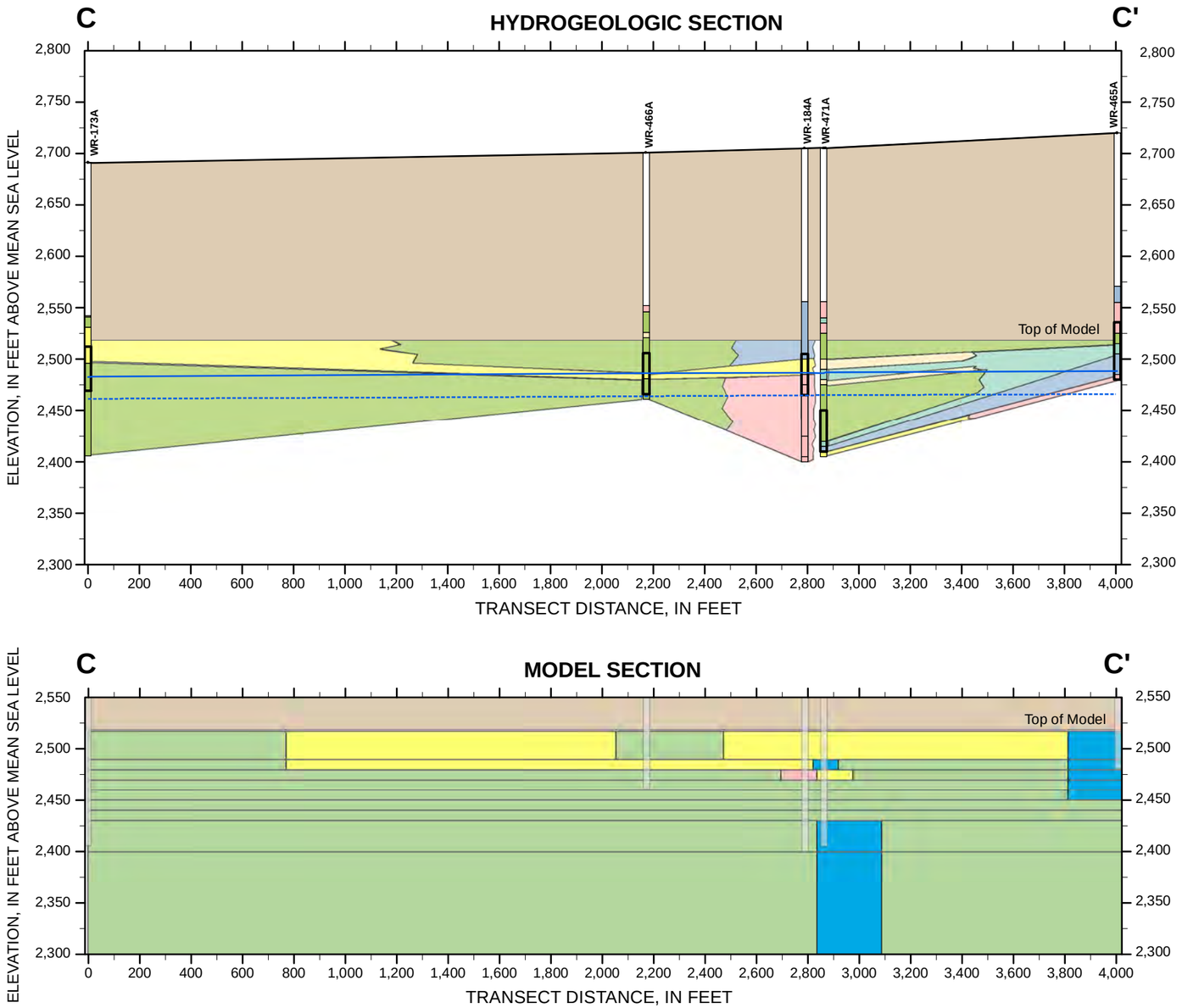


EXPLANATION FOR HYDROGEOLOGIC SECTION

Geologic Units

- Predominantly Clay
- Predominantly Silt
- Clayey and Silty Sand
- Predominantly Sand
- Clayey and Silty Gravel
- Predominantly Gravel
- January 2012 Water Table
- 2032 Model-Projected Water Table
- Screened Interval

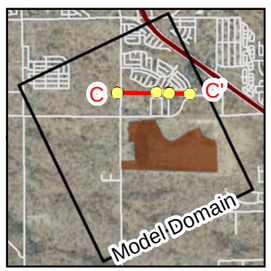
EXPLANATION FOR MODEL SECTION

Model Hydrogeologic Units

- Clay with Varying Amounts of Silt, Sand, and Gravel (7.3, 0.2 - 15.1 feet per day)*
- Silt with Varying Amounts of Clay, Sand, and Gravel (7.6, 0.9 - 21.7 feet per day)*
- Sand with Varying Amounts of Clay, Silt, and Gravel (19.2, 4.4 - 51.1 feet per day)*
- Gravel with Varying Amounts of Clay, Silt, and Sand (100.1, 25.0 - 268.3 feet per day)*
- Model Layer Boundary

*Geometric Mean and Range for Model Hydraulic Conductivity

MAP VIEW



0 250 500 750 1,000

Feet

Vertical Exaggeration: 4

FIGURE 3. HYDROGEOLOGIC AND MODEL SECTION C - C'

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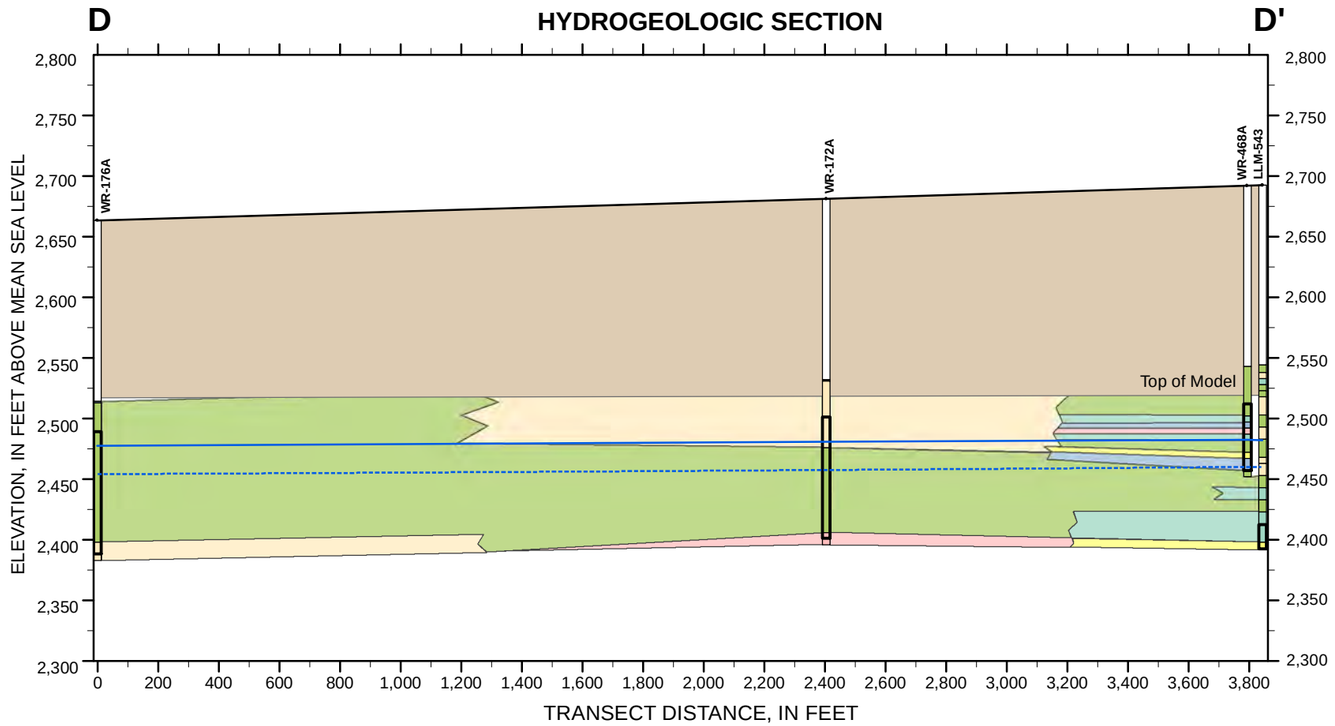
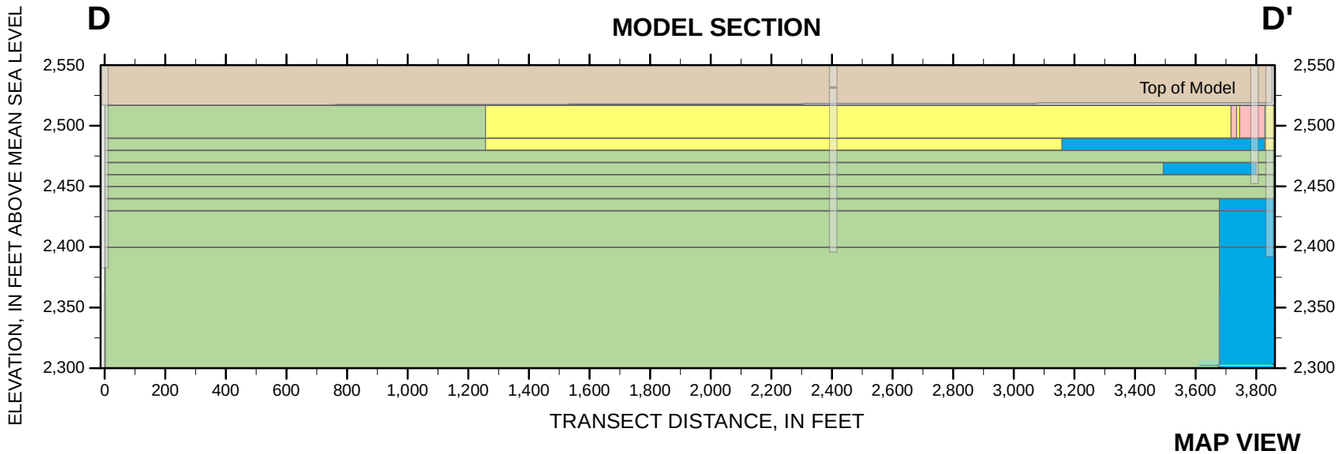
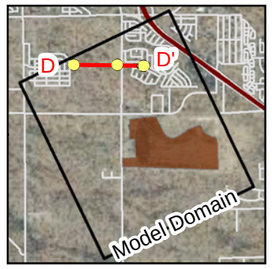
MONTGOMERY & ASSOCIATES





MAP VIEW



EXPLANATION FOR HYDROGEOLOGIC SECTION

Geologic Units

- Predominantly Clay
- Predominantly Silt
- Clayey and Silty Sand
- Predominantly Sand
- Clayey and Silty Gravel
- Predominantly Gravel
- January 2012 Water Table
- 2032 Model-Projected Water Table
- Screened Interval

EXPLANATION FOR MODEL SECTION

Model Hydrogeologic Units

- Clay with Varying Amounts of Silt, Sand, and Gravel (7.3, 0.2 - 15.1 feet per day)*
- Silt with Varying Amounts of Clay, Sand, and Gravel (7.6, 0.9 - 21.7 feet per day)*
- Sand with Varying Amounts of Clay, Silt, and Gravel (19.2, 4.4 - 51.1 feet per day)*
- Gravel with Varying Amounts of Clay, Silt, and Sand (100.1, 25.0 - 268.3 feet per day)*
- Model Layer Boundary

*Geometric Mean and Range for Model Hydraulic Conductivity

0 250 500 750 1,000

Feet

Vertical Exaggeration: 4

FIGURE 4. HYDROGEOLOGIC AND MODEL SECTION D - D'

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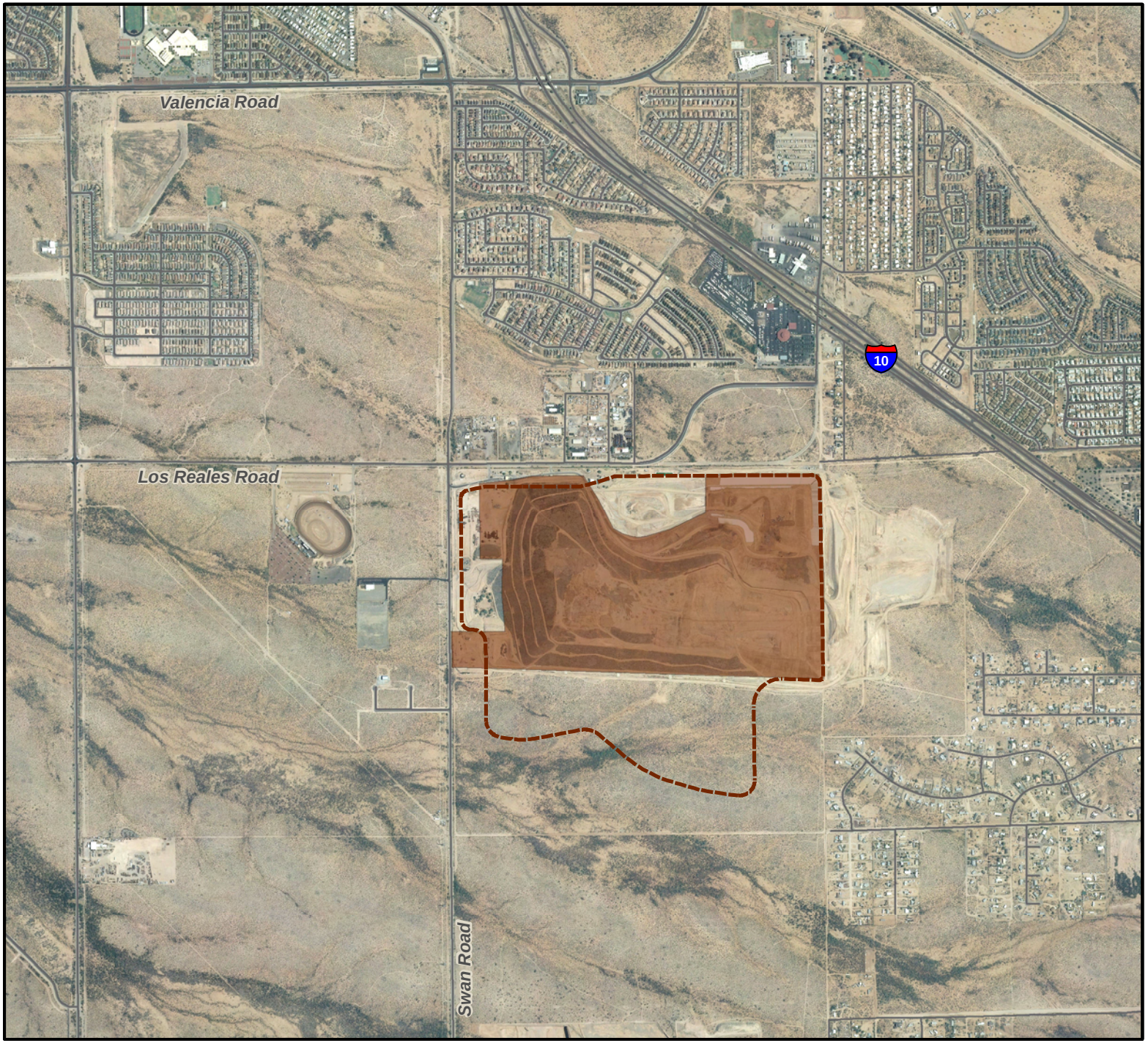
MONTGOMERY & ASSOCIATES

R. 14 E.



T. 15 S.

T. 15 S.

R. 14 E.

EXPLANATION

- Current Waste Limit
- Future Permitted Waste Limit

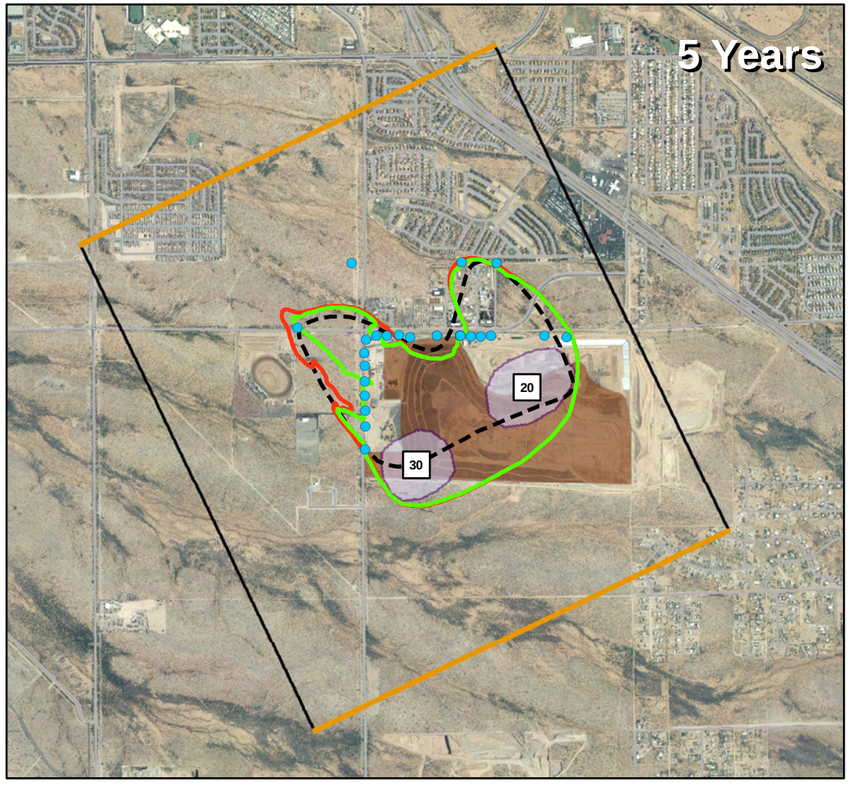
0 1,000 2,000

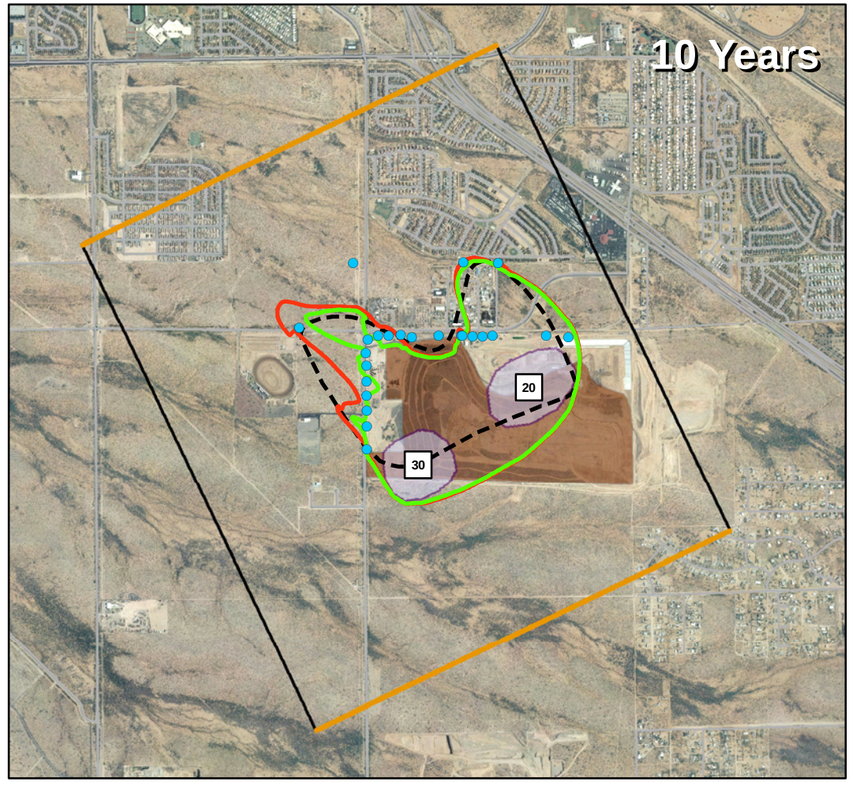
Feet

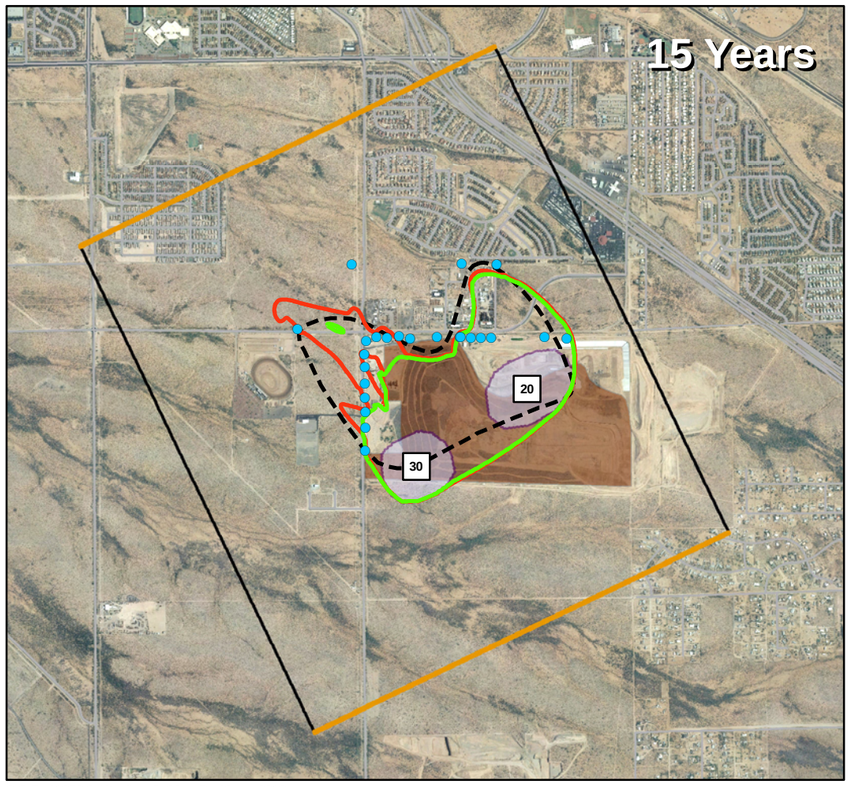
FIGURE 5. CURRENT AND FUTURE PERMITTED WASTE LIMITS, LOS REALES LANDFILL

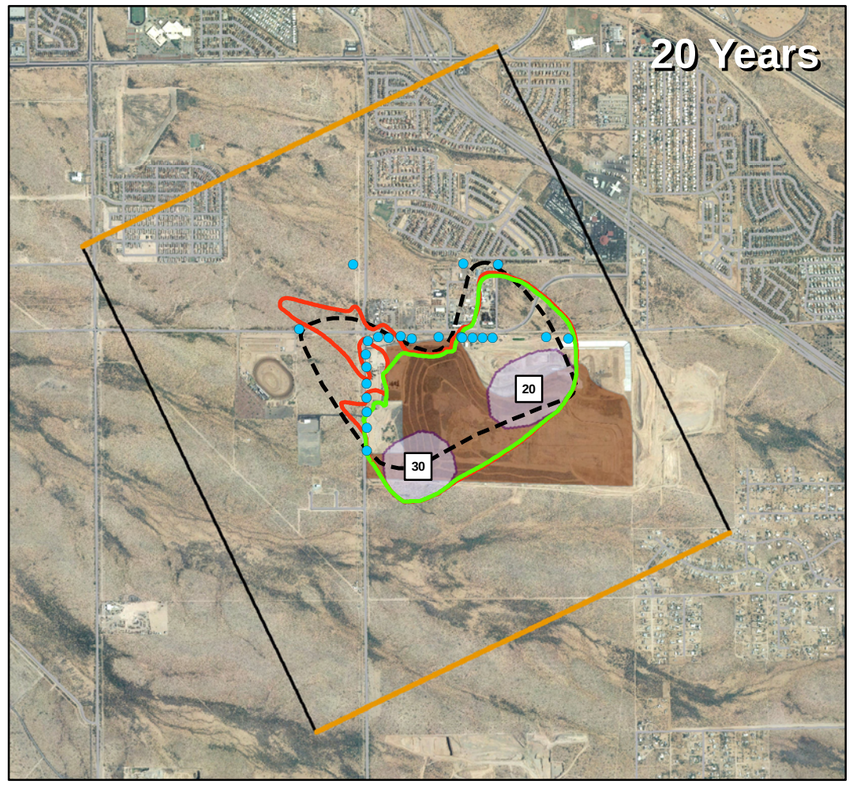
GIS-Tuc\1373.04\WasteLimit\23April2013

MONTGOMERY & ASSOCIATES









EXPLANATION

- Remediation Well
- Specified Head Boundary
- No Flow Boundary
- Los Reales Landfill
- Estimated Extent of 5 µg/L PCE Concentration Contour, January 2012
- Simulated Extent of 5 µg/L PCE Concentration Contour for Alternative 2, Monitoring Only
- Simulated Extent of 5 µg/L PCE Concentration Contour for Alternative 3A, Modified Current Operation
- 20 — Simulated Constant PCE Concentration Source Area in Layers 1 through 3; concentration in µg/L shown in box

Notes:
µg/L = Micrograms per liter
PCE = Tetrachloroethene

N

0 1,000 2,000 3,000
Feet

City of Tucson, Environmental Services
Los Reales Landfill

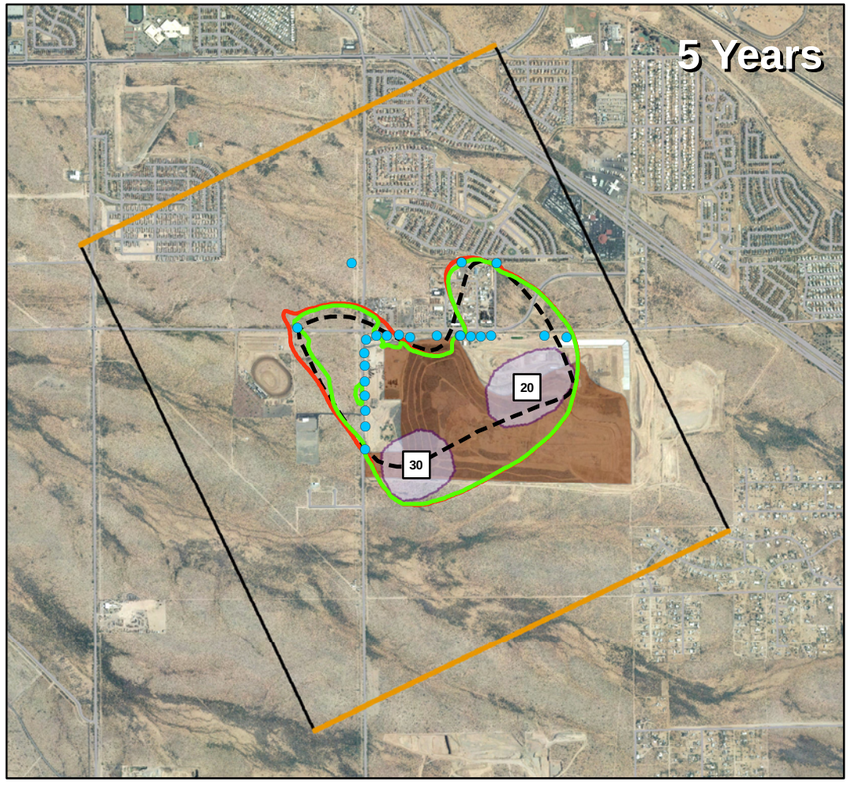
MODEL RESULTS DECLINING HEAD BOUNDARIES

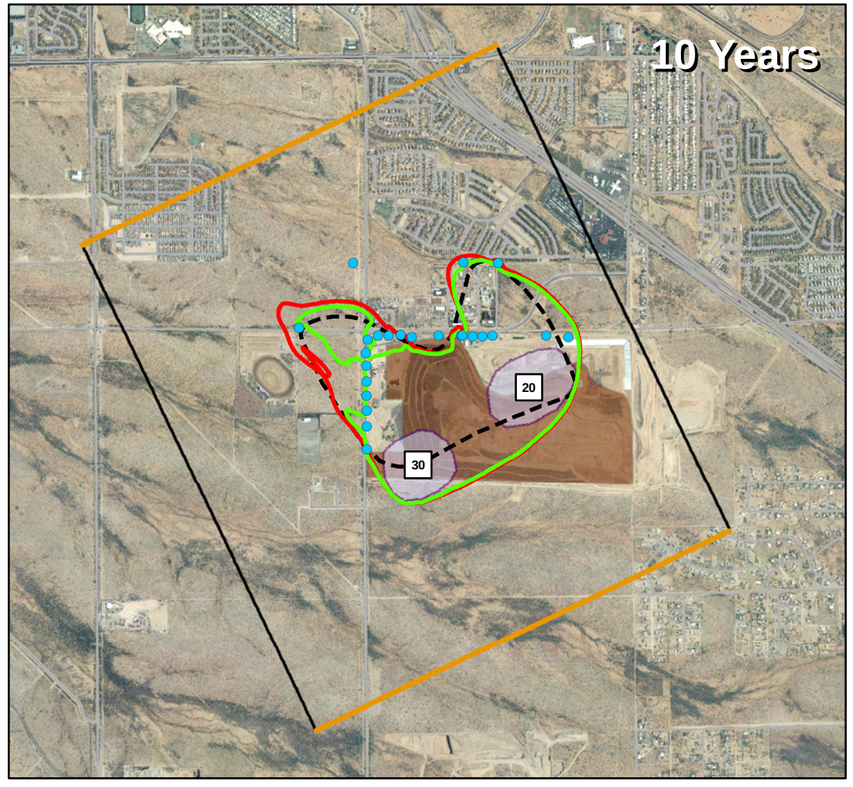
MONTGOMERY & ASSOCIATES
Water Resource Consultants

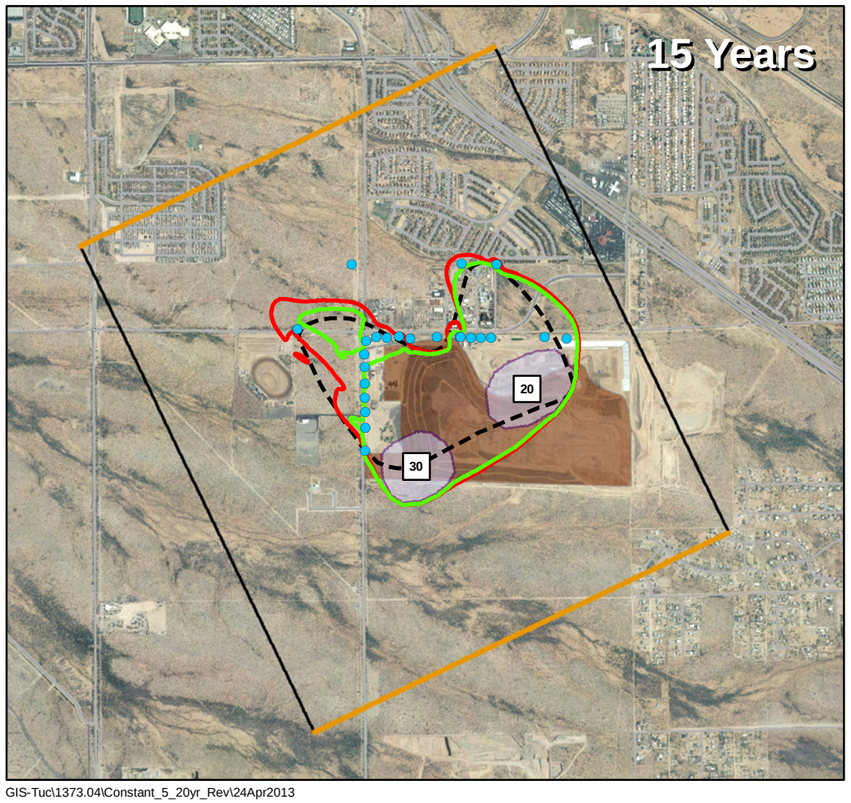
2013

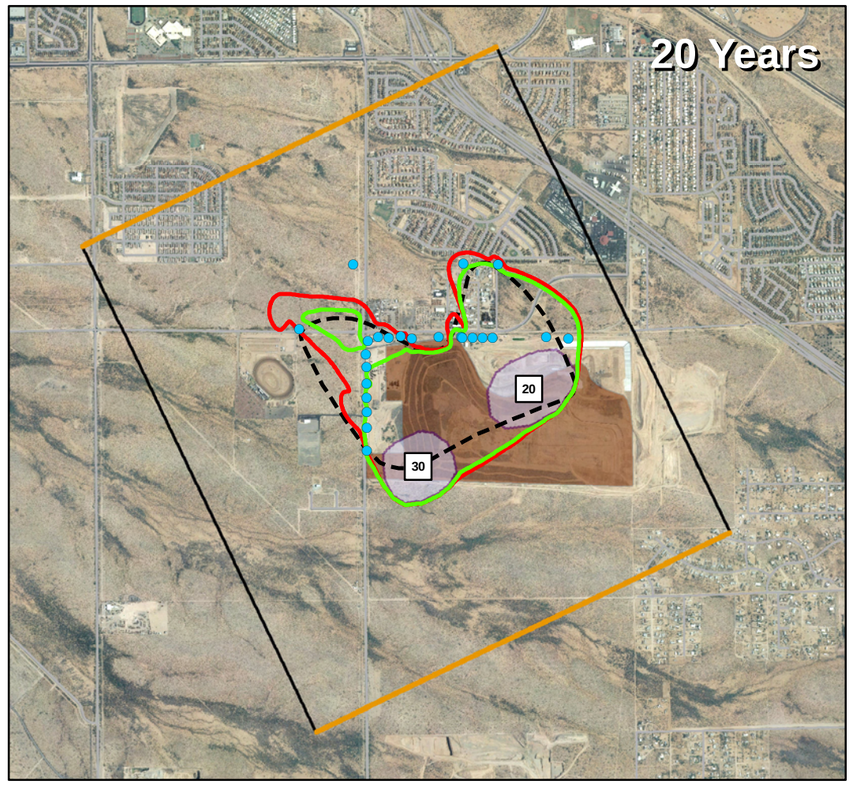
FIGURE 6

GIS-Tuc\1373.04\Decline_5_20yr_Rev\24Apr2013









EXPLANATION

- Remediation Well
- Specified Head Boundary
- No Flow Boundary
- Los Reales Landfill
- Estimated Extent of 5 µg/L PCE Concentration Contour, January 2012
- Simulated Extent of 5 µg/L PCE Concentration Contour for Alternative 2, Monitoring Only
- Simulated Extent of 5 µg/L PCE Concentration Contour for Alternative 3A, Modified Current Operation
- 20 — Simulated Constant PCE Concentration Source Area in Layers 1 through 3; concentration in µg/L shown in box

Notes:
µg/L = Micrograms per liter
PCE = Tetrachloroethene

N

0 1,000 2,000 3,000
Feet

City of Tucson, Environmental Services
Los Reales Landfill

MODEL RESULTS CONSTANT HEAD BOUNDARIES

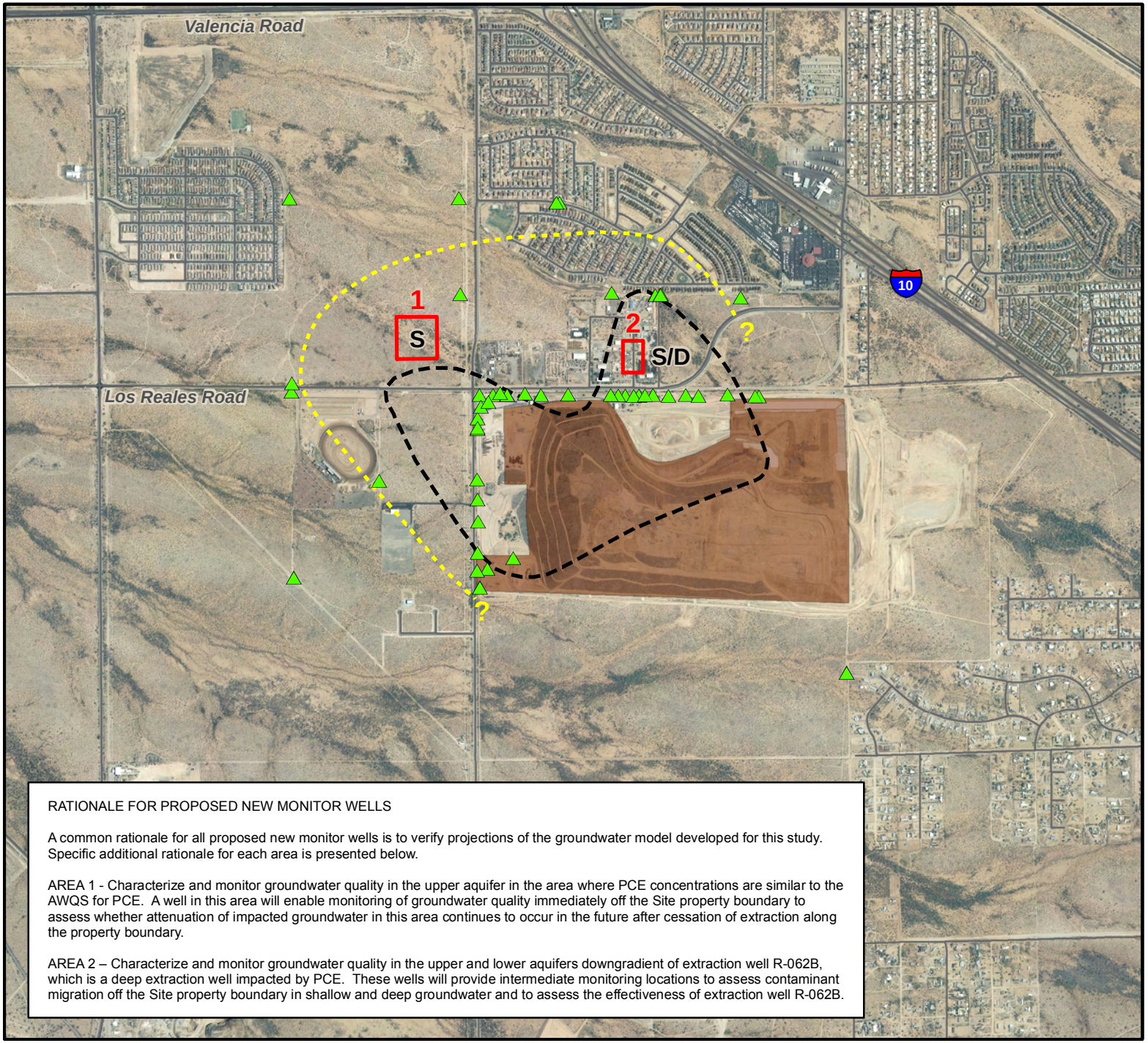
MONTGOMERY & ASSOCIATES
Water Resource Consultants

2013

FIGURE 7

GIS-Tuc\1373.04\Constant_5_20yr_Rev\24Apr2013

R. 14 E.



T. 15 S.

T. 15 S.

EXPLANATION

- Monitor Well
- Los Reales Landfill
- Estimated Extent of 5 µg/L PCE Concentration Contour, January 2012
- 2 — Area where Additional Monitor Well(s) Are Recommended
- S — One Shallow Monitor Well Recommended
- S/D — One Shallow and Deep Monitor Well Recommended
- Inferred Extent of PCE Concentration Above 1 Microgram per Liter Based on 2011 Water Quality Data

Notes:
µg/L = Micrograms per Liter
PCE = Tetrachloroethene

0 1,000 2,000
Feet

RATIONALE FOR PROPOSED NEW MONITOR WELLS

A common rationale for all proposed new monitor wells is to verify projections of the groundwater model developed for this study. Specific additional rationale for each area is presented below.

AREA 1 - Characterize and monitor groundwater quality in the upper aquifer in the area where PCE concentrations are similar to the AWQS for PCE. A well in this area will enable monitoring of groundwater quality immediately off the Site property boundary to assess whether attenuation of impacted groundwater in this area continues to occur in the future after cessation of extraction along the property boundary.

AREA 2 – Characterize and monitor groundwater quality in the upper and lower aquifers downgradient of extraction well R-062B, which is a deep extraction well impacted by PCE. These wells will provide intermediate monitoring locations to assess contaminant migration off the Site property boundary in shallow and deep groundwater and to assess the effectiveness of extraction well R-062B.

R. 14 E.

FIGURE 8. RECOMMENDED AREAS FOR NEW MONITOR WELLS, LOS REALES LANDFILL

GIS-Tuc\1373.04\RecommendedMonwells_Alt\30Aug2013

MONTGOMERY & ASSOCIATES

APPENDIX E

UPDATED WELL INVENTORY, LOS REALES LANDFILL
CITY OF TUCSON, ENVIRONMENTAL SERVICES

APPENDIX E
UPDATED WELL INVENTORY, LOS REALES LANDFILL
CITY OF TUCSON, ENVIRONMENTAL SERVICES

This appendix includes an updated well inventory for the Los Reales Landfill Water Quality Revolving Fund Site (Site). The updated well inventory was prepared at the request of the Arizona Department of Environmental Quality (ADEQ) in their comments to the July 2012 report titled *Evaluation of Remediation Strategies, Los Reales Landfill Water Quality Assurance Revolving Fund Site*. This report was prepared by Montgomery & Associates on behalf of the City of Tucson, Environmental Services (COT-ES) to evaluate alternative remedial strategies for the Site.

Table E-1 summarizes information for 58 wells and exploration bore holes identified in the well inventory area. **Figure E-1** shows the locations of these monitor wells and bore holes. Information for the inventory was obtained from Arizona Department of Water Resources (ADWR), Tucson Water files, COT-ES files, Pima County Assessor's website, historical United States Geological Survey (USGS) topographic maps and interviews with property owners. In cases where wells were unregistered or their location uncertain, COT-ES made an effort to field locate them as noted on the table.

Monitor Wells

A total of 44 monitor wells and exploratory bore holes were identified in the well inventory area, including 24 wells registered to COT-ES. Five of the wells registered to COT-ES were either not installed or there are no records of the wells in COT-ES files. The remainder of the monitor wells and bore holes are registered to the Tucson Truck Terminal (Triple T), Quik Mart, El Paso Energy, or EXXON Corporation.

Public and Domestic Supply Wells

A total of 8 wells were identified as public supply or domestic in the well inventory area. **Table E-2** summarizes groundwater withdrawals reported to ADWR for 3 of the 8 wells. These wells are completed to depths ranging from 400 to 500 feet below land surface (**Table E-1**). One of these wells is owned by the Ray Water Company (Registry ID number 609466), and the other two are owned by Town and Country Mobile Estates (Registry ID numbers 619474 and 619475). According to the property owner, well No. 2 at the Town and Country Mobile Estates is capped and not used due to cavitation or collapse of the borehole. All 3 wells are located over one-half mile from the inferred extent of detectable PCE concentrations in groundwater (COT-ES Figure 2 in **Appendix A**).

Five "exempt" domestic supply wells were identified in in Sections 10, 14, and 22 located near the Site, including the JFG and Racetrack wells located in Section 22, the Benson Estates well located in Section 10, and the Anglo American and Marble wells located in Section 14. These wells are considered exempt because they yield less than 35 gallons per minute (gpm), and information about their use is not required to be reported to ADWR.

The JFJ well and Racetrack well are located approximately 800 feet and 2,200 feet, respectively, west of Swan Road in Section 22 (**Figure E-1**). These wells are either not used or are used for irrigation purposes only according to COT-ES records and interviews with the well owners. Potable water is supplied to the Racetrack property by Tucson Water. Potable water for the JFJ property is supplied by a bottled water service according to the well owner of the JFJ well. A copy of an email from the JFJ well owner confirming the use of bottled water is provided in **Appendix F**. Because the JFJ and Racetrack wells are not used for potable supply, they are not considered wells of concern for the evaluation of remedial alternatives at the Site.

The Benson Estates well is located at approximately 4502 E. Benson Highway, a vacant parcel in Township 15 - Range 14 - Section 10. The well could not be located during a site visit by COT-ES. COT-ES could not reach the parcel owner by telephone to discuss the status of the well. If the approximate location is correct, the well is located over one-half mile from the inferred extent of detectable PCE concentrations, and is not of concern for the evaluation of remedial alternatives.

The owner of the Anglo American well, located at 7090 S. Craycroft Rd., informed COT-ES that the well is not used because the property is connected to Tucson Water. Therefore, it is not considered a concern for the evaluation of remedial alternatives at the Site.

The Marble well, located at 4831 E. Los Reales Road, was discovered during this well inventory update. The well was installed in 2002, but its location was misidentified by the driller as being in Township 14. A copy of the well driller report and well log are included in **Appendix F**. The well is located approximately 500 feet north of the landfill parcel boundary (**Figure E-2**). The well appears to be within a low concentration area (less than 5 micrograms per liter tetrachloroethene concentration) of the Site volatile organic compound plume, but may be screened in a zone beneath the vertical extent of the plume. COT-ES plans to collect a sample from the well in spring 2013 and will provide the analytical results to ADEQ when they are available. Additional evaluation of this well will be conducted after it is sampled.

Unregistered Wells

Two unregistered wells were identified in the well inventory (**Table E-1**). The owners of these wells were listed by ADWR as Ashton Construction Company and Fletcher Conquistador Stables. Neither well could be field located, and neither well was visible on USGS historical topographic maps of the area.

Parcel Survey

At the request of ADEQ, COT-ES prepared **Table E-3 and Figure E-2** to summarize water source information for all non-residential parcels in Sections 14, 15, and 22. COT-ES attempted to verify the on-site water source for each parcel by cross referencing the parcel number with the Tucson Water billing database and performed a field check of current water source(s) for parcels without a Tucson Water connection. Most parcels without a Tucson Water connection were vacant.

TABLE E-1. UPDATED WELL INVENTORY
LOS REALES LANDFILL WATER QUALITY ASSURANCE REVOLVING FUND SITE
TUCSON, ARIZONA

REGISTRY IDENTIFIER	GWSI SITE IDENTIFIER	WELL NAME	CADASTRAL	OWNER NAME	TYPE	WELL DEPTH (ft)	CASING DEPTH (ft)	CASING DIAMETER (in)	PERFORATED INTERVAL (ft bgs)	APPLICATION DATE	INSTALLATION DATE	DEPTH TO WATER (ft msl)	PUMPING RATE (gpm)	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS	COMMENTS	FIELD LOCATED	OWNER ADDRESS	PHONE NUMBER	WELL ADDRESS	CURRENT USE	DATA SOURCE
905297	---	---	D15014010CAA	QUIK MART STORES INC.	GEOTECHNICAL	0	0	0	---	7/28/06		0	0	NO	---	X	509268	3556038	Soil borings	No	8351 EAST BROADWAY BLVD. SUITE #10, Tucson, AZ 85710	(520)298-8929	---	N/A	WR, WF
906230	---	---	D15014010CAA	QUIK MART STORES INC.	MONITOR	220	220	4	---	1/5/07	1/5/07	190	0	NO	A	X	509268	3556038	Abandoned 2007	No	8351 EAST BROADWAY BLVD. SUITE #10, Tucson, AZ 85710	(520)298-8929	---	N/A	WR, WF
904787	---	---	D15014010CAA	QUIK MART STORES INC.	MONITOR	222	217	5	---	5/5/06	5/10/06	200	0	NO	A	X	509268	3556038	Abandoned 2007	No	8351 EAST BROADWAY BLVD. SUITE #10, Tucson, AZ 85710	(520)298-8929	---	N/A	WR, WF
609466	320830110540601	RWC-5	D15014010CAA	RAY WATER CO.	NON-EXEMPT	400	400	12	---	5/27/82	1/1/63	160	250	YES	---	---	509268	3556038	---	Yes	55 W ALAMEDA, Tucson, AZ 85701	---	---	Municipal/Domestic	WR, WF, GWSI
577499	---	---	D15014010CDA	EL PASO ENERGY CORP	MONITOR	100	85	2	85-100	9/27/99	10/30/99	98.00	0.00	NO	---	X	509270	3555633	May be N. of Benson Hwy	No	1001 LOUISIANA ST, Houston TX 77002	(713)420-5947	6005 S. Belvedere Ave. Tucson, AZ 85706	Monitor	WR, WF
577500	---	---	D15014010CDA	EL PASO ENERGY CORP	MONITOR	0	0	0	---	9/27/99		0	0	NO	---	---	509270	3555633	No completion report	No	1001 LOUISIANA ST, Houston TX 77002	(713)420-5947	---	Monitor	WR, WF
577511	---	---	D15014010CDA	EL PASO ENERGY CORP	MONITOR	0	0	0	---	9/27/99		0	0	NO	---	---	509270	3555633	No completion report	No	1001 LOUISIANA ST, Houston TX 77002	(713)420-5947	---	Monitor	WR, WF
640145	---	---	D15014010D00	BENSON ESTATES LLC	EXEMPT	0	0	0	---	7/16/82	---	0	0	NO	---	---	509776	3555741	Parcel Use: Vacant/Residential/Golf/Agricultural. No well visible on property. No answer on any available phone numbers.	No	1015 W PRINCE RD D-139, Tucson, AZ 85705 or 10257 E CALLE COSTA DEL SOL, Tucson, AZ	(520)304-4977 (520)574-2116 (520)398-6383	4502 E. Benson HWY Tucson, AZ 140-32-005C	Unknown	WR, WF, GWSI, PC
619474	320813110534001	No. 1	D15014010DC0	TOWN & COUNTRY ASSOCIATES UC	NON-EXEMPT	450	167	8	167-450	6/14/82	1/1/71	153	35	YES	---	---	509575	3555536	Well is active	Yes	5275 CAMDEN AVE #217 , San Jose CA, 95124	---	4444 E. Benson Hwy	Production/Domestic	WR, WF, FC, PO
619475	320813110534401	No. 2	D15014010DC0	TOWN & COUNTRY ASSOCIATES UC	NON-EXEMPT	500	177	12	177-500	6/14/82	1/1/71	153	35	YES	---	---	509575	3555536	Well is capped due to cavitation (per well owner).	Yes	5275 CAMDEN AVE #217 , San Jose CA, 95124	---	4444 E. Benson Hwy	Production/Domestic	WR, WF, FC, PO
542132	---	EW-3	D15014014ADA	TUCSON TRUCK TERMINAL	MONITOR	100	20	4	20-70	1/25/94	1/31/94	0	0	NO	A	X	511693	3554807	Abandoned 2009	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	N/A	WR, WF
542133	---	EW-1	D15014014ADA	TUCSON TRUCK TERMINAL	MONITOR	140	75	2	77-145	1/25/94	2/1/94	0	0	NO	A	X	511693	3554807	Abandoned 2009	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	N/A	WR, WF
542134	---	EW-4	D15014014ADA	TUCSON TRUCK TERMINAL	MONITOR	159	115	2	77-155	1/25/94	2/2/94	0	0	NO	A	X	511693	3554807	Abandoned 2009	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	N/A	WR, WF
542135	---	EW-2	D15014014ADA	TUCSON TRUCK TERMINAL	MONITOR	125	77	2	77-125	1/25/94	2/3/94	0	0	NO	A	X	511693	3554807	Abandoned 2009	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	N/A	WR, WF
521779	---	---	D15014014ADD	EXXON MOBIL CORP	MONITOR	100	97	4	7-87	7/14/88	7/27/88	0	0	NO	N	X	511691	3554605	---	No	PO BOX 4415, HOUSTON, TX 77210	---	---	---	WR, WF
521780	---	---	D15014014ADD	EXXON MOBIL CORP	MONITOR	60	59	4	9-59	7/14/88	7/27/88	0	0	NO	N	X	511691	3554605	---	No	PO BOX 4415, HOUSTON, TX 77210	---	---	---	WR, WF
522617	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	0	0	0	---	10/12/88	---	0	0	NO	---	---	511691	3554605	No imaged records	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	---	WR, WF
522618	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	0	0	0	---	10/12/88	---	0	0	NO	---	---	511691	3554605	No imaged records	No	5451 Benson HWY	(520)574-0051	5451 Benson HWY	---	WR, WF
515985	---	MW-1	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	265	265	10	199-257	11/5/86	11/21/86	210	10	NO	A	X	511691	3554605	Abandoned 2009	No	5451 Benson HWY	(520)574-0052	5451 Benson HWY	N/A	WR, WF
519443	---	H1	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	70	70	4	20-70	10/22/87	10/28/87	0	0	NO	A	X	511691	3554605	Abandoned 2009	No	5451 Benson HWY	(520)574-0053	5451 Benson HWY	N/A	WR, WF
525820	---	MW-3	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	262	257	14	196-256	9/1/89	9/18/89	207	10	NO	A	X	511691	3554605	Abandoned 2009	No	5451 Benson HWY	(520)574-0054	5451 Benson HWY	N/A	WR, WF
525821	---	MW-2	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	268	268	14	202-262	9/1/89	9/22/89	205	10	NO	A	X	511691	3554605	Abandoned 2009	No	5451 Benson HWY	(520)574-0055	5451 Benson HWY	N/A	WR, WF
515986	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	0	0	0	---	11/5/86	---	0	0	NO	---	---	511691	3554605	No imaged records	No	5451 Benson HWY	(520)574-0056	5451 Benson HWY	Monitor	WR, WF
515987	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	0	0	0	---	11/5/86	---	0	0	NO	---	---	511691	3554605	No imaged records	No	5451 Benson HWY	(520)574-0057	5451 Benson HWY	Monitor	WR, WF
515988	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	MONITOR	0	0	0	---	11/5/86	---	0	0	NO	---	---	511691	3554605	No imaged records	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	Monitor	WR, WF
568555	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	OTHER	300	0	0	---	5/12/98	6/24/98	0	0	NO	A	X	511691	3554605	Geotechnical Boring	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	N/A	WR, WF
583682	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	OTHER	0	0	0	---	10/2/00	---	0	0	NO	---	---	511691	3554605	Geotechnical Boring	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	N/A	WR, WF
521177	---	---	D15014014ADD	TUCSON TRUCK TERMINAL	OTHER	150	0	7	---	5/11/88	5/26/88	0	0	NO	N	X	511691	3554605	Exploration Boring, No Imaged Records	No	5451 Benson HWY	(520)574-0050	5451 Benson HWY	N/A	WR, WF
219962	---	LLM-543	D15014014CAB	COT-ES	MONITOR	300	300	5	280-300	6/15/10	10/18/10	170	0	NO	---	X	510683	3554396	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
902794	---	WR-468A	D15014014CAB	COT-ES	MONITOR	240	235	6	180-235	8/4/05	---	203	0	NO	---	X	510683	3554396	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
575183	320708110525201	R-065A	D15014014CAD	COT-ES	MONITOR	0	0	0	200-240	5/21/99	---	0	0	NO	---	---	510883	3554191	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
591750	---	---	D15014014CCC	MARBLE	EXEMPT	350	320	5	280-320	3/21/02	4/19/02	204.00	0.00	NO	X	X	509270	3555633	Well NOI location misidentified as 141514	Yes	7346 E CALLE DE LA ETERNIDAD	(520)444-7771	4831 E. Los Reales Rd, Tucson, AZ 85756	Domestic	WR, FC, PO
575184	---	---	D15014014CDB	COT-ES	MONITOR	0	0	0	---	5/21/99	---	0	0	NO	---	---	510680	3553980	NOI submitted but well not drilled.	---	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
902791	---	WR-466A	D15014014CDB	COT-ES	MONITOR	240	235	7	195-235	8/4/05	---	205	0	NO	---	X	510680	3553980	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
519858	---	---	D15014014DAD	ANGLO AMERICAN	EXEMPT	0	0	0		12/17/87	---	0	0	NO	---	---	511688	3554200	Well not in use. Jessie Nelson (manager) provided with information on abandonment	Yes	2 INTL. PLAZA #600, Nashville, TN 37217	(520)663-1138	7090 S Craycroft Rd., Tucson, AZ 85756	None	WR, WF, FC, WO
902792	---	WR-465A	D15014014DCA	COT-ES	MONITOR	240	238	6	184.4-240	8/4/05	---	225	0	NO	---	X	511284	3553990	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
902793	---	WR-470A	D15014014DCB	COT-ES	MONITOR	240	20	7	200-240	8/4/05	---	211	0	NO	---	X	511083	3553987	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
902795	---	WR-471A	D15014014DCB	COT-ES	MONITOR	300	295	6	255-295	8/4/05	---	212	0	NO	---	X	511083	3553987	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
527403	320722110525901	WR-184A	D15014014DCB	COT-ES	MONITOR	300	300	6	200-240	3/8/90	8/26/05	185	35	NO	X	X	511083	3553987	Well grouted from 300 to 240 feet bls	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
583856	---	---	D15014014DCC	COT-ES	MONITOR	0	0	0		10/12/00	---	0	0	NO	---	---	511081	3553769	NOI submitted but well not drilled.	---	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WR, WF
527398	320736110533201	WR-172A	D15014015DAA	COT-ES	MONITOR	280	280	6	180-280	3/8/90	10/23/90	182	32	NO	X	X	510078	3554394	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
559121	320723110533402	WR-173B	D15014015DAA	COT-ES	MONITOR	280	275	4	260-275	7/30/96	8/17/96	191	0	NO	N	X	510078	3554394	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
559123	320723110533403	WR-173C	D15014015DAA	COT-ES	MONITOR	205	205	4	190-205	7/30/96	8/20/96	0	0	NO	N	X	510078	3554394	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
527399	320736110535901	WR-176A	D15014015DBB	COT-ES	MONITOR	275	275	6	174-275	3/8/90	10/23/90	0	34	NO	X	X	509469	3554397	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
527400	320711110535901	WR-175A	D15014015DCC	COT-ES	MONITOR	280	280	6	179-225	3/8/90	10/23/90	176	32	NO	X	X	509467	3553774	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR

TABLE E-1. UPDATED WELL INVENTORY
LOS REALES LANDFILL WATER QUALITY ASSURANCE REVOLVING FUND SITE
TUCSON, ARIZONA

REGISTRY IDENTIFIER	GWSI SITE IDENTIFIER	WELL NAME	CADASTRAL	OWNER NAME	TYPE	WELL DEPTH (ft)	CASING DEPTH (ft)	CASING DIAMETER (in)	PERFORATED INTERVAL (ft bgs)	APPLICATION DATE	INSTALLATION DATE	DEPTH TO WATER (ft msl)	PUMPING RATE (gpm)	RGR PUMP DATA	COMPLETION REPORT STATUS	DRILL LOG	UTM X METERS	UTM Y METERS	COMMENTS	FIELD LOCATED	OWNER ADDRESS	PHONE NUMBER	WELL ADDRESS	CURRENT USE	DATA SOURCE
559120	---	---	D15014015DCC	COT-ES	MONITOR	0	0	0	---	7/30/96	---	0	0	NO	N	---	509467	3553774	No Record of well in COT-ES files	---	---	---	---	N/A	WF, WR
559124	---	---	D15014015DCC	COT-ES	MONITOR	0	0	0	---	7/30/96	---	0	0	NO	N	---	509467	3553774	No Record of well in COT-ES files	---	---	---	---	N/A	WF, WR
527402	320723110533401	WR-173A	D15014015DDA	COT-ES	MONITOR	280	280	6	179-222.7	3/8/90	10/23/93	187	32	YES	X	X	510077	3553973	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
566881	---	---	D15014015DDC	COT-ES	MONITOR	0	0	0		2/9/98		0	0	NO	---	---	509873	3553766	No Record of well in COT-ES files	---	---	---	---	---	WF, WR
527401	320710110534401	WR-174A	D15014015DDC	COT-ES	MONITOR	285	285	6	184-221	3/8/90	10/23/90	187	32	YES	X	X	509873	3553766	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
568906	---	USA RACETRACK	D15014022ABB	RACEWAY PARTNERS LLC	EXEMPT	380	20	8	268-373	6/4/98	7/10/98	170	35	NO	X	X	509466	3553569	Well used for Irrigation per owner	Yes	4300 E. Los Reales Rd., Tucson, AZ 85756	(520)940-4884	4300 E. Los Reales Rd., Tucson, AZ 85756	Irrigation	WF, WR, PO
216286	---	LLM-513	D15014022ABB	COT-ES	MONITOR	290	290	5	260-290	8/8/07	1/30/08	0	0	NO	---	X	509466	3553569	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd., Tucson, AZ 85756	Monitor	WF, WR
598990	---	JFJ	D15014022ADB	BOB ERLER	EXEMPT	340	340	6	320-340	5/14/03	8/29/03	176	25	NO	X	X	509874	3553157	Not used for potable per owner.	Yes	3847 Parkdale, San Antonio, TX 78229	(520)663-4028	7600 S. Swan Rd., Tucson, AZ 85756	Unknown	WF, WR, PO
902819	---	WR-469A	D15014022ADB	COT-ES	MONITOR	235	20	10	185-235	8/6/05	---	185	0	NO	---	X	509874	3553157	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
594924	---	---	D15014022ADD	COT-ES	MONITOR	0	0	0		10/3/02	---	0	0	NO	---	---	510078	3552953	NOI submitted but well not drilled.	---	---	---	---	---	WF, WR
527404	320644110535901	WR-185A	D15014022DBB	COT-ES	MONITOR	280	280	6	180-280	3/8/90	1/28/91	172	35	NO	X	X	509471	3552757	---	Yes	4004 S. Park Ave. Tucson, AZ 85714	(520)791-3175	5300 E. Los Reales Rd.	Monitor	WF, WR
Not registered	320748110 525801	---	D151414 ACB	ASHTON CONSTRUCTION CO.	---	605	---	10	225-597	---	12/7/65	180	---	---	---	---	32	111	Water level shown from 1965. Historical USGS maps do not show a well in this area.	No	---		Unknown	Unknown	GWSI, USGS TOPO
Not Registered	320711110 533201	---	D151415 DDD	FLETCHER, CONQ. STABLES	---	300	---	7	---	---	5/18/41	168	---	---	---	---	32.119722(1)	110.892222 (2)	Water level shown taken in 1965. Well reported as dry in 1981 by USGS. Historical USGS maps do not show a well in this area.	No	---		Unknown	Unknown	GWSI, USGS TOPO

WR = ADWR Well Records database
WF = ADWR or COT Well Files
FC = Field Check; well visually located by COT-ES
COT-ES = City of Tucson-Environmental Services
USGS TOPO = Historical topographic map for Tucson area.
PC = Pima County Assessors website
"------ = Information not available
PO = Property Owner; COT-ES interviewed owner or manager
GWSI = Groundwater Site Inventory database
ft = Feet
in = Inches
ft bgs = Feet below ground surface
ft msl = Feet above mean sea level
gpm = Gallons per minute

TABLE E-2. REPORTED GROUNDWATER WITHDRAWAL FOR NON-EXEMPT WELLS
LOS REALES LANDFILL WATER QUALITY ASSURANCE REVOLVING FUND SITE

REGISTRY ID	WELL ID	CADASTRAL	WELL DEPTH (ft)	PERFORATED INTERVAL (ft bgs)	ANNUAL WITHDRAWAL IN ACRE-FEET (AF)														
					1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
619474	No. 1	D15014010DC0	450	167-450	115.00	144.00	109.00	108.00	94.00	100.00	103.00	97.92	100.17	52.41	102.98	105.08	113.50	124.12	158.65	201.79
619475	No. 2	D15014010DC0	500	177-500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.85	44.98	10.48	0.13	0.00	0.27	0.27	15.45
609466	RWC-5	D15014010CAA	400	----	57.70	64.68	55.61	60.45	75.42	60.82	67.18	74.55	52.18	48.10	128.97	92.57	82.87	122.90	131.78	131.59

REGISTRY ID	WELL ID	CADASTRAL	WELL DEPTH (ft)	PERFORATED INTERVAL (ft bgs)	ANNUAL WITHDRAWAL IN ACRE-FEET												TOTAL (AF)
					2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
619474	No. 1	D15014010DC0	450	167-450	119.88	143.76	121.15	0.00	130.32	131.76	141.23	419.52	139.14	138.10	104.60	97.66	3517
619475	No. 2	D15014010DC0	500	177-500	5.96	12.18	0.00	0.00	10.00	10.50	0.00	0.00	0.00	0.00	0.00	0.00	127
609466	RWC-5	D15014010CAA	400	----	169.48	155.89	13.82	18.18	34.34	35.57	29.16	0.00	0.00	0.00	0.00	0.00	1764

ft = Feet
ft bgs = Feet below ground surface
---- = Information not available

Source: Arizona Department of Water Resources website: www.azwater.gov

TABLE E-3. CONNECTION TO TUCSON WATER AND ON-SITE WELL USE
LOS REALES LANDFILL PARCEL INVENTORY AREA

ID	ZONING	PARCEL STREET NUMBER	PARCEL DIRECTION	PARCEL STREET NAME	JURISDICTION	TOWNSHIP RANGE AND SECTION	ON-SITE WELL	WELL USE	CONNECTION TO TUCSON WATER	POTABLE WATER SOURCE	OWNER NAME	OWNER ADDRESS 1	OWNER ADDRESS 2	OWNER ADDRESS 3	ZIP CODE	PARCEL	PRESENT PARCEL USE
1	C-2	0			TUCSON	151410E	No		No	Unknown	LANDMARK TITLE TR 7690-T	ATTN: BENSON ALVERNON WAY PROPERTIES	4564 E CAMP LOWELL DR	TUCSON AZ	857121282	140327150	Vacant
2	C-2	0			TUCSON	151410E	No		No	Unknown	LANDMARK TITLE TR 7690-T	ATTN: BENSON ALVERNON WAY PROPERTIES	4564 E CAMP LOWELL DR	TUCSON AZ	857121282	140327160	Vacant
3	I-1	6065	S	ANTRIM LP	TUCSON	151410E	No		No	Unknown	FNBN-RESCON I	4191 2ND ST S	SAINT CLOUD MN		563013761	14032097A	Vacant
4	I-1	6085	S	ANTRIM LP	TUCSON	151410E	No		No	Unknown	FNBN-RESCON I	4191 2ND ST S	SAINT CLOUD MN		563013761	14032098A	Vacant
5		6150	S	ANTRIM LP	UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60248	ATTN: STARDUST - CANTERA INC	6730 N SCOTTSDALE RD STE 230	SCOTTSDALE AZ	852534416	140327120	Vacant
6	I-1	6084	S	ANTRIM LP	TUCSON	151410E	No		No	Unknown	FNBN-RESCON I	4191 2ND ST S	SAINT CLOUD MN		563013761	14032087A	Vacant
7		6001	S	ALVERNON WY	TUCSON	151410E	No		No	Unknown	PIMA COUNTY	FLOOD CONTROL DISTRICT			0	14032001C	Vacant
8	I-1	6115	S	ANTRIM LP	TUCSON	151410E	No		No	Unknown	FNBN-RESCON I	4191 2ND ST S	SAINT CLOUD MN		563013761	14032099A	Vacant
9	I-1	6114	S	ANTRIM LP	TUCSON	151410E	No		No	Unknown	FNBN-RESCON I	4191 2ND ST S	SAINT CLOUD MN		563013761	14032086A	Vacant
10	I-1	6133	S	ANTRIM LP	TUCSON	151410E	No		No	Unknown	FNBN-RESCON I	4191 2ND ST S	SAINT CLOUD MN		563013761	14032100A	Vacant
11	I-1	6132	S	ANTRIM LP	TUCSON	151410E	No		No	Unknown	FNBN-RESCON I	4191 2ND ST S	SAINT CLOUD MN		563013761	14032085A	Vacant
12		0			TUCSON	151410E	No		No	Unknown	BROWN KRISTOFOR N	6801 LEISURE TOWN RD APT 70	VACAVILLE CA		956889444	14032002J	Vacant
13		6184	S	COLUMBUS BL	TUCSON	151410E	No		No	Unknown	CITY OF TUCSON				0	14032002F	Vacant
14		4101	E	VALENCIA RD	TUCSON	151410E	No		Yes	TW	SUNNYSIDE SCHOOL DISTRICT NO 12				0	14032003A	School
15	I-1	0			TUCSON	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60137	ATTN: RED POINT DEVELOPMENT INC	8710 N THORNYDALE RD STE 120	TUCSON AZ	857425032	14032717A	Vacant
16	I-1	6307	S	ALVERNON WY	TUCSON	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60137	ATTN: RED POINT DEVELOPMENT INC	8710 N THORNYDALE RD STE 120	TUCSON AZ	857425032	140327180	Vacant
17	I-1	6391	S	ALVERNON WY	TUCSON	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60137	ATTN: RED POINT DEVELOPMENT INC	8710 N THORNYDALE RD STE 120	TUCSON AZ	857425032	140327190	Vacant
18	C-2	0			TUCSON	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60137	ATTN: RED POINT DEVELOPMENT INC	8710 N THORNYDALE RD STE 120	TUCSON AZ	857425032	14032720A	Vacant
19	C-2	0			TUCSON	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60137	ATTN: RED POINT DEVELOPMENT INC	8710 N THORNYDALE RD STE 120	TUCSON AZ	857425032	14032723A	Vacant

TABLE E-3. CONNECTION TO TUCSON WATER AND ON-SITE WELL USE
LOS REALES LANDFILL PARCEL INVENTORY AREA

ID	ZONING	PARCEL STREET NUMBER	PARCEL DIRECTION	PARCEL STREET NAME	JURISDICTION	TOWNSHIP RANGE AND SECTION	ON-SITE WELL	WELL USE	CONNECTION TO TUCSON WATER	POTABLE WATER SOURCE	OWNER NAME	OWNER ADDRESS 1	OWNER ADDRESS 2	OWNER ADDRESS 3	ZIP CODE	PARCEL	PRESENT PARCEL USE
20	C-2	3955	E	VALENCIA RD	TUCSON	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60137	ATTN: RED POINT DEVELOPMENT INC	8710 N THORNYDALE RD STE 120	TUCSON AZ	857425032	140327220	Vacant
21	C-2	3925	E	VALENCIA RD	TUCSON	151410E	No		No	Unknown	FIDELITY NATIONAL TITLE TR 60137	ATTN: RED POINT DEVELOPMENT INC	8710 N THORNYDALE RD STE 120	TUCSON AZ	857425032	140327210	Vacant
22	CB-2	4500	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151410E	Unknown		No	Unknown	4500 E BENSON HIGHWAY LLC	4500 E BENSON HWY	TUCSON AZ		857067906	14032005A	Business
23	R	4502	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151410E	Unknown		No	Unknown	DAM DAVIS	10257 E CALLE COSTA DEL SOL	TUCSON AZ		857475173	14032005C	Vacant
24	CB-2	0			UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	ADAMSON LARRY R 25% & ADAMSON	HAROLD D JR 25% & BAUM FRED A 7% ET AL	30 E CALLE CLARAVISTA	TUCSON AZ	857164907	14032007D	Vacant
25	CB-2	4545	E	VALENCIA RD	UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	EIDAL JACQUELINE TR 40/96 & ANDERSON	MARY DIANE 10/96 & MCGARRY MILTON & JOAN	22/96 & MCGARRY MARTIN M 8/96	6220 N CAMINO ESCALANTE, TUCSON, AZ	857183014	14032006B	Vacant
26	CB-2	4685	E	VALENCIA RD	UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	DIAMOND SHAMROCK ARIZONA INC	ATTN: REAL ESTATE DEPT	1 VALERO WAY	SAN ANTONIO TX	782491616	14032006E	Business
27	CB-2	4454	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	TRI-S WALL SYSTEM INC	15615 E WANDERING CREEK PL	VAIL AZ		856416098	140320090	Vacant
28	CB-2	4300	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	CHIEN & LU VOYAGER FAMILY LP (THE)	19600 FARWELL AVE	SARATOGA CA		950700000	140320080	Vacant
29	CB-2	4278	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151410E	Yes	Monitoring	No	Unknown	QUIK MART STORES INC	8351 E BROADWAY BLVD	TUCSON AZ		857104052	14035206A	Business
30	CB-2	0			UNINCORPORATED PIMA COUNTY	151410E	Yes	Potable		Unknown	RAY WATER CO	ATTN: RHONDA MALLIS ROSENBAUM	414 N COURT AVE	TUCSON AZ	857011019	140352050	Business
31	CB-2	4240	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	DURAZO ARTURO & HILDA JT/RS	5968 S REX STRAV	TUCSON AZ		857060000	14035206B	Business
32	CB-2	4180	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151410E	No		No	Unknown	PRESSNALL DON COLIN	4900 S CACTUS WREN AVE	TUCSON AZ		857461008	140352030	Vacant
1	CB-2	5383	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151414E	Yes	Monitoring	No	None	TUCSON TRUCK TERMINAL INC	5451 E BENSON HWY	TUCSON AZ		857569601	14039041A	Business/Parking
2	TR	6660	E	CRAYCROFT RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	WEINGATE BILLIE ANNE	6660 S. CRAYCROFT RD	TUCSON AZ		85756	14039039B	RV Lot. Per owner, water source is TW and there is no well
3	CB-2	7040	S	CRAYCROFT RD	UNINCORPORATED PIMA COUNTY	151414E	Yes	Not Used	Yes	TW	GREATER ARIZONA AUTO AUCTIONS INC	7090 S CRAYCROFT RD	TUCSON AZ		857569709	14039048B	Business
4	Unknown	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	PIMA COUNTY				0	140397360	Vacant
5	CB-2	7090	S	CRAYCROFT RD	UNINCORPORATED PIMA COUNTY	151414E	Yes	Not Used	Yes	TW	GREATER ARIZONA AUTO AUCTIONS INC	7090 S CRAYCROFT RD	TUCSON AZ		857569709	14039050A	Business
6		0			TUCSON	151414E	Yes	Monitoring	Yes	TW	CITY OF TUCSON				0	14039052E	Vacant

TABLE E-3. CONNECTION TO TUCSON WATER AND ON-SITE WELL USE
LOS REALES LANDFILL PARCEL INVENTORY AREA

ID	ZONING	PARCEL STREET NUMBER	PARCEL DIRECTION	PARCEL STREET NAME	JURISDICTION	TOWNSHIP RANGE AND SECTION	ON-SITE WELL	WELL USE	CONNECTION TO TUCSON WATER	POTABLE WATER SOURCE	OWNER NAME	OWNER ADDRESS 1	OWNER ADDRESS 2	OWNER ADDRESS 3	ZIP CODE	PARCEL	PRESENT PARCEL USE
7	Unknown	0			UNINCORPORATED PIMA COUNTY	151414E	Yes	Monitoring	No	None	CITY OF TUCSON				0	14040049B	Vacant
8	CB-2	5061	E	CORONA RD	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	C L TRANSPORT INC & TANA TRANSPORT INC	7328 E SYLVANE DR	TUCSON AZ		857102110	14040049C	Business/Storage
9	CB-2	5041	E	CORONA RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	GLAS-TEC HOLDINGS LLC	307 SHATTUCK ST	BISBEE AZ		856031547	140400480	Business
10	CB-2	5021	E	CORONA RD	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	GLAS-TEC HOLDINGS LLC	307 SHATTUCK ST	BISBEE AZ		856031547	140400470	Business/Storage
11	CB-2	5001	E	CORONA RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	B & G DEVELOPMENT HOLDINGS LLC	1820 E RIVER RD STE 110	TUCSON AZ		857186595	140400460	Business
12	CB-2	4971	E	CORONA RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	TEPACHI TRUCKING LLC	4971 E CORONA RD	TUCSON AZ		857568912	140400450	Business
13	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	GB GROUP LLC	ATTN: RICHARD A BLOCK	1050 E RIVER RD STE 203	TUCSON AZ	857185736	140400690	Vacant
14	Unknown	7157	S	SWAN RD	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	MERIDIAN ENTERPRISES LLC	3855 N BUSINESS CENTER DR	TUCSON AZ		857052979	140398760	Vacant
15	CB-2	7121	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	RHODES JOHN R & SALLY C REVOC LIVING TR	45 W FORREST FEEZOR	CORONA DE TUCSON AZ		856412110	14040050A	Business
16	CB-2	7120	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	ROCKRIDGE DEVELOPMENT LLC	7120 S COMSTOCK RD	TUCSON AZ		857569434	140400430	Business
17	CB-2	4941	E	CORONA RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	KLM PROPERTIES LLC	ATTN: KERRY LANOUE	6979 E BROADWAY BLVD STE 123	TUCSON AZ	857102800	140400440	Business
18	CB-2	7140	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	WOOD MICHAEL	743 E ELM ST	TUCSON AZ		857193913	140400420	Business/Vacant
19	CB-2	7140	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	GLAS-TEC HOLDINGS LLC	307 SHATTUCK ST	BISBEE AZ		856031547	140400620	Business/Storage
20	CB-2	7141	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	TRITSCHLER JULES	PO BOX 17193	TUCSON AZ		857317193	140400630	Business
21	CB-2	7141	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	RHODES JOHN R & SALLY C REVOCABLE LIVING TRUST	45 W FORREST FEEZOR ST	CORONA DE TUCSON AZ		856412110	140400510	Business
22	CB-2	7170	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	MC NARY MICAHEL & DAMA	ATTN: THE MC NARY CO	1905 N KING	TUCSON AZ	857490000	140400410	Business
23	CB-2	7171	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	TRITSCHLER JULES E	PO BOX 17193	TUCSON AZ		857317193	140400640	Business
24	CB-2	7170	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	GLAS-TEC HOLDINGS INC	307 SHATTUCK ST	BISBEE AZ		856031547	140400610	Business
25	CB-2	7171	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	REPUBLIC SERVICES OF AZ LLC	ATTN: PROPERTY TAX DEPARTMENT	PO BOX 29246	PHOENIX AZ	850389246	140400520	Business

TABLE E-3. CONNECTION TO TUCSON WATER AND ON-SITE WELL USE
LOS REALES LANDFILL PARCEL INVENTORY AREA

ID	ZONING	PARCEL STREET NUMBER	PARCEL DIRECTION	PARCEL STREET NAME	JURISDICTION	TOWNSHIP RANGE AND SECTION	ON-SITE WELL	WELL USE	CONNECTION TO TUCSON WATER	POTABLE WATER SOURCE	OWNER NAME	OWNER ADDRESS 1	OWNER ADDRESS 2	OWNER ADDRESS 3	ZIP CODE	PARCEL	PRESENT PARCEL USE
26	CB-2	7200	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	ANDERSON CARL C	7838 E RIVER FOREST PL	TUCSON AZ		857150000	140400400	Business
27	CB-2	7200	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	THREEWISHES LLC	2002 W GREENWAY RD	PHOENIX AZ		850234342	140400600	Business
28	CB-2	7201	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	RUNIONS FRANK A & RITA C CP/RS	852 S ROUTH PL	VAIL AZ		856416820	140400650	Business
29	R/C-1 PENDING	4831	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151414E	Yes	Domestic	No	On-Site Well	MONTERRA GROUP LLP	7346 E CALLE DE LA ETERNIDAD	TUCSON AZ		857152803	140398770	Residential
30	Unknown	4781	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	MC GREW CARLOS B & BUENO EMMA A CP/RS	4781 E LOS REALES RD	TUCSON AZ		857569191	140398780	Business
31	Unknown	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	B & F MACHINERY CORP	4761 E LOS REALES RD	TUCSON AZ		857569191	140398790	Business/Storage
32	CB-2	7201	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	REPUBLIC SERVICES OF AZ LLC	ATTN: PROPERTY TAX DEPARTMENT	PO BOX 29246	PHOENIX AZ	850389246	140400530	Business/Storage
33	CB-2	7232	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	J T VAUGHAN ENTERPRISES LLC	PO BOX 27585	TUCSON AZ		857267585	140400390	Business
34	Unknown	4851	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	COMMONWEALTH MRTG CO	PO BOX 13205	TUCSON AZ		857323205	140398830	Vacant
35	CB-2	7231	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	DADD PAMELA & HOWE JOHN PHILLIP REVOC TR	7231 S COMSTOCK RD	TUCSON AZ		857569718	140400660	Business
36	CB-2	7230	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	TURNER DAVID & ALICE JT/RS	16420 S OSAGE TRL	BENSON AZ		856027241	140400590	Business
37	CB-2	7231	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	REPUBLIC SERVICES OF AZ LLC	ATTN: PROPERTY TAX DEPARTMENT	PO BOX 29246	PHOENIX AZ	850389246	140400540	Business/Storage
38	CB-2	4771	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	HISKES GEORGE SR & AUDREY M CP/RS	PO BOX 11098	TUCSON AZ		857341098	140398810	Business
39	Unknown	4761	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	FELIX LUIS A & ELENA G DE JT/RS	4761 E LOS REALES RD		TUCSON AZ		140398800	Business
40	R	4801	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	VLASTARIS SPYRIDON	11102 N GILA RD	TUCSON AZ		857429747	140398820	Vacant
41	Unknown	0			UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	COMMONWEALTH MRTG CO	PO BOX 13205	TUCSON AZ		857323205	140400380	Vacant
42	CB-2	7261	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	REPUBLIC SERVICES OF AZ LLC	ATTN: PROPERTY TAX DEPARTMENT	PO BOX 29246	PHOENIX AZ	850389246	140400550	Business/Storage
43	CB-2	7260	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	JAMESON R DAVID	7224 E PLACITA RANCHO LA CHOLLA	TUCSON AZ		857153252	140400580	Business
44	CB-2	7261	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	VAKILI DAVOOD & JANET K TR	5626 N CAMINO DEL SOL	TUCSON AZ		857184406	140400670	Business

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LOS REALES LANDFILL PARCEL INVENTORY AREA

ID	ZONING	PARCEL STREET NUMBER	PARCEL DIRECTION	PARCEL STREET NAME	JURISDICTION	TOWNSHIP RANGE AND SECTION	ON-SITE WELL	WELL USE	CONNECTION TO TUCSON WATER	POTABLE WATER SOURCE	OWNER NAME	OWNER ADDRESS 1	OWNER ADDRESS 2	OWNER ADDRESS 3	ZIP CODE	PARCEL	PRESENT PARCEL USE
45	CB-2	7290	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	AMAZON INDUSTRIES LLC	7838 E RIVER FOREST PL	TUCSON AZ		857150000	140400370	Business
46	CB-2	5007	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	APC TRUCKING INC	12420 E HORSEHEAD RD	TUCSON AZ		857490000	140400570	Business/Storage
47	CB-2	7291	S	COMSTOCK RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	VENI VIDI VICI LLC	ATTN: LYNNAE FRITZ	2102 95TH STREET CT NW	GIG HARBOR WA	983329587	140400680	Business
48	CB-2	7291	S	FRANCES AV	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	APC EQUIPMENT LLC	7291 S FRANCES AVE	TUCSON AZ		857569704	140400560	Business
49	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	AMAZON INDUSTRIES LLC	7838 E RIVER FOREST PL	TUCSON AZ		857150000	140400700	Vacant
50	CB-2	5383	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	TUCSON TRUCK TERMINAL INC	5451 E BENSON HWY	TUCSON AZ		857569601	14039041A	Vacant /Parking
51	R	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	MONTEREY WATER COMPANY	ATTN: ACCOUNTING DEPARTMENT	2870 N SWAN RD STE 100	TUCSON AZ	857126303	140390380	Vacant
52	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	JET KING SHING HO	555 LAUREL AVE APT 119	SAN MATEO CA		944010000	140390420	Vacant
53	CB-2	5000	E	VALENCIA RD	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	MILEE TUCSON INC	ATTN: JACK IN THE BOX INC	EPROPERTY TAX DEPT 401	PO BOX 4900, SCOTTSDALE, AZ	852614900	14039043E	Business
54	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	JAY SHREE RAM INC	1150 N MOUNTAIN AVE STE 116	UPLAND CA		917863668	14039043B	Vacant
55	CB-2	5030	E	VALENCIA RD	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	LEI JUNTING & JIANG YAN CP/RS	1315 E BENSON HWY	TUCSON AZ		857141845	14039043D	Vacant
56	Unknown	5049	E	FAIRY DUSTER DR	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	VALSTATE HOMEOWNERS ASSN INC	ATTN: PLATINUM MANAGEMENT	310 S WILLIAMS BLVD STE 135	TUCSON AZ	857117700	140565850	Park
57	Unknown	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	PIMA COUNTY				0	140397360	Vacant
58	Unknown	5049	E	FAIRY DUSTER DR	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	VALSTATE HOMEOWNERS ASSN INC	ATTN: PLATINUM MANAGEMENT	310 S WILLIAMS BLVD STE 135	TUCSON AZ	857117700	140565850	Vacant
59	Unknown	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	PIMA COUNTY				0	140397360	Vacant
60	R	5190	E	FAIRY DUSTER DR	UNINCORPORATED PIMA COUNTY	151414E	No		No	None	FIRST AMERICAN TITLE TR 4970	1880 E RIVER RD STE 120	TUCSON AZ		857185962	140565890	Vacant
61	Unknown	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	PIMA COUNTY				0	14039022A	Vacant
62	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	PIMA COUNTY				0	14039019A	Vacant
63	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	PIMA COUNTY				0	140390200	Vacant

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LOS REALES LANDFILL PARCEL INVENTORY AREA

ID	ZONING	PARCEL STREET NUMBER	PARCEL DIRECTION	PARCEL STREET NAME	JURISDICTION	TOWNSHIP RANGE AND SECTION	ON-SITE WELL	WELL USE	CONNECTION TO TUCSON WATER	POTABLE WATER SOURCE	OWNER NAME	OWNER ADDRESS 1	OWNER ADDRESS 2	OWNER ADDRESS 3	ZIP CODE	PARCEL	PRESENT PARCEL USE
64	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	PIMA COUNTY				0	140390210	Vacant
65	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	MARRS ANTHONY W 5/6 INT & MARRS	CHRISTOPHER 1/6 INT	3573 E SUNRISE DR #233	TUCSON AZ	857180000	140390080	Vacant
66	CB-2	0			UNINCORPORATED PIMA COUNTY	151414E	No		No	None	JOHNSON STEPHEN L TR	165 INVERWAY	PALATINE IL		600674413	14039037A	Vacant
67	CB-2	5471	E	BENSON HY	UNINCORPORATED PIMA COUNTY	151414E	No		Yes	TW	TUCSON TRUCK TERMINAL INC	5451 E BENSON HWY	TUCSON AZ		857569601	140390490	Business
68	Landfill	0			TUCSON	151414E	Yes	Monitoring	Yes	TW	CITY OF TUCSON	REAL ESTATE DIVISION	ATTN: PROPERTY MANAGEMENT	PO BOX 27210, TUCSON, AZ	857267210	14039052F	Vacant
69	R/CI-1	4175	E	CAMEO POINT DR	UNINCORPORATED PIMA COUNTY	151415E	Yes	Monitoring	No	None	STATE OF ARIZONA				0	140411400	Vacant
70	CI-1	0			UNINCORPORATED PIMA COUNTY	151415E	No		No	None	PIMA COUNTY	FLOOD CONTROL DISTRICT			0	140411360	Vacant
71	Unknown	0			UNINCORPORATED PIMA COUNTY	151422E	No		No	None	STEWART TITLE & TRUST TR 2908	ATTN: AURIGA PROPERTIES INC	DAVID GOLDSTEIN PRESIDENT	2200 E RIVER RD STE 115, TUCSON, AZ	857186577	140440040	Vacant
72	Unknown	0			UNINCORPORATED PIMA COUNTY	151422E	No		No	None	HUNT WALTER N 13.07% & HENNESSY BURRIS	CO PROFIT SHARING PLAN 69.71% & HENNESSY	BURRIS & CO PROFIT SHARING PLAN 2 17.22%	1802 W GRANT RD #110, TUCSON, AZ	857451232	14044002F	Vacant
73	Unknown	4300	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151422E	Yes	Irrigation	Yes	TW	RACEWAY PARTNERS LLC	ATTN: ROBERT P ROBLEY	2872 W RUDASILL RD	TUCSON AZ	857413437	14044003A	Business
74	Unknown	4550	E	LOS REALES RD	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	HENNESSEY BURRIS & COMPANY PROFIT	SHARING PLAN AND TR AGR ATTN: W	TIM BURRIS & MICHAEL E HENNESSEY TR	1802 W GRANT RD #110, TUCSON, AZ	857451232	14044002E	Vacant
75	Unknown		0			151422E	No		No	None	TUCSON AIRPORT AUTHORITY INC & CITY OF TUCSON	7005 S PLUMER AVE		TUCSON AZ		140440060	Vacant
76	Unknown	0			UNINCORPORATED PIMA COUNTY	151422E	Yes	Monitoring	No	None	CITY OF TUCSON				0	14044005A	Easement
77	Unknown	0			UNINCORPORATED PIMA COUNTY	151422E	No		No	None	BURRIS HENNESSY & CO PROFIT SHARING PLAN 69.71%	BURRIS HENNESSY & CO PROFIT SHARING PLAN	2 17.22% & HUNT WALTER N 13.07%	1802 W GRANT RD STE 110, Tucson, AZ	857451232	14044002G	Vacant
78	Unknown	0			UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FEST REVOCABLE TR	ATTN: OTTO P & MARCIA M FEST TR	4016 E TENNESSEE ST	TUCSON AZ	857142130	14044002H	Vacant
79	0	7600	S	SWAN RD	UNINCORPORATED PIMA COUNTY	151422E	Yes	Irrigation	No	Bottled Water Service	ROD ROBERTSON AUCTIONS LTD	1802 NW MILITARY HWY # 100	SAN ANTONIO TX		782132422	14044002A	Business
80	Unknown	7770	S	REUSE PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442250	Vacant
81	Unknown	7771	S	REUSE PL	UNINCORPORATED PIMA COUNTY	151422E	No		Yes	TW	GOLD STAR PUMPING INC	10001 N SILVERBELL RD	TUCSON AZ		857439794	140442260	Business

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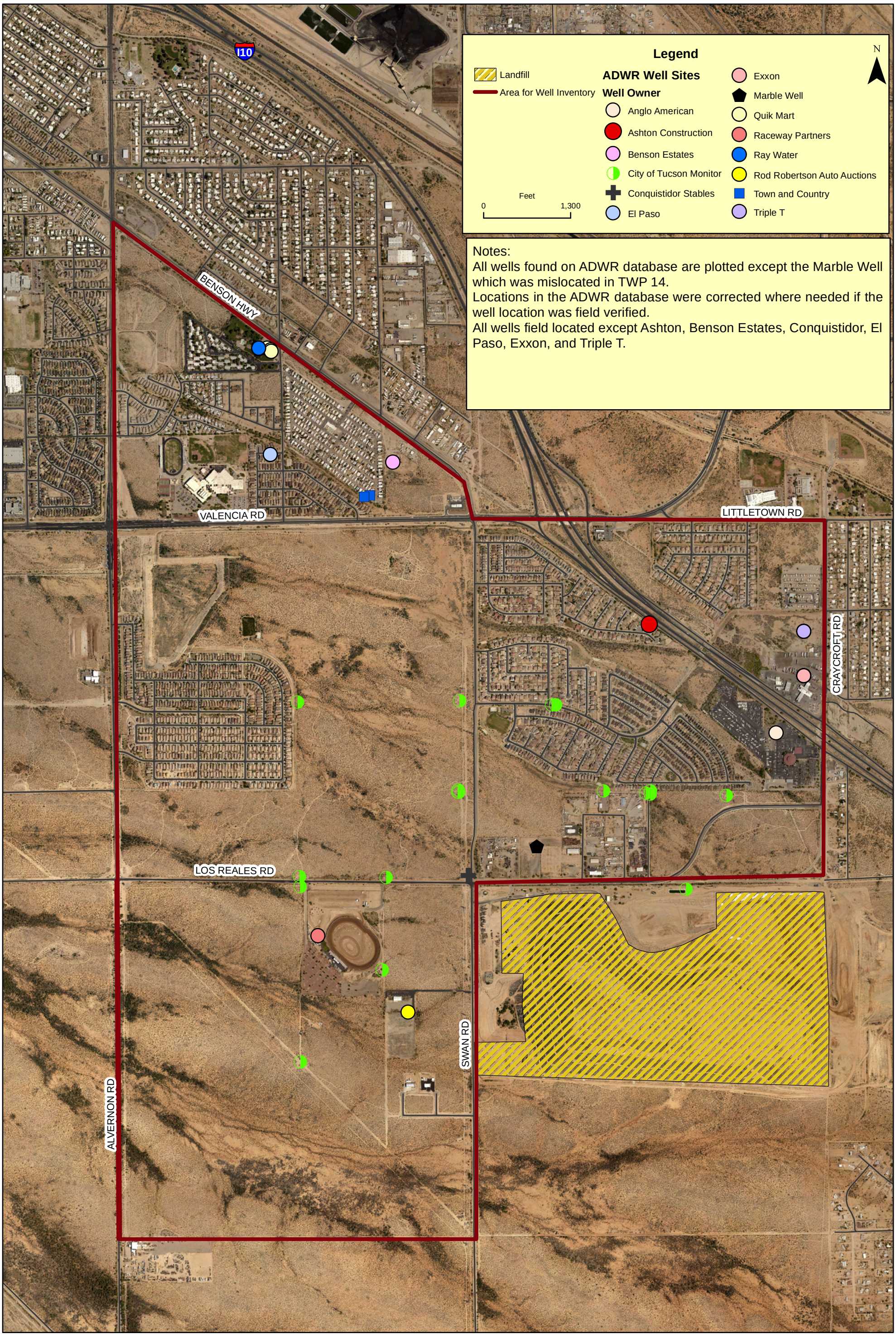
ID	ZONING	PARCEL STREET NUMBER	PARCEL DIRECTION	PARCEL STREET NAME	JURISDICTION	TOWNSHIP RANGE AND SECTION	ON-SITE WELL	WELL USE	CONNECTION TO TUCSON WATER	POTABLE WATER SOURCE	OWNER NAME	OWNER ADDRESS 1	OWNER ADDRESS 2	OWNER ADDRESS 3	ZIP CODE	PARCEL	PRESENT PARCEL USE
82	Unknown	7772	S	RECYCLE CT	UNINCORPORATED PIMA COUNTY	151422E	No		Yes	TW	KAZOLT LLC	1226 E 8TH	TUCSON AZ		857195450	140442270	Business
83	Unknown	7773	S	RECYCLE CT	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442280	Vacant
84	Unknown	4653	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442290	Vacant
85	Unknown	7800	S	REUSE PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442240	Vacant
86	Unknown	4567	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442320	Vacant
87	Unknown	4579	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442310	Vacant
88	Unknown	4639	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442300	Vacant
89	Unknown	4532	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442230	Vacant
90	Unknown	4554	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442220	Vacant
91	Unknown	4592	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442210	Vacant
92	Unknown	4630	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442200	Vacant
93	Unknown	4652	E	ECO INDUSTRIAL PL	UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442190	Vacant
94	Unknown	0			UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442340	Vacant
95	Unknown	0			UNINCORPORATED PIMA COUNTY	151422E	No		No	None	FIDELITY NATIONAL TITLE TR 60352	ATTN: SWAN INDUSTRIAL LLC	1226 E 8TH	TUCSON AZ	857195450	140442330	Vacant
96	Unknown	0			TUCSON	151423E	Yes	Monitoring	No	None	CITY OF TUCSON				0	14044007A	Vacant

TW = Tucson Water

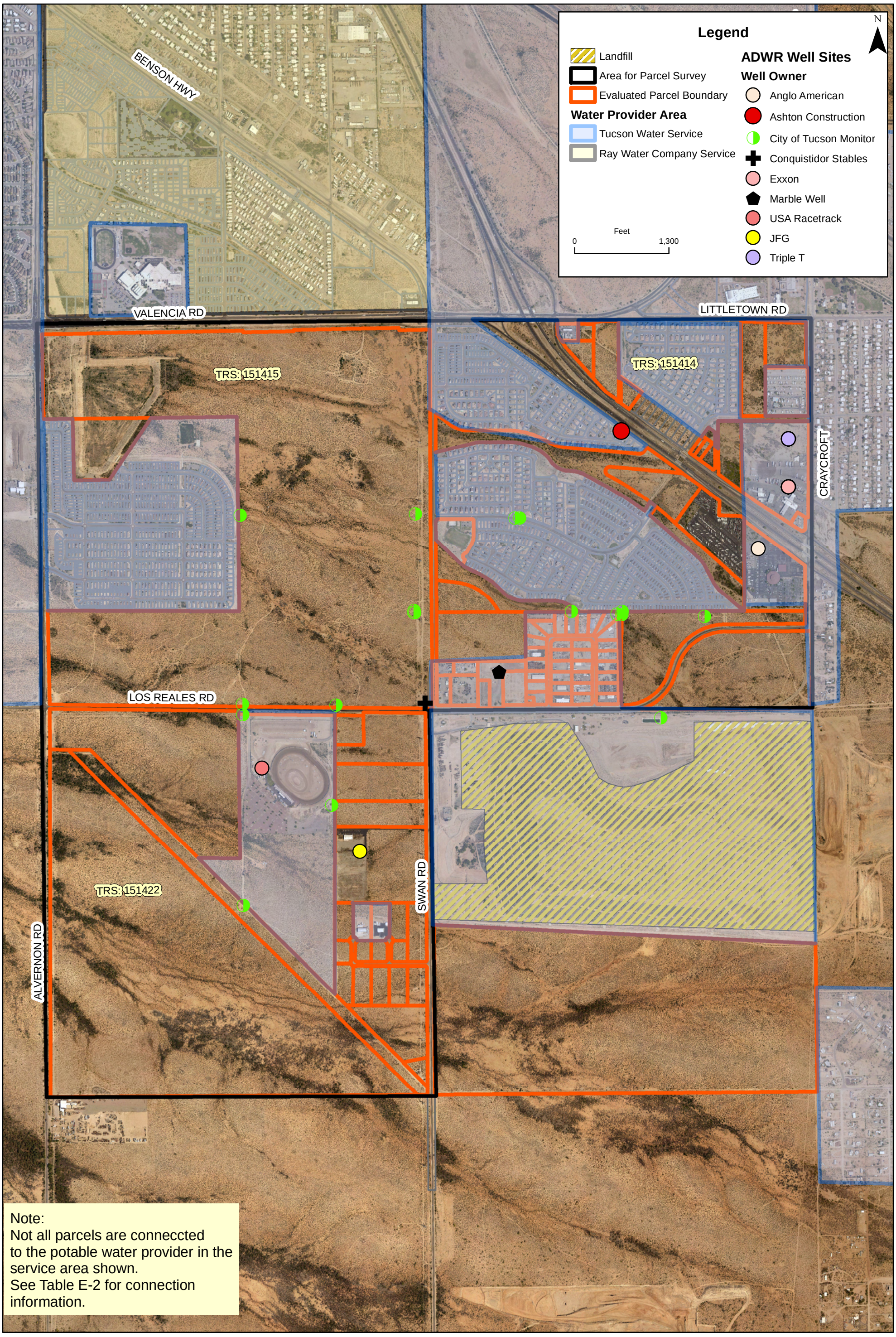


CITY OF TUCSON
ENVIRONMENTAL SERVICES

Figure E-1
Well Inventory Update
Los Reales Landfill

Drawn By:	MC
Checked:	LE
Approved:	JD
Date:	3/8/2013
File:	See Below

J:GIS\LosReales\2013\Well_surv.mxd



Note:
Not all parcels are connecctedto the potable water provider in the service area shown.
See Table E-2 for connection information.

CITY OF TUCSON
ENVIRONMENTAL SERVICES

Figure E-2
Parcel Evaluation and Water Service Area
Los Reales Landfill

Drawn By:	MC
Checked:	LE
Approved:	JD
Date:	4/26/2013
File:	See Below

J:GIS\LosReales\2013\Parcels.mxd

Tucson Water Quality Laboratory Report

License # AZ0038

Login Number:	**L28164**
Date Collected:	**May 07, 2013**
Project Number:	**P01049**
Project Name:	**Los Reales Landfill**

Data reported herein is certified to be true, accurate and complete as indicated by the signature of the Laboratory Manager or his Designee.

Laboratory Manager's Signature: 

Case Narrative

Los Reales LF, Project #P01049

Sampled 05-07-13

Samples were analyzed in accordance with the methods listed in the text of this data report.

All Quality Control Parameters were within control limits.

.

The following analyses were subcontracted to MWH Laboratories:
1) Ammonia Nitrogen – EPA Method 350.1

Los Reales Landfill

Location: MARBLE #1 **Site** WELL **Log-in Number:** L28164-01
Sample Date: 05/07/2013 10:49:00 AM **Collected By:** K. MENDOZA

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256
License # AZ0038

Parameter	Value	Qualifier	Method	RDL	Analysis Date
Calcium, Total	84 mg/L		EPA 200.7	2 mg/L	05/15/2013 08:50:00 AM
Chromium, Total	<.02 mg/L		EPA 200.7	.02 mg/L	05/15/2013 08:50:00 AM
Iron, Total	.15 mg/L		EPA 200.7	.02 mg/L	05/15/2013 08:50:00 AM
Magnesium, Total	16 mg/L		EPA 200.7	.5 mg/L	05/15/2013 08:50:00 AM
Manganese, Total	<.02 mg/L		EPA 200.7	.02 mg/L	05/15/2013 08:50:00 AM
Potassium, Total	2.2 mg/L		EPA 200.7	.5 mg/L	05/15/2013 08:50:00 AM
Sodium, Total	43 mg/L		EPA 200.7	2 mg/L	05/15/2013 08:50:00 AM
Arsenic, Total	.0025 mg/L		EPA 200.8	.001 mg/L	05/20/2013 01:03:00 PM
Lead, Total	<.001 mg/L		EPA 200.8	.001 mg/L	05/20/2013 01:03:00 PM
Bromide	.17 mg/L		EPA 300.0	.1 mg/L	05/07/2013 03:33:00 PM
Chloride	18 mg/L		EPA 300.0	3 mg/L	05/07/2013 03:33:00 PM
Fluoride	.27 mg/L		EPA 300.0	.1 mg/L	05/07/2013 03:33:00 PM
Nitrate as N	.71 mg/L		EPA 300.0	.25 mg/L	05/07/2013 03:33:00 PM
Nitrite as N	<.1 mg/L		EPA 300.0	.1 mg/L	05/07/2013 03:33:00 PM
Ortho Phosphate as P	<.2 mg/L		EPA 300.0	.2 mg/L	05/07/2013 03:33:00 PM
Sulfate	195 mg/L		EPA 300.0	5 mg/L	05/07/2013 03:33:00 PM
Ammonia As N	<.05 mg/L		EPA 350.1	.05 mg/L	05/14/2013 12:21:00 PM
Lab ID	EEA AZ0778		EPA 350.1		05/14/2013 12:21:00 PM
1,1,1,2-Tetrachloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,1,1-Trichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,1,2,2-Tetrachloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,1,2-Trichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,1-Dichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,1-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM

Los Reales Landfill

Location: MARBLE #1 **Site** WELL **Log-in Number:** L28164-01
Sample Date: 05/07/2013 10:49:00 AM **Collected By:** K. MENDOZA

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256

Parameter	Value	Qualifier	Method	RDL	Analysis Date
1,1-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2,3-Trichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2,3-Trichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2,4-Trichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2,4-Trimethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2-Dibromo-3-chloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2-Dibromoethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2-Dichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,2-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,3,5-Trimethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,3-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,3-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
1,4-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
2,2-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
2-Chlorotoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
4-Chlorotoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
4-Isopropyltoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Benzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Bromobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Bromochloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Bromodichloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Bromofluorobenzene (Surr.)	92 % recovery		EPA 8260	%	05/07/2013 02:52:00 PM
Bromoform	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM

Los Reales Landfill

Location: MARBLE #1 **Site** WELL **Log-in Number:** L28164-01
Sample Date: 05/07/2013 10:49:00 AM **Collected By:** K. MENDOZA

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256

Parameter	Value	Qualifier	Method	RDL	Analysis Date
Bromomethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Carbon Tetrachloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Chlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Chloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Chloroform	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Chloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Dibromochloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Dibromofluoromethane (Surr.)	106.4 % recovery		EPA 8260	%	05/07/2013 02:52:00 PM
Dibromomethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Dichlorodifluoromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Ethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Hexachlorobutadiene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Isopropylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Methyl tert-butyl ether	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Methylene Chloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Naphthalene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Sec-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Styrene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Tetrachloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Toluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Toluene-d8 (Surr.)	98.4 % recovery		EPA 8260	%	05/07/2013 02:52:00 PM
Total Trihalomethanes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Total Xylenes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Trichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM

Los Reales Landfill

Location: MARBLE #1 **Site** WELL **Log-in Number:** L28164-01
Sample Date: 05/07/2013 10:49:00 AM **Collected By:** K. MENDOZA

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256

Parameter	Value	Qualifier	Method	RDL	Analysis Date
Trichlorofluoromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Vinyl Chloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
cis-1,2-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
cis-1,3-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
m/p-Xylenes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
n-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
n-Propylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
ortho-Xylene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
tert-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
trans-1,2-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
trans-1,3-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 02:52:00 PM
Bicarbonate Alkalinity	127 mg/L		SM 2320B	20 mg/L	05/07/2013 09:27:00 PM
Total Alkalinity	127 mg/L		SM 2320B	20 mg/L	05/07/2013 09:27:00 PM
Total Dissolved Solids	488 mg/L		SM 2540C	10 mg/L	05/09/2013 03:00:00 PM
Total Organic Carbon	<.25 mg/L		SM 5310	.25 mg/L	05/10/2013 03:35:00 AM

Los Reales Landfill

Location: TRIP BLANK **Site** TWQL **Log-in Number:** L28164-02
Sample Date: 05/07/2013 10:49:00 AM **Collected By:** TWQL

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256
License # AZ0038

Parameter	Value	Qualifier	Method	RDL	Analysis Date
1,1,1,2-Tetrachloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,1,1-Trichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,1,2,2-Tetrachloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,1,2-Trichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,1-Dichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,1-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,1-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2,3-Trichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2,3-Trichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2,4-Trichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2,4-Trimethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2-Dibromo-3-chloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2-Dibromoethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2-Dichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,2-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,3,5-Trimethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,3-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,3-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
1,4-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
2,2-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
2-Chlorotoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
4-Chlorotoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
4-Isopropyltoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM

Los Reales Landfill

Location: TRIP BLANK **Site** TWQL **Log-in Number:** L28164-02
Sample Date: 05/07/2013 10:49:00 AM **Collected By:** TWQL

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256

Parameter	Value	Qualifier	Method	RDL	Analysis Date
Benzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Bromobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Bromochloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Bromodichloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Bromofluorobenzene (Surr.)	95 % recovery		EPA 8260	%	05/07/2013 04:25:00 PM
Bromoform	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Bromomethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Carbon Tetrachloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Chlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Chloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Chloroform	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Chloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Dibromochloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Dibromofluoromethane (Surr.)	105.2 % recovery		EPA 8260	%	05/07/2013 04:25:00 PM
Dibromomethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Dichlorodifluoromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Ethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Hexachlorobutadiene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Isopropylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Methyl tert-butyl ether	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Methylene Chloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Naphthalene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Sec-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Styrene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM

Los Reales Landfill

Location: TRIP BLANK **Site** TWQL **Log-in Number:** L28164-02
Sample Date: 05/07/2013 10:49:00 AM **Collected By:** TWQL

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256

Parameter	Value	Qualifier	Method	RDL	Analysis Date
Tetrachloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Toluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Toluene-d8 (Surr.)	99.8 % recovery		EPA 8260	%	05/07/2013 04:25:00 PM
Total Trihalomethanes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Total Xylenes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Trichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Trichlorofluoromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
Vinyl Chloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
cis-1,2-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
cis-1,3-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
m/p-Xylenes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
n-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
n-Propylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
ortho-Xylene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
tert-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
trans-1,2-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM
trans-1,3-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:25:00 PM

Los Reales Landfill

Location: MARBLE #2 **Site** WELL **Log-in Number:** L28164-03
Sample Date: 05/07/2013 11:00:00 AM **Collected By:** K. MENDOZA

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256
License # AZ0038

Parameter	Value	Qualifier	Method	RDL	Analysis Date
Calcium, Total	84 mg/L		EPA 200.7	2 mg/L	05/15/2013 08:55:00 AM
Chromium, Total	<.02 mg/L		EPA 200.7	.02 mg/L	05/15/2013 08:55:00 AM
Iron, Total	.074 mg/L		EPA 200.7	.02 mg/L	05/15/2013 08:55:00 AM
Magnesium, Total	16 mg/L		EPA 200.7	.5 mg/L	05/15/2013 08:55:00 AM
Manganese, Total	<.02 mg/L		EPA 200.7	.02 mg/L	05/15/2013 08:55:00 AM
Potassium, Total	2.3 mg/L		EPA 200.7	.5 mg/L	05/15/2013 08:55:00 AM
Sodium, Total	43 mg/L		EPA 200.7	2 mg/L	05/15/2013 08:55:00 AM
Arsenic, Total	.002 mg/L		EPA 200.8	.001 mg/L	05/20/2013 01:08:00 PM
Lead, Total	<.001 mg/L		EPA 200.8	.001 mg/L	05/20/2013 01:08:00 PM
Bromide	.17 mg/L		EPA 300.0	.1 mg/L	05/07/2013 03:59:00 PM
Chloride	17 mg/L		EPA 300.0	3 mg/L	05/07/2013 03:59:00 PM
Fluoride	.25 mg/L		EPA 300.0	.1 mg/L	05/07/2013 03:59:00 PM
Nitrate as N	.7 mg/L		EPA 300.0	.25 mg/L	05/07/2013 03:59:00 PM
Nitrite as N	<.1 mg/L		EPA 300.0	.1 mg/L	05/07/2013 03:59:00 PM
Ortho Phosphate as P	<.2 mg/L		EPA 300.0	.2 mg/L	05/07/2013 03:59:00 PM
Sulfate	194 mg/L		EPA 300.0	5 mg/L	05/07/2013 03:59:00 PM
Ammonia As N	<.05 mg/L		EPA 350.1	.05 mg/L	05/14/2013 12:22:00 PM
Lab ID	EEA AZ0778		EPA 350.1		05/14/2013 12:22:00 PM
1,1,1,2-Tetrachloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,1,1-Trichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,1,2,2-Tetrachloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,1,2-Trichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,1-Dichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,1-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM

Los Reales Landfill

Location: MARBLE #2 **Site** WELL **Log-in Number:** L28164-03
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Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256

Parameter	Value	Qualifier	Method	RDL	Analysis Date
1,1-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2,3-Trichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2,3-Trichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2,4-Trichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2,4-Trimethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2-Dibromo-3-chloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2-Dibromoethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2-Dichloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,2-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,3,5-Trimethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,3-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,3-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
1,4-Dichlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
2,2-Dichloropropane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
2-Chlorotoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
4-Chlorotoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
4-Isopropyltoluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Benzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Bromobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Bromochloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Bromodichloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Bromofluorobenzene (Surr.)	93.8 % recovery		EPA 8260	%	05/07/2013 04:56:00 PM
Bromoform	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM

Los Reales Landfill

Location: MARBLE #2 **Site** WELL **Log-in Number:** L28164-03
Sample Date: 05/07/2013 11:00:00 AM **Collected By:** K. MENDOZA

Results from Tucson Water LIMS, Tucson Water Quality Lab, 4401 S. Tucson Estates Parkway, Tucson, AZ 85735 (520) 791-5256

Parameter	Value	Qualifier	Method	RDL	Analysis Date
Bromomethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Carbon Tetrachloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Chlorobenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Chloroethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Chloroform	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Chloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Dibromochloromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Dibromofluoromethane (Surr.)	106.6 % recovery		EPA 8260	%	05/07/2013 04:56:00 PM
Dibromomethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Dichlorodifluoromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Ethylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Hexachlorobutadiene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Isopropylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Methyl tert-butyl ether	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Methylene Chloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Naphthalene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Sec-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Styrene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Tetrachloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Toluene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Toluene-d8 (Surr.)	99 % recovery		EPA 8260	%	05/07/2013 04:56:00 PM
Total Trihalomethanes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Total Xylenes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Trichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM

Los Reales Landfill

Location: MARBLE #2 **Site** WELL **Log-in Number:** L28164-03
Sample Date: 05/07/2013 11:00:00 AM **Collected By:** K. MENDOZA

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Parameter	Value	Qualifier	Method	RDL	Analysis Date
Trichlorofluoromethane	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Vinyl Chloride	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
cis-1,2-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
cis-1,3-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
m/p-Xylenes	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
n-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
n-Propylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
ortho-Xylene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
tert-Butylbenzene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
trans-1,2-Dichloroethene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
trans-1,3-Dichloropropene	<.0005 mg/L		EPA 8260	.0005 mg/L	05/07/2013 04:56:00 PM
Bicarbonate Alkalinity	126 mg/L		SM 2320B	20 mg/L	05/07/2013 09:40:00 PM
Total Alkalinity	126 mg/L		SM 2320B	20 mg/L	05/07/2013 09:40:00 PM
Total Dissolved Solids	492 mg/L		SM 2540C	10 mg/L	05/09/2013 03:00:00 PM
Total Organic Carbon	<.25 mg/L		SM 5310	.25 mg/L	05/10/2013 04:04:00 AM

TUCSON WATER CHAIN OF CUSTODY

LOGIN ID: L28164

CLIENT: ES

PROJECT NAME/FREQUENCY:
LOS REALES Landfill
Annual

PROJECT #: P01049

~~Sample Date:~~
May 7, 2013

SAMPLED BY:

print full name Kristie Mendoza

signature

EEA# 433905

SAMPLE #	TIME	LOCATION	SITE	NUMBER OF CONTAINERS	PRESERVATIVE	(Na2S2O3)		(Unpreserved)			(HNO3)						(H2SO4)	(NaS2O3/H2SO4)	(Unpreserved)	(NaS2O3/H2SO4)	(H2SO4)	(HCl)	(Ascorbic Acid)	(Na2S2O3)			(Unpreserved)								(H2SO4)		(HCl)	(NaOH/Zinc Acetate)	COMMENTS
											ICP	ICP	ICP	ICP	ICP	ICPMS	ICPMS																						
												Cr - Fe - Mn		Ca - Mg - K - Na		As - Pb			Anions - Alkalinity - TDS			TOC	8260												Ammonia				
																								EEA	EEA	EEA	EEA	EEA	EEA	EEA	EEA	EEA	EEA	EEA	EEA	EEA	EEA	
-01	1049	Marble ~~Well~~	WELL	10								X		X		X			X			X	X											X				TB# -02
-02	1049	Trip Blank	TWQL	2																			X															LOT # 030713
-03	1100	Marble #2	Well	10								X		X		X			X			X	X											X				TB-02

COMMENTS:

SPECIAL TURNAROUND TIME:

	SIGNATURE	DATE/TIME		SIGNATURE	DATE/TIME
RELINQUISHED BY:		5/7/13 1150	RECEIVED BY:	Diane Harper	05-07-13 12:13
RELINQUISHED BY:	Diane Harper	05-07-13 1600	RECEIVED BY:	FEDEX 7996 9206 4838	(CA)
RELINQUISHED BY:			RECEIVED BY:		
RELINQUISHED BY:			RECEIVED BY:		

RECEIVING TEMPERATURE= 2.6 °C

Invoice Date	Invoice Number
05-JUN-13	2160

TUCSON WATER QUALITY LABORATORY
INVOICE

BILL TO:

Environmental Services

,

Acctnum: C1005
Project: P01049 Los Reales Landfill
Start:
End:
Terms:
PO#:

Sample ID (Client ID):

Salesperson:

L28164-01(MARBLE #1), L28164-02(TRIP BLANK), L28164-03(MARBLE #2),

Qty	Matrix	Analysis	Description	Unit Price	Total Price
2	LiquidH2O	AS,T (I)200.8	Arsenic, total by ICPMS	$7.00	$14.00
2	LiquidH2O	CATION,T(I)200.7	Cations, total by 200.7	$28.00	$56.00
2	LiquidH2O	CR,T (I)200.7	Chromium, total by ICP	$7.00	$14.00
2	LiquidH2O	FE,T (I)200.7	Iron, total by ICP	$7.00	$14.00
2	LiquidH2O	MN,T (I)200.7	Manganese, total by ICP	$7.00	$14.00
2	LiquidH2O	NH3N (S)350.1	Ammonia as Nitrogen	$20.00	$40.00
2	LiquidH2O	PB,T (I)200.8	Lead, total by ICPMS	$7.00	$14.00
2	LiquidH2O	TOC (I)SM5310	Total Organic Carbon (TOC Analyzer)	$35.00	$70.00
3	LiquidH2O	VOA (I)8260	Volatiles, GC/MS	$100.00	$300.00
2	LiquidH2O	WETCHEM	Parent product for Alk, Anions, TDS	$58.00	$116.00

Qty	Additional Charge Description	Total Price

3 Samples: 21 Analyses; Total Amount Due: $652.00

Groundwater Management Support Section
P.O. Box 458 ✦ Phoenix, Arizona 85001-0458
(602) 417-2470 ✦ (800) 352-8488
www.wa.az.gov

Notice of Intent to Drill, Deepen, Replace or Modify a Well
(except a Non-Exempt Well in an Active Management Area)

- Review instructions prior to completing form
- You must include with your Notice:
  - $10 check or money order for the processing fee
- Authority for fee: A.R.S. § 45-113(B), A.A.C. R12-15-151(B)(4)(e)

AMA / INA	B	SB
RECEIVED DATE	WB	
ISSUED DATE	WQARF	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER 55 -

** PLEASE PRINT CLEARLY **

SECTION 1. COUNTY OR LOCAL HEALTH AUTHORITY ENDORSEMENT (if applicable)

If water from the proposed well will be used for domestic purposes on a parcel of land of 20 or fewer acres, the applicable county or local health authority must endorse all items in Section 1 before submission to the Department of Water Resources. You must also attach a site plan (see instructions).

CHECK ONE

☒ County or Local Health Authority Recommends Approval (pursuant to A.R.S. § 45-596 (G) and (F))
- ☐ Field Inspection Performed
- ☒ Site Plan Review Only

☐ Insufficient Information to Make a Determination

Official County or Local Seal or Stamp

RECEIVED APR 17 2002 GROUNDWATER MGT

Pima County DEQ
130 W. Congress
Tucson, AZ 85701

COUNTY OR LOCAL AUTHORITY NAME AND TITLE: ROBERT E FLINT CIVIL ENG. ASSIST.

TELEPHONE NUMBER: 520 740-6502

DATE: 03.29.02

COUNTY OR LOCAL AUTHORITY SIGNATURE: Robert E. Flint

Pump set @ 300'

SECTION 2. REGISTRY INFORMATION

Well Type

CHECK ONE

☒ Exempt
(Pump has a maximum capacity of not more than 35 gpm and water is not used for irrigation purposes inside an AMA.) (*See instructions.*)

☐ Non-Exempt
(Pump has a maximum capacity of more than 35 gpm or water is used for irrigation purposes inside an AMA.) (*See instructions.*)

DESIGN PUMP CAPACITY: Gallons Per Minute

Proposed Action

CHECK ONE

☒ Drill New Well
☐ Deepen
☐ Replace
☐ Modify

If Deepening, Replacing or Modifying:

ORIGINAL WELL REGISTRATION NUMBER: 55 -

MAXIMUM CAPACITY OF ORIGINAL WELL: Gallons Per Minute

DISTANCE & DIRECTION FROM ORIGINAL WELL: Feet

Location of Well

WELL LOCATION ADDRESS (IF ANY): 4811 E Los Reales Rd

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
14	15	14	SE¼	SW¼	SW¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL	# OF ACRES
140	39	0515	2

PLACE OF WATER USE (ONLY IF DIFFERENT FROM LOCATION OF WELL)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
		¼	¼	¼	¼

COUNTY WHERE WELL IS LOCATED: Pima

SECTION 3. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: Brad & Elmer Marble

MAILING ADDRESS: P.O Box 22224

CITY / STATE / ZIP CODE: Tucson AZ 85734

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL: same

MAILING ADDRESS: same

CITY / STATE / ZIP CODE: same

DESERT DRILLING
19299 S. SONOITA HWY. PH. 520-762-9549
VAIL, AZ 85641

3840

91-2/1221

3-21-2002

PAY TO THE ORDER OF: AZ DEPT OF WATER RESOURCES $ 20.00

TEN AND 00/100 DOLLARS

BANK ONE
BANK ONE, ARIZONA, N.A.
BROADWAY-WILMOT OFFICE (187)
TUCSON, ARIZONA

FOR Marble well permit

[redacted]

Bob Schnitzler
239-6685

ARIZONA DEPARTMENT OF WATER RESOURCES
Records Management Section
500 N. 3rd Street * Phoenix, Arizona 85004
(602) 417-2405 * (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log

RECEIVED
JUN 18 2002
RECORDS MGT

FILE NUMBER: D(14-15) 14 DCC
WELL REGISTRATION NUMBER: 55- 591750
PERMIT NUMBER (IF ISSUED):

- Review instructions prior to completing form
- This report should be prepared by the driller in detail and filed with the Department within 30 days following completion of the well.

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION OR INDIVIDUAL: BRAD MARBLE
MAILING ADDRESS: PO BOX 22224
CITY / STATE / ZIP: TUCSON, AZ 85706
CONTACT PERSON NAME AND TITLE:
TELEPHONE NUMBER: 520-574-0447
FAX:

Location of Well

WELL LOCATION ADDRESS (IF KNOWN): 4811 E LOS REALES RD.

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
14 S	15 E	14	SE 1/4	SW 1/4	SW 1/4

LATITUDE: 32 ° 07 . 19 "N
LONGITUDE: 110 ° 52 . 55 "W
LAND SURFACE ELEVATION AT WELL: 2710 Feet Above Sea Level
METHOD OF LATITUDE / LONGITUDE (CHECK ONE): ☒ USGS Quad Map ☐ Conventional Survey ☐ GPS: ☐ Hand-Held ☐ Survey-Grade
COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK 140 MAP 39 PARCEL 051S
COUNTY WHERE WELL IS LOCATED: PIMA

SECTION 2. DRILLING AUTHORIZATION

Drilling Firm

NAME: DESERT DRILLING
DWR LICENSE NUMBER: 517
TELEPHONE NUMBER: 520-429-1815
FAX:

SECTION 3. WELL CONSTRUCTION DETAILS

DATE WELL CONSTRUCTION STARTED: 4-15-02
DATE WELL CONSTRUCTION COMPLETED: 4-19-02
IF FLOWING WELL, METHOD OF FLOW REGULATION: ☐ Valve ☐ Other

Drill Method (CHECK ONE)

- ☒ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (please specify)

Method of Well Development (CHECK ONE)

- ☒ Airlift
- ☐ Bail
- ☐ Surge Back
- ☐ Surge Pump
- ☐ Other (please specify)

Water Level Information

STATIC WATER LEVEL: 204 Feet Below Land Surface
DATE MEASURED: 4-19-02

Method of Sealing at Reduction Points (CHECK ONE)

- ☒ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (please specify)

DWR-55-55-10/01 (Rev.)

COMPLETED AUG 2 2 2002

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55-591750

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Borehole			Installed Casing														
DEPTH FROM SURFACE			DEPTH FROM SURFACE			MATERIAL TYPE (X)				PERFORATION TYPE (X)						
FROM (feet)	TO (feet)	BOREHOLE DIAMETER (inches)	FROM (feet)	TO (feet)	OUTER DIAMETER (inches)	STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	20	10"	-1'	20'	7"	X				X						
0	350	6½"	-2'	280'	5"		X			X						
			280	350	5"		X							X		

Installed Annular Material											
DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (X)								FILTER PACK		
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	SIZE
0	20			X								

DEPTH OF BORING: 350' Feet Below Land Surface

DEPTH OF COMPLETED WELL: 320' Feet Below Land Surface

DWR-55-55B-10/01 (Rev.)

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55- 591750

SECTION 5. GEOLOGIC LOG OF WELL			
DEPTH FROM SURFACE		DESCRIPTION	Check (X) every interval where water was encountered
FROM (feet)	TO (feet)	Describe material, grain size, color, etc.	
0	12	SOIL	
12	290	SANDY SILT	X
290	350	SILT / SAND / GRAVEL	

DWR 55-55-10/01 (REV) page 3 of 4

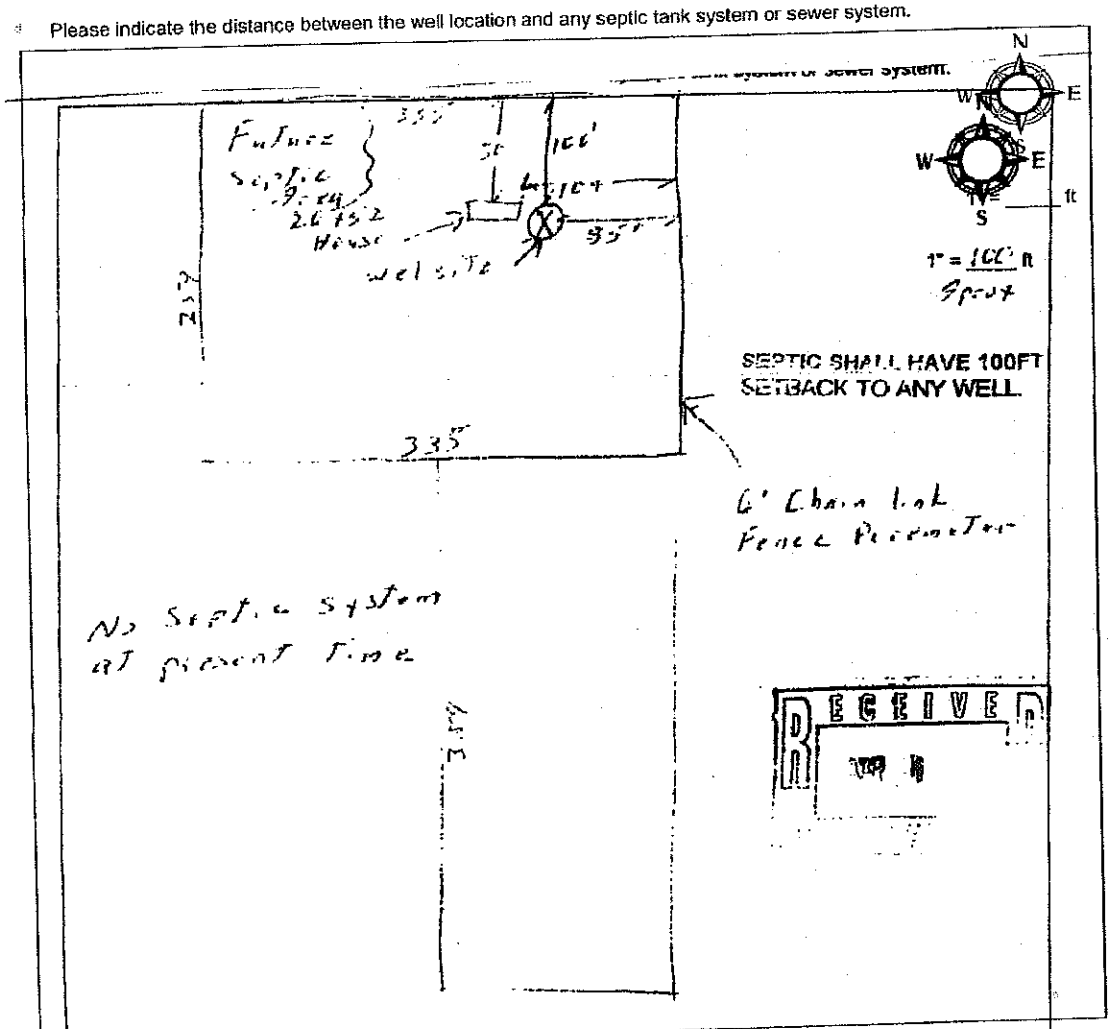
Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55- 591750

SECTION 6. WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER BOOK	MAP	PARCEL
BRAD MARBLE	140	39	051S

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the proposed well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.



I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

DRILLING FIRM	SIGNATURE OF QUALIFYING PARTY	DATE
DESERT DRILLING	Alex Stump	6-11-02

DWR-55-55 (Rev. 10/11/01)

ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION
500 North Third Street
Phoenix, Arizona 85004

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILL OPERATIONS

WELL REGISTRATION NO: 55-591750

AUTHORIZED DRILLER: DESERT DRILLING LICENSE NO: 517

NOTICE OF INTENTION TO DRILL AN EXEMPT WELL(S) HAS BEEN FILED WITH THE DEPARTMENT BY:

WELL OWNER: BRAD MARBLE PO BOX 22224 TUCSON, AZ 85706

The well(s) is/are to be located in the:

SW ¼ of the SW ¼ of the SE ¼ Section 14 Township 14 SOUTH Range 15 EAST

No. of wells in this project: 1

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 30TH DAY OF MARCH, 2003

AJD
GROUNDWATER MANAGEMENT SUPPORT

THE DRILLER MUST FILE A LOG OF THE WELL WITHIN 30 DAYS OF COMPLETION OF DRILLING

$10 FEE

Arizona Department of Water Resources
Groundwater Management Support Section
P.O. Box 458 ✦ Phoenix, Arizona 85001-0458
(602) 417-2470 ✦ (800) 352-8488
www.water.az.gov

Notice of Intent to Drill, Deepen, Replace or Modify a Well

(except a Non-Exempt Well in an Active Management Area)

AMA / INA	B	55
Tucson	16	
RECEIVED DATE	WS	
4/1/02	07	
ISSUED DATE	WQARF	CERCLA
4/8/02		

FILE NUMBER: D(14-15)14 adc
WELL REGISTRATION NUMBER: 55-591150

- Review instructions prior to completing form
- You must include with your Notice:
  - $10 check or money order for the processing fee
- Authority for fee: A.R.S. § 45-113(B), A.A.C. R12-15-151(B)(4)(a)

** PLEASE PRINT CLEARLY **

SECTION 1. COUNTY OR LOCAL HEALTH AUTHORITY ENDORSEMENT (if applicable)

If water from the proposed well will be used for domestic purposes on a parcel of land of 20 or fewer acres, the applicable county or local health authority must endorse all items in Section 1 before submission to the Department of Water Resources. You must also attach a site plan (see instructions).

CHECK ONE

- [X] County or Local Health Authority Recommends Approval (pursuant to A.R.S. § 45-596 (G) and (F))
  - [ ] Field Inspection Performed
  - [X] Site Plan Review Only
- [ ] Insufficient Information to Make a Determination

Official County or Local Seal or Stamp

RECEIVED
APR 1 2002
GROUNDWATER

Pima County DEQ
130 W. Congress
Tucson, AZ 85701

COUNTY OR LOCAL AUTHORITY NAME AND TITLE: ROBERT E FLINT CIVIL ENG. ASSIST.

COUNTY OR LOCAL AUTHORITY SIGNATURE: Robert E. Flint

TELEPHONE NUMBER: 520 740-6502

DATE: 03.29.02

SECTION 2. REGISTRY INFORMATION

Well Type

CHECK ONE

- [X] Exempt (Pump has a maximum capacity of not more than 35 gpm and water is not used for irrigation purposes inside an AMA.) (See instructions.)
- [ ] Non-Exempt (Pump has a maximum capacity of more than 35 gpm or water is used for irrigation purposes inside an AMA.) (See instructions.)

DESIGN PUMP CAPACITY: 35 Gallons Per Minute

Proposed Action

CHECK ONE

- [X] Drill New Well
- [ ] Deepen
- [ ] Replace
- [ ] Modify

If Deepening, Replacing or Modifying:

ORIGINAL WELL REGISTRATION NUMBER: 55 -

MAXIMUM CAPACITY OF ORIGINAL WELL: Gallons Per Minute

DISTANCE & DIRECTION FROM ORIGINAL WELL: Feet

Location of Well

WELL LOCATION ADDRESS (IF ANY): 4811 E Los Reales Rd

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
14	15	14	SE¼	SW¼	SW¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL	# OF ACRES
140	39	0515	2

PLACE OF WATER USE (ONLY IF DIFFERENT FROM LOCATION OF WELL)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
		¼	¼	¼	¼

COUNTY WHERE WELL IS LOCATED: Pima

SECTION 3. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: Brad & Elmer Marble

MAILING ADDRESS: P.O Box 22224

CITY / STATE / ZIP CODE: Tucson Az 85734

CONTACT PERSON NAME AND TITLE: Brad Marble (owner)

TELEPHONE NUMBER: 520-574-0447

FAX: 574-0447

Landowner (If different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL: Same

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER

FAX

SECTION 4.

Questions	Yes	No	If Yes:
1. Is the proposed well site within 100 feet of a septic tank system, sewer disposal area, landfill, hazardous materials or petroleum storage area or tank?		X	You must also request a variance (A.A.C. R12-15-818).
2. Is there another well name or identification number associated with this well?		X	PLEASE STATE
3. Is the proposed well the second exempt well on this parcel for the same use?		X	If the proposed well is in an Active Management Area, you must also file a supplemental form 55-40A.

DWR 55-40 (REVISED 02/02/02) Page 1 of 3

Notice of Intent to Drill, Deepen, Replace or Modify a Well

WELL REGISTRATION NUMBER: 55-

SECTION 5. DRILLING AUTHORIZATION

Drilling Firm	
NAME: DESERT DRILLING	
DWR LICENSE NUMBER: 517	ROC LICENSE CATEGORY: C-53 F A-04
TELEPHONE NUMBER: 520-762-9549	FAX:

SECTION 6. WATER / SITE INFORMATION

Principal Use of Water (CHECK ONE)	Other Uses of Water (CHECK ALL THAT APPLY)
☐ Irrigation	☐ Irrigation
☐ Utility	☐ Utility
☐ Commercial	☐ Commercial
☒ Domestic	☐ Domestic
☐ Municipal	☐ Municipal
☐ Industrial	☐ Industrial
☐ Mining	☐ Mining
☐ Stock	☐ Stock
☐ Recharge	☐ Recharge
☐ Dewatering	☐ Dewatering
☐ Other *(please specify)*:	☐ Other *(please specify)*:

SECTION 7. PROPOSED WELL CONSTRUCTION DESIGN (attach separate sheet if needed)

DATE CONSTRUCTION IS TO BEGIN: regular

Borehole: DEPTH FROM SURFACE FROM (feet)	Borehole: DEPTH FROM SURFACE TO (feet)	Borehole: BOREHOLE DIAMETER (inches)	Casing: DEPTH FROM SURFACE FROM (feet)	Casing: DEPTH FROM SURFACE TO (feet)	Casing: OUTER DIAMETER (inches)	Casing: MATERIAL TYPE (✓) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (✓) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	GROUTING MATERIAL
0	21	10"	-1	21'	6"	X*				X						Cement
21	250	6½"	-1	250'	5"		X			X						
250	300	6½	250	300'	5		X							X		

* ADWR well construction standards require a surface seal consisting of a minimum of 20 feet of steel casing. Cement grout must be used to fill the annular space between the surface casing and the borehole. (A.A.C. R12-15-811(B))

The Department's issuance of an authorization to drill a well is not a determination of whether water withdrawn from the well is legally surface water or groundwater. The legal nature of the water withdrawn from the well may be the subject of court action in the future as part of a determination of surface water rights in your area. If there are court proceedings that could affect your well, you will be notified and be given the opportunity to participate. If you have questions regarding the legal nature of the water to be withdrawn from your proposed well, please consult with an experienced civil engineer, hydrologist or water rights attorney.

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE: Brad Marble

SIGNATURE OF WELL OWNER OR LANDOWNER: Brad Marble

DATE: 3-15-02

Notice of Intent to Drill, Deepen, Replace or Modify a Well

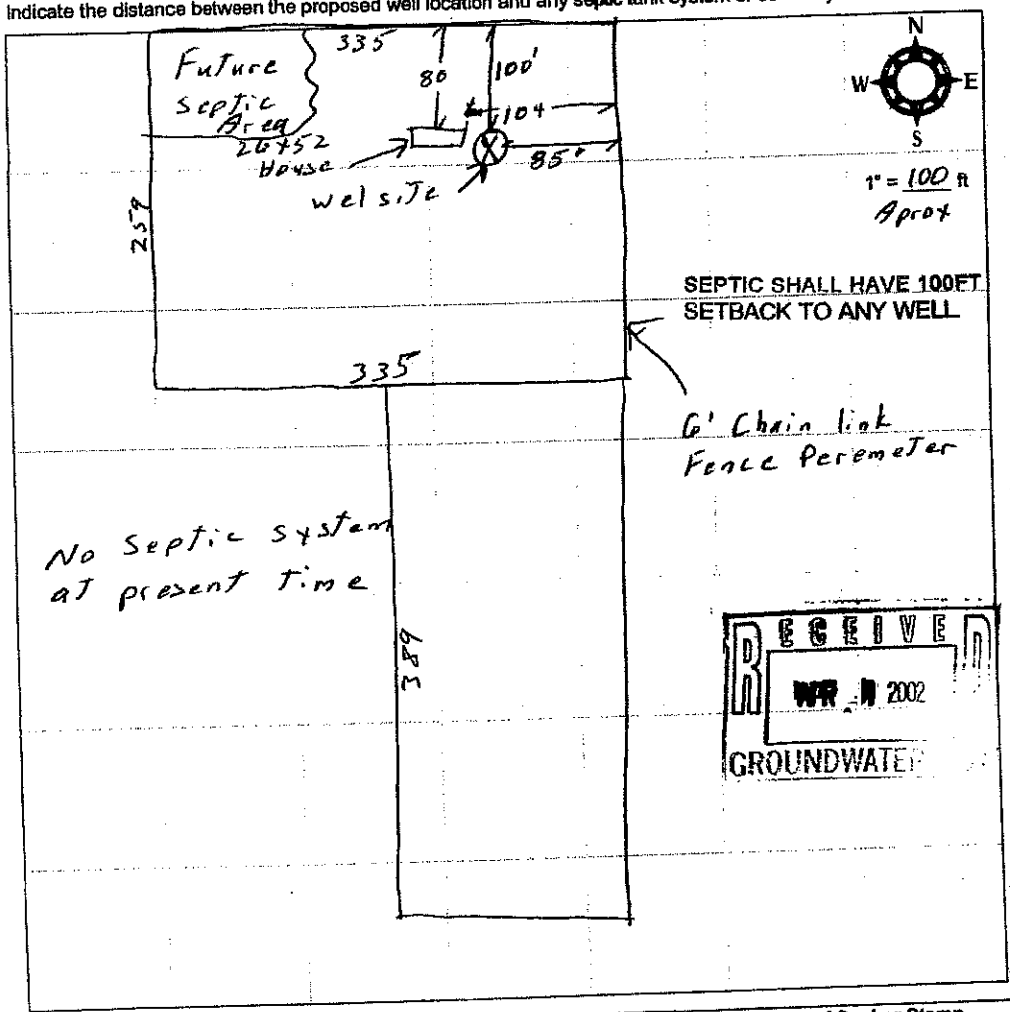
WELL REGISTRATION NUMBER: 55-

WELL SITE PLAN

NAME OF WELL OWNER: Brad & Elmer Marble

COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK 140 | MAP 39-054 | PARCEL 051S

- If this well will be a domestic well on 20 acres or less, please draw the following: (1) the boundaries of your property; (2) the proposed well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well. If the parcel is vacant land or lacks a septic tank or sewer system, please indicate this.
- Indicate the distance between the proposed well location and any septic tank system or sewer system.



COUNTY OR LOCAL AUTHORITY NAME AND TITLE: ROBERT E FLINT CIVIL ENG. ASSIST.

COUNTY OR LOCAL AUTHORITY SIGNATURE: Robert E. Flint

TELEPHONE NUMBER: 520.740.6502

DATE: 05.29.02

Official County or Local Seal or Stamp

Pima County DEQ
130 W. Congress
Tucson, AZ 85701

DWR 55-40 (REVISED 02/02/02) Page 3 of 3

ARIZONA DEPARTMENT OF WATER RESOURCES
500 North 3rd Street, Phoenix, Arizona 85004
Telephone (602) 417-2470
Fax (602) 417-2422

April 10, 2002

JANE DEE HULL
Governor
JOSEPH C. SMITH
Director

BRAD MARBLE
PO BOX 22224
TUCSON, AZ 85706

Registration No. 55-591750
File No. D(14-15) 14 DCC

Dear Well Owner:

Enclosed is a copy of the Notice of Intention (NOI) to Drill a well. This NOI, which was recently filed with this Department, is being returned to you as evidence of your compliance with ARS §45-596. The enclosed Pump Installation Completion Report is to be submitted when pump equipment is installed. The drilling card and Well Drilling Report form have been sent to your driller. He may not begin drilling until he has received the drilling card and it must be displayed on the rig during drilling. If you change drillers, you must supply this Department with the new driller's identity. Please ensure that the driller you select is licensed to drill the type of well you require. All well drillers must pass an examination proving they understand the drilling methods for that particular license, and are familiar with the laws and regulations which govern well construction in Arizona.

If it is necessary to change the location of the proposed well, immediately contact the Department of Water Resources to obtain written permission before proceeding with the drilling. A properly signed, amended drilling card must be in the possession of the driller before drilling commences at a different location than originally authorized.

ARS §45-600 requires the registered well owner to submit a Pump Installation Completion Report within thirty (30) days after the installation of pumping equipment. It also requires the driller to furnish this Department a complete and accurate Well Drillers Report and Well Log within thirty (30) days after completion of drilling. You should insist, and ensure, that both of these are done.

If in the course of drilling a new well, it is determined that the new well cannot be successfully completed as initially intended (dry hole, cave in, lost tools, etc.), the new well must be properly abandoned and a Well Abandonment Completion Report submitted per R12-15-816.F.

Per ARS §45-593 (C), the person to whom a well is registered shall notify this Department of a change in ownership of the well and/or information pertaining to the physical characteristics of the well in order to keep this well registration file current and accurate. We have enclosed a Change of Well Information Form should it be needed in the future.

Sincerely,

Sylvia Valdez
Water Resource Technician
Groundwater Management Support Section

Enclosures

Molly Collins - Re: Auto auctions property

From: Robert Stephens <stephens.robertc@gmail.com>
To: Molly Collins <Molly.Collins@tucsonaz.gov>
Date: 3/4/2013 9:36 AM
Subject: Re: Auto auctions property
CC: <nathan@rodrobertson.com>

Rod Robertson Enterprises
3847 Parkdale
San Antonio, Texas 78229

thank you.

On Mon, Mar 4, 2013 at 7:44 AM, Molly Collins <Molly.Collins@tucsonaz.gov> wrote:

> Robert and Nathan
> I would like to send you the results of the testing done in July and January for your records. No VOCs were detected in either sample. Can you give me an address where I can mail a copy of the laboratory reports and a summary letter?
> Thanks
>
> >>> Robert Stephens <stephens.robertc@gmail.com> 3/1/2013 12:15 PM >>>
> we have a water service so we drink bottled water.
>
> thanks.
>
> On Fri, Mar 1, 2013 at 10:05 AM, Molly Collins <Molly.Collins@tucsonaz.gov> wrote:
>
> > Hi Nathan and Robert
> > I am the project manager for the groundwater program at the Los Reales Landfill. We traded some emails in July in order to get our sampling crew access to sample the well at the auto auctions property. The state agency has asked me to verify where your drinking water comes from for the people working on the property. Can you tell me if the drinking water is from the on-site well, and if not where it is from?
> > Thanks
> > Molly Collins, R.G.
> > City of Tucson Environmental Services
> > (520) 837-3703 (direct)
> > (520) 791-4155 (fax)
> > (520) 404-2705 (mobile)

Mail Envelope Properties (5134CD75.0BC : 250 : 188)

Subject:	Re: Auto auctions property
Creation Date	3/4/2013 9:35:39 AM
From:	Robert Stephens <stephens.robertc@gmail.com>
Created By:	stephens.robertc@gmail.com

Recipients

tucsonaz.gov
OPPO1.OPDOM2
MCollin1 (Molly Collins)

rodrobertson.com
nathan CC

Post Office	**Route**
OPPO1.OPDOM2	

Files	**Size**	**Date & Time**
MESSAGE	1293	3/4/2013 9:35:39 AM
TEXT.htm	3369	
Mime.822	8215	

Options

Expiration Date:	None
Priority:	Standard
Reply Requested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

Junk Mail Handling Evaluation Results

Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered

Junk Mail handling disabled by User
Junk List is not enabled
Junk Mail using personal address books is not enabled
Junk iCal Mail using personal address books is not enabled
Block List is not enabled

City of Tucson Environmental Services
(520) 837-3703 (direct)
(520) 791-4155 (fax)
(520) 404-2705 (mobile)

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GUY NATHAN HENDERSON
ARIZONA YARD/DRIVER MANAGER
6001 S WILMOT RD
TUCSON AZ 85706
(OFFICE)520-663-4028
(FAX)520-663-3860
(CELL)830-765-4228

Mail Envelope Properties (5134CDEE.106 : 69 : 262)

Subject:	Re: Auto auctions property
Creation Date	3/4/2013 9:36:42 AM
From:	Nathan Henderson <nathan@rodrobertson.com>
Created By:	nathan@rodrobertson.com

Recipients
tucsonaz.gov
OPPO1.OPDOM2
MCollin1 CC (Molly Collins)

gmail.com
stephens.robertc (Robert Stephens)

Post Office	**Route**
OPPO1.OPDOM2	

Files	**Size**	**Date & Time**
MESSAGE	1772	3/4/2013 9:36:42 AM
TEXT.htm	3786	
Mime.822	8600	

Options

Expiration Date:	None
Priority:	Standard
Reply Requested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

Junk Mail Handling Evaluation Results
Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered
Junk Mail handling disabled by User
Junk List is not enabled
Junk Mail using personal address books is not enabled
Junk iCal Mail using personal address books is not enabled
Block List is not enabled

ConformaTECH

LANDFILL GAS PROBE LOCATION MAP

N

0 500 1,000

Feet

1 inch = 1,000 feet

S Swan Rd

S Craycroft Rd

10

E Los Reales Rd

LR-1 LR-2 LR-3 LR-4 LR-5 LR-6 LR-7 LR-8 LR-9 LR-10 LR-11 LR-12 LR-13 LR-14 LR-15 LR-16 LR-17 LR-18 LR-19 LR-20 LR-21 LR-22 LR-23 LR-24

EXPLANATION

- Gas Monitoring Wells
- Waste Boundary
- 100-Feet from Waste Boundary
- 500-Feet from Waste Boundary

CITY OF TUCSON

ENVIRONMENTAL SERVICES

Los Reales Landfill
Landfill Gas Monitoring Probes
May 2011

Drawn By:	LE
Checked:	JD
Approved:	NP
Date:	3/18/2011
File:	See Below

J:\GIS\Data_Collection\Maps\Los_Reales_Gas_Probes.mxd