

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

CITY OF TUCSON PROPERTY  
CITY OF TUCSON REFUSE TRANSFER STATION AND  
CONTAINER MAINTENANCE COMPOUND  
1450 S. 10<sup>TH</sup> AVENUE, TUCSON, ARIZONA

APNs 118-20-036A, -037A, -0750, -078A, & PORTIONS OF APNs 118-20-076A & -077A

PREPARED FOR:



DECEMBER 2, 2013

AAI DATE: APRIL 30, 2014



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ALLWYN ENVIRONMENTAL JOB No. 002-094

**PREPARED BY:**



**TUCSON, ARIZONA**

## EXECUTIVE SUMMARY

This report presents the findings of the Phase I Environmental Site Assessment (ESA) performed by Allwyn Environmental for the City of Tucson (COT) Property located at 1450 S. 10<sup>th</sup> Avenue, Pima County, Arizona (herein referred to as the COT Property and/or the subject property in this Phase I ESA Report). The subject property is contained within six parcels (Assessor Parcel Nos. (APNs) 118-20-036A, 118-20-037A, 118-20-0750, 118-20-078A, and portions of APNs 118-20-076A and 118-20-077A), and covers approximately 9.50 acres. The center of the subject property is located at a latitude of approximately 33.204372° North and a longitude of approximately 110.975541° West. The subject property is located within the northwest quarter of Section 24, Township 14 South, Range 13 East of the Gila and Salt River Baseline and Meridian System.

The northeast portion of the subject property is separated from the main portion of the subject property by a dry wash and there is an Office Building (formerly COT's Brush and Bulky Office) located on the eastern portion of the northeast portion of the subject property. The main portion of the subject property located south of the dry wash is occupied by the COT Refuse Transfer Station and Container Maintenance Compound. The former COT Refuse Transfer Facility, which interviews indicate was decommissioned in the late 1990s, is located on the southern portion of the main portion of the subject property. There is a truck scale, 5,000 gallon diesel fuel aboveground storage tank (AST), and fuel dispenser island located north of the former COT Refuse Transfer Facility on the south side of Papago Street. In addition, there is a Container Maintenance Facility (consisting of welding bays, a wash bay, and a paint booth used to repair and paint refuse containers), a Storage Building, an Office Trailer, and concrete-walled storage/parking areas located on the northern portion of the main portion of the subject property. The remainder of the subject property consists of asphalt parking lots and areas designated for the storage of metal refuse dumpsters and residential refuse collection containers.

The Phase I ESA was completed for the City of Tucson Environmental Services Department to document known environmental risks and conditions associated with the property. The Phase I ESA was completed in accordance with the requirements of the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation: E1527-05). The objective of the Phase I ESA was to identify recognized environmental conditions (RECs) at the property.

This assessment revealed evidence of the following RECs in connection with the subject property:

- Allwyn Environmental observed the trash compactor unit within the former COT Refuse Transfer Facility where municipal garbage trucks once off-loaded their municipal solid waste. Interviews with COT staff indicate that the compactor was operated by hydraulics, and there is other hydraulic equipment at the facility. Allwyn Environmental was unable to obtain documentation pertaining to the number or location of hydraulic tanks associated with this facility. It is also Allwyn Environmental's understanding that this facility may be demolished at some point in the future. Allwyn Environmental recommends additional investigation of this REC. First, the number of tanks and their locations must be identified and their contents should be properly characterized and then disposed off-site at an appropriate facility. Subsequently, an inspection should be conducted in the vicinity of the tanks to evaluate potential impacts, if any, to soils in the area. If soils in the vicinity of the hydraulic tanks appear to be impacted then Allwyn Environmental would recommend the collection of soil samples. Specifically, shallow subsurface soil samples would be collected from soils underlying the tanks and in the vicinity of the tanks. Collected soil samples would be analyzed for

polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) to identify potential impacts, if any, to the soil.

- Aerial Photography indicates that from sometime between 1980 to 1990 and 1996 to 2002, the area west of the Container Maintenance Facility and the area east of the Office Trailer were used to stockpile apparent refuse debris. Therefore Allwyn Environmental recommends that incremental composite shallow subsurface soil samples be collected from these areas and analyzed for PAHs, volatile organic compounds (VOCs), and metals to identify potential impacts, if any, to the soil.

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- 1 SITE VICINITY MAP
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- 3 AERIAL MAP (2012)

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- A REGULATORY DATABASE SEARCH REPORT
- B USER INFORMATION DOCUMENTATION FORM
- C HISTORICAL TITLE REPORT
- D AGENCY REQUESTS
- E SITE RECONNAISSANCE DOCUMENTATION FORM
- F PHOTOGRAPHIC LOG
- G INTERVIEW DOCUMENTATION FORM
- H ENVIRONMENTAL PROFESSIONAL RESUME

## 1.0 INTRODUCTION

### 1.1 PROJECT BACKGROUND

Allwyn Environmental was retained by the City of Tucson (COT) to conduct a Phase I Environmental Site Assessment (ESA) for the City of Tucson (COT) Property located at 1450 S. 10<sup>th</sup> Avenue, Pima County, Arizona and herein referred to as the COT Property and/or subject property in this Phase I ESA Report (See Figure 1 for the Vicinity Map of this site). The subject property is contained within six parcels (118-20-036A, 118-20-037A, 118-20-0750, 118-20-078A, and portions of APNs 118-20-076A and 118-20-077A), and covers approximately 9.50 acres (See Figure 2 for the Parcel Map of this site). The center of the subject property is located at a latitude of approximately 33.204372° North and a longitude of approximately 110.975541° West. The subject property is located within the northwest quarter of Section 24, Township 14 South, Range 13 East of the Gila and Salt River Baseline and Meridian System. This document presents the Phase I ESA in accordance with the requirements of the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation: E1527-05).

### 1.2 PROJECT OBJECTIVES

The objective of the Phase I ESA is to identify recognized environmental conditions (RECs) at the subject site. A REC is defined in the ASTM E-1527-05 as:

*“The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. This term is not intended to include de minimis conditions that generally do not present a threat to public 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 ”.*<sup>1</sup>

### 1.3 SCOPE OF WORK

Allwyn Environmental completed the following scope of services for the Phase I ESA in accordance with ASTM E1527-05:

- Review City of Tucson-provided information
- Review standard environmental record sources within minimum search distance
- Review readily-available historical sources (potentially including aerial photographs, fire insurance maps, property tax files, recorded land title records, and topographical maps)
- Disseminate and evaluate information to formulate professional opinion and conclusions
- Prepare report

ASTM E1527-05 also requires that the environmental professional conduct a site reconnaissance, including site visit of the exterior features of buildings and structures and a representative evaluation of adjoining property uses and conduct interviews with owner, occupant, or other persons knowledgeable with the site history and operations.

#### **1.4 REASON FOR PERFORMING PHASE I**

The Phase I ESA is intended to permit the City of Tucson to satisfy one of the requirements for the innocent landowner's defense to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability, namely "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice". In addition, persons that receive a Brownfields grant from the U.S. Environmental Protection Agency (EPA) awarded under CERCLA section 104(k)(2)(B) and use the grant money to conduct site characterization or assessment activities must do so using All Appropriate Inquiries (AAI) which is satisfied by completing a Phase I ESA in accordance with ASTM 1527-05.

#### **1.5 USER RELIANCE**

This document and the information contained herein have been prepared solely for the use of the City of Tucson and their authorized representatives. Any reliance on this report by other parties shall be at such party's sole risk. Any future consultation or provision of services to third parties related to the property requires written authorization from the City of Tucson or their representatives. Any such services may be provided at Allwyn Environmental's sole discretion and under terms and conditions acceptable to Allwyn Environmental, including potential additional compensation.

## 2.0 SITE INFORMATION

### 2.1 SITE LOCATION AND LEGAL DESCRIPTION

The subject property is contained within six parcels (118-20-036A, 118-20-037A, 118-20-0750, 118-20-078A, and portions of APNs 118-20-076A and 118-20-077A) located at 1450 S. 10<sup>th</sup> Avenue in Tucson, Pima County, Arizona and covers approximately 9.50 acres. The center of the subject property is located at a latitude of approximately 33.204372° North and a longitude of approximately 110.975541° West. The subject property is located within the northwest quarter of Section 24, Township 14 South, Range 13 East of the Gila and Salt River Baseline and Meridian System.

The addresses and legal descriptions for the parcels containing the subject property are:

- Parcel No. 118-20-036A  
425 W. 23<sup>rd</sup> Street, Tucson, AZ 85713  
NATIVE AMERICAN W66.17' E135' N150' BLK 3 EXC NELY SPNDRL ADDITION (RD 3418/153 RD 862/284)
- Parcel No. 118-20-037A  
1402 S. 10<sup>th</sup> Avenue, Tucson, AZ 85713  
NATIVE AMERICAN ADDITION ALL OF BLK 3 & ABAN SACATON AVE & PAPAYO ST LYG WLY OF TENTH AVE EXC N150' E66.17' THEREOF (ABAN 3418/153 & RD 862/284)
- Parcel No. 118-20-0750  
No situs address, Tucson, AZ 85713  
N150' S406' W364.45' E784.4' EXC S34.4' E64.35' THEREOF SEC 24-14-13 (DRE 251/570 RD 862/284)
- Parcel No. 118-20-076A  
1445 S. 11<sup>th</sup> Avenue, Tucson, AZ 85713  
PTN S874.8' W214.34' E1259.49' NW4 NW4 EXC SLY 5' THEREOF LYG ELY & ADJ TO ELEVENTH AVE 4.20 AC SEC 24-14-13(DRE 251/570 RD 3418/153)
- Parcel No. 118-20-077A  
1480 S. 10<sup>th</sup> Avenue, Tucson, AZ 85713  
PTN S426.6' W612.39' E1102.39' NW4 NW4 EXC SLY 5' THEREOF SEC 24-14-13 (DRE 251/570 RD 3418/153)
- Parcel No. 118-20-078A  
No situs address, Tucson, AZ 85713  
W64.35' OF THE E490' OF THE S290.4' OF NW4 NW4 EXC SLY 5' THEREOF

### 2.2 ENVIRONMENTAL SETTING

#### 2.2.1 Topography

The site lies within the coverage area of the Tucson, Arizona 7.5 Minute Quadrangle United States Geological Service (USGS) maps. The property is generally flat with elevations ranging from approximately 2385 feet to approximately 2400 feet above mean sea level (msl). Allands, a historical title and environmental research firm, included portions of the 1983 version of the topographic map

encompassing the site as part of the Regulatory Database Search Report. The Allands report is contained within Appendix A.

### **2.2.2 Regional and Site Geology**

The property lies within the Basin and Range Sonoran Desert physiographic province, characterized by generally north- to northwest-trending mountain ranges separated by wide, flat alluvial basins. The alluvial basins are composed of deep layers of sediments. The depth to bedrock at the center of the Upper Santa Cruz Valley Subbasin is in excess of 11,000 feet. Alluvial sediments in this basin can be subdivided into four hydrogeologic units which are listed in descending order:

- Surficial or recent deposits. This unit is usually less than 100 feet thick and consists mainly of unconsolidated sand and gravel.
- Fort Lowell Formation. This unit is generally 300 to 400 feet thick and consists of unconsolidated to moderately consolidated sands and silts.
- Tinaja Beds. The Tinaja Beds consists of the upper, middle, and lower units. The thickness of the Tinaja Beds can be as great as 5,000 feet, consisting of sandstones and conglomerates ranging to siltstones and mudstones.
- Pantano Formation. This unit consists of consolidated sandstones, conglomerates, and mudstones and ranges to 6,400 feet in thickness.

The Basement Unit is below the basin-fill sediments and forms an impermeable bedrock floor of the basin.<sup>2</sup>

### **2.2.3 Regional Groundwater Conditions**

The property lies within the boundaries of the Tucson Active Management Area (AMA), in the north-central portion of the Upper Santa Cruz Basin (USCB), which was established as a result of 1980 Arizona Groundwater Management Code. The Tucson AMA was designed to address groundwater overdraft in the area, whereby groundwater withdrawal is occurring at twice the rate of recharge. As a result, water management in this area is intensive. Within the Tucson AMA, groundwater can be withdrawn legally only through a groundwater right or permit, unless groundwater is withdrawn from an exempt well (maximum capacity of 35 gallons per minute or less). These rights or permits take the form of grandfathered rights, service rights, or withdrawal rights.<sup>3</sup>

Historically, the Fort Lowell Formation provided most of the water used in the Tucson AMA, but portions are now partially or completely dewatered. The upper Tinaja Beds have a greater yield than the middle and lower portions and have become the principal groundwater source in the area. Due to its geologic composition and depth, the Pantano Formation is not widely used as a groundwater source. Groundwater flow generally trends to the northwest, although localized pumping and other conditions can impact the direction of flow.<sup>4</sup>

### **2.2.4 Site Groundwater**

Imaged Records for wells registered with the Arizona Department of Water Resources (ADWR) were reviewed to identify wells in the vicinity of the subject property. Based on the information provided in

the Well Driller Report from a well located within a ½ mile of the subject property (ADWR Well No. 55-549206), groundwater is located approximately 155 feet below ground surface (bgs). Groundwater flow in the vicinity of the subject property is generally towards the northwest.<sup>5</sup>

### **2.3 CURRENT PROPERTY USE AND DESCRIPTION**

The northeast portion of the subject property is separated from the main portion of the subject property by a dry wash and there is an Office Building (formerly COT's Brush and Bulky Office) located on the eastern portion of the northeast portion of the subject property. The main portion of the subject property located south of the dry wash is occupied by the COT Refuse Transfer Station and Container Maintenance Compound. The former COT Refuse Transfer Facility, which interviews indicate was decommissioned in the late 1990s, is located on the southern portion of the main portion of the subject property. There is a truck scale, 5,000 gallon diesel fuel aboveground storage tank (AST), and fuel dispenser island located north of the former COT Refuse Transfer Facility on the south side of Papago Street. In addition, there is a Container Maintenance Facility (consisting of welding bays, a wash bay, and a paint booth used to repair and paint refuse containers), a Storage Building, an Office Trailer, and concrete-walled storage/parking areas located on the northern portion of the main portion of the subject property. The remainder of the subject property consists of asphalt parking lots and areas designated for the storage of metal refuse dumpsters and residential refuse collection containers.

### **2.4 PUBLIC UTILITIES**

The subject property is served by the following utilities and providers:

- Electric – Tucson Electric Power
- Potable Water – City of Tucson
- Wastewater – Pima County Public Works
- Solid Waste – City of Tucson and Private Haulers
- Natural Gas – Southwest Gas Corporation

### **2.5 CURRENT USES OF ADJOINING PROPERTIES**

The current uses of properties immediately adjoining the subject property are:

- Northwest
  - 11<sup>th</sup> Avenue and 23<sup>rd</sup> Street intersection
  - Commercial and Residential development
- North
  - 23<sup>rd</sup> Street
  - Residential development
- Northeast
  - 10<sup>th</sup> Avenue and 23<sup>rd</sup> Street intersection
  - Residential development
- East
  - 10<sup>th</sup> Avenue
  - Residential development
- Southeast
  - 10<sup>th</sup> Avenue and 25½<sup>th</sup> Street intersection
  - Residential development

- South
  - 25½<sup>th</sup> Street
  - Residential development
- Southwest
  - COT Water storage facility and storage yard
- West
  - Tucson Water storage facility and storage yard
  - 11<sup>th</sup> Avenue
  - Vacant lots
  - Commercial and residential development

### **3.0 USER PROVIDED RECORDS**

In order to qualify for the landowner liability protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the Phase I ESA user must provide certain information to the environmental professional. Allwyn Environmental developed a User Information Documentation Form to solicit this information from the User of this Phase I ESA Report to achieve this liability protection. Mr. David Barraza, City of Tucson Environmental Services, was interviewed via e-mail a User Information Documentation Form by Allwyn Environmental on October 31, 2013. Information obtained from the User Information Documentation Form is summarized below and a copy of the completed form is included in this report in Appendix B.

#### **3.1 ENVIRONMENTAL LIENS OR DEURS**

Mr. Barraza was not aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law. Mr. Barraza was not aware of any other activity and use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law.

#### **3.2 SPECIALIZED KNOWLEDGE**

Mr. Barraza indicated that he did possess specialized knowledge or experience related to the subject property or nearby properties. Specifically, he stated that transfer station at the subject location was decommissioned in late 1990s and that the primary use of this property since the transfer station was deactivated has been the maintenance of commercial containers and the storage of residential containers. Mr. Barraza also stated that Tucson Water uses the warehouse and storage yard located on the property southwest of the subject property and that the warehouse is not used to store chemicals.

#### **3.3 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE KNOWLEDGE**

Mr. Barraza indicated that he was 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. Specifically, Mr. Barraza stated COT Environmental Services maintains an Industrial Wastewater Control (IWC) Permit (Permit #12442) for the Container Maintenance Facility located within the COT Refuse Transfer Station and Container Maintenance Compound. Mr. Barraza further stated that paint is stored within the Container Maintenance Facility.

#### **3.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES**

Mr. Barraza indicated that he was uncertain if the purchase price of this property reasonably reflects the fair market value of the property.

#### **3.5 INDICATORS OF PRESENCE OR LIKELY PRESENCE OF CONTAMINATION**

Mr. Barraza indicated that he was unaware of any obvious indicators that point to the potential presence or likely presence of contamination at the subject property.

## 4.0 HISTORICAL USE

ASTM E1527-05 requires the environmental professional to identify all obvious uses of the property from the present back to the property's first developed use or 1940, whichever is earliest. This information is collected to identify the likelihood that past uses have led to RECs in connection with the property. This task is accomplished by reviewing standard historical sources to the extent that they are necessary, reasonably ascertainable, and likely to be useful. These standard records include aerial photographs, fire insurance maps, property tax files, land title records, topographic maps, city directories, building department records, and zoning/land use records.

The general type of historical use (i.e., commercial, retail, residential, industrial, undeveloped, office) should be identified at 5-year intervals, unless the specific use of the property appears to be unchanged over a period longer than 5 years. The historical research is complete when the use is defined or when data failure occurs. Data failure occurs when all of the standard historical sources have been reviewed, yet the property use cannot be identified back to its first developed use or to 1940. Data failure is not uncommon in trying to identify the use of the property at 5-year intervals back to first use or 1940, whichever is earlier.

Historical records were researched and obtained by Allwyn Environmental to identify obvious uses of the property from the present back to the property's first developed use, or to 1940, whichever is earlier. The results of this research and data failure, if encountered, are presented in the following sections.

### 4.1 AERIAL PHOTOGRAPH REVIEW

Aerial photographs were reviewed from several sources for the years 1958, 1967, 1972, 1980, 1990, 1996, 2002, 2006 and 2012 (See Figure 3 for the 2012 aerial photograph of the subject property). A brief description of each aerial photograph follows:

- **1958 Aerial Photograph Reviewed at [www.historicaerials.com](http://www.historicaerials.com).**

#### Property Features

There subject property is vacant and undeveloped.

#### Surrounding Property Features

10<sup>th</sup> Street is a paved road that runs north-south along the eastern boundary of the subject property. The other roads that traverse the perimeter of the subject property (11<sup>th</sup> Avenue, 23<sup>rd</sup> Street, and 25½<sup>th</sup> Street) and the interior of the subject property (Papago Street and Sacaton Avenue) are unpaved. There are approximately ten apparent refuse containers being stored on the property southwest of the subject property along 11<sup>th</sup> Avenue. The properties to the north, south, and west of the subject property contain apparent residential development and the properties west of the subject property contain apparent commercial development. In addition, there is an apparent railroad line that runs north-south approximately 100 feet west of the subject property.

- **1967 Aerial Photograph Reviewed at [www.historicaerials.com](http://www.historicaerials.com).**

#### Property Features

The subject property appears to have been graded. The western portion of the subject property is now partially enclosed by a fence and the fenced-in area extends to encompass the property southwest of the subject property. The portion of the fenced-in area located on the subject

property is being used to store apparent refuse containers and other materials. The southern portion of the subject property is now being used for parking and there is one structure located on the southwest portion of the parking area. The dry wash that divides the northeast portion of the subject property from the main portion of the subject property is now visible and there is an apparent pile of debris located on the central portion of the northeast portion of the subject property. The other uses on the subject property appear unchanged from the 1958 aerial photograph.

#### Surrounding Property Features

The property located southwest of the subject property is now partially enclosed by a fence and the fenced-in area extends to encompass the subject property. The portion of the fenced-in area located on the property southwest of the subject property is occupied by two apparent commercial structures and there are apparent refuse containers and other materials being stored in this area. Additional commercial development has occurred on the properties west of the subject property and 11<sup>th</sup> Avenue. The uses on the other properties located immediately adjacent to the subject property appear unchanged from the 1958 aerial photograph.

- **1972 Aerial Photograph Reviewed at [www.historicaerials.com](http://www.historicaerials.com).**

#### Property Features

The Office Building is now visible on the northeast portion of the subject property and the Storage Building is now visible on the northern portion of the main portion of the subject property. The area that was partially enclosed by a fence on the western portion of the subject property now appears to be entirely fenced-in. The other uses on the subject property appear unchanged from the 1967 aerial photograph.

#### Surrounding Property Features

The property southwest of the subject property has been entirely fenced-in. The uses on the other properties located immediately adjacent to the subject property appear unchanged from the 1967 aerial photograph.

- **1980 Aerial Photograph Reviewed at [www.historicaerials.com](http://www.historicaerials.com).**

#### Property Features

The area around the Office Building located on the northeast portion of the subject property is now being used for parking. The other uses on the subject property appear unchanged from the 1972 aerial photograph.

#### Surrounding Property Features

All of the roads that traverse the perimeter of the subject property have been paved and the railroad line that runs north-south west of the subject property is no longer visible. The uses on the properties located immediately adjacent to the subject property appear unchanged from the 1972 aerial photograph. .

- **1990 Aerial Photograph Reviewed at [www.historicaerials.com](http://www.historicaerials.com).**

#### Property Features

The COT Refuse Transfer Facility is now visible on the southern portion of the subject property as are the paved roads that allow access to it. The roadways that traverse the interior portions of the subject property have been paved and the fuel dispenser island, located north of the COT Refuse Transfer Facility is now visible. Construction of the Container Maintenance Facility is complete and

the Office Trailer is also visible. In addition, there is a large stockpile of apparent refuse debris visible east of the Office Trailer and another pile of apparent refuse debris visible west of the Container Maintenance Facility. The unpaved portions located on the eastern portion of the main portion of the subject property have been paved and portions of the paved areas are now being used for parking.

Surrounding Property Features

Additional development has occurred on the properties west of the subject property and 11<sup>th</sup> Avenue. The uses on the other properties located immediately adjacent to the subject property appear unchanged from the 1980 aerial photograph.

▪ **June 1, 1996 Aerial Photograph Reviewed at Google Earth.**

Property Features

The size of the apparent stockpile of refuse debris located west of the Container Maintenance Facility has increased. The other uses on the subject property appear unchanged from the 1990 aerial photograph.

Surrounding Property Features

The uses on the properties located immediately adjacent to the subject property appear unchanged from the 1990 aerial photograph.

▪ **November 16, 2002 Aerial Photograph Reviewed at Google Earth.**

Property Features

Both of the apparent refuse debris stockpiles have been cleared from the subject property and the areas located west of the Container Maintenance Facility and south of the COT Refuse Transfer Facility are now being used to store apparent refuse containers. The 5,000 gallon diesel fuel AST located north of the COT Refuse Transfer Facility is now visible. The other uses on the subject property appear unchanged from the 1996 aerial photograph.

Surrounding Property Features

Apparent commercial redevelopment and additional residential development has occurred on the properties east of the subject property. The uses on the properties located immediately adjacent to the subject property appear unchanged from the 1996 aerial photograph.

▪ **November 16, 2006 Aerial Photograph Reviewed at Google Earth.**

Property Features

The area south of the COT Refuse Transfer Facility is now almost exclusively being used for the storage of residential refuse collection containers. The other uses on the subject property appear unchanged from the 2002 aerial photograph.

Surrounding Property Features

The uses on the properties located immediately adjacent to the subject property appear unchanged from the 2002 aerial photograph.

▪ **November 11, 2012 Aerial Photograph Reviewed at Google Earth.**

Property Features

The uses on the subject property appear unchanged from the 2006 aerial photograph.

Surrounding Property Features

The uses on the properties located immediately adjacent to the subject property appear unchanged

from the 2006 aerial photograph.

#### **4.2 SANBORN MAP REVIEW**

Sanborn Map fire insurance maps were created to assist fire insurance agents in assessing the fire hazards of particular pieces of property in towns and cities throughout the United States. The maps indicate the size, shape, and construction materials of residences, commercial properties, and factories and often include such details as building use, house and block numbers, widths of streets and locations of water mains. Sanborn maps were regularly updated, making them a valuable tool for documenting the changes in structure and building use in American cities.

Allands, a historical title and environmental research firm, searched for Sanborn fire insurance maps at the Arizona State Capital Archives, as part of the Regulatory Database Search and reported that portions of the subject property were located within the boundaries of available maps for the year 1949. The Allands report, which includes portions of the Sanborn Maps that encompass portions of the subject property, is contained in Appendix A. A brief description of the Sanborn Insurance Map follows:

- **1949 Tucson Insurance Map Published by Sanborn Map Company**

- Property Features

- There are two dwellings depicted on the northeast portion of the subject property and there is a 'day school' that partially occupies the southeast portion of the subject property. The Sanborn Map only depicts portions of the subject property located east of the Sacaton Avenue and Papago Street Intersection.

- Surrounding Property Features

- There is a church located east of the northern portion of the subject property and 10<sup>th</sup> Avenue does not extend south of Papago Street. In addition, light residential development is depicted on the properties south, east, and north of the subject property.

#### **4.3 PROPERTY TAX FILES**

On-line Pima County Tax Assessor records were researched for the subject property. The assessor's records show that the subject property is owned by the City of Tucson.

#### **4.4 ENVIRONMENTAL LIEN AND ACTIVITY OR USE LIMITATION (AUL) SEARCH REPORT**

Allwyn Environmental contracted with Allands to prepare a Historical Title Report. The report is contained in Appendix C. The report confirms that current ownership is as detailed in Section 4.3.

The Historical Title Report indicates there are no Voluntary Environmental Mitigation Use Restrictions (VEMURs), Declaration of Environmental Use Restrictions (DEURs), Environmental Liens, or activity and use restrictions currently recorded against the property as searched at the Pima County Recorder's Office. The Chain of Title (past to present) for the six parcels comprising the subject property are detailed in the Historical Title Report and summarized below:

- APNs 118-20-036A, -037A, -0750, -076A, -077A, and -078A  
Deed from George Pusch and Mathilde Pusch, his wife to the Board of Home Mission of the Presbyterian Church, recorded 7-18-1903 in Book 34 of Deeds, page 635. (all but streets)

- Papago Street and Sacaton Avenue  
Dedication of Streets by George Pusch and Mathilde Pusch, his wife recorded 9-10-1904 in Book 7 of Misc., page 284. (streets)
- APNs 118-20-0750, -076A, and -077A  
Deed from the Board of Home Mission of the Presbyterian Church to the Board of National Ministries of the Presbyterian Church, recorded 1-23-29 in Book 132 of Deeds, pages 16 and 17 and recorded 4-23-30 in Book 146 of Deeds, page 150.
- APN 118-20-077A  
Deed from Alice V. Orndorff and Lee H. Orndorff, her husband and George W. Pusch to Walter F. Pusch, Mabel P. Hankins and Gertrude D. Zipf, recorded 6-21-35 in Book 185 of Deeds, pages 294 and 295.
- APN 118-20-037A  
Deed from the Board of National Ministries of the Presbyterian Church to the city of Tucson recorded 5-24-48 in Docket 79, page 48.
- APN 118-20-076A  
Deed from the Superintendent of Streets awarding property to the city of Tucson recorded 1-22-26 in Docket 107, page 380. (076A)
- APN 118-20-0750  
Deed from the Superintendent of Streets awarding property to the city of Tucson recorded 1-22-26 in Docket 107, page 382.
- APN 118-20-077A  
Deeds from Walter F. Pusch, Mabel P. Hankins and Gertrude D. Zipf to Fred L. Pusch, a single man, recorded 4-29-47 in Docket 325, pages 178 to 180.
- APN 118-20-077A  
Deed from Fred L. Pusch, a single man to the city of Tucson recorded 4-29-47 in Docket 325, page 181.
- APN 118-20-036A  
Deed from the Board of National Ministries of the Presbyterian Church to the city of Tucson recorded 4-16-53 in Docket 590, page 271.
- APN 118-20-078A  
Quit Claim Deed from the United States of America to the city of Tucson recorded 3-23-55 in Docket 819, page 424.
- Papago Street and Sacaton Avenue  
Abandonment of Sacaton Avenue and Papago Street to the city of Tucson by Ordinance recorded 1-23-69 in Docket 3418, page 153. (Streets)

#### 4.5 USGS TOPOGRAPHIC MAPS

USGS 7.5 Minute Topographic maps for the Tucson, Arizona quadrangle were reviewed at [www.historicaerials.com](http://www.historicaerials.com) for the years 1905, 1916, 1932, 1947, 1958, 1963, 1973, 1977, 1983, 1994, 1995, and 2002. The following relevant information was gathered during the topographic map review:

- The topographic maps dated from 1905 to 1947 depict the subject property as vacant and the properties located immediately adjacent to the subject as lightly developed as indicated by the black squares and roads depicted on the map.
- The topographic maps dated from 1958 to 2002 show the subject property and properties immediately adjacent to the subject property to be heavily developed as indicated by the pink or gray shading on the maps. In addition, the maps dated from 1958 to 1977 depict the railroad line that runs north-south approximately 100 feet west of the subject property.

With regard to the topographic maps, no industrial, commercial, or manufacturing uses (aside from the railroad that runs north-south approximately 100 feet west of the subject property) on the subject property or properties located immediately adjacent to the subject property are indicated or can be inferred. A portion of the 1983 topographic map encompassing the subject property is included in the Allands Report. The Allands Report is contained in Appendix A.

#### 4.6 CITY DIRECTORY

Allwyn Environmental reviewed business directories, city directories, and cross reference directories at the Pima County library on November 5, 2013, to identify past uses at the addresses assigned to the subject property. The directories were reviewed, if available, at approximately 5-year intervals for the years spanning 1940 (or earliest developed use when applicable) through 2013 (not necessarily inclusive).

Property uses identified by Allwyn Environmental’s review of the available property addresses 1402 S. 10<sup>th</sup> Avenue, 1450 (aka 1550) S. 10<sup>th</sup> Avenue, 1480 S. 10<sup>th</sup> Avenue, and 425 W. 23<sup>rd</sup> Street, Tucson, Pima County, Arizona, are listed in Table 4.1. In addition, tenants that appear to be industrial, commercial, or manufacturing in nature on adjoining properties are listed in Table 4.2 (Please Note: The address 1445 S. 11<sup>th</sup> Avenue is assigned to the Tucson Water Facility located on the property southwest of the subject property and not on the subject property itself).

**TABLE 4.1**

PROPERTY USES FOR ADDRESSES ASSOCIATED WITH THE SUBJECT PROPERTY			
YEAR	ADDRESS	TENANTS	SOURCE <sup>1</sup>
1940	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	ADC
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1944	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	ADC
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1951	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	BCS/MKC
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Samano, PV (Residential Listing)	

PROPERTY USES FOR ADDRESSES ASSOCIATED WITH THE SUBJECT PROPERTY			
YEAR	ADDRESS	TENANTS	SOURCE <sup>1</sup>
1959	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	BCS/MKC
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1964	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1969	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 (aka 1550) S. 10 <sup>th</sup> Avenue	Tucson Public Works	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1974	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 (aka 1550) S. 10 <sup>th</sup> Avenue	COT Trash Removal, Operations, and Purchasing	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
	1398 S. Sacaton Ave	Tucson Garbage/Sanitation	
1979	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1985	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1990	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
1998	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
2005	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	
2012	1402 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1450 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	CD
	1480 S. 10 <sup>th</sup> Avenue	Address Not Listed in Research Source	
	425 W. 23 <sup>rd</sup> Street	Address Not Listed in Research Source	

<sup>1</sup>Source: ADC – Arizona Directory Company  
CD – Cole's Directory

BCS – Baldwin Con Survey Co  
MKC – Mullin Kille Company

**TABLE 4.2**

<b>APPARENT COMMERCIAL LISTINGS FOR SURROUNDING PROPERTIES</b>			
<b>YEAR</b>	<b>ADDRESS</b>	<b>TENANTS</b>	<b>SOURCE<sup>1</sup></b>
1944	425 W. 25 <sup>th</sup> Street	US Indian Service	ADC
1951	423 W. 23 <sup>rd</sup> Street	Southside Presbyterian Church	ADC
1959	433 W. 23 <sup>rd</sup> Street	Greater Southside Baptist Church	BCS/MKC
	544 W. 23 <sup>rd</sup> Street	Crispy Potato Chip Co.	
	600 W. 25 <sup>th</sup> Street	San Xavier Rock & Sand Co.	
1964	600 W. 25 <sup>th</sup> Street	San Xavier Rock & Sand Co.	CD
1969	1435 S. 10 <sup>th</sup> Avenue	Jacobs Assay Office	CD
1974	600 W. 25 <sup>th</sup> Street	Equipment Sales Co.	CD
1979	1435 S. 10 <sup>th</sup> Avenue	Jacobs Assay Office	CD
	1445 S. 11 <sup>th</sup> Avenue	Tucson Water Purchasing	
	317 W. 23 <sup>rd</sup> Street	Head Start Center	
	600 W. 25 <sup>th</sup> Street	Equipment Sales	
1985	1435 S. 10 <sup>th</sup> Avenue	Jacobs Assay Office	CD
	1555 S. 10 <sup>th</sup> Avenue	Pacific Food Enterprises	
	317 W. 23 <sup>rd</sup> Street	Head Start Center	
	600 W. 25 <sup>th</sup> Street	ATCO Bldg. Centers	
1990	1435 S. 10 <sup>th</sup> Avenue	Jacobs Assay Office	CD
	1555 S. 10 <sup>th</sup> Avenue	Mary's Market	
	317 W. 23 <sup>rd</sup> Street	Head Start Center	
	600 W. 25 <sup>th</sup> Street	ATKO Bldg. Materials	
1998	1435 S. 10 <sup>th</sup> Avenue	Jacobs Assay Office	CD
	1555 S. 10 <sup>th</sup> Avenue	Mary's Market	
	317 W. 23 <sup>rd</sup> Street	Head Start Center	
	600 W. 25 <sup>th</sup> Street	ATKO Bldg. Materials	
2005	1454 S. 10 <sup>th</sup> Avenue	Fields Communication LLC	CD
	1555 S. 10 <sup>th</sup> Avenue	Mary's Lucky Dollar Market	
	317 W. 23 <sup>rd</sup> Street	Head Start Center	
2012	1435 S. 10 <sup>th</sup> Avenue	Jacobs Assay Office	CD
	1555 S. 10 <sup>th</sup> Avenue	Mary's Market	
	600 W. 25 <sup>th</sup> Street	Blend X Tucson Stucco Supplies	

<sup>1</sup>Source:           ADC – Arizona Directory Company           BCS – Baldwin Con Survey Co  
                           CD – Cole's Directory                                   MKC – Mullin Kille Company

#### **4.7 BUILDING DEPARTMENT RECORDS**

Historical building department records were reviewed by Allwyn Environmental on November 5, 2013 at COT Development Services. Staff from COT indicated they only possessed files for the addresses 1402 S. 10<sup>th</sup> Avenue and 1550 (aka 1450) S. 10<sup>th</sup> Avenue. It was noted during review of the files that both addresses were associated with the COT Refuse Transfer Station and Container Maintenance Compound and documentation for both addresses were contained within the same file. The files maintained by COT Development Services contained the following documentation:

- In 1964, several building permits and new construction permits were issued. However, these

documents appeared to pertain to the structures that were constructed on the Tucson Water property southwest of the subject property.

- A document, dated 1982, citing concern regarding stormwater runoff from the COT Refuse Transfer Facility. The files did not contain any other documentation regarding this matter.
- A document, dated June 21, 1983, indicating that a 10,000 gallon diesel fuel underground storage tank (UST) was installed 15 feet west of the dispenser island and 175 feet north of 25½<sup>th</sup> Street.
- A document, dated June 6, 1996 listing COT-owned facilities where USTs were to be removed and ASTs were to be installed. 1402 S. 10<sup>th</sup> Avenue was included on the list.
- A permit, dated July 22, 1996, for the installation of a 5,000 gallon AST at the subject property.

#### **4.8 ZONING/LAND USE RECORDS**

Zoning information was obtained from the City of Tucson. The subject property has the following zoning designation:

R-3: Residence Zone. The Zoning District Narrative Summary for the R-3 designation reads as follows:

- This zone provides for high density residential development and compatible uses.

#### **4.9 AGENCY REQUESTS**

##### **4.9.1 City of Tucson Fire Department (TFD) Records**

Allwyn Environmental contacted TFD – Fire Prevention via e-mail on October 25, 2013 to request information regarding hazardous material responses and other environmental data maintained by TFD such as inspections, chemical storage records, or USTs for the subject property. On November 5, 2013, Allwyn Environmental reviewed those records. The files maintained by TFD – Fire Prevention contained the following documentation:

- An undated document indicating the a 10,000 gallon UST was installed at the site on July 19, 1982 with a hand-written note attached indicating that the UST had been removed and replaced with an AST.
- A UST Closure document, dated August 1, 1996, indicating that the 10,000 gallon UST at the subject property had been removed and that three soil samples had been collected. The documentation did not contain any analytical data for the collected samples.
- Documentation from February 2001 indicating that leak detection had been installed on the 5,000 gallon diesel fuel AST located on the subject property.
- Semi-annual inspection reports, dating from September 2009 to January 2013, for the 5,000 gallon diesel fuel AST located on the subject property. The documentation indicated that the addresses 1450 S. 10<sup>th</sup> Avenue and 1450 S. 11<sup>th</sup> Avenue were both used to identify the location of the AST.

A copy of Allwyn Environmental's facsimile is included in Appendix D.

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#### 4.9.2 Arizona Department of Environmental Quality File Review

Allwyn Environmental contacted the Arizona Department of Environmental Quality (ADEQ) via e-mail on October 25, 2013 to review records and files maintained at the ADEQ Phoenix Records Center related to the subject property. ADEQ Staff from both the Underground Storage Tank Unit and Records Center both responded and stated that they did possess records for the subject property. On November 15, 2013, Allwyn Environmental reviewed the records at the ADEQ Records Center File Room. The files maintained by ADEQ contained the following documentation:

- A Hazardous Waste Manifest for the removal of UN2810, Waste toxic liquids, n.o.s., 6.1 (epinephrine and lidocaine) from the site was generated on December 9, 2009. The waste was discovered at the site in a dumpster being stored at the site and removed from the site by Southwest Hazard Control.
- A report entitled Permanent Closure of One Underground Storage Tank System: City of Tucson 10<sup>th</sup> Avenue Transfer Station - 1450 S. 11<sup>th</sup> Avenue, Tucson, Arizona 85701 (Facility ID #0-005177, ADEQ #AA5177, LUST #4540.01 (herein referred to as the Verde Report). The Verde Report was prepared for the City of Tucson's Environmental Management Department by Verde Companies (Verde) and dated October 1996.

The Verde Report states that a 10,000 gallon fiberglass UST system was removed from COT's 10<sup>th</sup> Avenue Transfer Station and that field work was completed on August 1, 2, and 21, 1996. As part of the UST removal, seven compliance samples were collected (two from underneath the tank, one from the soil stockpiled during the removal, and four from the below the associated dispensers and piping) and analyzed for total petroleum hydrocarbons (TPHs) using modified method 418.1AZ. The Verde Report stated that the analytical results indicated that TPHs were present in the soil below the west end of the UST, below both of the product dispensers, and along the north-south product line. The report further stated that COT had completed the required release notification procedures to satisfy ADEQ requirements and that the area from which the UST was removed was backfilled to grade with the original soil and imported fill. The UST was destroyed on-site and then transported to a municipal solid waste landfill. The Verde report then concluded that additional site characterization be performed at COT's 10<sup>th</sup> Avenue Transfer Station.

- A report entitled Results of a Site Characterization Investigation: City of Tucson 10<sup>th</sup> Avenue Transfer Station - 1402 S. 10<sup>th</sup> Avenue, Tucson, Arizona (ADEQ Leaking Underground Storage Tank (LUST) Files 4501.01, 02, 04, and 04) (herein referred to as the ESE Report). The ESE Report was prepared for the City of Tucson's Environmental Management Department by Environmental Science and Engineering, Inc. (ESE) and dated November 12, 1996.

The ESE Report states that on September 11 and 12, 1996, the following four soil borings were installed in the vicinity of the former UST and dispensers:

- West end of the former UST (LUST File 4540.01): Boring SB-2 was installed to a depth of 30 feet bgs and samples were collected 5-foot intervals beginning at 20 feet bgs (3 samples total).
- West end of the former Dispenser Island (LUST File 4540.02): Boring SB-1 was installed to a depth of 20 feet bgs and samples were collected at 5-foot intervals beginning at 5 feet bgs (4 samples total).
- East end of the former Dispenser Island (LUST File 4540.03): Boring SB-4 was installed to a depth of 25 feet bgs and samples were collected at 5-foot intervals beginning at 5 feet bgs (5 samples total).

- North-south Product Line (LUST File 4540.04): Boring SB-3 was installed to a depth of 30 feet bgs and samples were collected at 5-foot intervals beginning at 5 feet bgs (6 samples total).

Soil samples collected from these borings were analyzed for total recoverable petroleum hydrocarbons (TPRHS). In the Corrective Action Summary section of the ESE Report, ESE, on the behalf of COT, requested that ADEQ close all four of the open LUST Files. The ESE Report stated that the request for closure was based on the following field observations and analytical laboratory results obtained from the collected soil samples:

- Laboratory analytical results from the four soil borings did not detect TPRHs above laboratory reporting limits.
- Depth to groundwater beneath the site is approximately 141 feet bgs. Soils encountered during drilling were predominantly sands and clay. Saturated conditions were not encountered during drilling.
- A sample collected from the stockpile of soil removed during the UST excavation was analyzed for TRPH. Laboratory results for this sample did not indicate TRPH at concentrations above exceeding reporting limits. Therefore the stockpile soil was returned to the excavation (Verde 1996).

Figures provided in the ESE Report indicated that the UST was located slightly south of the 5,000 Gallon Diesel fuel AST located on the subject property at the time this Phase I ESA was performed.

The ADEQ Files contained additional documentation tracking the status of the LUST files as they progressed and on November 29, 1996, ADEQ closed all four of the LUST Files associated with this site and closed soil levels met Risk-Based Corrective Action (RBCA) levels.

A copy of Allwyn Environmental's e-mail and Records Request Form are included in Appendix D.

#### **4.10 SUMMARY OF PROPERTY HISTORICAL USE INFORMATION**

##### **4.10.1 Site Specific Historical Use**

Historical records could not reasonably be obtained to identify the uses at the site, if any, prior to 1905. Topographical maps indicate that the subject property was undeveloped from 1905 to 1947 and Sanborn Insurance Maps indicate that by 1949, two small dwellings occupied the northeast portion of the subject property and that there was a day school that partially occupied the southeast portion of the subject property because at the time 10<sup>th</sup> Avenue did not extend south of the Papago Street intersection.

Between 1949 and 1958, the dwellings and day school were removed from the subject property and 10<sup>th</sup> Avenue was extended south past the Papago Street intersection. After 1958, Development of the COT Refuse Transfer Station and Container Maintenance Compound began at the subject property over a period of several years. A timeline of this development has been provided below:

- Between 1958 and 1967, the western portion of the subject property began to be used to store refuse containers and other materials and the southeast portion of the subject property began to be used for parking.
- Between 1967 and 1972, the COT Brush and Bulky Office was constructed on the northeast portion

of the subject property and, prior to 1980, the area immediately surrounding the former COT Brush and Bulky Office began to be used for parking.

- Between 1980 and 1990, the COT Refuse Transfer Facility and Container Maintenance Facility were constructed, the Office Trailer was installed at the site, and the access roads and parking areas for these facilities were paved. In 1982, a 10,000 gallon diesel fuel UST was installed north of the COT Refuse Transfer Facility on the south side of Papago Street.
- For periods of time spanning from sometime between 1980 and 1990 until sometime between 1996 and 2002, the area west of the Container Maintenance Facility and the area east of the Office Trailer were used to stockpile apparent refuse debris. Once the apparent refuse debris stockpiles were cleared from the site, those areas began to be used for the storage of refuse containers and residential refuse collection containers.
- The COT Refuse Transfer Facility was decommissioned in the late 1990s and the 10,000 gallon UST was removed from the site in 1996 and replaced with a 5,000 Gallon Diesel AST.

When the UST was removed from the site, four LUST Files were open to address potential leaks from the UST and associated piping and dispensers. The site characterization of these features was completed in November 1996 and on November 29, 1996, ADEQ closed all four of the LUST Files associated with this site and closed soil levels met RBCA levels.

No significant changes in use have occurred at the subject property since the COT Refuse Transfer Facility was decommissioned in the late 1990s.

#### **4.10.2 Summary of Adjacent Properties Historical Use Information**

The developed properties located immediately adjacent to the subject property have historically contained commercial and residential development. The property directly southwest of the subject property is occupied by Tucson Water who uses the warehouse and storage yard at the site. Historical records indicate that they began to occupy this site between 1958 and 1967.

## 5.0 REGULATORY REVIEW

### 5.1 DATABASE INFORMATION

Allwyn Environmental conducted a review of readily-available local, state, and federal standard environmental record sources to assess whether current and past property usage and practices at the property parcels and surrounding properties (within appropriate minimum search distances) may have caused a REC at the site. Information from these sources was gathered either by Allwyn Environmental personnel directly or by a paid database search service (Allands of Goodyear, Arizona). A copy of the Allands report is provided in Appendix A. The databases that were reviewed and the approximate minimum search distances (in parentheses) were:

- Federal ASTM Standard Records
  - National Priorities List (NPL)/Proposed NPL Sites (1.0 mile)
  - Delisted NPL Sites (0.5 mile)
  - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) (0.5 mile)
  - CERCLIS-No Further Remedial Action Planned (NFRAP) (0.5 mile)
  - Resource Conservation and Recovery Act (RCRA) Generator (0.125 mile)
  - RCRA Corrective Action Report (CORRACTS) Sites (1.0 mile)
  - RCRA non-CORRACTS Treatment, Storage, or Disposal (TSD) Site (0.5 mile)
  - Emergency Response Notification System (ERNS) (0.125 mile)
- State of Arizona ASTM Standard Records
  - Water Quality Assurance Revolving Fund (WQARF) Sites (1.0 mile)
  - Arizona Superfund Program List (0.5 mile)
  - Solid Waste Facility/Landfill Lists (0.5 mile)
  - DEUR Institutional Control/Engineering Control Registry (AUL) Sites (Property and Adjoining)
  - Brownfields Tracking System (BROWNFIELDS)/ Voluntary Remediation Program (VRP) Sites (0.5 mile)
  - Registered Underground Storage Tank List (UST) Sites (0.125 mile)
  - Leaking Underground Storage Tank List (LUST) Sites (0.5 mile)
- Additional Environmental Record Sources
  - RCRA Compliance Facilities (0.125 mile)
  - Hazardous Materials Incidents Emergency Response Logbook (0.125 mile)
  - ADEQ Drywell Registration Database (0.125 mile)
  - Environmental Permits (Property and Adjoining)
  - Dry Cleaners (0.125 mile)

Note: The objective of this database search is to evaluate the potential impact of a listed facility on the property that is the subject of the Phase I ESA. The data tables for each section provide the relative position of groundwater flow at the listed facility in relationship to the subject property based on the assumption that groundwater flow generally tends to the northwest in this area. Therefore, facilities that are indicated as “Upgradient” of the subject property can potentially impact the facility and may be considered to be RECs.

**5.2 SUMMARY OF STANDARD RECORDS REVIEW**

This section summarizes the findings of the standard records review within the applicable search radius from the subject property. The subject property was listed in the records searched by Allands. Records for the subject property and other properties located within the appropriate search radius are found in Table 5.1. Detailed information for each standard record is provided in the Sections 5.3 through 5.5.

**TABLE 5.1**

<b>RECORDS SUMMARY FOR PROPERTIES WITHIN ASTM-DEFINED SEARCH RADIUS</b>			
<b>SITE NAME ADDRESS</b>	<b>RECORD</b>	<b>DISTANCE AND DIRECTION FROM PROPERTY</b>	<b>GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY</b>
American Scrap Metal Recycling 2140 S. Freeway	CERCLIS/NFRAP	0.4 mi. S	Crossgradient
Jacobs Essay Office 1435 S. 10 <sup>th</sup> Avenue	RCRA Generator	0.1 mi. E	Crossgradient
Exxon Co. USA 73904 655 W. 22 <sup>nd</sup> Street	RCRA Generator	0.1 mi. W	Crossgradient
Sanitation Transfer Site Fuel 1450 S. 10 <sup>th</sup> Avenue	UST/LUST	Site	Site
Circle K # 2705579 655 W. 22 <sup>nd</sup> Street	UST/LUST	0.1 mi. NW	Downgradient
Express-It 601 W. 22 <sup>nd</sup> Street	UST/LUST	0.1 mi. W	Crossgradient
El Campo Tire Warehouse 600 W. 22 <sup>nd</sup> Street	UST/LUST	0.1 mi. NW	Downgradient
Atko Building Materials Inc. 600 W. 25 <sup>th</sup> Street	UST/LUST	0.1 mi. W	Crossgradient
Circle K # 1838 1145 S. Freeway	LUST	0.2 mi. NW	Downgradient
Unocal # 4897 1210 S. Freeway	LUST	0.2 mi. NW	Downgradient
Ron's Freeway Texaco 702 W. Starr Pass Boulevard	LUST	0.3 mi. NW	Downgradient
PEP BOYS #645 1300 S. 6 <sup>th</sup> Avenue	LUST	0.4 mi. E	Crossgradient
West 18th St Fuel Island 510 W. 18 <sup>th</sup> Street	LUST	0.4 mi. N	Crossgradient
Asphalt Products Transport Co 635 W. 18 <sup>th</sup> Street	LUST	0.4 mi. N	Crossgradient
Michael Katcher / Dolly Madison 1700 S. 6 <sup>th</sup> Avenue	LUST	0.4 mi. SE	Upgradient
Reuter Property 1748 S. 6 <sup>th</sup> Avenue	LUST	0.4 mi. SE	Upgradient
City Of South Tucson Government Complex 1810 S. 6 <sup>th</sup> Avenue	LUST	0.4 mi. SE	Upgradient

RECORDS SUMMARY FOR PROPERTIES WITHIN ASTM-DEFINED SEARCH RADIUS			
SITE NAME ADDRESS	RECORD	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY
Kushmaul Machine & Engineering 2210 S. Freeway	LUST	0.5 mi. S	Crossgradient
COT - Transfer Station Waste Tire Collection 425 W. 23 <sup>rd</sup> Street	Environmental Permits	Site	Site

### 5.3 FEDERAL ASTM STANDARD RECORDS REVIEW RESULTS

#### 5.3.1 National Priorities List (NPL) Sites

The Environmental Protection Agency (EPA) maintains the National Priorities List (NPL), a list of hazardous waste sites in the United States and its territories eligible for long-term remedial action financed under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or “Superfund”) program. The list contains national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants and is intended primarily to guide the EPA in determining which sites warrant further investigation.

**Outcome:** Allwyn Environmental’s review of the August 2013 NPL database and/or regulatory agency database did not result in the identification of facilities located on the property or within the 1.0-mile search radius.

#### 5.3.2 Proposed NPL Sites

EPA maintains a list of sites that are proposed for inclusion on the NPL.

**Outcome:** Allwyn Environmental’s review of the August 2013 NPL database and/or regulatory agency database did not result in the identification of facilities located on the property or within the 1.0-mile search radius.

#### 5.3.3 Delisted NPL Sites

EPA may determine that all appropriate response actions under CERCLA have been completed at a site listed on the NPL. These sites are considered to be “de-listed” from the NPL and, no further remedial action pursuant to CERCLA is appropriate or required.

**Outcome:** Allwyn Environmental’s review of the August 2013 NPL Deletions database and/or regulatory agency database did not result in the identification of facilities located on the property or within the 0.5-mile search radius.

#### 5.3.4 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)/ CERCLIS - No Further Remedial Action Planned (NFRAP)

The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) is a list maintained by EPA of suspected hazardous waste sites throughout the United States. This federal database contains information on preliminary assessments, potential and actual hazardous

waste sites, site inspections, and cleanup activities. CERCLIS sites are candidates for addition to the federal and state Superfund lists. The database is updated periodically as new sites are discovered.

No Further Remedial Action Planned (NFRAP) sites have been removed from the CERCLIS list by EPA and are no longer considered an environmental concern. NFRAP sites may be designated as such when, following initial investigation, either no contamination was found, contamination was removed quickly without the 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.

**Outcome:** Allwyn Environmental’s review of the August 2013 CERCLIS/CERCLIS NFRAP databases and/or regulatory agency databases resulted in the identification of the following facility located on the property or within the 0.5-mile search radius:

CERCLIS/CERCLIS-NFRAP FACILITIES				
FACILITY NAME ADDRESS	FACILITY IDENTIFICATION NUMBER	NFRAP	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY
American Scrap Metal Recycling 2140 S. Freeway	AZD983474784	X	0.4 mi. S	Crossgradient

### 5.3.5 RCRA Generator

EPA’s RCRA Info provides information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined and regulated by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small generators (CESQGs) generate less than 100 kilograms (kg) of hazardous waste per month, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kg of hazardous waste per month, or more than 1 kg of acutely hazardous waste per month. Non-generators do not presently generate hazardous waste.

**Outcome:** Allwyn Environmental’s review of the August 2013 RCRA Info database and/or regulatory agency database resulted in the identification of the following facilities located on the property or within the 0.125-mile search radius:

RCRA GENERATOR FACILITIES				
FACILITY NAME ADDRESS	EPA ID # STATUS CODE <sup>1</sup>	NOTIFICATION DATE	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY
Jacobs Essay Office 1435 S. 10 <sup>th</sup> Avenue	AZD000025601 LQG	8/8/2009	0.1 mi. E	Crossgradient
Exxon Co. USA 73904 655 W. 22 <sup>nd</sup> Street	AZD983471020 N	7/29/2002	0.1 mi. W	Crossgradient

<sup>1</sup>**STATUS CODES:**

LQG: Large quantity generator (more than 1000 kg per month)

N : Not a generator verified or inactive generator

### **5.3.6 RCRA Corrective Action Report (CORRACTS)**

RCRA Corrective Action Sites (CORRACTS) list is a list maintained by EPA of hazardous waste treatment, storage, or disposal facilities and other RCRA-regulated facilities (due to past interim status or storage of hazardous waste beyond 90 days) that have been notified by EPA to undertake corrective action under RCRA. The CORRACTS list is a subset of the EPA database that manages RCRA data.

**Outcome:** Allwyn Environmental’s review of the August 2013 CORRACTS database and/or regulatory agency database did not result in the identification of facilities located on the property or within the 1.0-mile search radius.

### **5.3.7 RCRA Non-CORRACTS Treatment, Storage, and Disposal (TSD) Facilities**

EPA maintains a list of RCRA Non-CORRACTS Treatment, Storage, and Disposal (TSD) facilities. These facilities treat, store, and/or dispose of hazardous waste, as defined and regulated by RCRA, but have not been subject to corrective action.

**Outcome:** Allwyn Environmental’s review of the August 2013 RCRA Info database and/or regulatory agency database did not result in the identification of facilities located on the property or within the 0.5-mile search radius.

### **5.3.8 Emergency Response Notification System (ERNS) Facilities**

The Emergency Response Notification System (ERNS) is maintained by the National Response Center. This database contains EPA’s list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity.

**Outcome:** Allwyn Environmental’s review of the August 2013 ERNS list and/or regulatory agency database did not result in the identification of any ERNS incidents at the property or within the 0.125-mile search radius.

## **5.4 STATE OF ARIZONA ASTM STANDARD RECORDS**

### **5.4.1 Water Quality Assurance Revolving Fund (WQARF)**

ADEQ maintains a list of sites that may have an actual or potential impact upon the waters of the state caused by hazardous substances. The WQARF program provides matching funds to political subdivisions and other state agencies for clean-up activities.

**Outcome:** Allwyn Environmental’s review of the August 2013 database and/or regulatory agency database did not result in the identification of any facilities at the property or within the 1.0 mile search radius.

### **5.4.2 Arizona Superfund Program List (SPL)**

The Arizona Superfund Program List (SPL) is maintained by the ADEQ Superfund Program Section (SPS) and includes sites listed on any of the following:

- Water Quality Assurance Revolving Fund (WQARF) Registry List
- Potential WQARF Registry Sites
- National Priority List
- Department of Defense sites requiring SPS oversight

WQARF is the State of Arizona’s equivalent to the federal Superfund program. ADEQ, SPS uses WQARF, created under the Environmental Quality Act of 1986, to support hazardous substance cleanup efforts in the State of Arizona. Sites are placed on the WQARF Registry List based on an approved eligibility and evaluation (E&E) model for evaluating risk and other environmental factors.

**Outcome:** Allwyn Environmental’s review of the August 2004 SPL database and/or regulatory agency database did not result in the identification of facilities within the 0.5-mile search radius.

#### **5.4.3 Solid Waste Facility/Landfill**

ADEQ inventory of solid waste disposal facilities and landfills in the State of Arizona. These are active or inactive facilities or open dumps that failed to meet RCRA Subtitle D criteria for solid waste landfills or disposal sites. The database is from the ADEQ 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 the search radius of the property.

**Outcome:** Allwyn Environmental’s review of the May 2004 Solid Waste Facilities database and/or regulatory agency database did not result in the identification of any facilities located on the property or within the 0.5-mile search radius.

#### **5.4.4 DEUR Institutional Control/Engineering Control Registry (AUR)**

The Arizona Unified Repository for Informational Tracking of the Environment (AZURITE) database stores core data for all of ADEQ’s programs and allows structured searches of data subsets. The Remediation and DEUR Tracking (RDT) System is one such database subset used to track institutional and engineering controls authorized by ADEQ for site remediation projects. Institutional and administrative controls in Arizona have historically consisted of the following two mechanisms:

- Declaration of Environmental Use Restriction (DEUR). A restrictive land use covenant that is required when a property owner elects to use an institutional (i.e., administrative) control or engineering (i.e., physical) control as a means to meet remediation goals. The DEUR runs with and burdens the land, and requires maintenance of any institutional or engineering controls.
- Voluntary Environmental Mitigation Use Restriction (VEMUR). A restrictive land use covenant that, prior to July 18, 2000, was required when a property owner elected to remediate the property to non-residential uses. Effective July 18, 2000, the DEUR replaced the VEMUR as a restrictive use covenant.

**Outcome:** Allwyn Environmental’s review of the August 2013 RDT database did not result in the identification of facilities with institutional controls associated with the property or adjoining properties.

#### 5.4.5 Brownfields Tracking System (BROWNFIELDS)/Voluntary Remediation Program (VRP)

ADEQ's Voluntary Remediation Program (VRP) allows property owners, prospective purchasers, and other interested parties investigate or clean up a contaminated site in cooperation with ADEQ. VRP results in a streamlined process for program participants who work with a single point of contact at ADEQ to address applicable cross-program remediation efforts. ADEQ reviews these voluntary remedial actions and provides a closure document for successful site remediation that is accepted by all relevant ADEQ programs. The ADEQ AZURITE database contains the Brownfields Tracking System (BTS) that comprise sites within the VRP and ADEQ Brownfields Program.

**Outcome:** Allwyn Environmental's review of the August 2013 VRP and BTS databases did not result in the identification of any facilities at the property or within the 0.5 mile search radius.

#### 5.4.6 Underground Storage Tanks (UST)

Under State of Arizona and federal RCRA Subtitle D rules, persons who own or have owned USTs that contain regulated substances are required to complete a notification form and submit it to the State of Arizona. ADEQ Tanks Program maintains a list of these registered USTs in the State of Arizona.

**Outcome:** Allwyn Environmental's review of the January 2013 UST registration list and/or regulatory agency database resulted in the identification of the following facilities located on the property or within the 0.125-mile search radius from the site:

REGISTERED UNDERGROUND STORAGE TANK (UST) FACILITIES				
FACILITY NAME ADDRESS	FACILITY ID NUMBER	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY	REGULATORY STATUS
Sanitation Transfer Site Fuel 1450 S. 10 <sup>th</sup> Avenue	0-005177	Site	Site	Tank 1: Removed (1996)
Circle K #5579 655 W. 22 <sup>nd</sup> Street	0-002010	0.1 mi. NW	Downgradient	Tank 1: Removed (1991) Tank 2: Removed (1991) Tank 3: Removed (1991) Tank 4: Removed (1991) Tank 5: Active Tank 6: Active Tank 7: Active
Express-It 601 W. 22 <sup>nd</sup> Street	0-007780	0.1 mi. W	Crossgradient	Tank 2: Removed (1993) Tank 4: Removed (1978)
El Campo Tire Warehouse 600 W. 22 <sup>nd</sup> Street	0-009809	0.1 mi. NW	Downgradient	Tank 1: Removed (2001) Tank 2: Removed (2001)
Atko Building Materials Inc. 600 W. 25 <sup>th</sup> Street	0-006056	0.1 mi. W	Crossgradient	Tank 1: Removed (1998) Tank 2: Removed (1998) Tank 3: Removed (1998) Tank 4: Removed (1998)

**5.4.7 Leaking Underground Storage Tanks (LUSTs)**

The ADEQ Tank Programs maintains a list of known or reported incidents of leaking underground storage tanks (LUSTs).

**Outcome:** Allwyn Environmental’s review of the January 2013 LUST database and/or regulatory agency database resulted in the identification of the following facilities located on the property or within the 0.5-mile search radius:

LEAKING UNDERGROUND STORAGE TANK (LUST) FACILITIES					
FACILITY NAME ADDRESS	FACILITY ID NUMBER	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY	P CODE <sup>1</sup>	REGULATORY STATUS
Sanitation Transfer Site 1450 S. 10 <sup>th</sup> Avenue	0-005177	Site	Site	5R1	Leak ID: 4540.01 Open: 8/2/96 Closed: 11/29/96
				5R1	Leak ID: 4540.02 Open: 8/21/96 Closed: 11/29/96
				5R1	Leak ID: 4540.03 Open: 8/30/96 Closed: 11/29/96
				5R1	Leak ID: 4540.04 Open: 8/30/93 Closed: 11/29/96
El Campo Tire Warehouse 600 W. 22 <sup>nd</sup> Street	0-009809	0.1 mi. NW	Downgradient	5R1	Leak ID: 5290.01 Open: 10/24/01 Closed: 7/08/02
Circle K #2705579 655 W. 22 <sup>nd</sup> Street	0-002010	0.1 mi. NW	Downgradient	5R1	Leak ID: 0416.01 Open: 3/9/88 Closed: 2/2/98
				5R1	Leak ID: 0416.02 Open: 6/5/91 Closed: 2/2/98
Atko Building Materials Inc. 600 W. 25 <sup>th</sup> Street	0-006056	0.1 mi. W	Crossgradient	5R1	Leak ID: 0420.01 Open: 3/22/88 Closed: 12/22/92
Express-It 601 W. 22 <sup>nd</sup> Street	0-007780	0.1 mi. W	Crossgradient	5R1	Leak ID: 3259.01 Open: 12/03/93 Closed: 07/13/98
				5R1	Leak ID: 3259.02 Open: 7/13/98 Closed: 07/13/98

LEAKING UNDERGROUND STORAGE TANK (LUST) FACILITIES					
FACILITY NAME ADDRESS	FACILITY ID NUMBER	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY	P CODE <sup>1</sup>	REGULATORY STATUS
Circle K # 1838 1145 S. Freeway	0-001494	0.2 mi. NW	Downgradient	5R1	Leak ID: 4695.01 Open: 5/9/97 Closed: 11/22/00
				5R1	Leak ID: 4695.02 Open: 5/9/97 Closed: 11/22/00
				5R1	Leak ID: 4695.03 Open: 5/9/97 Closed: 11/22/00
				5R1	Leak ID: 4695.04 Open: 5/9/97 Closed: 11/22/00
				5R1	Leak ID: 4695.05 Open: 5/9/97 Closed: 11/22/00
				5R1	Leak ID: 4695.06 Open: 5/21/97 Closed: 3/16/06
Unocal # 4897 1210 S. Freeway	0-005290	0.2 mi. NW	Downgradient	5R1	Leak ID: 4657.01 Open: 2/14/97 Closed: 7/21/98
				5R1	Leak ID: 4657.02 Open: 2/14/97 Closed: 7/21/98
				5R1	Leak ID: 4657.03 Open: 2/14/97 Closed: 7/21/98
				5R1	Leak ID: 4657.04 Open: 2/14/97 Closed: 7/21/98
Ron's Freeway Texaco 702 W. Starr Pass Blvd <b>Continued next page</b>	0-006208	0.3 mi. NW	Downgradient	5R1V	Leak ID: 0886.01 Open: 8/15/96 Closed: 7/16/96
				5R1	Leak ID: 0886.02 Open: 2/10/97 Closed: 5/23/00
				5R1	Leak ID: 0886.03 Open: 2/10/97 Closed: 5/23/00
				5R1	Leak ID: 0886.04 Open: 2/10/97 Closed: 5/23/00

LEAKING UNDERGROUND STORAGE TANK (LUST) FACILITIES					
FACILITY NAME ADDRESS	FACILITY ID NUMBER	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY	P CODE <sup>1</sup>	REGULATORY STATUS
Ron's Freeway Texaco 702 W. Starr Pass Blvd <b>Continued from previous page</b>	0-006208	0.3 mi. NW	Downgradient	5R1	Leak ID: 0886.05 Open: 2/10/97 Closed: 5/23/00
				5R1V	Leak ID: 0886.05 Open: 3/8/99 Closed: 9/14/05
PEP BOYS #645 1300 S. 6 <sup>th</sup> Avenue	0-003672	0.4 mi. E	Crossgradient	5R1	Leak ID: 4055.01 Open: 5/1/95 Closed: 1/8/96
West 18th St Fuel Island 510 W. 18 <sup>th</sup> Street	0-003544	0.4 mi. N	Crossgradient	5R1	Leak ID: 0370.01 Open: 5/3/87 Closed: 11/30/90
				5R1	Leak ID: 0370.02 Open: 1/6/99 Closed: 4/30/99
Asphalt Products Transport Co 635 W. 18 <sup>th</sup> Street	0-000483	0.4 mi. N	Crossgradient	5R1	Leak ID: 0515.01 Open: 8/19/88 Closed: 7/22/98
Michael Katcher Dolly Madison 1700 S. 6 <sup>th</sup> Avenue	0-008913	0.4 mi. SE	Upgradient	1F	Leak ID: 4482.01 Open: 6/28/96 Closed: OPEN
				5R1	Leak ID: 4482.02 Open: 6/28/96 Closed: 6/5/06
				1F	Leak ID: 4482.03 Open: 6/28/96 Closed: OPEN
				5R1	Leak ID: 4482.04 Open: 7/22/96 Closed: 6/5/06
				5R1	Leak ID: 4482.05 Open: 7/22/96 Closed: 6/5/06
				5R1	Leak ID: 4482.06 Open: 7/22/96 Closed: 6/5/06
Reuter Property 1748 S. 6 <sup>th</sup> Avenue	0-009432	0.4 mi. SE	Upgradient	5R1	Leak ID: 5085.01 Open: 5/21/99 Closed: 5/26/99

LEAKING UNDERGROUND STORAGE TANK (LUST) FACILITIES					
FACILITY NAME ADDRESS	FACILITY ID NUMBER	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY	P CODE <sup>1</sup>	REGULATORY STATUS
City Of Hall City Of South Tucson Government Complex 1810 S. 6 <sup>th</sup> Avenue	0-008837	0.4 mi. SE	Upgradient	5R1	Leak ID: 4359.01 Open: 2/14/96 Closed: 9/28/98
				5R1	Leak ID: 4359.02 Open: 2/6/97 Closed: 9/28/98
				7	Leak ID: 4359.03 Open: 2/6/97 Closed: 3/13/97
				5R1	Leak ID: 4359.04 Open: 2/6/97 Closed: 3/13/97
				5R1	Leak ID: 4359.05 Open: 2/6/97 Closed: 3/13/97
Kushmaul Machine & Engineering 2210 S. Freeway	0-002903	0.5 mi. S	Crossgradient	5R1	Leak ID: 0773.01 Open: 6/15/89 Closed: 3/15/91

**<sup>1</sup> 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
- 1F Free product present on GW and/or SW
- 5G1 Closed soil/GW levels meet RBCA Tier 1
- 5G4 Closed soil/GW that exceed ADQs (R18-12-263.04)
- 5R1 Closed soil levels meet RBCA
- 6 Incident/tank was determined not to be UST jurisdiction and referred to another program

**5.5 ADDITIONAL ENVIRONMENTAL RECORD SOURCES**

**5.5.1 RCRA Compliance Facilities**

The RCRA Compliance Log is a list maintained by ADEQ of facilities that have been or are under investigation for non-compliance with RCRA regulations.

**Outcome:** Allwyn Environmental’s review of the August 2013 RCRA Compliance Log and/or regulatory agency database did not result in the identification of facilities located on the property or within the 0.125 mile search radius.

**5.5.2 Hazardous Materials Incidents**

The State of Arizona, Emergency Response Unit tracks chemical spills and incidents in the Hazardous

Materials Logbook (SPILLS) database.

**Outcome:** Allwyn Environmental’s review of the 1984 through June 2001 Hazardous Materials Logbook database and/or regulatory agency database did not result in the identification of facilities located on the property or within the 0.125-mile search radius.

### 5.5.3 Dry Well Registration (DRY WELL)

A listing maintained by ADEQ of registered dry wells.

**Outcome:** Allwyn Environmental’s review of the January 2013 Dry Well database and/or regulatory agency database did not result in the identification of any facilities located within the 0.125 mile search radius.

### 5.5.4 Environmental Permits

These lists include Groundwater Permits, Reuse Permits, National Pollutant Discharge Elimination System (NPDES) permits, and Aquifer Protection Permits (APP). These databases are from ADEQ through the AZURITE Database System and the EPA.

**Outcome:** Allwyn Environmental’s review of the August 2013 Environmental Permits database and/or regulatory agency database resulted in the identification of the following facility located on the property:

ENVIRONMENTAL PERMIT FACILITIES			
FACILITY NAME ADDRESS	SITE ID	DISTANCE AND DIRECTION FROM PROPERTY	GROUNDWATER FLOW AT FACILITY RELATIVE TO SUBJECT PROPERTY
Transfer Station Waste Tire Collection Site 425 W. 23 <sup>rd</sup> Street	50956 / 137913	Site	Site

### 5.5.5 Dry Cleaners

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 ADEQ Dry Cleaners Inventory Project, dated June, 2006, and searched for dry cleaners sites located within a <=0.125 mile search distance from the exterior boundaries of the property.

**Outcome:** Allwyn Environmental’s review of the June 2006 ADEQ Dry Cleaners Inventory Project and/or regulatory agency database did not result in the identification of any facilities located within the 0.125 mile search radius.

## **6.0 SITE RECONNAISSANCE**

### **6.1 PROPERTY USE, METHODOLOGY, AND LIMITING CONDITIONS**

Mr. Derek Koller of Allwyn Environmental conducted a limited site reconnaissance visit of the subject property on October 31, 2013. The purpose of the site reconnaissance visit was to observe the subject property and to identify potential RECs. Mr. Koller was accompanied during the site reconnaissance visit by Ramon Polanco, COT - Welder Supervisor - Environmental Services. Site observations and diagrams of the interior were recorded by Mr. Koller and are contained in Appendix E.

#### **6.1.1 Property Use**

The property is contained within six parcels (118-20-036A, 118-20-037A, 118-20-0750, 118-20-078A, and portions of APNs 118-20-076A and 118-20-077A) located at 1450 S. 10<sup>th</sup> Avenue in Tucson, Pima County, Arizona and covers approximately 9.50 acres. The following facilities are located at the COT Refuse Transfer Station/Container Maintenance Compound.

- The former COT Brush and Bulky office (currently vacant) (See Photograph Nos. 1 and 2 contained within the Photographic Log in Appendix F).
- The Storage Building (See Photograph No. 3)
- The Container Maintenance Facility (Includes paint booth, welding shops, and wash bay) (See Photograph Nos. 4 through 6)
- The Office Trailer
- The COT Refuse Transfer Station (currently non-operational) (See Photograph No. 7)

The locations of these structures are provided in Figure 3. Areas of the property not occupied by facilities are primarily used to store dumpsters and residential refuse collection containers (See Photograph Nos. 8 and 9).

#### **6.1.2 Methodology**

In order to complete the site reconnaissance, the subject property was identified using information provided by the City of Tucson and information obtained on the Pima County Assessor's website. The property was traversed via foot.

#### **6.1.3 Limiting Conditions**

Allwyn Environmental did not encounter any limiting conditions during the site reconnaissance.

### **6.2 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS**

#### **6.2.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses**

Allwyn Environmental observed the following hazardous substances and/or petroleum products in connection with identified uses at various locations of the:

- A storage locker with metal gas fuel cans and other miscellaneous chemicals inside the Storage Building (See Photograph No. 10)

- 5-gallon containers of paint stored in the vicinity of the paint booth (See Photograph No. 11).
- Acetylene and Oxygen cylinders chained in the vicinity of the welding shop (See Photograph No. 12).
- Storage container that holds 55-gallon drums of detergent and deodorizer located on the west side of the container/maintenance facility (See Photograph No. 13).
- 55-gallon drums of detergent and deodorizer in the vicinity of the wash bays (See Photograph No. 14).

### **6.2.2 Storage Tanks**

Allwyn Environmental observed the following ASTs on the property:

- A 5,000 gallon steel diesel fuel AST and fuel dispenser island located north of the former COT Refuse Transfer Facility on the south side of Papago Street (See Photograph No. 15).
- Two approximate 500 gallon steel ASTs located west of the former COT Refuse Transfer Facility (See Photograph No. 16)

Records review and interviews indicated that the 5,000 gallon steel diesel fuel AST would be present on the property.

Allwyn Environmental did not observe any cracked or depressed areas, access ways, vent pipes, fill ports, or other evidence that would suggest the presence of USTs on the property. Records review indicated that there was a 10,000 gallon diesel fuel UST formerly located slightly south of the 5,000 gallon diesel fuel AST located on the property at the time this Phase I ESA was performed, but that the UST was removed in 1996.

### **6.2.3 Odors**

Allwyn Environmental did not detect any strong, pungent, or noxious odors on the property. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

### **6.2.4 Pools of Liquids**

Allwyn Environmental did not observe any pools of liquids likely to contain hazardous substances on the property. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

### **6.2.5 Drums and Containers**

Allwyn Environmental did not observe any drums and/or other containers not addressed in Section 6.2.1.

### **6.2.6 PCB-Containing Equipment**

Allwyn Environmental observed a ground-mounted electrical transformer on the west side of the former COT Refuse Transfer Station. Allwyn Environmental did not observe any markings on the transformers indicating that the transformer did not contain Polychlorinated Biphenyls (PCBs). Therefore, it should be assumed that the transformer contain PCBs. However, Allwyn Environmental did not observe any spills

or stains on the soil below the transformer indicative of a leak of PCB-containing materials.

Allwyn Environmental observed the trash compactor unit at the former COT Refuse Transfer Facility (See Photograph No. 17) where municipal garbage trucks once off-loaded their municipal solid waste. Interviews indicate that there is hydraulic equipment within this facility.

Allwyn Environmental did not observe any other electrical or hydraulic equipment known to contain PCBs on the property. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

### **6.3 OUTDOOR OBSERVATIONS**

#### **6.3.1 Pits, Ponds, or Lagoons**

Allwyn Environmental did not observe any ponds, pits, or lagoons on the property. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

#### **6.3.2 Stained Soil or Pavement**

Allwyn Environmental did not observe any stained soil not considered to be *de minimis* at the site. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

#### **6.3.3 Stressed Vegetation**

Allwyn Environmental did not observe any areas of stressed vegetation that would indicate the presence of contamination on the property. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

#### **6.3.4 Solid Waste**

Allwyn Environmental observed large amounts of debris within the trash compactor unit (See Photograph No. 17)

Allwyn Environmental did not observe any other solid waste or areas that are apparently filled or graded by non-natural causes (or filled by fill of unknown origin) suggesting trash, construction debris, demolition debris, or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal.

#### **6.3.5 Wastewater and Stormwater**

The terrain at the subject property is generally flat with two exceptions. The former COT Refuse Transfer Facility is at a higher elevation where municipal garbage trucks were once off-loaded and the area south of the former COT Refuse Transfer Facility is at lower elevation. Based on these observations of the site topography, Allwyn Environmental concluded that stormwater would primarily run off the property to the east and some would be retained on site. In addition, stormwater would also flow with the elevation changes that exist on the southern portion of the property.

Allwyn Environmental observed stormwater drains in the area south of the former COT Refuse Transfer Facility (See Photograph No. 18). Interviews indicated that these features would be present at the property.

Allwyn Environmental did not observe any additional wastewater or other liquid on the exterior of the property that may discharge into a drain, ditch, underground injection system, or stream on or adjacent to the property.

#### **6.3.6 Wells**

Allwyn Environmental did not observe any evidence of drywells, disposal wells, and/or water wells on the property. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

#### **6.3.7 Septic System**

Allwyn Environmental did not observe any evidence of a septic system on the property. In addition, records review and interviews conducted during the course of this Phase I ESA did not indicate that these features were present on the property.

### **6.4 INDOOR OBSERVATIONS**

#### **6.4.1 Heating/Cooling**

The facilities are equipped with evaporative cooler and/or air conditioning units. Allwyn Environmental did not observe any evidence of heating system at any of the facilities.

#### **6.4.2 Stains or Corrosion**

Allwyn Environmental did not observe any stains, discoloration, and/or corrosion within the facilities located at the property.

#### **6.4.3 Drains and Sumps**

Allwyn Environmental observed drains associated with common plumbing fixtures such as toilets, floor drains, and sinks within the facilities. In addition, Allwyn Environmental observed a sump in the wash bay of the Container Maintenance facility. The bay north of the wash bay appears to have also once contained a sump because there was concrete patching on observed on the floor in the exact same configuration of the sump in the wash bay (See Photograph Nos. 19 and 20).

## **7.0 INTERVIEWS**

### **7.1 PROPERTY TENANT**

Ramon Polanco, COT - Welder Supervisor - Environmental Services (has worked at site for 17 years), was interviewed in person by Mr. Derek Koller of Allwyn Environmental on October 31, 2013. Details of the interview were recorded on the Interview Documentation Form contained in Appendix G. Pertinent information gathered from Mr. Polanco during the interview has been incorporated into this Phase I ESA report.

## 8.0 FINDINGS AND CONCLUSIONS

### 8.1 SUMMARY

The subject property is contained within six parcels (118-20-036A, 118-20-037A, 118-20-0750, 118-20-078A, and portions of APNs 118-20-076A and 118-20-077A) located at 1450 S. 10<sup>th</sup> Avenue in Tucson, Pima County, Arizona and covers approximately 9.50 acres. The center of the subject property is located at a latitude of approximately 33.204372° North and a longitude of approximately 110.975541° West. The subject property is located within the northwest quarter of Section 24, Township 14 South, Range 13 East of the Gila and Salt River Baseline and Meridian System.

Historical records could not reasonably be obtained to identify the uses at the site, if any, prior to 1905. Topographical maps indicate that the subject property was undeveloped from 1905 to 1947 and Sanborn Insurance Maps indicate that by 1949, two small dwellings occupied the northeast portion of the subject property and that there was a day school that partially occupied the southeast portion of the subject property because at the time 10<sup>th</sup> Avenue did not extend south of the Papago Street intersection.

Between 1949 and 1958, the dwellings and day school were removed from the subject property and 10<sup>th</sup> Avenue was extended south past the Papago Street intersection. After 1958, Development of the COT Refuse Transfer Station and Container Maintenance Compound began at the subject property over a period of several years. A timeline of this development has been provided below:

- Between 1958 and 1967, the western portion of the subject property began to be used to store refuse containers and other materials and the southeast portion of the subject property began to be used for parking.
- Between 1967 and 1972, the COT Brush and Bulky Office was constructed on the northeast portion of the subject property and, prior to 1980, the area immediately surrounding the former COT Brush and Bulky Office began to be used for parking.
- Between 1980 and 1990, the COT Refuse Transfer Facility and Container Maintenance Facility were constructed, the Office Trailer was installed at the site, and the access roads and parking areas for these facilities were paved. In 1982, a 10,000 gallon diesel fuel UST was installed north of the COT Refuse Transfer Facility on the south side of Papago Street.
- For periods of time spanning from sometime between 1980 and 1990 until sometime between 1996 and 2002, the area west of the Container Maintenance Facility and the area east of the Office Trailer were used to stockpile apparent refuse debris. Once the apparent refuse debris stockpiles were cleared from the site, those areas began to be used for the storage of refuse containers and residential refuse collection containers.
- The COT Refuse Transfer Facility was decommissioned in the late 1990s and the 10,000 gallon UST was removed from the site in 1996 and replaced with a 5,000 Gallon Diesel AST.

When the UST was removed from the site, four LUST Files were open to address potential leaks from the UST and associated piping and dispensers. The site characterization of these features was completed in November 1996 and on November 29, 1996, ADEQ closed all four of the LUST Files associated with this site and closed soil levels met RBCA levels.

No significant changes in use have occurred at the subject property since the COT Refuse Transfer Facility was decommissioned in the late 1990s.

## 8.2 POTENTIAL RECOGNIZED ENVIRONMENTAL CONDITIONS

The following features were given consideration as potential RECs, but were found not to represent a REC for the given reasons:

**TABLE 8.1**

POTENTIAL RECOGNIZED ENVIRONMENTAL CONDITIONS	
SITE NAME AND/OR SITE CONDITION	REASON NOT CONSIDERED A REC
Diesel AST Located north of the former Reuse Transfer Station on the south side of Papago Street.	There are no signs of staining on the sides of the AST or on the surrounding concrete and the AST is surrounded by a berm. In addition, the general appearance of the AST and fuel dispenser island indicates that it has been well-maintained. If redevelopment at the site would call for the removal of the AST and fuel dispenser island then Allwyn Environmental would recommend soil sampling underneath the piping and fuel dispensers.
The two approximate 500 gallon ASTs observed west of the refuse transfer station.	Investigation of these features during the site reconnaissance indicates that these ASTs are used to store water.
Various floor drains within in the wash bay and around the subject property.	Interviews indicate that COT Environmental Services maintains an Industrial Wastewater Control (IWC) Permit (Permit #12442) for the COT Refuse Transfer Station and Container Maintenance Compound and conducts periodic water sampling of the wastewater.
Storage of small fuel containers and other chemicals in the storage building; Storage of paint near the paint booth; Storage of degreasers and deodorizers in the container located west of the Container Maintenance facility; Storage of acetylene cylinders near the welding bays.	There were no signs of spills and/or leaks in areas where fuels and chemicals were being stored.
Floor Sump in the wash bay and the former sump located in the bay north of the wash bay.	Interviews indicate that COT Environmental Services maintains an Industrial Wastewater Control (IWC) Permit (Permit #12442) for the COT Refuse Transfer Station and Container Maintenance Compound and conducts periodic water sampling of the wastewater.
Sanitation Transfer Site Fuel 1450 S. 10 <sup>th</sup> Avenue UST/LUST Facility	Located on site, however, the UST was removed in 1996. On November 29, 1996, ADEQ closed all four of the LUST Files associated with this site and closed soil levels met RBCA levels.
COT - Transfer Station Waste Tire Collection 425 W. 23 <sup>rd</sup> Street Environmental Permit Facility	Located on site, but no evidence of releases or other potential impacts that would impact the subject property. The collection of tires would not be indicative of a REC.

<b>POTENTIAL RECOGNIZED ENVIRONMENTAL CONDITIONS</b>	
<b>SITE NAME AND/OR SITE CONDITION</b>	<b>REASON NOT CONSIDERED A REC</b>
American Scrap Metal Recycling 2140 S. Freeway CERCLIS/NFRAP Facility	Located crossgradient of the subject property.
Jacobs Essay Office 1435 S. 10 <sup>th</sup> Avenue RCRA Generator Facility	Located crossgradient of the subject property.
Exxon Co. USA 73904 655 W. 22 <sup>nd</sup> Street RCRA Generator Facility	Located crossgradient of the subject property.
Circle K # 2705579 655 W. 22 <sup>nd</sup> Street UST/LUST Facility	Located downgradient of the subject property.
Express-It 601 W. 22 <sup>nd</sup> Street UST/LUST Facility	Located crossgradient of the subject property.
El Campo Tire Warehouse 600 W. 22 <sup>nd</sup> Street UST/LUST Facility	Located downgradient of the subject property.
Atko Building Materials Inc. 600 W. 25 <sup>th</sup> Street UST/LUST Facility	Located crossgradient of the subject property.
Circle K # 1838 1145 S. Freeway LUST Facility	Located downgradient of the subject property.
Unocal # 4897 1210 S. Freeway LUST Facility	Located downgradient of the subject property.
Ron's Freeway Texaco 702 W. Starr Pass Boulevard LUST Facility	Located downgradient of the subject property.
PEP BOYS #645 1300 S. 6 <sup>th</sup> Avenue LUST Facility	Located crossgradient of the subject property.
West 18th St Fuel Island 510 W. 18 <sup>th</sup> Street LUST Facility	Located crossgradient of the subject property.
Asphalt Products Transport Co 635 W. 18 <sup>th</sup> Street LUST Facility	Located crossgradient of the subject property.
Michael Katcher / Dolly Madison 1700 S. 6 <sup>th</sup> Avenue LUST Facility	Located upgradient of the subject property, but no evidence of releases or other potential impacts that would impact the subject property.

POTENTIAL RECOGNIZED ENVIRONMENTAL CONDITIONS	
SITE NAME AND/OR SITE CONDITION	REASON NOT CONSIDERED A REC
Reuter Property 1748 S. 6 <sup>th</sup> Avenue LUST Facility	Located upgradient of the subject property, but no evidence of releases or other potential impacts that would impact the subject property.
COST Government Complex 1810 S. 6 <sup>th</sup> Avenue LUST Facility	Located upgradient of the subject property, but no evidence of releases or other potential impacts that would impact the subject property.
Kushmaul Machine & Engineering 2210 S. Freeway LUST Facility	Located crossgradient of the subject property.

### 8.3 DATA GAPS

A data gap is defined as the lack or inability to obtain information required by ASTM E1527-05 despite good faith efforts by the environmental professional to gather such information. The environmental professional is required to document and comment on the significance of only those data gaps that affect the ability of the environmental professional to identify conditions indicative of releases or threatened releases of hazardous substances, pollutants, contaminants, petroleum and petroleum products, and controlled substances on, at, in, or to the subject property.

Allwyn Environmental did not encounter a data gap during the course of conducting this Phase I ESA Report.

### 8.4 RECOGNIZED ENVIRONMENTAL CONDITIONS

Allwyn Environmental performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of the COT Property located at 1450 S. 10th Avenue in Tucson, Pima County, Arizona. Any exceptions to, or deletions from, this practice are described in Section 9.0 of this report.

This assessment revealed evidence of the following RECs in connection with the subject property:

- Allwyn Environmental observed the trash compactor unit within the former COT Refuse Transfer Facility where municipal garbage trucks once off-loaded their municipal solid waste. Interviews with COT staff indicate that the compactor was operated by hydraulics, and there is other hydraulic equipment at the facility. Allwyn Environmental was unable to obtain documentation pertaining to the number or location of hydraulic tanks associated with this facility. It is also Allwyn Environmental's understanding that this facility may be demolished at some point in the future. Allwyn Environmental recommends additional investigation of this REC. First, the number of tanks and their locations must be identified and their contents should be properly characterized and then disposed off-site at an appropriate facility. Subsequently, an inspection should be conducted in the vicinity of the tanks to evaluate potential impacts, if any, to soils in the area. If soils in the vicinity of the hydraulic tanks appear to be impacted then Allwyn Environmental would recommend the collection of soil samples. Specifically, shallow subsurface soil samples would be collected from soils underlying the tanks and in the vicinity of the tanks. Collected soil samples would be analyzed for polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) to identify

potential impacts, if any, to the soil.

- Aerial Photography indicates that from sometime between 1980 to 1990 and 1996 to 2002, the area west of the Container Maintenance Facility and the area east of the Office Trailer were used to stockpile apparent refuse debris. Therefore Allwyn Environmental recommends that incremental composite shallow subsurface soil samples be collected from these areas and analyzed for PAHs, volatile organic compounds (VOCs), and metals to identify potential impacts, if any, to the soil.

## **9.0 DEVIATIONS**

This Phase I ESA was performed in general accordance with the requirements of the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation: E1527-05). There were no substantive deviations, deletions, or additions to this practice, including client-imposed limitations.

## **10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL**

### **10.1 ENVIRONMENTAL PROFESSIONAL EXPERIENCE**

Mr. Tod Whitwer, PE is a Registered Professional Engineer in the State of Arizona and has over 20 years of experience in the environmental field. Mr. Whitwer's technical expertise includes site assessment and remediation; regulatory compliance; process engineering; Brownfields redevelopment; and project management services. He has participated in numerous Phase I ESAs as the lead professional, Principal, or staff professional for a diverse range of properties including industrial, manufacturing, commercial, residential, and undeveloped. He has extensive project management experience, including leading multiple task, multi-million dollar contracts. Mr. Whitwer holds a Bachelor of Science degree in Chemical Engineering and a Masters degree in Business Administration. Mr. Whitwer's resume is provided in Appendix H.

### **10.2 ENVIRONMENTAL PROFESSIONAL SIGNATURE AND STATEMENT**

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

#### **Signature of the Environmental Professional:**



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Tod R. Whitwer, PE  
Allwyn Environmental  
Environmental Professional

## 11.0 LIMITATIONS

Allwyn Environmental has performed our services for this project in accordance with Allwyn Environmental's proposal dated October 18, 2013, the City of Tucson's Notice to Proceed dated October 22, 2013 the terms and conditions of the ARRA Brownfields Program Technical Assistance Contract (Contract No. 100486-01) between the City of Tucson and Allwyn Environmental, and with the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-05). No other guarantees or warranties are expressed or implied. These services were performed to the degree of skill and diligence normally employed by experienced professionals performing the same or similar services in the same geographic area at the time the services were performed.

This Phase I ESA was conducted solely to permit Allwyn Environmental to render a professional opinion regarding the likelihood of a REC being present on, in, or beneath the subject site at the time services were performed. No Phase I ESA is thorough or exhaustive enough to wholly eliminate uncertainty regarding the potential for RECs in connection with the property. In addition, the level of inquiry for each Phase I ESA is variable, consistent with good commercial or customary practice, and will consider the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry.

Allwyn Environmental has examined and relied on written documents, oral statements, and observations made by others. We have assumed this information is true, correct, accurate, and complete, and have not conducted an independent examination of the materials and statements. Allwyn Environmental shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed, or for items that were not visible, accessible, or present on the site and adjoining sites at the time of the site reconnaissance.

Environmental regulatory criteria are continually changing. Therefore, environmental conditions, such as contaminant concentrations in certain media that are considered legal and acceptable at the time of this report may in the future be subject to different regulatory standards. Professional opinions and judgments expressed in this Phase I ESA are based on our understanding and interpretations of current regulatory standards and practices. This report is not meant to provide or represent legal opinions.

This document and the information contained herein have been prepared solely for the use of the City of Tucson and their authorized representatives. Any reliance on this report by other parties shall be at such party's sole risk. Any future consultation or provision of services to third parties related to the property requires written authorization from the City of Tucson or their representatives. Any such services may be provided at Allwyn Environmental's sole discretion and under terms and conditions acceptable to Allwyn Environmental, including potential additional compensation.

According to ASTM E1527-05, Phase I ESAs are generally valid for 180 days, unless site conditions or usage have changed to impact site environmental conditions. If within this period, the Phase I ESA is to be used by a different user than for whom the assessment was originally prepared, the new user must meet the User Responsibilities described in ASTM 1527-05.

This Phase I ESA may be used for up to 1 year from the date of issue, provided that the following inquiries are updated or conducted within 180 days of the date of purchase:

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

Our scope of services specifically did not address the following issues:

- Asbestos-Containing Material (ACM)
- Radon
- Lead-Based Paint
- Lead in Drinking Water
- Wetlands
- Regulatory Compliance
- Cultural and Historic Resources
- Industrial Hygiene
- Health and Safety
- Ecological Resources
- Endangered Species
- Indoor Air Quality
- High Voltage Powerlines

## 12.0 REFERENCES

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<sup>1</sup> ASTM; Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Designation: E-1527-05); May 2005.

<sup>2</sup> Arizona Department of Water Resources; Third Management Plan 2000-2010, Tucson Active Management Area;  
[http://www.azwater.gov/dwr/Content/Publications/files/ThirdMgmtPlan/tmp\\_final/tucson/ch2-tuc.pdf](http://www.azwater.gov/dwr/Content/Publications/files/ThirdMgmtPlan/tmp_final/tucson/ch2-tuc.pdf)

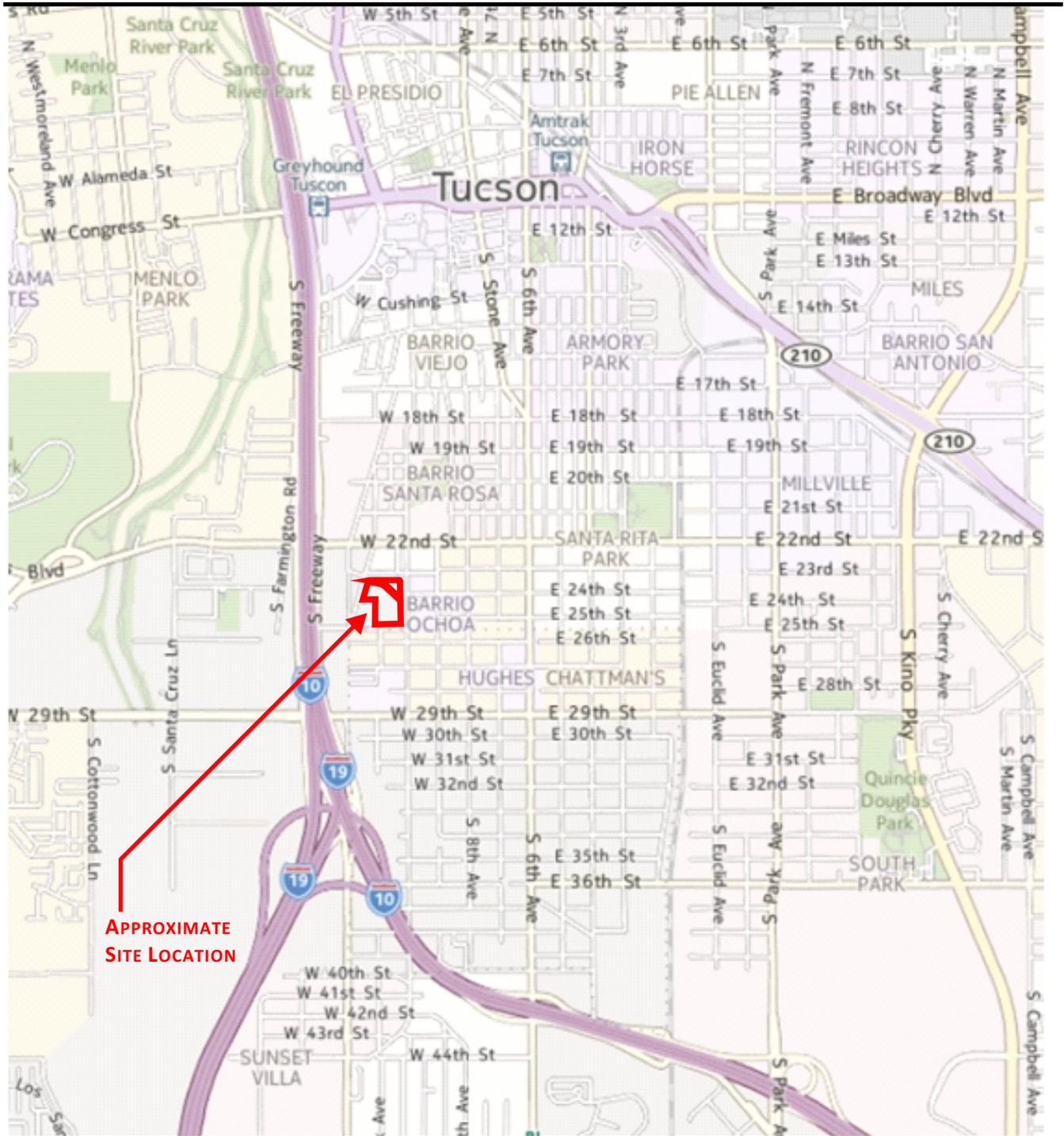
<sup>3</sup> Arizona Department of Water Resources; Overview of the Arizona Groundwater Management Code;  
<http://www.water.az.gov/adwr/Content/Publications/files/gwmgtovw.pdf>.

<sup>4</sup> Arizona Department of Water Resources; Third Management Plan 2000-2010, Tucson Active Management Area;  
[http://www.azwater.gov/dwr/Content/Publications/files/ThirdMgmtPlan/tmp\\_final/tucson/ch2-tuc.pdf](http://www.azwater.gov/dwr/Content/Publications/files/ThirdMgmtPlan/tmp_final/tucson/ch2-tuc.pdf)

<sup>5</sup> Arizona Department of Water Resources; D.W.R. Hydrologic Map Series Report No. 11 (Sheet 1 of 3); Depth to Water and Altitude of the Water Level;  
[http://www.azwater.gov/azdwr/Hydrology/BasicDataUnit/documents/HMS\\_No\\_11.pdf](http://www.azwater.gov/azdwr/Hydrology/BasicDataUnit/documents/HMS_No_11.pdf)

# FIGURES

**FIGURE 1  
VICINITY MAP**



**APPROXIMATE  
SITE LOCATION**

**Map Source:**

Yahoo! Maps

[Http://maps.yahoo.com](http://maps.yahoo.com)

City of Tucson - Environmental Services Department

Phase I Environmental Site Assessment

City of Tucson Transfer Station/Container Maintenance Facility

1450 S. 10<sup>th</sup> Avenue

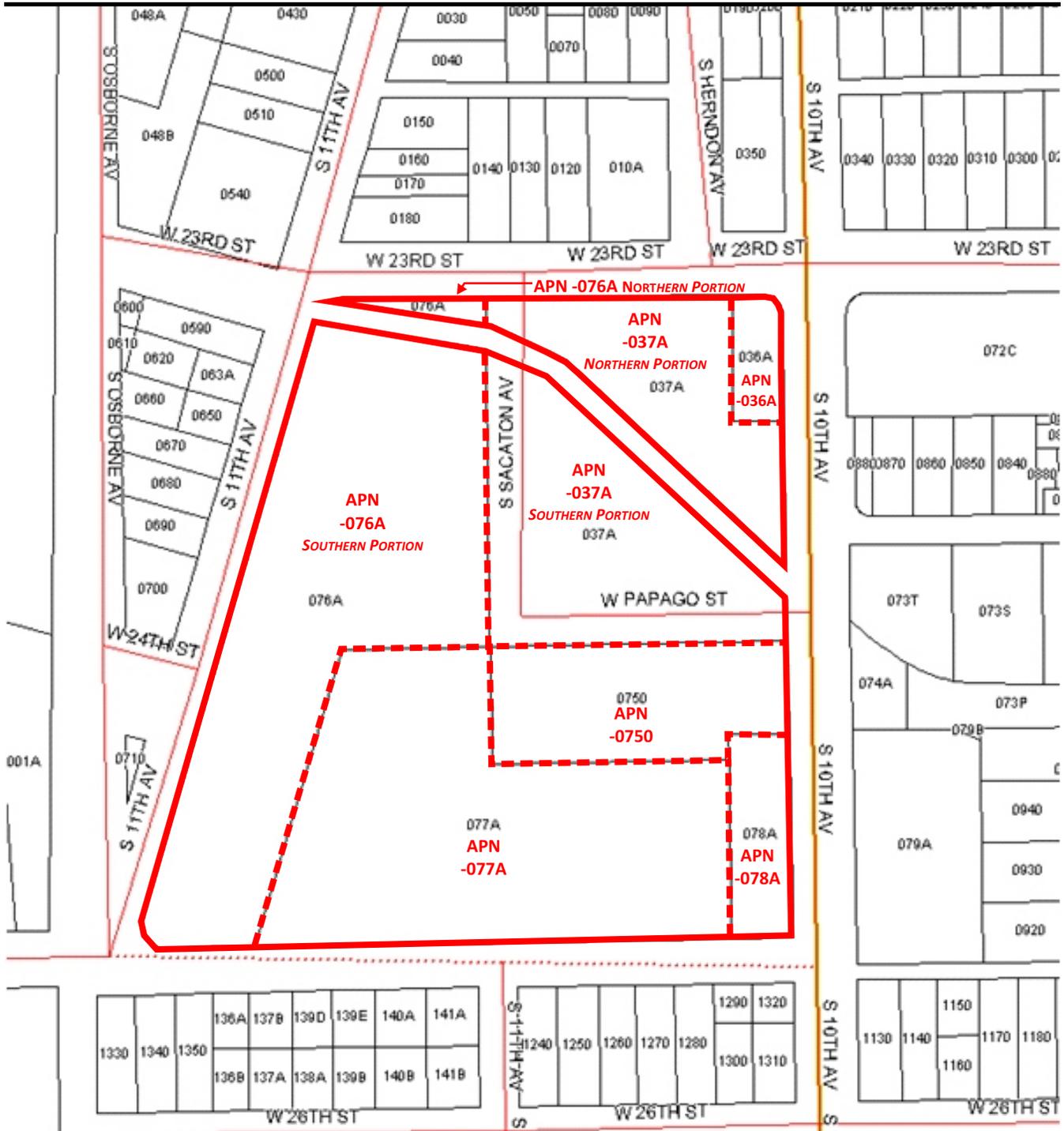
APNs 118-20-036A, -037A, -0750, and -078A & Portions of APNs -076A and -077A

Allwyn Environmental Job No. 002-094

December 2, 2013



## FIGURE 2 PIMA COUNTY ASSESSOR'S PARCEL MAP



**Map Source:**

Pima County Geographical Information System  
<http://gis.pima.gov/maps/mapguide>

**Parcels that contain the subject property are outlined in red**



City of Tucson - Environmental Services Department  
 Phase I Environmental Site Assessment  
 City of Tucson Transfer Station/Container Maintenance Facility  
 1450 S. 10<sup>th</sup> Avenue  
 APNs 118-20-036A, -037A, -0750, and -078A & Portions of APNs -076A and -077A  
 Allwyn Environmental Job No. 002-094  
 December 2, 2013



**FIGURE 3  
AERIAL MAP (2012)**



**Map Source:**

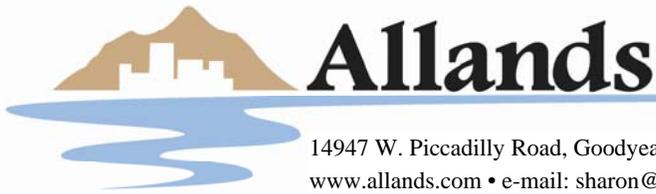
Pima County Geographical Information System  
<http://gis.pima.gov/maps/mapguide>

City of Tucson - Environmental Services Department  
 Phase I Environmental Site Assessment  
 City of Tucson Transfer Station/Container Maintenance Facility  
 1450 S. 10<sup>th</sup> Avenue  
 APNs 118-20-036A, -037A, -0750, and -078A & Portions of APNs -076A and -077A  
 Allwyn Environmental Job No. 002-094  
 December 2, 2013



# APPENDIX A

## REGULATORY DATABASE SEARCH REPORT



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: 002-094 / COT Transfer Station

ALLANDS FILE NO: 2013-10-079D

DATE OF REPORT: October 31, 2013

ALLANDS hereby reports the search results of Federal and State Databases according to ASTM standards for Phase I Environmental Site Assessments E 1527-05. 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 Allwyn Environmental.

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

Property located West of 10<sup>th</sup> Avenue between 23<sup>rd</sup> Street and 25<sup>th</sup> Street, Tucson, Arizona, being in the Northwest quarter of Section 24, Township 14 South, Range 13 East, Gila and Salt River Base and Meridian.

## REGULATORY DATABASE SEARCH SUMMARY

Database	Date of Database	Approximate Minimum Search Distance (miles)	Reported Facilities
<b>Standard Federal ASTM Environmental Record Sources</b>			
NPL (National Priorities List) / Proposed NPL / DOD (Department of Defense Sites)	08/13	1.0	0
Delisted National Priorities List	08/13	0.5	0
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)/No Further Remedial Action Planned (NFRAP)	08/13	0.5	1
RCRA (Resource Conservation and Recovery Act) Large and Small Quantity Generators	08/13	0.125	2
RCRA – CORRACTS TSDFs (Corrective Action Treatment, Storage, and Disposal Facilities)	08/13	1.0	0
RCRA – Non-CORRACTS TSDFs	08/13	0.5	0
ERNS (Emergency Response Notification System)	08/13	0.125	0
<b>Standard State ASTM Environmental Record Sources</b>			
WQARF (Water Quality Assurance Revolving Fund) Areas	08/13	1.0	0
Superfund Program List (replaces ACIDS)	08/04	0.5	0
Solid Waste Facilities/Landfill Sites – Operating and Closed	05/99 & 05/04	0.5	0
Control Registries	08/13	Site and adjoining	0
Brownfields / Voluntary Remediation Program	08/13	0.5	0
Registered USTs (Underground Storage Tanks) (includes Tribal Records)	01/13	0.125	5
LUSTs (Leaking Underground Storage Tanks) Incident Reports (includes Tribal Records)	01/13	0.5	15
<b>Additional Environmental Record Sources</b>			
RCRA Compliance Facilities	08/13	0.125	0
Hazardous Materials Incidents Emergency Response Logbook	1984-06/01	0.125	0
ADEQ Drywell Registration Database (includes Tribal Records)	08/13	0.125	0
Environmental Permits	08/13	Site	1
Fire Insurance Maps	Various	Site and adjoining	1
Topographical / Aerial Maps	See text	Site and adjoining	2
VEMUR / DEUR / LIENS / DEURTRACKER	08/13	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 monthly 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 August, 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 August, 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 August, 2013, and searched for facilities within a 0.5 mile search distance from subject property exterior boundaries.

EPA ID	NFRAP	FACILITY	ADDRESS	DISTANCE/ DIRECTION
AZD983474784	X	American Scrap Metal Recycling	2140 South Freeway	0.4 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 August, 2013 and checked for Federal RCRA facilities located within a <=0.125 mile search distance from subject property exterior boundaries.

EPA ID	FACILITY	ADDRESS	NOTIF. DATE	STATUS
AZD000025601	Jacobs Assay Office	1435 S Tenth Ave	8/8/2009	LQG
AZD983471020	Exxon Co USA 73904	655 W 22nd St	7/29/2002	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 August, 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 August, 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 August, 2013, and checked for incidents located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No incidents were found located within a  $\leq 0.125$  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 August, 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.

No WQARF Registry List sites were found located within a 1.0 mile search distance from subject property exterior boundaries.

### 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.

No facilities on the Arizona Superfund Program List were found located within a 0.5 mile search distance from subject property exterior boundaries.

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.

No active nor inactive landfills were found located within a 0.5 mile search distance from subject property exterior boundaries.

### **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 August, 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 August, 2013, and searched for sites which occurred within a 0.5 mile search distance from subject property exterior boundaries.

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

## 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.

FACILITY ID	NAME	ADDRESS	TANK ID	CLOSURE TYPE	CLOSURE DATE
0-002010	Circle K #5579	655 W 22nd St	1	Perm Removal	5/29/1991
0-002010	Circle K #5579	655 W 22nd St	2	Perm Removal	5/29/1991
0-002010	Circle K #5579	655 W 22nd St	3	Perm Removal	5/29/1991
0-002010	Circle K #5579	655 W 22nd St	4	Perm Removal	5/29/1991
0-002010	Circle K #5579	655 W 22nd St	5		
0-002010	Circle K #5579	655 W 22nd St	6		
0-002010	Circle K #5579	655 W 22nd St	7		
0-007780	Express-It	601 W 22nd St	2	Perm Removal	9/23/1993
0-007780	Express-It	601 W 22nd St	4	Perm Removal	10/25/1978
0-009809	El Campo Tire Warehouse	600 W 22nd St	1	Perm Removal	10/23/2001
0-009809	El Campo Tire Warehouse	600 W 22nd St	2	Perm Removal	10/23/2001
0-005177	Sanitation Transfer Site Fuel	1450 S 10th Ave	1	Perm Removal	8/1/1996
0-006056	Atko Building Materials Inc	600 W 25th St	1	Perm Removal	3/22/1988
0-006056	Atko Building Materials Inc	600 W 25th St	2	Perm Removal	3/22/1988
0-006056	Atko Building Materials Inc	600 W 25th St	3	Perm Removal	3/22/1988
0-006056	Atko Building Materials Inc	600 W 25th St	4	Perm Removal	3/22/1988

### DETAILS

NOTE: Details section is from the ADEQ 2003 UST list, newer lists do not provide this information.

Facility Id	Facility	Owner Id	Owner
Tank No.	Status	Capacity	Age
Tank Release Detection	Content	Piping Type	Tank Material
	Pipe Material		Pipe Release Detection

0-002010 **Exxon # 7-3904/Sandberg-Willrett** Pima Co. 1323 ExxonMobil  
 655 W 22nd ,Tucson AZ 85713  
 1 REMV Gasoline 8000 Interstitial Monitoring (Secondary Bare Steel Line Tightness Testing Containment)  
 2 REMV Gasoline 8000 Interstitial Monitoring (Secondary Bare Steel Line Tightness Testing Containment)  
 3 REMV Gasoline 8000 Interstitial Monitoring (Secondary Bare Steel Line Tightness Testing Containment)  
 4 REMV Used Oil 500 Bare Steel Pressure

**REGISTERED UNDERGROUND STORAGE TANKS  
(UST)**

Facility Id	Facility	Owner Id	Owner	
Tank No.	Status	Capacity	Age	Tank Material
Tank Release Detection	Content	Piping Type		Pipe Release Detection
	Pipe Material			

0-007780 **Express-It** Pima Co. 4404 Carl Sandberg  
 601 W 22nd St ,Tucson AZ 85713  
 1 REMV Bunker C F 12500 Cathodically Protected Suction: Check el Oil (Sacrificial Anode)  
 2 REMV Gasoline 550 Cathodically Protected Suction: Check (Sacrificial Anode)  
 3 REMV Bunker C F 33000 Bare Steel Pressure el Oil  
 4 PERM Diesel 3000 Galvanized Steel Gravity Feed

0-005177 **Sanitation Transfer Site Fuel** Pima Co. 932 City Of Tucson Fleet Services  
 1450 S 10th Ave ,Tucson AZ 85726-7210  
 1 REMV Diesel 10000 Interstitial Monitoring (Secondary Bare Steel Pressure  
 Containment) Tank Tightness with Inventory Controls

0-006056 **Atko Building Materials Inc** Pima Co. 365 Atko Building Materials Inc  
 600 W 25th St ,Tucson AZ 85713  
 1 REMV Gasoline 2000 Galvanized Steel  
 2 REMV Gasoline 2000 Galvanized Steel  
 3 REMV Diesel 1000 Galvanized Steel  
 4 REMV Diesel 1000 Galvanized Steel

**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.

<b>ID</b>	<b>LUST ID NO</b>	<b>FACILITY</b>	<b>ADDRESS</b>	<b>DATE OPEN</b>	<b>DATE CLOSED</b>	<b>P CODE</b>	<b>DIST./ DIREC.</b>
0-005177	4540.01	Sanitation Transfer Site Fuel	1450 S 10th Ave	8/2/1996	11/29/1996	5R1	0.1 mi. E
	4540.02			8/21/1996	11/29/1996	5R1	
	4540.03			8/30/1996	11/29/1996	5R1	
	4540.04			8/30/1996	11/29/1996	5R1	
0-009809	5290.01	El Campo Tire Warehouse	600 W 22nd St	10/24/2001	07/08/2002	5R1	0.1 mi. NW
0-002010	0416.01	Circle K #2705579	655 W 22nd	3/9/1988	2/2/1998	5R1	0.1 mi. NW
	0416.02			6/5/1991	2/2/1998	5R1	
0-006056	0420.01	Atko Building Materials Inc	600 W 25th St	3/22/1988	12/22/1992	5R1	0.1 mi. W
0-007780	3259.01	Express-It	601 W 22nd St	12/03/1993	07/13/1998	5R1	0.1 mi. W
	3259.02			7/13/1998	07/13/1998	5R1	
0-001494	4695.01	Circle K # 1838	1145 S Freeway	5/9/1997	11/22/2000	5R1	0.2 mi. NW
	4695.02			5/9/1997	11/22/2000	5R1	
	4695.03			5/9/1997	11/22/2000	5R1	
	4695.04			5/9/1997	11/22/2000	5R1	
	4695.05			5/9/1997	11/22/2000	5R1	
	4695.06			5/21/1997	3/16/2006	5R1	
0-005290	4657.01	Unocal # 4897	1210 S Freeway	2/14/1997	7/21/1998	5R1	0.2 mi. NW
	4657.02			2/14/1997	7/21/1998	5R1	
	4657.03			2/14/1997	7/21/1998	5R1	
	4657.04			2/14/1997	7/21/1998	5R1	
0-006208	0886.01	Ron's Freeway Texaco	702 W Starr Pass Blvd	12/4/1990	7/16/1996	5R1V	0.3 mi. NW
	0886.02			2/10/1997	5/23/2000	5R1	
	0886.03			2/10/1997	5/23/2000	5R1	
	0886.04			2/10/1997	5/23/2000	5R1	
	0886.05			3/8/1999	9/14/2005	5R1V	
0-003672	4055.01	PEP BOYS #645	1300 S 6th Ave	5/1/1995	1/8/1996	5R1	0.4 mi. E
0-003544	0370.01	West 18th St Fuel Island	510 W 18th St	5/3/1987	11/30/1990	5R1	0.4 mi. N
	0370.02			1/6/1999	4/30/1999	5R1	
0-000483	0515.01	Asphalt Products Transport Co	635 W 18th St	8/19/1988	7/22/1998	5R1	0.4 mi. N
0-008913	4482.01	Michael Katcher / Dolly Madison	1700 S 6th Ave	6/28/1996	OPEN	1F	0.4 mi. SE
	4482.02			6/28/1996	6/5/2006	5R1	
	4482.03			6/28/1996	OPEN	1F	
	4482.04			7/22/1996	6/5/2006	5R1	
	4482.05			7/22/1996	6/5/2006	5R1	
	4482.06			7/22/1996	6/5/2006	5R1	

**REGISTERED LEAKING UNDERGROUND STORAGE TANKS  
(CONT.)**

<b>ID</b>	<b>LUST ID NO</b>	<b>FACILITY</b>	<b>ADDRESS</b>	<b>DATE OPEN</b>	<b>DATE CLOSED</b>	<b>P CODE</b>	<b>DIST./ DIREC.</b>
0-009432	5085.01	Reuter Property	1748 S 6 <sup>th</sup> Ave	5/21/1999	5/26/1999	5R1	0.4 mi. SE
0-008837	4359.01 4359.02 4359.03 4359.04 4359.05	City Of Hall / City Of South Tucson - Government Complex	1810 S 6th Ave	2/14/1996 2/6/1997 2/6/1997 2/6/1997 2/6/1997	9/28/1998 9/28/1998 3/13/1997 3/13/1997 3/13/1997	5R1 5R1 7 5R1 5R1	0.4 mi. SE
0-002903	0773.01	Kushmaul Machine & Engineering	2210 S Freeway	6/15/1989	3/15/1991	5R1	0.5 mi. S

P CODE (Leaking UST Priority):

1F	Closed case for suspected release (false alarm)
5R1	Closed soil levels meet RBCA
5R1V	Closed soil levels meet RBCA Tier 1, via CRS
7	LUST case close-out involving combination with other LUST number/case at the same facility

## **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 August, 2013, and searched for compliance facilities within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No compliance facilities were found located within a  $\leq 0.125$  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  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No hazardous material incidents were found located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

## **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 August, 2013, and searched for dry wells located within a  $\leq 0.125$  mile search distance from subject property exterior boundaries.

No registered dry wells were found located within a  $\leq 0.125$  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 August, 2013, and checked for inclusion of subject property.

City of Tucson - Transfer Station Waste Tire Collection Site ID 50956 / 137913 located at 425 West 23rd Street

## **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 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](http://www.maptech.com)) and are for informational purposes only.

<b>NAME</b>	<b>TYPE</b>	<b>DATE</b>	<b>REVISION</b>	<b>CONTOUR INTERVAL</b>
Tucson	Topo	1983	None	10 feet
Tucson 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; Environmental Liens, or activity and use limitations, if any, were found currently recorded against the property as searched at the subject county recorder's office.

**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

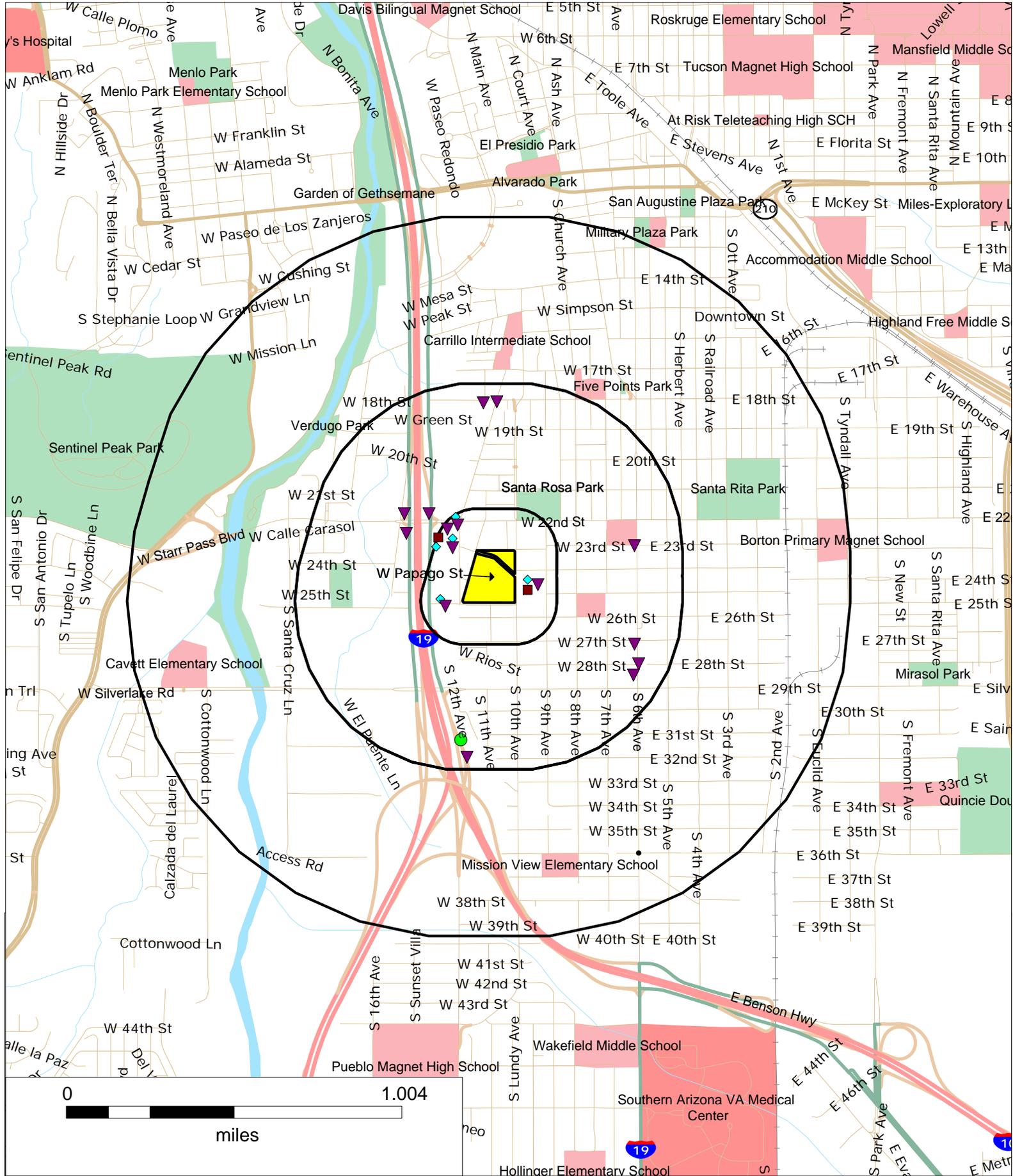
### Legal Description

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
567585	14	S	13	E	13				N				Union Pacific Railroad Company
700383	14	S	13	E	14				M			10	City Of Tucson
700384	14	S	13	E	14				M			12	City Of Tucson
909335	14	S	13	E	14								City Of Tucson
523298	14	S	13	E	14				N	50	0	3	Tucson, City Of,
900898	14	S	13	E	14				N				Arizona Department Of Transportation
903156	14	S	13	E	14				N				Rio Development Company
907395	14	S	13	E	14				T	45	45		City Of Tucson Environmental Services
640226	14	S	13	E	14	SE			D	25	21	0	Miller,H
589489	14	S	13	E	14	SE	SE	SE	T	135	124	2	City Of Tucson Environmental Services
535244	14	S	13	E	14	SE	SE	SE	N	230	34	0	Southwest Gas Corp,
581828	14	S	13	E	23				N				ADOT
571453	14	S	13	E	23				N				ADOT
581686	14	S	13	E	23				N				ADOT

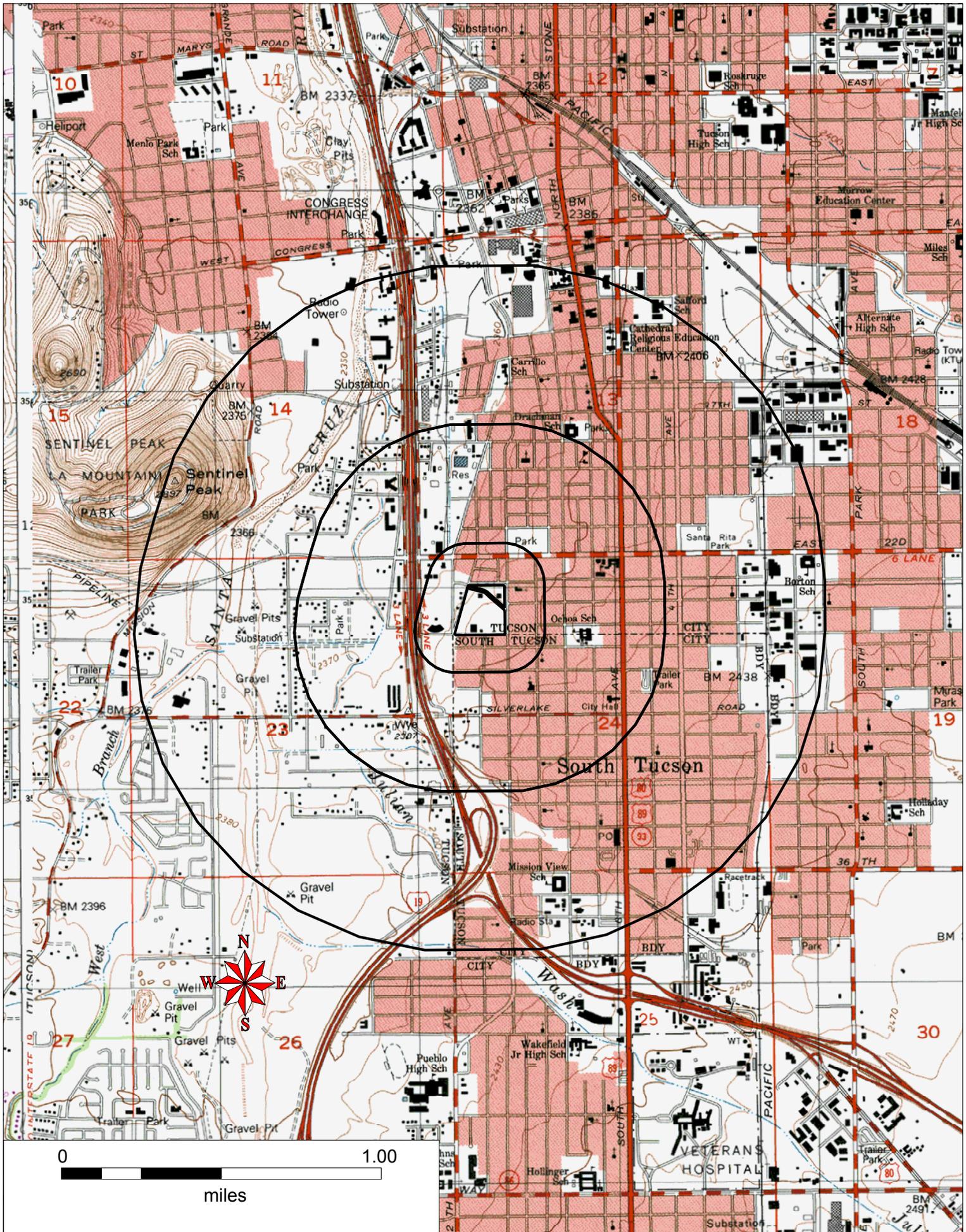
**ARIZONA DEPARTMENT OF WATER RESOURCES  
WELL REPORT (cont.)**

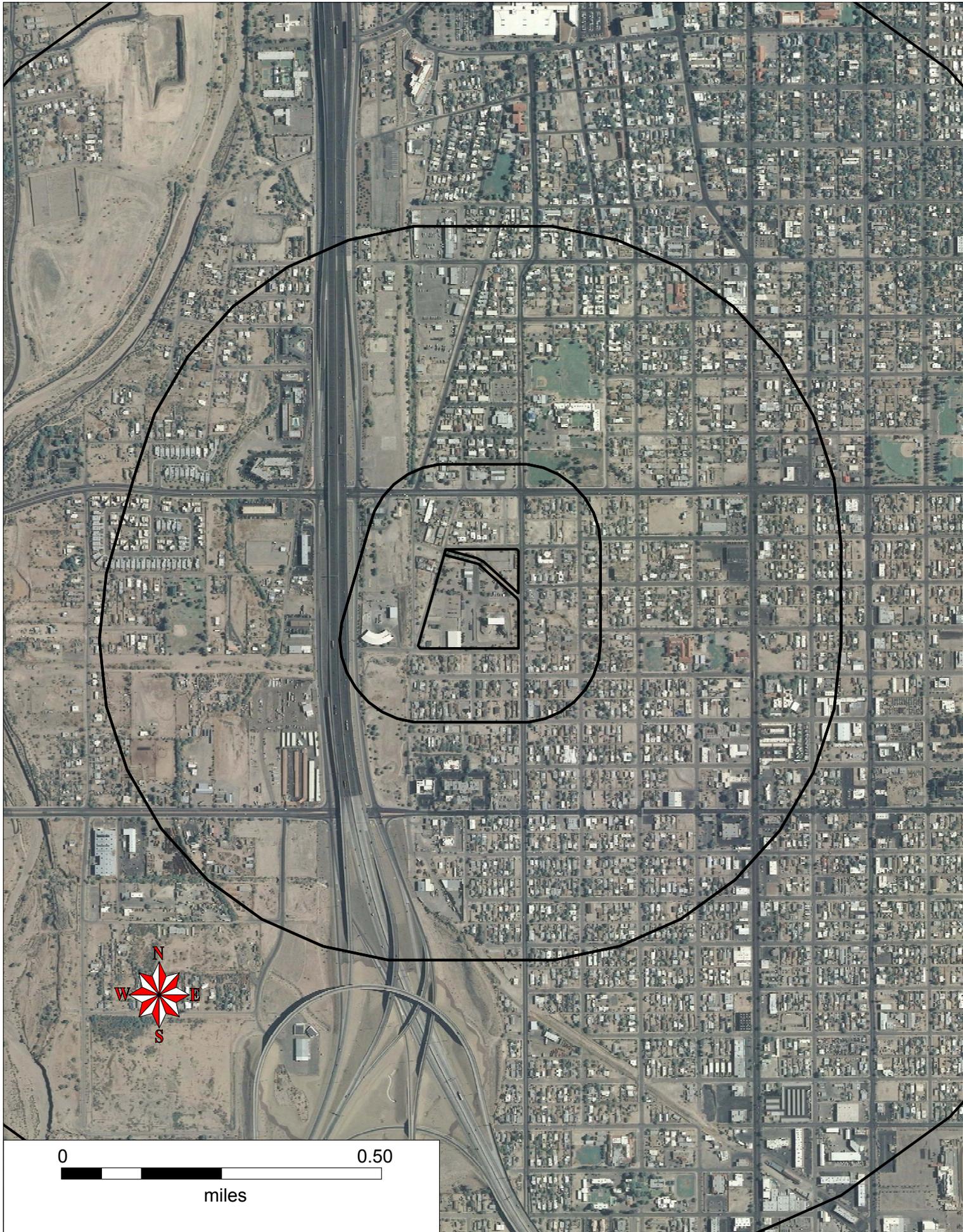
ID	T	N/S	R	E/W	S	Q1	Q2	Q3	WU	WD	WL	DIA	NAME
581828	14	S	13	E	23				N				ADOT
204622	14	S	13	E	23	NE	NE	NE	P	100		8	City Of Tucson Environmental Services
564759	14	S	13	E	23	NE	NE	NE	N	102			Exxon Mobil Oil Corporation
581826	14	S	13	E	24				N				Arizona Department Of Transportation
571454	14	S	13	E	24				N				Arizona Department Of Transportation
700374	14	S	13	E	24				D	76		6	
581687	14	S	13	E	24				N				Arizona Department Of Transportation
534293	14	S	13	E	24	NW	NE	SW	N	230	45	0	Southwest Gas Corp,
203161	14	S	13	E	24	NW	NW	SW	T	440		13	City Of Tucson - Environmental Services
549206	14	S	13	E	24	NW	NW	SW	N	155	0	0	Tucson, City Of,
568776	14	S	13	E	24	NW	SW	NE	T				Katcher
568775	14	S	13	E	24	NW	SW	NE	T				Katcher
568774	14	S	13	E	24	NW	SW	NE	T				Katcher

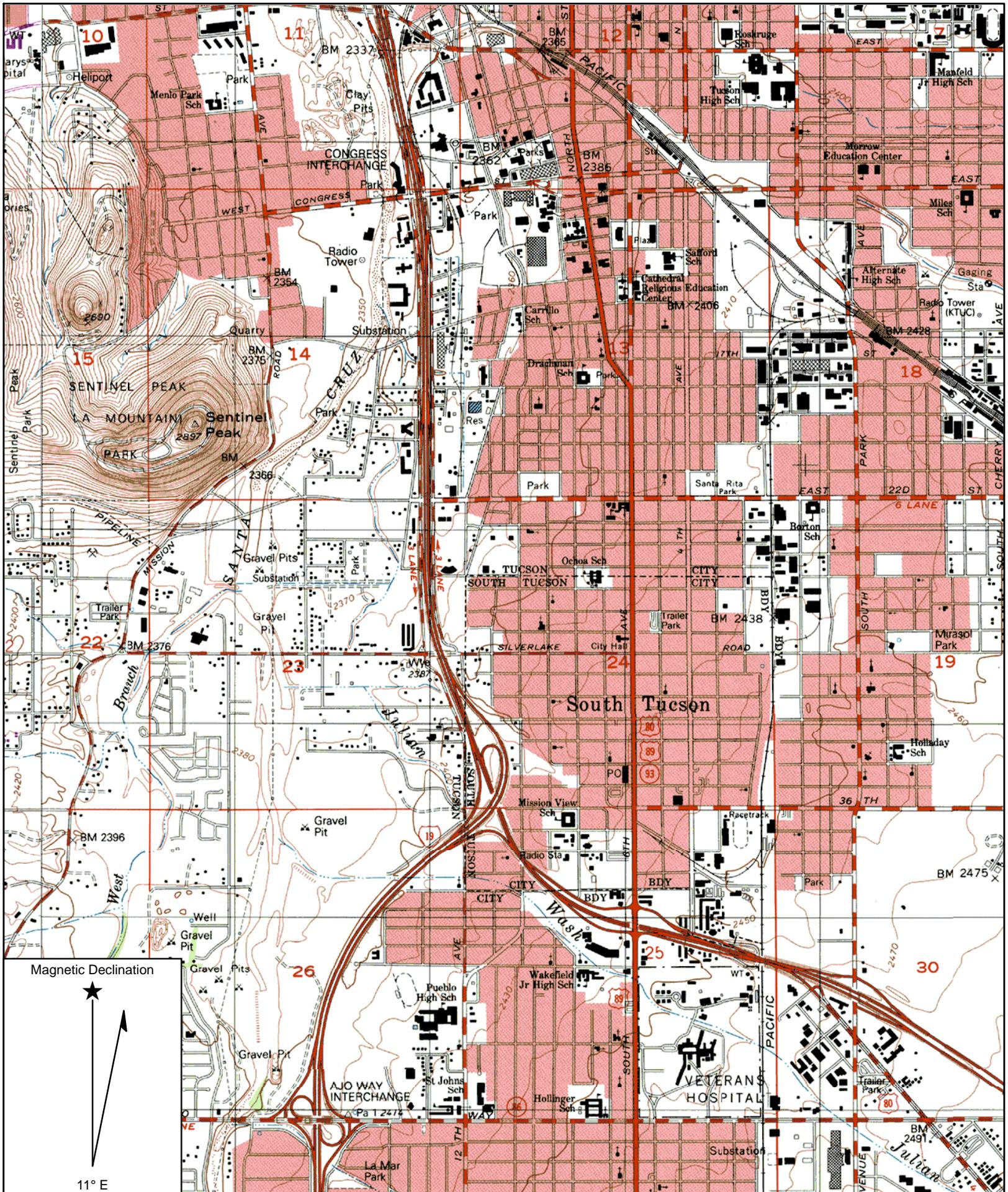


**LEGEND**

	<b>SITE</b>	<b>USTs</b>	<b>CERCLA / NFRAP</b>	<b>RCRA (Generators, TSD &amp; CORRACTS TSD)</b>	<b>SCHOOL</b>
	<b>LUSTs</b>	<b>LANDFILLS</b>	<b>RCRA COMPLIANCE</b>		







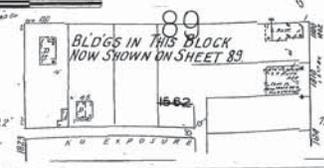
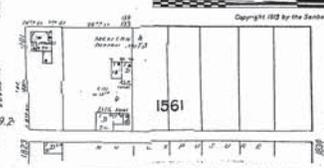
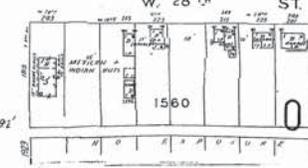
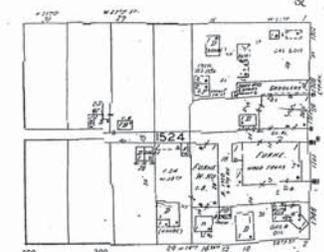
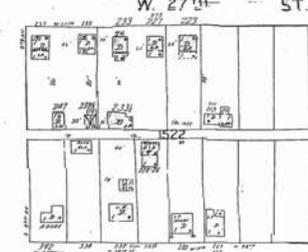
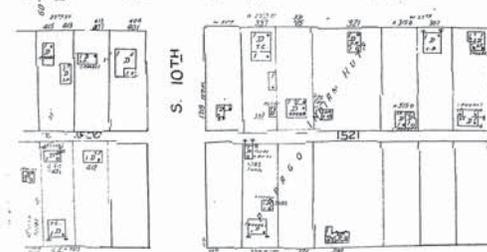
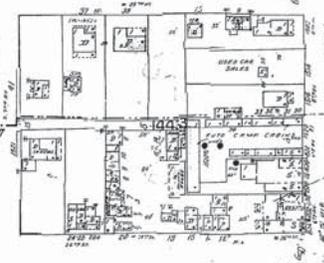
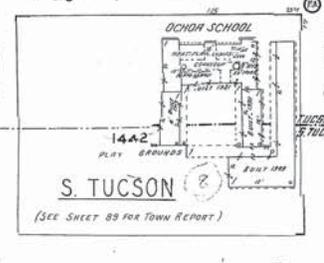
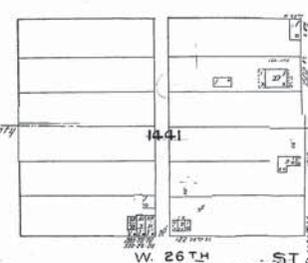
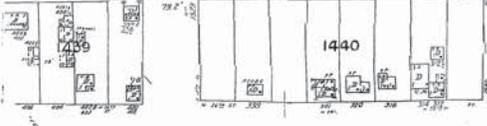
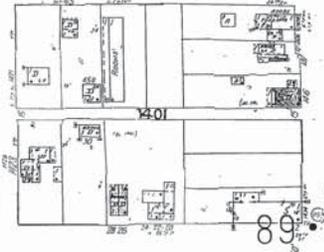
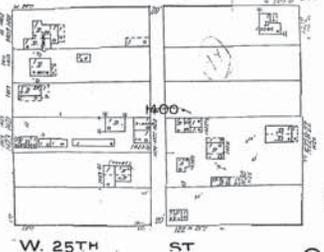
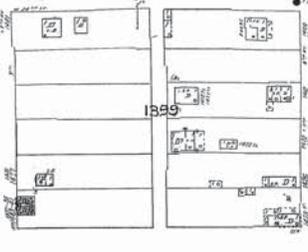
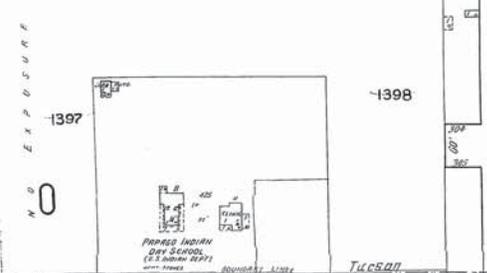
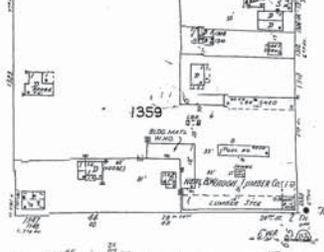
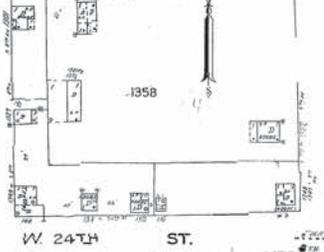
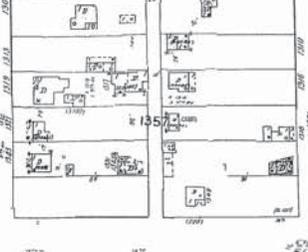
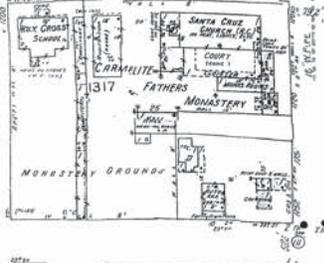
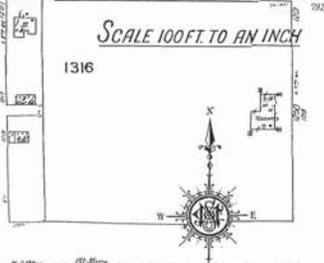
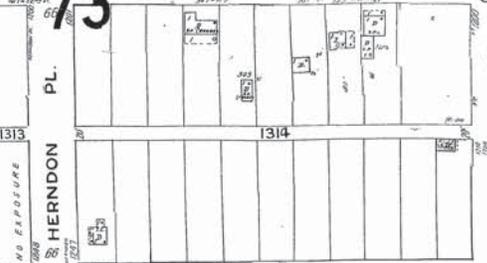
Name: TUCSON  
 Date: 10/25/2013  
 Scale: 1 inch equals 2000 feet

Location: 12 0502317 E 3562835 N NAD83  
 Caption: Job No. 2013-10-079  
 Contour interval is 10 feet

73

64

66



# APPENDIX B

## USER INFORMATION DOCUMENTATION FORM

## USER INFORMATION DOCUMENTATION FORM

**Project Name/Location:** 002-094: Transfer Station/Container Maintenance Facility - 1450 S. 10<sup>th</sup> Avenue

**Person Interviewed/Title:** David Barraza, COT - Environmental Services

**Date Interviewed:** 10/31/2013

**Performed By:** Derek Koller via email

QUESTION No.	TOPIC	YES	NO	UNKNOWN OR UNCERTAIN	COMMENT No.
1	Are you aware of environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?		X		
2	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 site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?		X		
3	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 property occupants or an adjoining property so that you would have specialized knowledge of the chemicals/processes used by this type of business?	X			3
4	Does the purchase price 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?			X	
5	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? For example, as the user: - Do you know the past property uses? - Do you know of specific chemicals that are present or once were present? - Do you know of spills or other chemical releases that have taken place? - Do you know of any environmental cleanups that have taken place?	X			4

## USER INFORMATION DOCUMENTATION FORM

QUESTION No.	TOPIC	YES	NO	UNKNOWN OR UNCERTAIN	COMMENT No.
6	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?		X		

**Comment No. 1:** Transfer station at the subject location was decommissioned in mid-1990's (verify with ES staff at facility). Maintenance activities of commercial containers and storage of new residential containers have been the primary use of this property since the transfer station was deactivated.

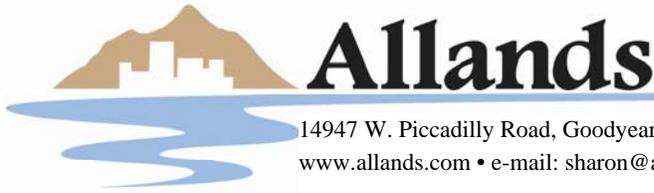
**Comment No. 2:** ES main office has records for the IWC wastewater permit for Container Maintenance facility; IWC Permit #12442.

**Comment No. 3:** TW has a warehouse adjacent to ES site to the west. No chemicals stored at TW. ES operates a paint booth to restore old dumpsters

**Comment No. 4:** ES transfer station for municipal waste; ES has an IWC permit for wastewater discharge at this site. Paint stored at ES facility. Not aware of any spills or cleanup.

# APPENDIX C

## HISTORICAL TITLE REPORT



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

## HISTORICAL TITLE REPORT

YOUR FILE NO: 002-094 / COT Transfer Station

ALLANDS FILE NO: 2013-10-079T

Date of Report: October 31, 2103

Title Plant Date\*\*\*: October 17, 2013

\*\*\*The Title Plant Date reflects the most current data made available by the information sources used at the time the research was performed.

ALLANDS hereby reports a Historical Title Report to the land described below, subject to the items as shown in Schedule B. This is a historical title report ONLY and is neither a guarantee of title, a commitment to insure or a policy of title insurance. 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 Allwyn Environmental.

1. Title to the estate or interest covered by this report is vested in: THE CITY OF TUCSON, A MUNICIPAL CORPORAITON
2. By virtue of that certain chain of title attached.
3. The land referred to in this report is located in Pima County, Arizona, described as follows:

Assessor's No.: 118-20-036A, 037A, 075, 076A, 077A and 078A

## SCHEDULE B

No Leases, VEMUR'S, DEUR'S; Environmental Liens, or activity and use limitations, if any, were found currently recorded against the property as searched at the subject county recorders office. \*\*\*

\*\*\* 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 recorders 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. Effective July 18, 2000, the Declaration of Environmental Use Restriction (DEUR) replaced the Voluntary Environmental Mitigation Use Restriction (VEMUR) as a restrictive use covenant.

## CHAIN OF TITLE

1. Deed from George Pusch and Mathilde Pusch, his wife to the Board of Home Mission of the Presbyterian Church, recorded 7-18-1903 in Book 34 of Deeds, page 635. (all but streets)
2. Dedication of Streets by George Pusch and Mathilde Pusch, his wife recorded 9-10-1904 in Book 7 of Misc., page 284. (streets)
3. Deed from the Board of Home Mission of the Presbyterian Church to the Board of National Ministries of the Presbyterian Church, recorded 1-23-29 in Book 132 of Deeds, pages 16 and 17 and recorded 4-23-30 in Book 146 of Deeds, page 150. (075, 076A and 077A)
4. Deed from Alice V. Orndorff and Lee H. Orndorff, her husband and George W. Pusch to Walter F. Pusch, Mabel P. Hankins and Gertrude D. Zipf, recorded 6-21-35 in Book 185 of Deeds, pages 294 and 295. (077A)
5. Deed from the Board of National Ministries of the Presbyterian Church to the city of Tucson recorded 5-24-48 in Docket 79, page 48. (037A)
6. Deed from the Superintendent of Streets awarding property to the city of Tucson recorded 1-22-26 in Docket 107, page 380. (076A)
7. Deed from the Superintendent of Streets awarding property to the city of Tucson recorded 1-22-26 in Docket 107, page 382. (075)
8. Deeds from Walter F. Pusch, Mabel P. Hankins and Gertrude D. Zipf to Fred L. Pusch, a single man, recorded 4-29-47 in Docket 325, pages 178 to 180. (077A)
9. Deed from Fred L. Pusch, a single man to the city of Tucson recorded 4-29-47 in Docket 325, page 181. (077A)

CHAIN OF TITLE CONTINUES

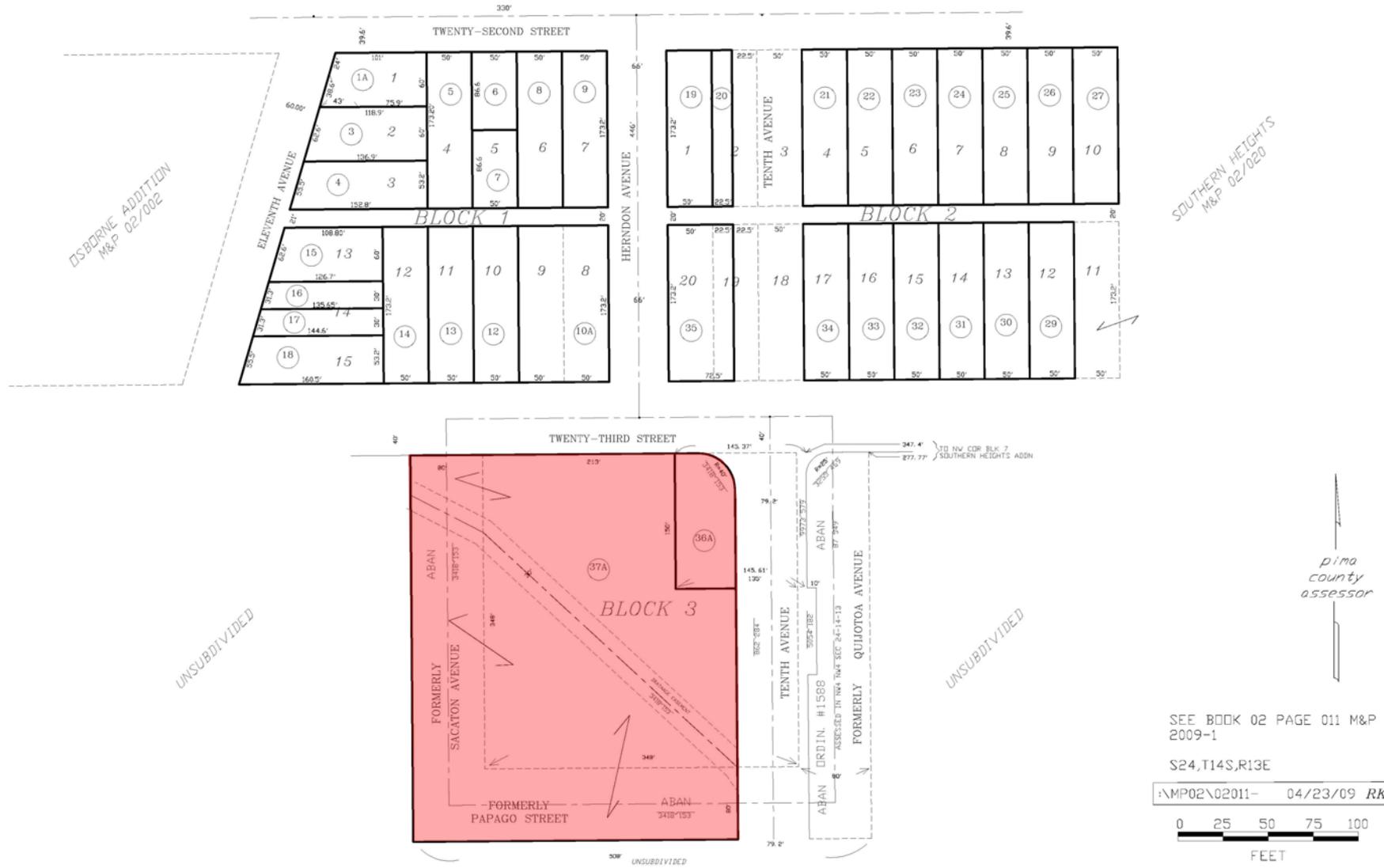
## CHAIN OF TITLE CONTINUED

10. Deed from the Board of National Ministries of the Presbyterian Church to the city of Tucson recorded 4-16-53 in Docket 590, page 271. (036A)
11. Quit Claim Deed from the United States of America to the city of Tucson recorded 3-23-55 in Docket 819, page 424. (078A)
12. Abandonment of Sacaton Avenue and Papago Street to the city of Tucson by Ordinance recorded 1-23-69 in Docket 3418, page 153. (Streets)

# ASSESSOR'S RECORD MAP NATIVE AMERICAN ADDITION

118-20

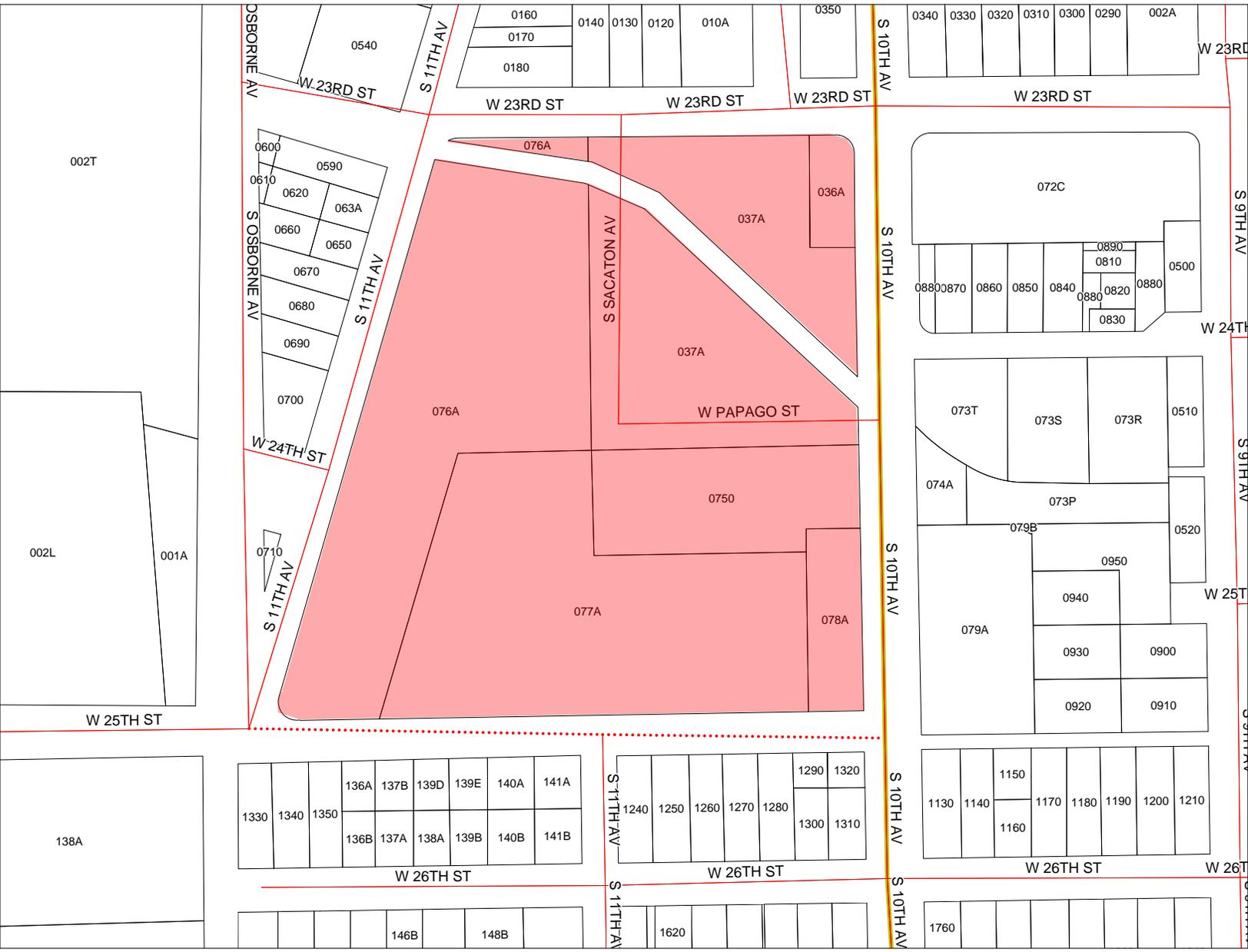
CITY OF TUCSON  
SEC. 13, T14S, R13E



pima  
county  
assessor

SEE BOOK 02 PAGE 011 M&P  
2009-1  
S24,T14S,R13E  
:\MP02\02011- 04/23/09 RK  
0 25 50 75 100  
FEET







## Pima County Geographic Information Systems

# Parcel 118-20-036A

Read the [Disclaimer](#). Information on this page is **unofficial**.

Mail name and address	Legal description
118-20-036A CITY OF TUCSON . . . 00000	NATIVE AMERICAN W66.17' E135' N150' BLK 3 EXC NELY SPNDRL ADDITION (RD 3418/153 RD 862/284)

### Situs (property) address

[\(About situs addresses\)](#)

Street Address	Jurisdiction	Postal City	Zip Code	
425 W 23RD ST	TUCSON	TUCSON	<a href="#">85713</a>	<input type="button" value="ZIP+4 Lookup"/>

### 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 590, Page 271.
  - [Voter Precinct and Districts](#)
- [Subdivision Plat Map](#) for Book 2, Page 11.
- Pima County [Sanitary Sewer Connection Search](#) and [Connection Records Overview](#).
- **Permits** from [Pima County Development Services](#).
  - [Permit Database Search](#)
  - [Historical Permit Cards](#) - Prior to about 1998

- [Development Activity Records](#) (permit, plat, rezoning) from City of Tucson DSD [Property Research Online](#).
- [Section Information and Maps](#) for Township 14S, Range 13E, Section 24
- **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](#).

<a href="#">Airports</a> <a href="#">Associations</a> <a href="#">Census</a> <a href="#">Comprehensive Plan - Pima County</a> <a href="#">Development</a> <a href="#">Floodplain - Defined by Pima County RFCD</a> <a href="#">Floodplain - FEMA</a>	<a href="#">Governmental Districts and Areas</a> <a href="#">Grids</a> <a href="#">Incentive Zones</a> <a href="#">Jurisdictions</a> <a href="#">Landscape Classifications</a> <a href="#">Miscellaneous</a> <a href="#">Other Regulatory Areas</a>	<a href="#">Public Safety</a> <a href="#">Schools</a> <a href="#">Sonoran Desert Conservation Plan</a> <a href="#">Transportation</a> <a href="#">Utilities</a> <a href="#">Zoning - Base</a> <a href="#">Zoning - Pima County</a> <a href="#">Overlay Zones</a>
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### Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this [disclaimer](#).

<b>Parcel centroid coordinates</b>	Approximately 32.205238 degrees latitude, -110.974868 degrees longitude.
<b>Parcel area</b>	<p><b>This is only an estimate from GIS data.</b>                  The <a href="#">Subdivision Plat Map</a> may also specify parcel area. See <a href="#">Finding Parcel Areas</a>.</p> <hr/> Approximately 0.22 acres or 9,531 square feet.

### Zoom to maps of the parcel's area

 <ul style="list-style-type: none"> <li>◦ <a href="#">Main map</a></li> <li>◦ <a href="#">Orthophoto map</a></li> </ul>	<p><b>Oblique Aerial Photos</b></p> <p>You can change the view (N,S,E,W) or pan and zoom the oblique photo.</p> <p>If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.</p>	 <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Parcel marker</li> <li><input type="checkbox"/> Add</li> </ul>	 <a href="#">Area Map</a>  <a href="#">Area Map</a>
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 <b>Pictometry Photos</b> <a href="#">Learn more</a>	markers? <input type="checkbox"/> Add traffic?		<a href="#">Area Map</a>
 <b>Bing Maps Photos</b> If you don't see the oblique photo, pick "2D" then "Bird's Eye".	<input type="button" value="Google Maps"/>		
	Pick "Satellite" for photo. <a href="#">Help</a>		

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## Pima County Geographic Information Systems

# Parcel 118-20-037A

Read the [Disclaimer](#). Information on this page is **unofficial**.

### Mail name and address

118-20-037A  
CITY OF TUCSON  
.  
. 00000

### Legal description

NATIVE AMERICAN ADDITION ALL OF BLK 3 &  
ABAN SACATON AVE & PAPAYO ST LYG WLY OF TENTH  
AVE  
EXC N150' E66.17' THEREOF  
(ABAN 3418/153 & RD 862/284)

### Situs (property) address

[\(About situs addresses\)](#)

Street Address	Jurisdiction	Postal City	Zip Code	
1402 S 10TH AV	TUCSON	TUCSON	<a href="#">85713</a>	ZIP+4 Lookup

### 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 79, Page 48.
  - [Voter Precinct and Districts](#)
- [Subdivision Plat Map](#) for Book 2, Page 11.
- Pima County [Sanitary Sewer Connection Search](#) and [Connection Records Overview](#).
- **Permits** from [Pima County Development Services](#).
  - [Permit Database Search](#)
  - [Historical Permit Cards](#) - Prior to about 1998

- [Development Activity Records](#) (permit, plat, rezoning) from City of Tucson DSD [Property Research Online](#).
- [Section Information and Maps](#) for Township 14S, Range 13E, Section 24
- **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](#).

<a href="#">Airports</a> <a href="#">Associations</a> <a href="#">Census</a> <a href="#">Comprehensive Plan - Pima County</a> <a href="#">Development</a> <a href="#">Floodplain - Defined by Pima County RFC</a> <a href="#">Floodplain - FEMA</a>	<a href="#">Governmental Districts and Areas</a> <a href="#">Grids</a> <a href="#">Incentive Zones</a> <a href="#">Jurisdictions</a> <a href="#">Landscape Classifications</a> <a href="#">Miscellaneous</a> <a href="#">Other Regulatory Areas</a>	<a href="#">Public Safety</a> <a href="#">Schools</a> <a href="#">Sonoran Desert Conservation Plan</a> <a href="#">Transportation</a> <a href="#">Utilities</a> <a href="#">Zoning - Base</a> <a href="#">Zoning - Pima County</a> <a href="#">Overlay Zones</a>
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### Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this [disclaimer](#).

This parcel consists of **2 separate areas** (polygons).

<b>Parcel centroid coordinates</b>	<ol style="list-style-type: none"> <li>1. Approximately 32.205141 degrees latitude, -110.975227 degrees longitude.</li> <li>2. Approximately 32.204635 degrees latitude, -110.975504 degrees longitude.</li> </ol>
<b>Parcel area</b>	<p><b>This is only an estimate from GIS data.</b>                  The <a href="#">Subdivision Plat Map</a> may also specify parcel area. See <a href="#">Finding Parcel Areas</a>.</p> <hr/> <ol style="list-style-type: none"> <li>1. Approximately 1.18 acres or 51,302 square feet.</li> <li>2. Approximately 1.91 acres or 83,242 square feet.</li> </ol> <p>Total estimated area 3.09 acres or 134,544 square feet.</p>

### Zoom to maps of the parcel's area



 <p>This parcel consists of <b>2 separate areas</b> (polygons).</p> <p>Parcel area 1:</p> <ul style="list-style-type: none"> <li>◦ <a href="#">Main map</a></li> <li>◦ <a href="#">Orthophoto map</a></li> </ul> <p>Parcel area 2:</p> <ul style="list-style-type: none"> <li>◦ <a href="#">Main map</a></li> <li>◦ <a href="#">Orthophoto map</a></li> </ul>	<h3>Oblique Aerial Photos</h3> <hr/> <p>You can change the view (N,S,E,W) or pan and zoom the oblique photo.</p> <p>If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.</p> <p>This parcel consists of <b>2 separate areas</b> (polygons).</p> <hr/> <p>Parcel area 1:</p>  <p><a href="#">Pictometry Photos</a> <a href="#">Learn more</a></p>  <p><a href="#">Bing Maps Photos</a> If you don't see the oblique photo, pick "2D" then "Bird's Eye".</p> <hr/> <p>Parcel area 2:</p> <p><a href="#">Pictometry Photos</a> <a href="#">Bing Maps Photos</a></p>	 <p>This parcel consists of <b>2 separate areas</b> (polygons).</p> <hr/> <p>Parcel area 1:</p> <p><input checked="" type="checkbox"/> Parcel marker <input type="checkbox"/> Add markers? <input type="checkbox"/> Add traffic?</p> <p><input type="text" value="Google Maps"/></p> <hr/> <p>Parcel area 2:</p> <p><input checked="" type="checkbox"/> Parcel marker <input type="checkbox"/> Add markers? <input type="checkbox"/> Add traffic?</p> <p><input type="text" value="Google Maps"/></p> <hr/> <p>Pick "Satellite" for photo. <a href="#">Help</a></p>	 <p><a href="#">Area Map</a></p>  <p><a href="#">Area Map</a></p>  <p><a href="#">Area Map</a></p>
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## Pima County Geographic Information Systems

# Parcel 118-20-0750

Read the [Disclaimer](#). Information on this page is **unofficial**.

Mail name and address	Legal description
118-20-0750 CITY OF TUCSON . . . 00000	N150' S406' W364.45' E784.4' EXC S34.4' E64.35' THEREOF 1.19 AC SEC 24-14-13 (DRE 251/570 RD 862/284)

### 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 107, Page 382.
  - **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 14S, Range 13E, Section 24
- **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](#).

<a href="#">Airports</a> <a href="#">Associations</a> <a href="#">Census</a> <a href="#">Comprehensive Plan - Pima County</a> <a href="#">Development</a> <a href="#">Floodplain - Defined by Pima County RFCFD</a> <a href="#">Floodplain - FEMA</a>	<a href="#">Governmental Districts and Areas</a> <a href="#">Grids</a> <a href="#">Incentive Zones</a> <a href="#">Jurisdictions</a> <a href="#">Landscape Classifications</a> <a href="#">Miscellaneous</a> <a href="#">Other Regulatory Areas</a>	<a href="#">Public Safety</a> <a href="#">Schools</a> <a href="#">Sonoran Desert Conservation Plan</a> <a href="#">Transportation</a> <a href="#">Utilities</a> <a href="#">Zoning - Base</a> <a href="#">Zoning - Pima County</a> <a href="#">Overlay Zones</a>
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### Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this [disclaimer](#).

<b>Parcel centroid coordinates</b>	Approximately 32.204076 degrees latitude, -110.975373 degrees longitude.
<b>Parcel area</b>	<p><b>This is only an estimate from GIS data.</b>                      The Subdivision Plat Map, if any, may also specify parcel area. See <a href="#">Finding Parcel Areas</a>.</p> <hr/> <p>Approximately 1.19 acres or 51,705 square feet.</p>

### Zoom to maps of the parcel's area

 ◦ <a href="#">Main map</a>	<b>Oblique Aerial Photos</b> <hr/> You can change the view (N,S,E,W) or pan and zoom the oblique photo.	
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<ul style="list-style-type: none"><li>◦ <a href="#">Orthophoto map</a></li></ul>	<p>If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.</p> <hr/> <p> <b>Pictometry</b> <a href="#">Pictometry Photos</a> <a href="#">Learn more</a></p> <hr/> <p> <a href="#">Bing Maps Photos</a> If you don't see the oblique photo, pick "2D" then "Bird's Eye".</p> <hr/>	<p><input checked="" type="checkbox"/> Parcel marker <input type="checkbox"/> Add markers? <input type="checkbox"/> Add traffic?</p> <p><input type="button" value="Google Maps"/></p> <p>Pick "Satellite" for photo. <a href="#">Help</a></p>
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## Pima County Geographic Information Systems

# Parcel 118-20-076A

Read the [Disclaimer](#). Information on this page is **unofficial**.

Mail name and address	Legal description
118-20-076A CITY OF TUCSON . . . 00000	PTN S874.8' W214.34' E1259.49' NW4 NW4 EXC SLY 5' THEREOF LYG ELY & ADJ TO ELEVENTH AVE 4.20 AC SEC 24-14-13 (DRE 251/570 RD 3418/153)

### Situs (property) address

[\(About situs addresses\)](#)

Street Address	Jurisdiction	Postal City	Zip Code	
1445 S 11TH AV	TUCSON	TUCSON	<a href="#">85713</a>	<input type="text" value="ZIP+4 Lookup"/>

### 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 107, Page 380.
  - [Voter Precinct and Districts](#)
- 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](#)
- [Historical Permit Cards](#) - Prior to about 1998
- [Development Activity Records](#) (permit, plat, rezoning) from City of Tucson DSD [Property Research Online](#).
- [Section Information and Maps](#) for Township 14S, Range 13E, Section 24
- **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](#).

<a href="#">Airports</a> <a href="#">Associations</a> <a href="#">Census</a> <a href="#">Comprehensive Plan - Pima County</a> <a href="#">Development</a> <a href="#">Floodplain - Defined by Pima County RFCD</a> <a href="#">Floodplain - FEMA</a>	<a href="#">Governmental Districts and Areas</a> <a href="#">Grids</a> <a href="#">Incentive Zones</a> <a href="#">Jurisdictions</a> <a href="#">Landscape Classifications</a> <a href="#">Miscellaneous</a> <a href="#">Other Regulatory Areas</a>	<a href="#">Public Safety</a> <a href="#">Schools</a> <a href="#">Sonoran Desert Conservation Plan</a> <a href="#">Transportation</a> <a href="#">Utilities</a> <a href="#">Zoning - Base</a> <a href="#">Zoning - Pima County</a> <a href="#">Overlay Zones</a>
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### Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this [disclaimer](#).

This parcel consists of **2 separate areas** (polygons).

<b>Parcel centroid coordinates</b>	<ol style="list-style-type: none"> <li>1. Approximately 32.205425 degrees latitude, -110.976181 degrees longitude.</li> <li>2. Approximately 32.204419 degrees latitude, -110.976600 degrees longitude.</li> </ol>
<b>Parcel area</b>	<p><b>This is only an estimate from GIS data.</b>                  The Subdivision Plat Map, if any, may also specify parcel area. See <a href="#">Finding Parcel Areas</a>.</p> <hr/> <ol style="list-style-type: none"> <li>1. Approximately 0.08 acres or 3,581 square feet.</li> <li>2. Approximately 3.71 acres or 161,761 square feet.</li> </ol> <p>Total estimated area 3.80 acres or 165,342 square feet.</p>

### Zoom to maps of the parcel's area

 <p>This parcel consists of <b>2 separate areas</b> (polygons).</p> <p>Parcel area 1:</p> <ul style="list-style-type: none"> <li>◦ <a href="#">Main map</a></li> <li>◦ <a href="#">Orthophoto map</a></li> </ul> <p>Parcel area 2:</p> <ul style="list-style-type: none"> <li>◦ <a href="#">Main map</a></li> <li>◦ <a href="#">Orthophoto map</a></li> </ul>	<h4>Oblique Aerial Photos</h4> <hr/> <p>You can change the view (N,S,E,W) or pan and zoom the oblique photo.</p> <p>If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.</p> <p>This parcel consists of <b>2 separate areas</b> (polygons).</p> <hr/> <p>Parcel area 1:</p>  <p><a href="#">Pictometry Photos</a> <a href="#">Learn more</a></p>  <p><a href="#">Bing Maps Photos</a> If you don't see the oblique photo, pick "2D" then "Bird's Eye".</p> <hr/> <p>Parcel area 2:</p> <p><a href="#">Pictometry Photos</a> <a href="#">Bing Maps Photos</a></p>	 <p>This parcel consists of <b>2 separate areas</b> (polygons).</p> <hr/> <p>Parcel area 1:</p> <p><input checked="" type="checkbox"/> Parcel marker  <input type="checkbox"/> Add markers?  <input type="checkbox"/> Add traffic?</p> <p><a href="#">Google Maps</a></p> <hr/> <p>Parcel area 2:</p> <p><input checked="" type="checkbox"/> Parcel marker  <input type="checkbox"/> Add markers?  <input type="checkbox"/> Add traffic?</p> <p><a href="#">Google Maps</a></p> <hr/> <p>Pick "Satellite" for photo. <a href="#">Help</a></p>	 <p><a href="#">Area Map</a></p>  <p><a href="#">Area Map</a></p>  <p><a href="#">Area Map</a></p>
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## Pima County Geographic Information Systems

# Parcel 118-20-077A

Read the [Disclaimer](#). Information on this page is **unofficial**.

Mail name and address	Legal description
118-20-077A CITY OF TUCSON . . 00000	PTN S426.6' W612.39' E1102.39' NW4 NW4 EXC SLY 5' THEREOF 4.02 AC SEC 24-14-13 (DRE 251/570 RD 3418/153)

### Situs (property) address

[\(About situs addresses\)](#)

Street Address	Jurisdiction	Postal City	Zip Code	
1480 S 10TH AV	TUCSON	TUCSON	<a href="#">85713</a>	<input type="text" value="ZIP+4 Lookup"/>

### 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 325, Page 181.
  - [Voter Precinct and Districts](#)
- 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](#)
- [Historical Permit Cards](#) - Prior to about 1998
- [Development Activity Records](#) (permit, plat, rezoning) from City of Tucson DSD [Property Research Online](#).
- [Section Information and Maps](#) for Township 14S, Range 13E, Section 24
- **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](#).

<a href="#">Airports</a> <a href="#">Associations</a> <a href="#">Census</a> <a href="#">Comprehensive Plan - Pima County</a> <a href="#">Development</a> <a href="#">Floodplain - Defined by Pima County RFCD</a> <a href="#">Floodplain - FEMA</a>	<a href="#">Governmental Districts and Areas</a> <a href="#">Grids</a> <a href="#">Incentive Zones</a> <a href="#">Jurisdictions</a> <a href="#">Landscape Classifications</a> <a href="#">Miscellaneous</a> <a href="#">Other Regulatory Areas</a>	<a href="#">Public Safety</a> <a href="#">Schools</a> <a href="#">Sonoran Desert Conservation Plan</a> <a href="#">Transportation</a> <a href="#">Utilities</a> <a href="#">Zoning - Base</a> <a href="#">Zoning - Pima County</a> <a href="#">Overlay Zones</a>
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### Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this [disclaimer](#).

<b>Parcel centroid coordinates</b>	Approximately 32.203651 degrees latitude, -110.975975 degrees longitude.
<b>Parcel area</b>	<p><b>This is only an estimate from GIS data.</b></p> <p>The Subdivision Plat Map, if any, may also specify parcel area. See <a href="#">Finding Parcel Areas</a>.</p> <hr/> <p>Approximately 3.53 acres or 153,819 square feet.</p>

### Zoom to maps of the parcel's area

 ◦ <a href="#">Main map</a>	<b>Oblique Aerial Photos</b> <hr/> You can change the view (N,S,E,W) or pan and zoom the oblique photo.		 	<a href="#">Area Map</a>
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<ul style="list-style-type: none"><li><a href="#">Orthophoto map</a></li></ul>	<p>If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.</p> <hr/> <p> <b>Pictometry</b> <a href="#">Pictometry Photos</a> <a href="#">Learn more</a></p> <hr/> <p> <b>Bing Maps Photos</b> If you don't see the oblique photo, pick "2D" then "Bird's Eye".</p> <hr/>	<p><input checked="" type="checkbox"/> Parcel marker</p> <p><input type="checkbox"/> Add markers?</p> <p><input type="checkbox"/> Add traffic?</p> <p><input type="text" value="Google Maps"/></p> <p>Pick "Satellite" for photo. <a href="#">Help</a></p>	<p></p> <p><a href="#">Area Map</a></p> <p><a href="#">Area Map</a></p>
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## Pima County Geographic Information Systems

# Parcel 118-20-078A

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Read the [Disclaimer](#). Information on this page is **unofficial**.

Mail name and address	Legal description
118-20-078A CITY OF TUCSON . . . 00000	W64.35' E490' S290.4' NW4 NW4 EXC SLY 5' THEREOF .43 MAC SEC 24-14-13 (RD 854/213 RD 3418/153)

### Situs (property) address

[\(About situs addresses\)](#)

Street Address	Jurisdiction	Postal City	Zip Code
There is no situs address information.			

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### 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 819, Page 424.
  - **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 14S, Range 13E, Section 24
- **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](#).

<a href="#">Airports</a> <a href="#">Associations</a> <a href="#">Census</a> <a href="#">Comprehensive Plan - Pima County</a> <a href="#">Development</a> <a href="#">Floodplain - Defined by Pima County RFCD</a> <a href="#">Floodplain - FEMA</a>	<a href="#">Governmental Districts and Areas</a> <a href="#">Grids</a> <a href="#">Incentive Zones</a> <a href="#">Jurisdictions</a> <a href="#">Landscape Classifications</a> <a href="#">Miscellaneous</a> <a href="#">Other Regulatory Areas</a>	<a href="#">Public Safety</a> <a href="#">Schools</a> <a href="#">Sonoran Desert Conservation Plan</a> <a href="#">Transportation</a> <a href="#">Utilities</a> <a href="#">Zoning - Base</a> <a href="#">Zoning - Pima County</a> <a href="#">Overlay Zones</a>
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### Parcel GIS geometry details

Accuracy is limited to that of the GIS parcel data. All data is subject to this [disclaimer](#).

<b>Parcel centroid coordinates</b>	Approximately 32.203610 degrees latitude, -110.974872 degrees longitude.
<b>Parcel area</b>	<p><b>This is only an estimate from GIS data.</b>                      The Subdivision Plat Map, if any, may also specify parcel area. See <a href="#">Finding Parcel Areas</a>.</p> <hr/> <p>Approximately 0.44 acres or 19,161 square feet.</p>

### Zoom to maps of the parcel's area

 ◦ <a href="#">Main map</a>	<b>Oblique Aerial Photos</b> <hr/> You can change the view (N,S,E,W) or pan and zoom the oblique photo.	
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<ul style="list-style-type: none"><li>◦ <a href="#">Orthophoto map</a></li></ul>	<p>If the parcel centroid is outside the oblique photo area, either a flat map is shown or the page remains empty.</p> <hr/> <p> <b>Pictometry</b> <a href="#">Pictometry Photos</a> <a href="#">Learn more</a></p> <hr/> <p> <a href="#">Bing Maps Photos</a> If you don't see the oblique photo, pick "2D" then "Bird's Eye".</p> <hr/>	<p><input checked="" type="checkbox"/> Parcel marker <input type="checkbox"/> Add markers? <input type="checkbox"/> Add traffic?</p> <p><input type="button" value="Google Maps"/></p> <p>Pick "Satellite" for photo. <a href="#">Help</a></p>
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# APPENDIX D

## AGENCY REQUESTS

## Derek Koller

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**From:** Derek Koller  
**Sent:** Friday, October 25, 2013 10:20 AM  
**To:** Rachel.Duarte3@tucsonaz.gov  
**Subject:** Records Request: COT - Transfer Station/Container Maintenance Facility

Rachel,

Allwyn Environmental is conducting a Phase I Environmental Site Assessment for COT Environmental Services. We would like to review any records the Tucson Fire Department may have of hazardous material responses or other environmental information such as inspections, chemical storage records, or underground storage tank removals from the following addresses:

### **Allwyn Environmental Job No. 002-094 (COT - Transfer Station/Container Maintenance Facility)**

#### **APNs:**

118-20-036A – 425 W. 23<sup>rd</sup> Street  
118-20-037A – 1402 S. 10<sup>th</sup> Avenue  
118-20-0750 – No address assigned  
118-20-076A – 1445 S. 11<sup>th</sup> Avenue  
118-20-077A – 1480 S. 10<sup>th</sup> Avenue  
118-20-078A – No address assigned  
And 1450 S. 10<sup>th</sup> Avenue (Address associated with the property)

All Located in Section 24, Township 14 South, Range 13 East

Please call me at (520) 551-7887 or email me at [dkoller@allwynenvironmental.com](mailto:dkoller@allwynenvironmental.com) to let me know when I can review the records.

Regards,

*Derek Koller*

**DEREK KOLLER**  
**ENVIRONMENTAL SPECIALIST**  
**ALLWYN ENVIRONMENTAL**  
**PHONE: (520) 551-7887**  
**FAX: (623) 738-3690**  
**EMAIL: [DKOLLER@ALLWYNENVIRONMENTAL.COM](mailto:DKOLLER@ALLWYNENVIRONMENTAL.COM)**  
**[WWW.ALLWYNENVIRONMENTAL.COM](http://WWW.ALLWYNENVIRONMENTAL.COM)**

 Please consider the environment before printing this e-mail.

## Derek Koller

---

**From:** Derek Koller  
**Sent:** Friday, October 25, 2013 10:19 AM  
**To:** 'RECORDSCENTER@AZDEQ.GOV'; USTReq  
**Subject:** Records Request: COT - Transfer Station/Container Maintenance Facility - AE Job No 002-094  
**Attachments:** 002-094 APDX D 3 ADEQ records\_request\_form.pdf

From: Derek Koller

Company: Allwyn Environmental

Phone: 520-551-7887

We are doing a Phase I ESA for the following properties in Tucson, Pima County, Arizona.

We are inquiring as to whether or not ADEQ has any UST, LUST, and/or other records associated with these properties?

### **Allwyn Environmental Job No. 002-094 (COT - Transfer Station/Container Maintenance Facility)**

#### **APNs:**

118-20-036A – 425 W. 23<sup>rd</sup> Street, Tucson, AZ  
118-20-037A – 1402 S. 10<sup>th</sup> Avenue, Tucson, AZ  
118-20-0750 – No address assigned, Tucson, AZ  
118-20-076A – 1445 S. 11<sup>th</sup> Avenue, Tucson, AZ  
118-20-077A – 1480 S. 10<sup>th</sup> Avenue, Tucson, AZ  
118-20-078A – No address assigned, Tucson, AZ  
And 1450 S. 10<sup>th</sup> Avenue (Address associated with the property)

All Located in Section 24, Township 14 South, Range 13 East.

I have attached the request form.

Please call me at (520) 551-7887 to let me know when I can review the records.

Regards,

*Derek Koller*

**DEREK KOLLER**  
**ENVIRONMENTAL SPECIALIST**  
**ALLWYN ENVIRONMENTAL**  
**PHONE: (520) 551-7887**  
**FAX: (623) 738-3690**  
**EMAIL: [DKOLLER@ALLWYNENVIRONMENTAL.COM](mailto:DKOLLER@ALLWYNENVIRONMENTAL.COM)**  
**[WWW.ALLWYNENVIRONMENTAL.COM](http://WWW.ALLWYNENVIRONMENTAL.COM)**

 Please consider the environment before printing this e-mail.



REQUEST TO REVIEW PUBLIC RECORDS  
 ADEQ MAIN CAMPUS RECORDS  
 MANAGEMENT CENTER

Use additional pages as needed to record file(s) reviewed

(All requests by the public to inspect public records shall be made in writing before the ADEQ staff provides the documents.)

Request Date	Review Date ADEQ Use Only	Contact EM _____	All public records that are not confidential shall be made available to the public for inspection and copying during normal business hours  *copying shall comply with the ADEQ photocopy policy for costs and delivery of goods
Time In RC Use Only Time Out RC Use Only	Review Time ADEQ Use Only	V _____ F _____	
1) Name of Requestor: Derek Koller			
2) Phone Number: 520-551-7887		3) Fax: 623-738-3690	
4) Company or group representing: Allwyn Environmental			
5) Mailing Address: 5777 E Camino Redencion			
6) Email Address: dkoller@allwynenvironmental.com			
7) Format of Material Requested <input checked="" type="checkbox"/> Digital (Excel, PDF) <input type="checkbox"/> Printed Form <input type="checkbox"/> Records inspection (in person) For record inspections: DO NOT TAMPER WITH CONTENTS OF FILE – A person commits tampering with a public record if, with the intent to defraud or deceive, such person knowingly destroys, mutilates, conceals, removes or otherwise impairs the availability of any record. Tampering with the public record is a class 6 felony. <a href="#">A.R.S. §§ 13-2407(A)(4)</a> and <a href="#">13-2407(C)</a> .			
8) Declaration of Purpose for Public Record Request I declare that the copies or the reproductions of the public records described above which I have requested are to be used solely for (check one – see statutes on page two) <input checked="" type="checkbox"/> <b>Commercial:</b> Pursuant to <a href="#">A.R.S. § 39-121.03</a> , commercial requests include a charge up to the value of reproduction declared on this form. Declared value is value of the reproduction on the commercial market: \$ _____ <input type="checkbox"/> <b>Non-commercial</b> I further declare that such copies or reproductions will not be used directly or indirectly for purposes other than described above and the foregoing is correct and true.			

9) Request for Records:

WAllwyn Environmental Job No. 002-094 (COT - Transfer Station/Container Maintenance Facility)

APNs:

118-20-036A – 425 W. 23rd Street, Tucson, AZ

118-20-037A – 1402 S. 10th Avenue, Tucson, AZ

118-20-0750 – No address assigned, Tucson, AZ

118-20-076A – 1445 S. 11th Avenue, Tucson, AZ

118-20-077A – 1480 S. 10th Avenue, Tucson, AZ

118-20-078A – No address assigned, Tucson, AZ

And 1450 S. 10th Avenue (Address associated with the property)

All Located in Section 24, Township 14 South, Range 13 East.

For Record inspections

**PLEASE DO NOT TAMPER WITH CONTENTS OF FILE**

A person commits tampering with a public record if, with the intent to defraud or deceive, such person knowingly destroys, mutilates, conceals, removes or otherwise impairs the availability of any record. Tampering with a public record is a class 6 Felony (A.R.S. § 13-2407.A.4 and A.R.S. § 13-2407.C.)

Please Date and sign after review of requested files

Date \_\_\_\_\_ Signature \_\_\_\_\_

RMC Staff Please Return file(s) to \_\_\_\_\_ Extension \_\_\_\_\_



State of Arizona  
Public Records Request for  
Arizona Department of Environmental Quality

## PUBLIC RECORDS REPRODUCTION

### [A.R.S. § 39-121.01 \(D\)\(1\)](#)

The custodian may require any person requesting that the custodian mail a copy of any public record to pay in advance for any copying and postage charges.

### [A.R.S. § 39-121.03](#)

## REQUEST FOR COPIES, PRINTOUTS OR PHOTOGRAPHS; STATEMENT OF PURPOSE; FEES

- A. A person requesting copies, printouts or photographs of public records for a commercial purpose shall, upon making such a request, provide a certified statement setting forth the commercial purpose for which the copies, printouts or photographs will be used. Upon being furnished the verified statement the custodian of such records may furnish reproductions, the charge for which shall include the following:
1. A portion of the cost to the state for obtaining the original or copies of the documents, printouts or photographs.
  2. A reasonable fee for the cost of time, equipment and personnel in producing such reproduction.
  3. The value of the reproduction on the commercial market.

## COMMERCIAL PURPOSE AS ABUSE OF PUBLIC RECORD; DETERMINATION BY GOVERNOR

- B. If the custodian of a public record determines that the commercial purpose stated in the verified statement is a misuse of public records or is an abuse of the right to receive public records, the custodian may apply to the governor requesting that the governor by executive order prohibit the furnishing of copies, printouts or photographs for such commercial purpose. The governor, upon application from a custodian of public records, shall determine whether the commercial purpose is a misuse or an abuse of the public record. If the governor determines that the public record shall not be provided for such commercial purpose he shall issue an executive order prohibiting the providing of such public records for such commercial purpose. If no order is issued within thirty days of the date of application, the custodian of public records shall provide such copies, printouts or photographs upon being paid the fee determined pursuant to subsection A of this section.

## CIVIL PENALTY

- C. A person who obtains public records for a commercial purpose without indicating the commercial purpose or who obtains a public record for a noncommercial purpose and uses or knowingly allows the use of such public record for a commercial purpose or who obtains a public record for a commercial purpose and uses or knowingly allows the use of such public record for a different commercial purpose or who obtains a public record from anyone other than the custodian of such records and uses them for a commercial purpose shall in addition to other penalties be liable to the state or the political subdivision from which the public record was obtained for damages in the amount of three times the amount which would have been charged for the public record had the commercial purpose been stated plus costs and reasonable attorneys' f ll be liable to the state or the political subdivision for the amount of three times the actual damages if it can be shown that the public record would not have been provided had the commercial purpose of actual use been stated at the time of obtaining the records.

## **COMMERCIAL PURPOSE DEFINITION**

- D. For the purposes of this section, "commercial purpose" means the use of a public record for the purpose of sale or resale or for the purpose of producing a document containing all or part of the copy, printout or photograph for sale or the obtaining of names and addresses from public records for the purpose of solicitation or the sale of names and addresses to another for the purpose of solicitation or for any purpose in which the purchaser can reasonably anticipate the receipt of monetary gain from the direct or indirect use of the public record. Commercial purpose does not mean the use of a public record as evidence or as research for evidence in an action in any judicial or quasi-judicial body.

# APPENDIX E

## SITE RECONNAISSANCE DOCUMENTATION FORM

**SITE RECONNAISSANCE DOCUMENTATION FORM**

**Project Name/Location:** 002-094: Transfer Station/Container Maintenance Facility - 1450 S. 10<sup>th</sup> Avenue

**Performed By:** Derek Koller

**Date:** 8/12/13

**SITE DIAGRAM**



**SITE RECONNAISSANCE DOCUMENTATION FORM**

**Project Name/Location:** 002-094: Transfer Station/Container Maintenance Facility - 1450 S. 10<sup>th</sup> Avenue

**Date Site Visit Conducted:** October 31, 2013 **Performed By:** Derek Koller

**HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS**

- Hazardous Substances/Petroleum Product Containers (Identify Use):** AE observed the following:
- A storage locker with metal gas fuel cans and other miscellaneous chemicals inside the Storage Building (See Photograph No. 10)
  - 5-gallon containers of paint stored in the vicinity of the paint booth (See Photograph No. 11).
  - Acetylene and Oxygen cylinders chained in the vicinity of the welding shop (See Photograph No. 12).
  - Storage container that holds 55-gallon drums of detergent and deodorizer located on the west side of the container/maintenance facility (See Photograph No. 13).
  - 55-gallon drums of detergent and deodorizer in the vicinity of the wash bays (See Photograph No. 14).

- Storage Tanks:** The following ASTs are located on the property:
- A 5,000 gallon steel diesel fuel AST and fuel dispenser island located north of the former COT Refuse Transfer Facility on the south side of Papago Street (See Photograph No. 15).
  - Two approximate 500 gallon steel ASTs located west of the former COT Refuse Transfer Facility (See Photograph No. 16)

**Odors:** None detected

**Pools of Liquid:** None observed

**Drums and Containers:** Identified above.

**PCB-Containing Equipment:** ground-mounted electrical transformer on the west side of the former COT Refuse Transfer Station. Trash compaction unit at the former COT Refuse Transfer Facility (See Photograph No. 17). This feature is located where municipal garbage trucks once off-loaded their collections. Interviews indicate that the compactor is run on hydraulics and that there is other hydraulic equipment within this facility.

**Other Comments or Observations:** None

**EXTERIOR OBSERVATIONS**

**Pits, Ponds, or Lagoons:** None observed

**Stained Soil or Pavement:** de minimis staining.

**Stressed Vegetation:** None observed

**Solid Waste:** large amounts of debris within the trash compaction unit (See Photograph No. 17)

**Wastewater:** The terrain is generally flat with two exceptions. The former COT Refuse Transfer Facility is at a higher elevation and the area south of the former COT Refuse Transfer Facility is at lower elevation. Based on these observations of the site topography - Stormwater would primarily run off the property to the east and some would be retained on site. Stormwater would also flow with the elevation changes that exist on the southern portion of the property. Allwyn Environmental observed stormwater

## SITE RECONNAISSANCE DOCUMENTATION FORM

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drains in the area south of the former COT Refuse Transfer Facility. In addition, there is a Drainage Channel (dry wash), which runs southeasterly, that separates the main portion of the subject property from the northeast portion of the subject property.

- Wells:** None observed \_\_\_\_\_
- Septic Systems:** None observed \_\_\_\_\_
- Other Comments or Observations:** None \_\_\_\_\_

### INTERIOR OBSERVATIONS

- Heating/Cooling:** Facilities are equipped with evaporative cooler and/or air conditioning units. Allwyn Environmental did not observe any evidence of heating system at any of the facilities.
- Stains and/or Corrosion:** *de minimis* staining on automotive bay floors. \_\_\_\_\_
- Drains and/or Sumps:** Drains associated with common plumbing fixtures such as toilets, floor drains, and sinks within the facilities. A sump in the wash bay of the Container Maintenance facility. The bay north of the wash bay appears to have also once contained a sump because there was concrete patching on observed on the floor in the exact same configuration of the sump in the wash bay (See Photograph Nos. 19 and 20).

# APPENDIX F

## PHOTOGRAPHIC LOG

### PHOTOGRAPHIC LOG



**PHOTOGRAPH NO. 1**  
Interior of former COT Brush and Bulky Office.



**PHOTOGRAPH NO. 2**  
Interior of former COT Brush and Bulky Office.



**PHOTOGRAPH NO. 3**  
Interior of Storage Building.



**PHOTOGRAPH NO. 4**  
Interior of paint booth.

### PHOTOGRAPHIC LOG



**PHOTOGRAPH NO. 5**  
Interior of Welding Shop.



**PHOTOGRAPH NO. 6**  
Covered Wash Bay.  
*Liquid on floor surface is water..*



**PHOTOGRAPH NO. 7**  
Rear (south side) of the former  
COT Refuse Transfer facility where  
loading refuse in dump trucks once occurred.



**PHOTOGRAPH NO. 8**  
Refuse containers being stored west of the  
Container Maintenance Facility.

### PHOTOGRAPHIC LOG



**PHOTOGRAPH NO. 9**  
Storage/Parking Area located east of the Office Trailer.



**PHOTOGRAPH NO. 10**  
Interior of chemical locker located within the storage locker.



**PHOTOGRAPH NO. 11**  
5-gallon containers of paint stored near the paint booth.  
*Note: Liquid on floor surface is water*



**PHOTOGRAPH NO. 12**  
Acetylene gas cylinders stored in the vicinity of the welding shop.

### PHOTOGRAPHIC LOG



**PHOTOGRAPH No. 13**

Storage locker that contains 55-gallon drums of detergent and deodorizer located on the west side of the Container Maintenance Facility.



**PHOTOGRAPH No. 14**

55-gallon drums of detergent and deodorizer located in the vicinity of the Wash Bay.



**PHOTOGRAPH No. 15**

5-gallon containers of paint stored near the paint booth.  
*Note: Liquid on floor surface is water*



**PHOTOGRAPH No. 16**

Two approximate 500 gallon ASTs that are used to store water. Located west of the former COT Refuse Transfer Facility.

### PHOTOGRAPHIC LOG



**PHOTOGRAPH NO. 17**  
Debris located within the trash compactor at the former COT Refuse Transfer Facility.



**PHOTOGRAPH NO. 18**  
Stormwater drain located in the area south of the former COT Refuse Transfer Facility.



**PHOTOGRAPH NO. 19**  
Sump located within the wash bay.



**PHOTOGRAPH NO. 20**  
Filled concrete in same configuration as the sump located in the wash bay.  
*Note: Liquid on the floor is water*

# APPENDIX G

## INTERVIEW DOCUMENTATION FORM

## INTERVIEW DOCUMENTATION FORM

**Project Name/Location:** 002-094: Transfer Station/Container Maintenance Facility - 1450 S. 10<sup>th</sup> Avenue

**Person Interviewed/Title:** Ramon Polanco, COT - Welder Supervisor - Environmental Services

**Date Interviewed:** 10/31/13

**Performed By:** Derek Koller

QUESTION No.	TOPIC	YES	NO	UNKNOWN OR UNCERTAIN	COMMENT No.
1	What is the current use of the property?				1
2	Do you have any knowledge of former uses of the property?		X		
3	Are you aware of any past manufacturing, industrial, or commercial uses of the property?		X		
4	Are you aware of any past manufacturing, industrial, or commercial uses on adjoining properties? If yes, where were the facilities located in relationship to this property and what were the uses?	X			2
5	Does the facility maintain any environmental permits or is it required to file any environmental-related reports to governmental agencies?	X			3
6	Are you aware of any environmental actions that have been taken against the property? If yes, provide the regulatory agency, action(s), date, regulatory agency, and outcome. Also, provide any available documentation related to the environmental actions taken.		X		
7	Are you aware of any environmental audits that have been performed for the Property? If yes, provide the company performing audit, date, summary of findings, and recommendations. Provide any available documentation related to the environmental audits performed.		X		
8	Are there are institutional or engineering controls required of the site?		X		
9	Are you aware of any hazardous substances or petroleum products used on the property?	X			4
10	Are you aware of any storage tanks (underground or aboveground) on the property?	X			4
11	Are you aware of the presence of any strong, noxious, or pungent odors on the property?		X		
12	Are you aware of any pools of liquids on the property?		X		
13	Are you aware of any drums located on the property?		X		
14	Are you aware of any unidentified substance containers on the property?		X		
15	Are you aware of PCB-containing equipment (e.g., electrical transformer or hydraulic equipment) any on the property?	X			5
16	Are you aware of any pits, ponds, or lagoons on the property?		X		

## INTERVIEW DOCUMENTATION FORM

QUESTION No.	TOPIC	YES	NO	UNKNOWN OR UNCERTAIN	COMMENT No.
17	Are you aware of any stained soil or pavement on the property?		X		
18	Are you aware of any stressed vegetation on the property?		X		
19	Are you aware of any solid waste on the property?	X			6
20	Are you aware of any wastewater or stormwater discharge on, onto, or from the property?	X			7
21	Are you aware of any wells (drywells, disposal wells, water wells) on the property?		X		
22	Are you aware of the presence of a septic system on the property?		X		
23	Are you aware of any testing for asbestos or lead-based paint for buildings on the property?		X		
24	Are you aware of any past chemical, wastewater, hazardous material, or other material surface or impoundment disposal on the property?		X		
25	Are you aware of any buried or otherwise disposed materials on the property?		X		
26	Are you aware of any other individuals who should be contacted with relevant knowledge of past or present uses or practices of the property or adjoining properties?		X		

**Comment No. 1:** The property and associated facilities are primarily used for container maintenance and storage. It has been used for that since I started working here 17 years ago and I think since the 1970s. The Refuse Transfer Building stopped being used in the late 1990s.

**Comment No. 2:** The fenced-in property southwest of our property is used by Tucson Water. They have a warehouse there and they use the rest as a storage yard.

**Comment No. 3:** The City tests the water periodically in the wash bays.

**Comment No. 4:** There is an AST for Diesel Fuel. We store a few gas cans in the storage building, paint near the paint booth, and detergents and deodorizers near the wash bay. There are cylinders of acetylene for welding in the welding bays.

**Comment No. 5:** The transfer station has a lot of hydraulic equipment in it - I do not know if that equipment used PCBs.

**Comment No. 6:** Occasionally trash may be kept on site for a short time if a dumpster slated for repair had some trash in it when it arrived.

**Comment No. 6:** There are several storm drains to accommodate stormwater - especially in the lower area where dump trucks used to get loaded on the south end of the Transfer Station.

# APPENDIX H

## ENVIRONMENTAL PROFESSIONAL RESUME

Mr. Whitwer started Allwyn Environmental in 2004 to build on his 25 years of environmental and project management experience providing site assessment, site remediation, process engineering, design, and Brownfields guidance and support including soil, groundwater, and industrial water and wastewater treatment systems, air quality control systems, and pollution prevention. He is responsible for regulatory support services including Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Water Quality Assurance Revolving Fund (WQARF), National Pollutant Discharge Elimination System (NPDES), Resource Conservation and Recovery Act (RCRA), and other Federal, state, and local permitting programs.

#### **EDUCATION**

BS, Chemical Engineering, Arizona State University, Arizona, 1986  
MBA, University of Phoenix, 2002

#### **REGISTRATIONS**

Professional Engineer (P.E.) - Chemical, No.29998, State of Arizona, 1996  
Leadership in Energy and Environmental Design Accredited Professional (LEED AP) – Building Design and Construction (BD&C)

#### **ORGANIZATIONAL AFFILIATIONS**

ASTM International; E50 - Environmental Assessment, Risk Management and Corrective Action Committee  
Sustainable Remediation Forum (SURF); Participant  
United States Green Building Council (USGBC)

#### **SELECT PROJECT EXPERIENCE**

##### **Project Management**

***Luke Air Force Base, Arizona.*** Program Manager for an indefinite quantity contract for Luke Air Force Base (AFB), Arizona. The contract was a 5-year contract with a contracted value of \$5 million. Program Management responsibilities included Delivery Order management, Environmental Programs and Contracting interface, and proposal preparation. Delivery Orders included site remediation, air quality permitting, environmental assessments, biological and cultural resource studies, training, and pollution prevention.

***US Army Corps of Engineers - Wilmington District, North Carolina.*** Program Manager for indefinite quantity contract, with over \$4.2 million encompassing 25 Task Orders. Project responsibilities include Task Order management, interaction with client, proposal preparation, and technical oversight. Task Orders include coastal engineering, environmental assessments, construction management, and dredge material management plans.

##### **Site Assessment and Remediation**

***Department of Energy, Western Area Power Administration; Pinal County, Arizona.*** Project Manager a Phase I Environmental Site Assessment (ESA) conducted on three substations that the Western Area Power Administration (WAPA) is planning to expand. The Phase I ESAs included an asbestos survey and lead-based paint survey. Delivered a final Phase I ESA that met the requirements of ASTM E1527-05 in 1 month from the date of the contract award. In addition to the Phase I ESA, provided recommendations and cost estimates for further site assessment and ballpark remediation costs. Based on our recommendations, performed Phase II ESA and concluded that no further assessment was required at the site.

***City of South Tucson; South Tucson, Arizona.*** Conducted a Phase I ESA at the City of South Tucson Public Works Yard, an operating municipal vehicle maintenance and storage facility and identified a recognized environmental condition (REC). There are no standard records associated with the two reported underground storage tanks (USTs) at the facility that have been decommissioned and that are no longer being used. Recommended that the USTs be removed and soil and/or groundwater should be investigated in accordance with applicable local, state, and federal rules and regulations.

Conducted a Phase II ESA was to further investigate the RECs. Acting as the City of South Tucson's environmental consultant and on behalf of the City, prepared and submitted a letter to the Arizona

Department of Environmental Quality (ADEQ) to provide the site history, regulatory background, and rationale for a request for ADEQ to conclude that the site was eligible for expenditure of Environmental Protection Agency (EPA) Fiscal Year 2009 Brownfields Community-Wide Assessment grants for Petroleum Products. Subsequently, ADEQ issued a determination that the site was eligible for Brownfields funding.

In order to adequately assess whether leaks or spills from the UST system potentially impacted site soil, the USTs were removed. Removed concrete overlying the USTs, excavated soil overlying the USTs and associated piping, and removed the USTs and associated product piping. Prepared the UST Closure Report and submitted the report to ADEQ. Based on the results of the Phase II ESA and the results and conclusions in the Phase I ESA, concluded the portion of the site associated with the diesel fuel and gasoline fuel UST systems have been adequately characterized and no further assessment is recommended for these portions of the site.

**Santa Cruz County; Nogales, Arizona.** Conducted a Phase I/II Environmental Site Assessment (ESA) for a small arms shooting range used by Federal agencies reportedly back to the late 1800s when it was used by the U.S. Calvary. The practice range consists of a simple target system with an earthen berm backstop. As a result, lead shot has not only impacted the range site, but has spread across neighboring properties to the west of the range that are privately-owned and are undeveloped, rugged desert. Chemical constituents that have impacted the neighboring property soil and a small, dry wash due to the practice range activities include lead, arsenic, antimony, and polynuclear aromatic hydrocarbons (PAHs).

Prepared the Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP), and Health and Safety Plan (HASP). Laid out a sampling grid, consisting of 135 50-foot by 50-foot sampling cells and collected surface and subsurface composite samples from each sampling cell for metals and PAH analysis. The samples were sieved and collected in accordance with EPA guidance for sample collection at small arms shooting ranges. Identified areas in which State of Arizona Soil Remediation Levels (SRLs) for residential and non-residential uses were exceeded. Prepared a final report delineating the extent of soil impacts from metals and PAHs, and provided remediation alternatives, costs, and schedule.

**DMB Mesa Proving Grounds, LLC, Mesa, Arizona.** Project Manager for completion of Phase I ESA and further assessment of an operating automotive testing facility for environmental due diligence for potential acquisition. Evaluated several landfills, underground storage tank (UST) and aboveground storage tank (AST) systems, septic system, chemical storage area, stormwater retention areas, and other areas of potential concern. Completed due diligence activities within 60 days, including drilling, geophysical survey of two landfills, and excavation of approximately 10 acres of landfill. Following the client's purchase of the site, remediated the Borrow Pit landfill and characterize groundwater underlying the two landfills. These activities generally included excavation and screening of buried materials; soil sampling and analysis of excavation sidewalls, floor, areas beneath suspect waste material, and soil stockpiles; installation of three groundwater monitoring wells and groundwater sampling and analysis; disposal of landscape material, non-hazardous waste, metal, asbestos-containing material, drums and chemical containers, and cylinders. Collected soil samples in the sidewall (121 grab, composite, and duplicate samples), floor (39 composite and duplicate samples), areas beneath suspect waste material (12 grab samples), and soil stockpiles (49 grab samples). Four groundwater samples were collected.

Prepared a Work Plan for closure under the Arizona Department of Environmental Quality (ADEQ) Voluntary Remediation Program (VRP). Over 40,000 cubic yards of soil overburden and landfill material was excavated and screened in 5 months. Metallic parts, waste tires, non-hazardous waste, asbestos-containing material, and compressed gas cylinders were properly characterized, manifested, transported, and disposed or recycled. Concrete and asphalt were stockpiled at the site for future construction of site roadways. The analytical results from the soil and groundwater samples were compared to the State of Arizona residential SRLs and Aquifer Water Quality (AWQS) standards, respectively, to assure that adequate cleanup levels had been reached in order to qualify for a determination that No Further Action is required to address potential contamination at the site (NFA determination). Prepared a Final Remediation Report and submitted the report to ADEQ requesting a NFA determination. The client received a NFA determination from ADEQ for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and 8 RCRA metals in oil and groundwater.

Procured and maintained necessary environmental permits and plans including County Dust Control, Stormwater Pollution Prevention Plan, Waste Tire Storage, and HASP during all stages of site assessment and remediation.

Conducted an Asbestos Survey of over 50 buildings covering over 1.1 million square feet of administrative and maintenance facilities. Collected over 800 samples of potential ACM and worked closely with the Maricopa County Air Quality Department to assure that adequate characterization of the buildings was conducted prior to demolition and/or re-use of the buildings. Once the extent of ACM was defined, contracted by DMB to abate the materials in 20 buildings. Developed the contractor bid package; negotiated the contractor's cost and schedule; and oversaw the abatement.

**Taylor Morrison/Arizona, Inc; Scottsdale, Arizona.** Completed five Phase I Environmental Site Assessments, asbestos survey, and pesticide/herbicide soil assessment for various projects in metropolitan Phoenix area.

**Bob Bondurant School of High Performance Driving, Phoenix, Arizona.** Principal and lead engineer for site investigation and closure of a Class V underground injection control (UIC) system. The Bob Bondurant School of High Performance Driving (Bondurant) facility provides training and instruction for race, street, and highway driving. To support this mission, Bondurant consists of several raceways, parking and storage areas; an Administration/Training Building; and Maintenance Facility. Wastewater is generated in the Maintenance Facility and is discharged through underground piping to a septic tank and then to two underground leach pits. The US Environmental Protection Agency (EPA) conducted a facility audit at the Bondurant facility and concluded that the discharge system constitutes a Class V underground injection system that should be regulated under Title 40, Section 144.81 of the Code of Federal Regulations (40 CFR 144.81). Provided regulatory compliance support to Bondurant to address EPA's Notice of Violation. This support included regulatory interpretation, preparation of position documents and response to EPA, coordination with Bondurant legal representation, wastewater discharge sampling and identification, chemical use review, and pollution prevention planning.

**Meridian Companies, Mesa, Arizona.** Completed assessment of approximately 5 acre parcel suspected of being impacted by toxaphene within 2 week due diligence period. Developed work plan, collected samples, and prepared report that contributed to sale of property.

**Arizona Department of Environmental Quality, Phoenix, Arizona.** Project Manager for the design and installation of a groundwater treatment system at the Payson WQARF site. Contracted to perform this work as ADEQ's contractor. Groundwater at the site was impacted by VOCs from historical dry cleaning operation. Treatment system was designed to allow treated water to be used in City of Payson's potable water supply.

**Salt River Project, Mesa, Arizona.** Project Manager for the design and construction management of a groundwater treatment system. The site is located in a WQARF site and involves the treatment of groundwater impacted by VOCs from historical dry cleaning operations. Responsibilities included lead process design of remediation system, client interface, coordination of engineering and regulatory disciplines, and budget and schedule control. Project received Technical Excellence Award from Arizona Consulting Engineers Association.

**Phase I Environmental Site Assessments (ESAs), Miscellaneous Clients.** Served as Principal or staff environmental professional for the completion of over 500 Phase I ESAs, including 150 that were completed following All Appropriate Inquiry (AAI) using ASTM E1527-05 Standard. Projects were completed at industrial, manufacturing, commercial, and undeveloped properties. Routinely complete asbestos and lead-based paint surveys of commercial structures as part of the Phase I ESA scope of work.

**Brookhill Corporation, Chocowinity, North Carolina.** Principal for the emergency response and remediation of a 15,000-gallon oil spill at a glass manufacturing facility. Oil spill impacted creek beds and marshland, and threatened sensitive coastal areas. Developed and implemented emergency response plan, cleanup strategies, and monitoring plans. Coordinated subcontractors and worked closely with local, state, and federal agencies to avoid agency fines and sanctions.

**AutoNation, USA, Tempe, Arizona.** Project Manager for the remediation of soil impacted by auto shredder fluff at a former automobile sales facility. Provided Owner representation during characterization phase, and recommended remediation approach based on applicable SRLs utilizing the ADEQ's Voluntary Remediation Program (VRP). Developed bid packages for chosen remediation approach.

**Luke Air Force Base, Arizona.** Principal for the development of a RCRA Closure Plan, remediation, and clean closure of a munitions treatment facility. The site was a former open burning/open detonation (OB/OD) facility that resulted in metals and petroleum hydrocarbon impact and buried live munitions. Implemented closure plan for soil excavation and soil removal to obtain clean closure.

**Motorola, Inc., Phoenix, Arizona.** Project Manager for an air sparging/SVE system to remediate soil and groundwater at a Superfund site in Arizona. Prepared engineering drawings, specifications, design report, cost estimate, and schedule. Design was developed using results of pilot programs performed at the site.

**Springs Industries, Rock Hill, South Carolina.** Project Director for soil and groundwater assessment and remediation at a former textile manufacturing facility. The 30-acre site was impacted by chlorinated VOCs, metals, and petroleum products. Provided technical direction for assessment and remediation activities, review of technical reports, and interaction with client.

**Confidential Client, Charlotte, North Carolina.** Project Director for site assessment performed at an upscale mall to support redevelopment efforts. Soil and groundwater at the site had been impacted by historical dry cleaning and automobile repair operations. Contaminants of concern included VOCs, metals, and petroleum hydrocarbons. Identified source of contaminants and developed remediation options.

**Beazer Industries, Oroville, California.** Developed a preliminary design for a contaminated groundwater treatment system at a woodtreating facility. The primary contaminants of concern at this Superfund site included pentachlorophenol, PAHs, chromium, arsenic, and dioxins. Air and groundwater technologies evaluated included air stripping, carbon adsorption, bioreactors, ion exchange, chemical precipitation, and advanced oxidation.

**Tesoro Alaska Petroleum Company, Kenai, Alaska.** Evaluated treatment options for remediation of BTEX-impacted groundwater at a petroleum refinery. The treatment options that were evaluated addressed groundwater and air media and included expansion of existing treatment system and development of alternative treatment systems. Performed bench-scale studies to evaluate potential iron-removal treatment methods, including flocculent aids, dispersants, and sequestering agents.

**ADEQ, Glendale, Arizona.** Principal for a remediation project associated with closure activities of a auto shredder fluff dump site located in Glendale, Arizona. The project scope included re-contouring the site remediated by others, river bank restoration, and re-vegetation of the approximately 2-acre site.

**Honeywell, Inc., Durham, North Carolina.** Project Director for assessment of VOC and petroleum hydrocarbon impacts at an electronic component manufacturing facility. Performed site assessment and implemented remediation methods including cut-off wall, excavation, and vapor extraction.

**World Resources Corporation, Tolleson, Arizona.** Project Director for the preparation of a RCRA Part B permit application for a metals recycling facility. Responsibilities included waste characterization, air quality and industrial wastewater permitting, health and safety, construction of facility upgrades, and design of a wastewater treatment system.

**Springs Industries, Lyman, South Carolina.** Project Director for site characterization of a closed landfill and wastewater spray field site. Provided technical direction for development of streamlined Remedial Investigation/Focused Feasibility Study.

#### **Brownfields Program Implementation**

**Community-Wide Assessment Grant Implementation, Pima County, Arizona.** Implementing FY2009 Brownfields Community-Wide Assessment for petroleum products and hazardous substances for the towns of

Ajo, Why, and Lukeville and FY 2007 Brownfields Community-Wide Assessment for Hazardous Substances within the Flowing Wells area of Pima County. Developed Quality Assurance Project Plan (QAPP) that meets the requirements of the City's Cooperative Agreement with EPA. Completed 48 Phase I ESAs compliant with AAI standard using ASTM E1527-05 and 14 Phase II ESAs. Developing a GIS-based Brownfields property inventory and management system for both areas. Routinely complete asbestos and lead-based paint surveys of commercial structures as part of the Phase I ESA scope of work.

**Community-Wide Assessment Grant Implementation, City of Tucson, Arizona.** Completed more than 70 projects using funds from the FY 2005 and FY 2010 Brownfields Community-Wide Assessment grants for hazardous substances and petroleum products for sites.

- Completed 30 Phase I ESAs compliant with AAI standard using ASTM E1527-05
- Completed 11 Phase II ESAs, including preparation of Sampling and Analysis Plans and Quality Assurance Project Plans that met EPA requirements
- Closed wells and dry wells under ADWR and ADEQ oversight
- Developed projected environmental costs associated with future Downtown Development projects and assisted in preparing report for City Manager
- Developed Geographic Information System (GIS)-based property inventory system
- Prepared Tucson Water's waiver application to the Arizona Department of Environmental Quality (ADEQ) for Synthetic Organic Chemicals (SOCs) monitoring of its drinking water system, resulting in cost savings to Tucson Water in excess of \$200,000
- Supported Tucson Water in the development of an Access-based decision report (called the GWR TRSS Sampling Requirements Report) to identify groundwater well sampling requirements as regulated by the National primary Drinking Water Regulations as regulated by the Arizona Department of Environmental Quality

**Community-Wide Assessment Grant Implementation, City of South Tucson, Arizona.** Implemented FY2009 and FY2005 Brownfields Community-Wide Assessment programs for petroleum products and hazardous substances within the City of South Tucson. Developed Quality Assurance Project Plan (QAPP) that meets the requirements of the City's Cooperative Agreement with EPA. Completed 53 Phase I ESAs compliant with AAI standard using ASTM E1527-05 and 16 Phase II ESAs. Developed a GIS-based Brownfields property inventory and management system. Routinely complete asbestos and lead-based paint surveys of commercial structures as part of the Phase I ESA scope of work.

**Community-Wide Assessment Grant Implementation, Santa Cruz County, Arizona.** Implemented FY 2006 Brownfields Community-Wide Assessment for petroleum products and hazardous substances within Santa Cruz County. Assisted with site identification and prioritization. Completed 22 Phase I ESAs compliant with AAI standard using ASTM E1527-05, one Phase II ESA, and QAPP that meets the requirements of the County's Cooperative Agreement with EPA.

**Community-Wide Assessment Grant Implementation, City of Flagstaff, Arizona.** Developed an environmental database within the Route 66 Corridor to identify sites that are listed in regulatory agency databases and toured the city to identify sites that appeared to be contaminated or underutilized. Compiling list of potential Brownfields sites, including parcel number, ownership, and current uses.

**Job Training Grant Implementation, City of Tucson, Arizona.** Assisted the city in implementing the Job Training Grant by providing the following services:

- Served on Advisory Council that directed program implementation
- Prepared Job Training information and application package (Program Overview, Schedule, and Application)
- Prepared mentoring responsibilities and commitment list
- Developed candidate interview questions and evaluation criteria
- Developed curriculum module objectives
- Developed instructor orientation materials
- Prepared Case Studies and served as instructor for report development and presentations

***Integrated City Brownfields Program Work Plan, City of Tucson, Arizona.*** Developed a work plan for an Integrated City Brownfields Program. The work plan identified the key components that should be included and fully defined in the Integrated City Brownfields Program and includes the following:

- Funding opportunities
- Tracking of grant leveraging, community involvement, economic impact of Brownfields and redevelopment efforts, historic building preservation, and greenspace creation/open space preservation)
- Stimulation of private investment
- Evaluation of short term and long term direction of Brownfields market
- Development of system of identification and prioritization of potential Brownfields projects
- Use of RLF mechanisms
- Compatibility with Rio Nuevo Master Plan

#### **Grant Application Preparation**

Prepared applications for grant funding from various Federal agencies for municipalities, counties, and Tribal organizations, including 18 EPA Brownfields grant applications, 14 of which resulted in the award of over \$3.8 million in grant funds (80% success rate versus a 25% overall success rate for all applications submitted to the EPA). In total, Allwyn Environmental has prepared grant applications that have resulted in over \$4.1 million in grant funding. These grant applications include:

- ***Fiscal Year 2012 EPA Non-Point Source Management Grants under Clean Water Act Section 319; White Mountain Apache Tribe.*** The White Mountain Apache Tribe was awarded \$146,014 as a result of this grant application.
- ***Fiscal Year 2012 EPA CERCLA Section 128(a) Tribal Response Program Grant; White Mountain Apache Tribe.*** The White Mountain Apache Tribe was awarded \$100,000 as a result of this grant application.
- ***Fiscal Year 2012 EPA Environmental Justice Small Grants Program; White Mountain Apache Tribe.*** Grant competition in progress.
- ***Fiscal Year 2012 US Department of Agriculture Solid Waste Management Grant; White Mountain Apache Tribe.*** Grant competition in progress. The White Mountain Apache Tribe was awarded \$126,568 as a result of this grant application.
- ***Fiscal Year 2012 EPA Brownfields Coalition Grant (Hazardous Substances and Petroleum Products); City of Flagstaff, Arizona.*** The city of Flagstaff was awarded \$700,000 as a result of this grant application.
- ***Fiscal Year 2012 EPA Brownfields Cleanup Grant (Hazardous Substances); White Mountain Apache Tribe.*** The White Mountain Apache Tribe was awarded \$200,000 as a result of this grant application.
- ***Fiscal Year 2012 EPA Brownfields Community-Wide Assessment Grant (Hazardous Substances and Petroleum Products); Pima County, Arizona.***
- ***Fiscal Year 2012 EPA Brownfields Community-Wide Assessment Grant (Hazardous Substances and Petroleum Products); Town of Miami, Arizona.***
- ***Fiscal Year 2011 EPA Brownfields Assessment Grant (Community-Wide – Hazardous Substances and Petroleum Products); City of Mesa, Arizona.*** The City of Mesa was awarded two grants for \$400,000 as a result of this grant application.
- ***Fiscal Year 2011 EPA Environmental Workforce Development and Job Training (EWDJT) Grant Application; City of South Tucson, Arizona.*** The City of South Tucson was awarded \$300,000 as a result of this grant application.
- ***Fiscal Year 2011 EPA Brownfields Assessment Grant (Community-Wide – Hazardous Substances and Petroleum Products); Town of Miami, Arizona.***
- ***Fiscal Year 2010 EPA Brownfields Assessment Grant (Community-Wide – Hazardous Substances and Petroleum Products); City of Tucson, Arizona.*** The City of Tucson was awarded two grants for \$400,000 as a result of this grant application.
- ***Fiscal Year 2010 EPA Brownfields Assessment Grant (Community-Wide – Hazardous Substances and Petroleum Products); Pima County, Arizona.*** Pima County was awarded two grants for \$400,000 as a result of this grant application.
- ***Fiscal Year 2010 EPA Brownfields Assessment Grant (Community-Wide – Hazardous Substances and Petroleum Products); City of Flagstaff, Arizona.***
- ***Fiscal Year 2009 EPA Brownfields Cleanup Grant Application, City of Tucson, Arizona.*** The City of Tucson was awarded a grant for \$200,000 as a result of this grant application.

- **Fiscal Year 2009 EPA Brownfields Cleanup Grant Application, City of Flagstaff, Arizona.** The City of Flagstaff was awarded a grant for \$126,900 as a result of this grant application.
- **Fiscal Year 2008 and Fiscal Year 2009 EPA Brownfields Assessment Grant Application (Community Wide – Hazardous Substances and Petroleum Products), City of South Tucson, Arizona.** The City of South Tucson was awarded a grant for \$400,000 as a result of this grant application.
- **Fiscal Year 2008 EPA Brownfields Community-Wide Assessment Grant Applications (Petroleum and Hazardous Substances), Pima County, Arizona.** Pima County was awarded a grant for \$200,000 as a result of this grant application.
- **Fiscal Year 2007 EPA Brownfields Assessment and Cleanup Grant Application (Mine-Scarred Land), City of Tucson, Arizona.** The City of Tucson was awarded a grant for \$200,000 as a result of this grant application.
- **Fiscal Year 2006 EPA Brownfields Community-Wide Assessment Grant Applications (Petroleum and Hazardous Substances), City of Flagstaff, Arizona.** The City of Flagstaff was awarded a grant for \$200,000 as a result of this grant application.
- **Fiscal Year 2006 EPA Brownfields Cleanup Grant Application, Town of Youngtown, Arizona.**
- **Fiscal Year 2005 EPA Brownfields Community-Wide Assessment Grant Applications (Petroleum and Hazardous Substances), City of Tucson, Arizona.** The City of Tucson was awarded two grants for \$400,000 as a result of this grant application.
- **Fiscal Year 2005 EPA Brownfields Job Training Grant Application, City of Tucson, Arizona.** The City of Tucson was awarded a grant for \$200,000 as a result of this grant application.
- **Fiscal Year 2005 EPA Brownfields Assessment Grant Applications, City of South Tucson, Arizona.** The City of South Tucson was awarded a grant for \$200,000 as a result of this grant application.
- **Fiscal Year 2004 Phoenix Award Application, City of Tucson, Arizona.** The City of Tucson won the 2004 Phoenix Award for Region 9 at the National Brownfields Conference and received national recognition for its overall Brownfields program.
- **Fiscal Year 2004 EPA Brownfields Assessment Grant Application, City of Goodyear, Arizona.**
- **Fiscal Year 2004 EPA Brownfields Cleanup Grant, Yuma County, Arizona.** Yuma County was awarded a grant for \$200,000 as a result of this grant application.

#### Regulatory Compliance

- **City of Tucson, Tucson Water Department, Tucson, Arizona.** Developed Access-based program to identify drinking water wells to be sampled in the event of a coliform detection at any point within the Tucson Water system. The program was developed to meet the requirements of the National Primary Drinking Water Regulations and evaluated over 200 sampling points in over 20 water service areas based on factors such as nitrate concentration, well run time, and prior sampling.

**City of Tucson, Tucson Water Department, Tucson, Arizona.** Completed Tucson Water's waiver application to ADEQ for Synthetic Organic Chemicals (SOCs) monitoring of its drinking water system. Tucson Water has 219 sources that require evaluations in order to obtain either a Use Waiver or Susceptibility Waiver. Performed site reconnaissance, regulatory database review, and field verification to identify the presence of regulated activities that would preclude a waiver for the drinking water source. A database was developed to store source-specific information and to compile reports for submittal to ADEQ. The cost savings to Tucson Water resulting from successful completion of the project activities is estimated to be in excess of \$200,000.

**United Dairymen of Arizona, Tempe, Arizona.** Program Director for a number of issues related to UDA's wastewater treatment system and discharges permitted by the City of Tempe's (COT's) Pretreatment Program. Evaluated existing treatment system and developed recommendations for improving system. Represented client at Show Cause hearing with the COT and helped negotiate favorable settlement that reduced UDA's fines by over 80 percent from those initially proposed by the city.

**Intel Corporation, Chandler, Arizona and Portland, Oregon.** Principal for the investigation of bulk solvent waste streams as EPA "Comparable Fuels". Developed statistical analysis for waste analysis plans.

**Luke Air Force Base, Arizona.** Project Manager for wastewater sampling and analysis program to identify phenols sources and to support NPDES compliance program. Project involved sample collection from approximately 50 locations and field analysis, with offsite analytical verifications.

**Carnation Foods, Phoenix, Arizona.** Project Manager for sulfide evaluation at a dairy producer. Performed wastewater sampling and analysis and identified cause of false positive exceedances of wastewater discharge permit conditions. Provided technical support, analytical laboratory interface, and regulatory agency negotiations support.

**Luke Air Force Base, Arizona.** Principal-in-Charge for internal Environmental Compliance, Assessment, and Management Program (ECAMP). Provided protocol training, technical guidance, and audit support. Program protocol training, technical guidance, and audit support. Program focused on 12 regulatory protocols.

**Kirkland Air Force Base, New Mexico.** Lead regulatory specialist for ECAMP performed at Phillips Laboratory. Developed compliance checklists, performed site visits, and provided regulatory interpretation. Protocols focused on water/wastewater, hazardous waste, and air quality at over 80 facilities.

**El Paso Electric Company, El Paso, Texas.** Performed emissions inventories for four power plants. Inventories developed using plant operating data, field data, and AP-42 emission factors.

**Arizona Public Service Company, Various Locations.** Provided regulatory and engineering expertise to support the water quality programs for APS's Environmental Department. Specific tasks included: developed regulatory compliance documents, based on an analysis of the NPDES and drinking water system regulations as they apply to four plants in New Mexico and Arizona; performed preliminary investigation of vehicle maintenance yard for support of an application for an Aquifer Protection Permit. This task included identification of applicable APP requirements, sampling of discharge and development of scope of work for the application process; calculated and prepared a summary of VOC emissions from a nuclear power plant; and served as project coordinator for an APP submittal for two facilities within a nuclear power plant.

**Arizona Public Service Company, Phoenix, Arizona.** Coordinated the evaluation of a dewatering project for a 36-mile long pipeline which conveys secondary treated effluent to the Palo Verde Nuclear Generating Station. The evaluation consisted of development of pipeline dewatering strategies, design of pollution control treatment systems, and evaluation of the costs and requirements of the applicable permits necessary for discharge NPDES and APP.

**Marine Corps Air Station, Yuma, Arizona.** Project Engineer involved in the preparation of a RCRA Part B permit application for a storage facility at a military installation in Arizona. Responsibilities include preparation of waste analysis plan, chemical and physical analyses, and closure plan section.

**Hughes Missile Systems, Tucson, Arizona.** Assisted in the preparation of SARA Section 313 Form R report for a missile manufacturer. This included development of chemical mass balances, process assessment and identification of potential emission reduction steps.

**Recycle Paper Manufacturer, Flagstaff, Arizona.** Project Manager for development and implementation of a Hazardous Material management Plan (HMMP) for a recycled paper manufacturer located in Flagstaff, Arizona. The project included review of the existing chemical inventory, and use, storage and handling procedures. Once an accurate inventory of the existing chemicals was completed, a best management plan for each chemical type was developed based on the requirements of the Uniform Fire Code (UFC), National Fire Protection Association (NFPA), and Uniform Building Code (UBC) guidelines for chemical storage, use, and dispensing. Upon completion of the HMMP, engineering recommendations were developed in accordance with the UFC, NFPA, and UBC for improving the existing chemical storage facilities. These recommendations were submitted to the Flagstaff Fire department and were accepted unconditionally. The engineering recommendations included construction of epoxy coated concrete containment walls, floors, ramps, catch basins, and sumps, structural steel roof, ladder, and stair systems, masonry wall systems, fire sprinkler enhancements, explosion relief and fire door systems, mechanical ventilation systems, piping systems, fire alarm systems, and tank level control systems. Upon completion of the construction drawings and specifications reflecting the engineering recommendations, Mr. Whitwer provided construction management and engineering inspection during construction of the chemical storage facility improvements.

### Process Engineering

**Honeywell, Inc., Phoenix, Arizona.** Project Manager for the assessment of a wastewater pretreatment system and necessary upgrade following shutdown of circuit board manufacturing processes. Evaluation included

identification of existing waste stream characteristics, evaluation of options, and recommendations for revised treatment system.

**Microchip Technology, Inc., Chandler, Arizona.** Principal for the evaluation of a wastewater pretreatment system to identify causes of industrial wastewater discharge permit exceedances and recommendations for upgrading system. Recommended valving, mixing, and chemical usage changes to increase system reliability.

**Speedfam Inc., Chandler, Arizona.** Principal for the evaluation of a wastewater pretreatment system to identify causes of industrial wastewater discharge permit exceedances and recommendations for upgrading system. Recommended valving, mixing, and chemical usage changes to increase system reliability.

**Sumitomo Sitix, Phoenix, Arizona.** Principal for support of wastewater permit application preparation and compliance sampling of wastewater stream at this semiconductor wafer manufacturing facility.

**SGS-Thomson Microelectronics, Phoenix, Arizona.** Prepared an Industrial Wastewater Discharge permit application for semiconductor manufacturer. Evaluated wastewater discharge characteristics, identified potential non-compliance issues, and assisted in negotiations with the city to obtain permit.

**Imation, Tucson Arizona.** Evaluated wastewater treatment system used to remove VOCs and heavy metals and recommended design changes to achieve compliance with wastewater discharge permit. Met with city officials and provided documentation to support negotiations with city.

**World Resources Company, Phoenix, Arizona.** Principal for the design/build of a wastewater treatment system. The treatment system consisted of pH adjustment, flocculation, clarification, and solids thickening to reduce the metals concentrations to permitted levels.

**Motorola Inc., Phoenix, Arizona.** Project Engineer for a study conducted to identify beneficial uses of 750 gallons per minute (gpm) of treated groundwater at this CERCLA site. Potential end uses included cooling tower makeup and landscaping, with the final end use selected to be feed to the ultrapure water system used in the semiconductor manufacturing process.

**Sterilite Corporation, Lake Havasu, Arizona.** Project Manager for process water evaluation for this injection molding facility. Identified causes of process piping corrosion, evaluated treatment methods, and designed reverse osmosis (RO) system. Provided turnkey installation of RO system.

**Miyama Resort, Territory of Guam.** Project Engineer for the design of a PotableWater Treatment Facility for this resort. Design encompassed reverse osmosis and was supported by mixed media and pressure filtration, pH adjustment, dechlorination, and degasification.

**El Paso Natural Gas, Gallup, New Mexico.** Project Engineer for the development of a Wastewater Discharge Permit for Wingate Plant. Performed water balance, qualified wastewater discharges, and sampled soil and wastewater.

**Speedfam, Inc., Chandler, Arizona.** Principal for the design/build of a wastewater treatment system for Speedfam, Inc., a manufacturer of Chemical Mechanical Polishing (CMP) tools. The system consists of flow equalization, solids removal, and pH adjustment.

**Wisconsin Tissue, Bellemont, Arizona.** Principal for a 5,000 gallon per day (gpd) wastewater treatment plant for Wisconsin Tissue located in Bellemont, Arizona. Project included design of approximately 1,200 lineal foot of sewer line, 750 lineal foot of potable water line, 2,400 lineal foot of effluent perforated lateral located in a 12,000 square foot leach field, an 800 square foot prefabricated metal building and foundation system, and specification of a prefabricated wastewater treatment system. Upon completion of the design, provided construction management and general contracting services for construction of the facility.

**Sunstreet Foods, Phoenix, Arizona.** Project manager for the installation of an oil water separator for a truck

wash facility at the Sunstreet Foods (Carnation) facility, Phoenix, Arizona. Project consisted of design and construction management for the installation of a precast oil water separator, private sewer lines, and city sewer connection. Project specifics included demolition, excavation, backfill and compaction, concrete replacement, and sewer pipe installation.

### **Pollution Prevention**

**Luke Air Force Base, Arizona.** Principal-in-Charge for preparation of a Source Reduction Evaluation, Review, and Plan (SRERP). The SRERP identified major waste streams, source reduction opportunities, and action taken. The SRERP was a requirement of Luke AFB's RCRA Bart B permit.

**Luke Air Force Base, Arizona.** Principal-in-Charge for preparation of a Hazardous Waste Management Performance Report. This report documents the hazardous waste management approaches implemented at the base and was a requirement of Luke AFB's RCRA Bart B permit.

**Phelps Dodge Morenci, Inc., Morenci, Arizona.** Prepared a pollution prevention plan and prepared a pollution prevention analysis, identifying pollution prevention options and opportunities, and recommending specific performance goals.

**Phelps Dodge Corporation, Phoenix, Arizona.** Prepared and presented a Pollution Prevention Workshop to corporate meeting of environmental managers from Phelps Dodge. Workshop addressed pollution prevention basics, how to implement a program, and provided technical information and guidance literature.

**Marine Corps Air Station, Yuma, Arizona.** Prepared a Hazardous Waste Assessment and Hazardous Waste Minimization Plan. The Assessment identified the major waste streams and generation at the Station. Options for minimizing or eliminating these waste streams were then quantified as part of the Hazardous Waste Minimization Plan.

**Luke Air Force Base, Arizona.** Project Manager for a hazardous waste usage and minimization study. Project involved characterization of waste-generating processes and operations; identification of waste minimization opportunities and implementation of these opportunities; improvement of material ordering, supply, and tracking systems; and identification of processes and operations which contribute to permit exceedances at the wastewater plant.

**Hughes Missile Systems, Tucson, Arizona.** Served as a Project Engineer in the development of a waste minimization program for a missile manufacturer. This program consisted of evaluation of manufacturing processes, identification of a database to contain chemical information, and implementation of process changes or chemical substitutions to achieve waste minimization. Developed treatment alternatives in order to minimize and/or recycle on-site generated wastes.

### **WORK HISTORY**

2005—present: Allwyn Environmental; Glendale, Arizona; Managing Member.  
2000—2005: Kleinfelder, Inc.; Tempe, Arizona; Arizona Regional Manager.  
1998—2000: Dames & Moore/URS Corporation; Charlotte, North Carolina; Carolinas Operations Manager.  
1997-1998: Merrick & Company; Phoenix, Arizona; Business Development Manager, Industrial Sector.  
1989-1997: Dames & Moore; Phoenix, Arizona; Remediation and Compliance Manager.  
1986-1989: Litton Electron Devices; Tempe, Arizona; Process Engineer.