

Phase I Environmental Site Assessment

El Sol Energy Storage

11500 West Invenergy Way

Youngtown, Maricopa County, AZ

November 12, 2021

Terracon Project No. 65217816



Prepared for:
Invenergy LLC
Portland, Oregon

Prepared by:
Terracon Consultants, Inc.
Tempe, Arizona

terracon.com

Terracon

Environmental



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Geotechnical



Materials

November 12, 2021



El Sol Energy Storage LLC
959 SE Division Street, Suite 350
Portland, OR 97214

Attn: Mr. Paul Burman
P: (971) 346-4985
E: pburman@invenergy.com

Re: Phase I Environmental Site Assessment
El Sol Energy Storage
11500 West Invenergy Way
Youngtown, Maricopa County, Arizona 85363
Terracon Project No. 65217816

Dear Mr. Burman:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Phase I Environmental Site Assessment (ESA) report for the above-referenced site. This assessment was performed in accordance with our Master Services Agreement dated April 19, 2019 and our Task Order dated October 19, 2021.

We appreciate the opportunity to be of service to you on this project. In addition to Phase I services, our professionals provide geotechnical, environmental, construction materials, and facilities services on a wide variety of projects locally, regionally and nationally. For more detailed information on all of Terracon's services please visit our website at www.terracon.com. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

Martha L. Leal
Assistant Scientist

For:

Jennifer C. Thies, CEM
Senior Scientist

For:

Attachments

Terracon Consultants Inc. 4685 S Ash Ave, Ste H-4 Tempe, AZ 85282-6767

P 480-897-8200 F 480-897-1133 terracon.com



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EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was performed in accordance with Master Services Agreement dated April 19, 2019 and our Task Order dated October 19, 2021, and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The ESA was conducted under the supervision or responsible charge of Noelle J. Espinosa, Environmental Professional. Martha L. Leal performed the site reconnaissance on November 5, 2021.

Findings and Opinions

A summary of findings is provided below. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

Site Description and Use

The site, located at 11500 West Invenergy Way, Youngtown, Maricopa County, Arizona, consists of approximately 14.22 acres of land on Maricopa County Assessor's Parcel Number (APN) 142-70-007D. The site is currently cleared and graded land.

Historical Information

Based on a review of historical information, the site and east adjoining property has consisted of native land since at least 1949. The north adjoining property consisted of native land from approximately 1949 to 2000. By 2002, the north adjoining property was the current construction and demolition debris landfill. The south adjoining property consisted of native land from at least 1949 to 1969. By approximately 1976 the south adjoining property was developed with the existing electrical substation. The west adjoining property consisted of native land from at least 1949 to 2002. By 2003, the west adjoining property was the current residential homes. Based on the historical information, recognized environmental conditions (RECs) were not identified.

Records Review

Selected federal and state environmental regulatory databases as well as responses from the state and local regulatory agencies were reviewed. Regulated facilities were not listed within the specified search distances from the site. The site was not identified on the regulatory database report.

Site Reconnaissance

During the site reconnaissance, the site appeared to be undergoing clearing and grading activities. No other features were observed and no RECs were observed during the site reconnaissance.

Adjoining Properties

The site is adjoined to the north by a construction and demolition debris landfill, to the east by native land, to the south by an APS facility, and to the west by a residential neighborhood.

Significant Data Gaps

No significant data gaps were identified.

Conclusions

We have performed a Phase I ESA consistent with the procedures included in ASTM Practice E 1527–13 of the property located at 11500 West Invenergy Way, Youngtown, Maricopa County, Arizona (APN 142-70-007D), the site. RECs or Controlled RECs (CRECs) were not identified in connection with the site.

Recommendations

Based on the scope of services, limitations, and conclusions of this assessment, no additional investigation is warranted at this time.

1.0 INTRODUCTION

1.1 Site Description

Site Name	El Sol Energy Storage
Site Location/Address	11500 West Invenergy Way Youngtown, Maricopa County, Arizona
Land Area	Approximately 14.22 acres
Site Improvements	Native land
Anticipated Future Site Use	A battery storage facility
Purpose of the ESA	Acquisition

The location of the site is depicted on Exhibit 1 of Appendix A, which was reproduced from a portion of the USGS 7.5-minute series topographic map. The site and adjoining properties are depicted on the Site Diagram, which is included as Exhibit 2 of Appendix A. Acronyms and terms used in this report are described in Appendix F.

1.2 Scope of Services

This Phase I ESA was performed in accordance with our Master Services Agreement dated April 19, 2019 and our Task Order dated October 19, 2021, and was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations, ASTM deviations, and significant data gaps (if identified) are noted in the applicable sections of the report.

ASTM E1527-13 contains a new definition of "migrate/migration," which refers to "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." By including this explicit reference to migration in ASTM E1527-13, the Standard clarifies that the potential for vapor migration should be addressed as part of a Phase I ESA. This Phase I ESA has considered vapor migration in evaluation of RECs associated with the site.

1.3 Standard of Care

This ESA was performed in accordance with generally accepted practices of this profession, undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care, but may be limited by conditions encountered during performance, a client-driven scope of work, or inability to review information not received by the report date. Where appropriate, these limitations are discussed in the text of the report, and an evaluation of their significance with respect to our findings has been conducted.

Phase I ESAs, such as the one performed at this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. It should be recognized that environmental concerns may be documented in public records that were not reviewed. No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site or otherwise uses the report for any other purpose. These risks may be further evaluated – but not eliminated – through additional research or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.4 Additional Scope Limitations, ASTM Deviations and Data Gaps

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e. evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other services not particularly identified and discussed herein. Credentials of the company (Statement of Qualifications) have not been included in this report but are available upon request. Pertinent documents are referred to in the text of this report, and a separate reference section has not been included. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Information obtained for this ESA was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder.

- The City of Youngtown was contacted for records of environmental concern associated with the site. At the issuance of this report, a response was still pending. Based on additional information, this data gap is not considered significant.

An evaluation of the significance of limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed

in the text of the report. However, it should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our conclusions, recommendations, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

This report represents our service to you as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based upon the site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the most recent reconnaissance and may subsequently become observable (such as after site renovation or development). Further, these services are not to be construed as legal interpretation or advice.

1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of El Sol Energy Storage LLC and Invenergy LLC. Use or reliance by any other party is prohibited without the written authorization of El Sol Energy Storage LLC, Invenergy, LLC, and Terracon Consultants, Inc. (Terracon).

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal, ESA report, and Terracon's Agreement. The limitation of liability defined in the Agreement is the aggregate limit of Terracon's liability to the client and all relying parties.

Continued viability of this report is subject to ASTM E1527-13 Sections 4.6 and 4.8. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E1527-13.

1.6 Client Provided Information

Paul Burman, the client, was asked to provide the following user questionnaire information as described in ASTM E1527-13 Section 6.

Client Questionnaire Responses

Client Questionnaire Item	Client Did Not Respond	Client's Response	
		Yes	No
Specialized Knowledge or Experience that is material to a REC in connection with the site.			X
Actual Knowledge of Environmental Liens or Activity Use Limitations (AULs) that may encumber the site.			X
Actual Knowledge of a Lower Purchase Price because contamination is known or believed to be present at the site.			X
Commonly Known or Reasonably Ascertainable Information that is material to a REC in connection with the site.			X
Obvious Indicators of Contamination at the site.			X

Terracon's consideration of the client provided information did not identify RECs. A copy of the questionnaire is included in Appendix C.

2.0 PHYSICAL SETTING

Physical Setting Information		Source
Topography		
Site Elevation	Approximately 1,120 feet above sea level	USGS Topographic Map, El Mirage, AZ Quadrangle, 2018 (Appendix A)
Topographic Gradient	Slightly sloping towards the west-northwest	
Closest Surface Water	Agua Fria Wash, approximately Site 1,330 feet west of the site.	
Soil Characteristics		
Soil Type	Brios loamy sand, Calciorthids and Torriorthents, eroded, Perryville gravelly loam, and Vint loamy fine sand	Maricopa County, Arizona Web Soil Survey, United States Department of Agriculture (USDA), and Natural Resources Conservation Service (NRCS) http://websoilsurvey.nrcs.usda.gov/ October 27, 2021
Description	The Brios series consists of very deep, excessively drained soils that formed in mixed and stratified alluvium. Brios soils are on flood plains and alluvial fans and have slopes of 0 to 5 percent. The mean annual precipitation is about 7 inches, and the mean annual air temperature is about 73 degrees F. The Perryville	

Physical Setting Information		Source
	series consists of very deep, well drained soils that formed in mixed alluvium. Perryville soils are on alluvial fans and terraces and have slopes of 0 to 3 percent. The mean annual precipitation is about 7 inches and the mean annual air temperature is about 72 degrees F. The Vint series consists of very deep, somewhat excessively drained soils formed in stratified stream alluvium. Vint soils are on flood plains and have slopes of 0 to 3 percent. The mean annual precipitation is about 7 inches and the mean annual air temperature is about 71 degrees F.	
Geology/Hydrogeology		
Formation	Holocene Surficial Deposits (0-10 ka) (Qy)	
Description	Unconsolidated deposits associated with modern fluvial systems. This unit consists primarily of fine-grained, well-sorted sediment on alluvial plains, but also includes gravelly channel, terrace, and alluvial fan deposits on middle and upper piedmonts.	United State Geological Survey (USGS) Geologic Map of Arizona, 2013 http://data.azgs.az.gov/geologic-map-of-arizona/
Estimated Depth to First Occurrence of Groundwater	Estimated depth to groundwater is 400 feet below ground surface (bgs)	ADWR Groundwater Data Website http://gisweb.azwater.gov
*Hydrogeologic Gradient	Not known - may be inferred to be parallel to topographic gradient (primarily to the west-northwest).	

* The groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

3.0 HISTORICAL USE INFORMATION

Terracon reviewed the following historical sources to develop a history of the previous uses of the site and surrounding area, in order to help identify RECs associated with past uses. Copies of selected historical documents are included in Appendix C.

3.1 Historical Topographic Maps, Aerial Photographs, Sanborn Maps

Readily available historical USGS topographic maps, selected historical aerial photographs (at approximately 10 to 15-year intervals) and historical fire insurance maps produced by the Sanborn Map Company were reviewed to evaluate land development and obtain information concerning the history of development on and near the site. Reviewed historical topographic maps, aerial photographs and Sanborn maps are summarized below.

Historical fire insurance maps produced by the Sanborn Map Company were requested from EDR to evaluate past uses and relevant characteristics of the site and surrounding properties. EDR provided Sanborn maps as summarized below.

- Topographic map: El Mirage, AZ, published in 1957, photorevised in **1971, 1974, 1982, 2014, and 2018** (1:24,000)
- Aerial photograph: Maricopa County Flood Control District Online Historical Aerial Maps. Years reviewed: 1949-2019. Years: **1949, 1976, 2001, 2003, 2004, 2006, 2009, 2019** (variable scale) are included in Appendix C.
- Sanborn Fire Insurance Map(s): **N/A**

Historical Maps and Aerial Photographs

Direction	Description
Site	Native land (1949-2019)
North	Native land (1949-2000), a construction and demolition debris landfill (2002-2019).
East	Native land (1949-2019).
South	Native land (1949-1971), an electrical substation (1976-2019).
West	Native land (1949-2002) residential homes (2003-2019).

3.2 Historical City Directories

The city directories used in this study were made available through EDR (selected years reviewed: 1972 to 2017) and were reviewed at approximate five-year intervals, if readily available. Street listings not available prior to 1972. The current street address for the site is 11500 West Invenergy Way.

Historical City Directories

Direction	Description
Site	11500 West Invenergy Way : No listings (1972-2017).
North	Unaddressed
East	Unaddressed

Direction	Description
South	Unaddressed
West	10117 North 115 th Drive: No listings (1972-2017). 10111 North 115 th Drive: No listings (1972-2017). 10105 North 115 th Drive: No listings (1972-2017). 11533 West Retherford Road: No listings (1972-2017). 11524 West Oglesby Avenue: No listings (1972-2017). 10097 North 115 th Drive: No listings (1972-2017). 10091 North 115 th Drive: No listings (1972-2017). 10085 North 115 th Drive: No listings (1972-2017).

3.3 Site Ownership

Based on a review of information obtained from the Maricopa County Assessor’s records, the current site owner is El Sol Energy Storage LLC.

3.4 Title Search

At the direction of the client, a title search was not included as part of the scope of services. Unless notified otherwise, we assume that the client is evaluating this information outside the scope of this report.

3.5 Environmental Liens and Activity and Use Limitations

The EDR regulatory database report included a review of both Federal and State Engineering Control (EC) and Institutional Control (IC) databases. Based on a review of the database report, the site was not listed on the EC or IC databases. Please note that in addition to these federal and state listings, AULs can be recorded at the county and municipal level that may not be listed in the regulatory database report.

Environmental Lien and activity and use limitation records recorded against the site were not provided by the client. At the direction of the client, performance of a review of these records was not included as part of the scope of services and we assume that the client is evaluating this information outside the scope of this report.

3.6 Interviews Regarding Current and Historical Site Uses

The following individuals were interviewed regarding the current and historical use of the site.

Interviews

Interviewer	Name / Contact	Title	Date/Time
Martha L. Leal	Paul Burman / pburman@invenergy.com	Manager, Renewable Development/ Invenergy	May 12, 2021 at 3:30 p.m.
Jennifer Thies	Paul Burman / 971-346-4985		October 14, 2021

Terracon interviewed Paul Burman, the client, via email on May 13, 2021. Mr. Burman stated that he has been associated with the site since March of 2021. Mr. Burman was not aware of any fueling operations, dry cleaners, pesticide spills, hazardous waste, chemical, or petroleum accidents or fires, or environmental lien holds associated with the site. Mr. Burman was aware of a landfill located on the north adjoining property. The north adjoining landfill operations were associated with construction waste, mostly concrete and steel. Mr. Burman stated that because of this operation, illegal dumping could have occurred on site, but he did not have any direct evidence of this. Mr. Burman was not aware of any previous use of the site beyond its current state of native undeveloped land.

According to Mr. Burman, he is not aware of significant changes to the site since the May 2021 environmental site assessment. The May 2021 environmental site assessment is discussed further in section 3.7.

3.7 Prior Report Review

Three previous environmental report for the site were prepared by Terracon for the client.

- Phase I Environmental Site Assessment (ESA)
 El Sol Energy Storage Project
 Youngtown, Arizona
 Dated: April 1, 2019
 Prepared by: HDR Inc.
 For: El Sol Storage LLC.

The HDR Inc. Phase I ESA reported the site to consist of undeveloped land with desert scrub vegetation. It was found that the north and south adjoining properties contained landfills. Mr. Tony Stone from the Arizona Department of Environmental Quality (ADEQ) was interviewed about the north adjoining landfill. Mr. Stone stated that no permits were associated with the landfill and conducted a site visit that confirmed the landfill was not regulated by the ADEQ due to the inert nature of the materials disposed of on the property. The east portion of the south adjoining property was identified as a landfill through aerial photography. Aerial review found that the landfill ended at the property line and that waste disposal was not evident. According to the report, RECs were not identified.

- Phase I Environmental Site Assessment
 El Sol Energy Storage
 Youngtown, Arizona
 Dated: May 15, 2021
 Prepared by: Terracon
 For: El Sol Storage LLC

The Terracon May 2021 Phase I ESA reported the site to consist of 14.12 acres of native land on Maricopa County Assessor’s Parcel Number (APN) 142-70-007D. At the time, the site was an unaddressed parcel. No RECs were identified in the Terracon May 2021 Phase I ESA.

4.0 RECORDS REVIEW

Regulatory database information was provided by EDR, a contract information services company. The purpose of the records review was to identify RECs in connection with the site. Information in this section is subject to the accuracy of the data provided by the information services company and the date at which the information is updated. The scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

In some of the following subsections, the words up-gradient, cross-gradient and down-gradient refer to the topographic gradient in relation to the site. As stated previously, the groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

4.1 Federal and State/Tribal Databases

Listed below are the facility listings identified on federal and state/tribal databases within the ASTM-required search distances from the approximate site boundaries. Database definition, descriptions, and the database search report are included in Appendix D.

Federal Databases

Database	Description	Distance (miles)	Listings
CERCLIS	Comprehensive Environmental Response, Compensation, & Liability Information System	0.5	0
CERCLIS / NFRAP	Comprehensive Environmental Response, Compensation, & Liability Information System/No Further Remedial Action Planned	0.5	0
ERNS	Emergency Response Notification System	Site	0
IC / EC	Institutional Control/Engineering Control	Site	0
NPL	National Priorities List	1	0

Database	Description	Distance (miles)	Listings
NPL (Delisted)	National Priorities Delisted List	0.5	0
RCRA CORRACTS/ TSD	RCRA Corrective Action Activity	1	0
RCRA Generators	Resource Conservation and Recovery Act	Site and adjoining properties	0
RCRA Non-CORRACTS/ TSD	RCRA Non-Corrective Action Activity	0.5	0

State/Tribal Databases

Database	Description	Distance (miles)	Listings
AUL	Activity and Use Limitation	Site	0
Brownfields	Brownfields Sites	0.5	0
LUST	Leaking Underground Storage Tanks	0.5	0
SHWS	State Hazardous Waste Site	0.5	0
SPILLS	Hazardous Material Incident List	Site	0
SPL	Superfund Program List	1	0
SWF/LF	Solid Waste Facilities/Landfills	0.5	0
UST	Underground Storage Tanks	Site and adjoining properties	0
VCP	Voluntary Cleanup Program	0.5	0
WQARF	Water Quality Assurance Revolving Fund Sites	1	0

In addition to the above ASTM-required listings, Terracon reviewed other federal, state, local, and proprietary databases provided by the database firm. A list of the additional reviewed databases is included in the regulatory database report included in Appendix D.

The remaining facilities listed in the database report do not appear to represent RECs to the site at this time based upon regulatory status, apparent topographic gradient, and/or distance from the site.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report listed four facilities in the unmapped section. Determining the location of unmapped facilities is beyond the scope of this assessment; however, none of these facilities were identified as the site or adjacent properties. These facilities are listed in the database report in Appendix D.

4.2 Local Agency Inquiries

Agency Contacted/ Contact Method	Response
Town of Youngtown Public Records Request / nsmart@youngstown.org	The City of Youngtown was contacted for records of environmental concern associated with the site. At the issuance of this report, a response was still pending. A copy of the request form can be found in Appendix C.
Maricopa County Environmental Services Department (MCESD) / Online Search https://aca.maricopa.gov/CitizenAccessMCESD/	No records of illegal dumping, hazardous waste spills or other environmental concerns were found in connection with the site. A copy of the search results is included in Appendix C.
Maricopa County Environmental Services Department (MCOSS) / Online Search https://accela.maricopa.gov/CitizenAccessMCOSS/	Records of environmental concern were not found in connection with the site on the Environmental Services website. A copy of the search results is included in Appendix C.
Arizona Department of Environmental Quality (ADEQ) / Online Search http://megasearch.azdeq.gov/megasearch/	There ADEQ online search engine was reviewed to identify possible UST/LUST, hazardous waste, and drywell registrations for the site. The site was not listed in regulatory databases. A copy of the search results is included in Appendix C.
Arizona Department of Environmental Quality (ADEQ) / GIS Map	The ADEQ website was reviewed to identify possible UST/LUST, hazardous waste, and drywell registrations for the site. The site was not listed in regulatory databases. A copy of the map results is included in Appendix C.

5.0 SITE RECONNAISSANCE

5.1 General Site Information

Information contained in this section is based on a visual reconnaissance conducted while walking through the site and the accessible interior areas of structures, if any, located on the site. The site and adjoining properties are depicted on the Site Diagram, which is included in Exhibit 2 of Appendix A. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix B. Credentials of the individuals planning and conducting the site visit are included in Appendix E.

General Site Information

Site Reconnaissance	
Field Personnel	Martha L. Leal
Reconnaissance Date	November 5, 2021
Weather Conditions	Sunny, approximately 90 degrees Fahrenheit
Site Contact/Title	Unescorted

5.2 Overview of Current Site Occupants and Operations

The site, located northwest of West Olive Avenue and North 111th Avenue, Youngtown, Maricopa County, Arizona, consists of approximately 14.12 acres of land on Maricopa County APN 142-70-007D. The site is currently graded and cleared land.

5.3 Site Observations

The following table summarizes site observations and interviews. Affirmative responses (designated by an “X”) are discussed in more detail following the table.

Site Characteristics

Category	Item or Feature	Observed or Identified
Site Operations, Processes, and Equipment	Emergency generators	
	Elevators	
	Air compressors	
	Hydraulic lifts	
	Dry cleaning	
	Photo processing	
	Ventilation hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Heating and/or cooling systems	
	Paint booths	
	Sub-grade mechanic pits	
	Wash-down areas or carwashes	
	Pesticide/herbicide production or storage	
	Printing operations	
	Metal finishing (e.g., electroplating, chrome plating, galvanizing, etc.)	

Category	Item or Feature	Observed or Identified
	Salvage operations	
	Oil, gas or mineral production	
	Other processes or equipment	
Aboveground Chemical or Waste Storage	Aboveground storage tanks	
	Drums, barrels and/or containers ≥ 5 gallons	
	MSDS or SDS	
Underground Chemical or Waste Storage, Drainage or Collection Systems	Underground storage tanks or ancillary UST equipment	
	Sumps, cisterns, French drains, catch basins and/or dry wells	
	Grease traps	
	Septic tanks and/or leach fields	
	Oil/water separators, clarifiers, sand traps, triple traps, interceptors	
	Pipeline markers	
	Interior floor drains	
Electrical Transformers/ PCBs	Transformers and/or capacitors	
	Other equipment	
Releases or Potential Releases	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Leachate and/or waste seeps	
	Trash, debris and/or other waste materials	
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	X
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
Other Notable Site Features	Surface water bodies	
	Quarries or pits	
	Wastewater lagoons	
	Wells	

Construction/demolition debris and/or dumped fill dirt

Construction debris, equipment, and dumped fill dirt associated with ongoing clearing and grading activities were observed during the site reconnaissance. No staining, noxious odors, or evidence of a release was observed across the site. The construction debris, equipment, and fill dirt does not constitute a REC to the site.

6.0 ADJOINING PROPERTY RECONNAISSANCE

Visual observations of adjoining properties (from site boundaries) are summarized below.

Adjoining Properties

Direction	Description
North	An inert debris landfill.
East	Native land.
South	An APS electrical substation facility.
West	A residential neighborhood.

RECs were not observed with the adjoining properties.

7.0 ADDITIONAL SERVICES

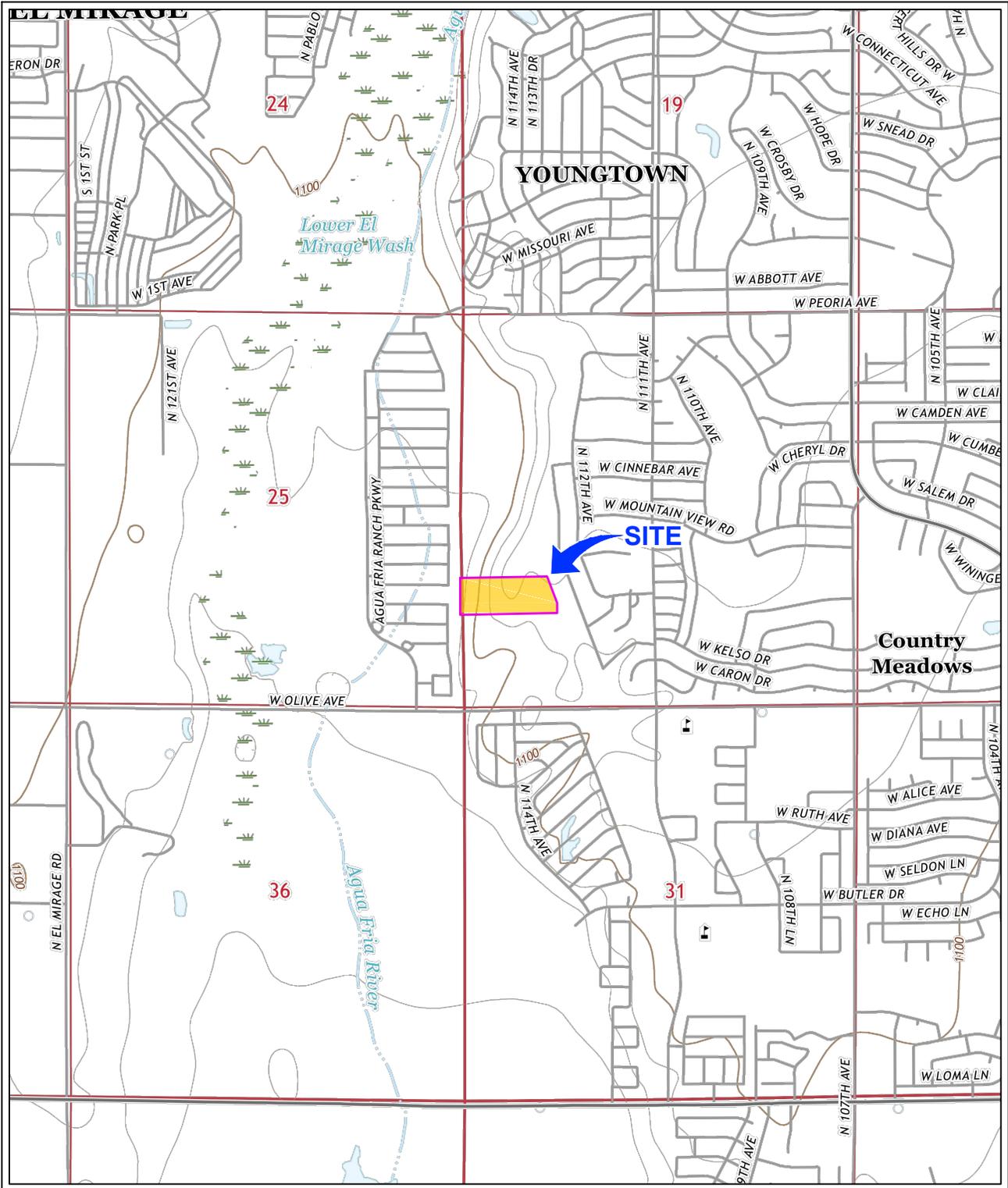
Per the agreed scope of services specified in the proposal, additional services (e.g. asbestos sampling, lead-based paint sampling, wetlands evaluation, lead in drinking water testing, radon testing, vapor encroachment screening, etc.) were not conducted.

8.0 DECLARATION

I, Noelle J. Espinosa, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312; and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. I have developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Noelle J. Espinosa, PhD
Project Scientist

APPENDIX A
EXHIBIT 1 – TOPOGRAPHIC MAP
EXHIBIT 2 – SITE DIAGRAM



EL MIRAGE, AZ
DATED 2018



n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh 1 Topo

Project Mngr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/11/2021

Terracon
Consulting Engineers and Scientists
4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
PH. (480) 897-8200 FAX. (480) 897-1133

TOPOGRAPHIC MAP
El Sol Energy Storage Phase I ESA
Northwest of West Olive Avenue and North 111th Avenue
Youngtown, Arizona 85363

EXHIBIT
1



Project Mgr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/1/2021

Terracon	
Consulting Engineers and Scientists	
4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282	
PH. (480) 897-8200 FAX. (480) 897-1133	

SITE DIAGRAM	
EI Sol Energy Storage Phase I ESA	
Northwest of West Olive Avenue and North 111th Avenue	
Youngtown, Arizona 85363	

EXHIBIT	2
---------	----------

APPENDIX B
SITE PHOTOGRAPHS



Photo #1 View of the site facing north.



Photo #2 View of the site facing west



Photo #3 View of the site facing northwest.



Photo #4 View of the site facing south.



Photo #5 View of construction machinery.



Photo #6 View of the south adjoining property.

Phase I Environmental Site Assessment

El Sol Energy Storage ■ Youngtown, AZ

Photos Taken November 5, 2021 ■ Terracon Project No. 65217816



Photo #7 View of the east adjoining property.



Photo #8 View of the north adjoining property from the east side of the site.



Photo #9 View of the north adjoining property from the west side of the site.



Photo #10 View of the west adjoining property.

APPENDIX C
HISTORICAL DOCUMENTATION AND USER QUESTIONNAIRE

Client/User Required Questionnaire



Person Completing Questionnaire	Name: <i>Paul Barman</i> Company: <i>invenergy</i>	Phone: <i>971 346 4985</i> Email: <i>pbarman@invenergy.com</i>
Site Name	El Sol Energy Storage	
Site Address	Northwest of West Olive Avenue and North 111th Ave, Youngtown, AZ 85363	
Point of Contact for Access	Name: <i>Paul Barman</i> Company: <i>invenergy</i>	Phone: Email:
Access Restrictions or Special Site Requirements?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please explain)	
Confidentiality Requirements?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please explain)	
Current Site Owner	Name: Company: <i>invenergy</i>	Phone: Email:
Current Site Operator	Name: Company: <i>N/A</i>	Phone: Email:
Reasons for ESA (e.g., financing, acquisition, lease, etc.)	<i>financing</i>	
Anticipated Future Site Use	<i>battery storage facility</i>	
Relevant Documents?	Please provide Terracon copies of prior Phase I or II ESAs, Asbestos Surveys, Environmental Permits or Audit documents, Underground Storage Tank documents, Geotechnical Investigations, Site Surveys, Diagrams or Maps, or other relevant reports or documents.	
ASTM User Questionnaire		
In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must respond to the following questions. Failure to provide this information to the environmental professional may result in significant data gaps, which may limit our ability to identify recognized environmental conditions resulting in a determination that "all appropriate inquiry" is not complete. This form represents a type of interview and as such, the user has an obligation to answer all questions in good faith, to the extent of their actual knowledge.		
1) Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.25)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below and send Terracon a copy of the title records or judicial records reviewed.)		
2) Did a search of recorded land title records (or judicial records where appropriate) identify any activity and use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law (40 CFR 312.26)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below and send Terracon a copy of the title records or judicial records reviewed.)		
3) Do you have any specialized knowledge or experience related to the site or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the site or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business (40 CFR 312-28)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below)		
4) Do you have actual knowledge of a lower purchase price because contamination is known or believed to be present at the site (40 CFR 312.29)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Not applicable (If yes or Not applicable, explain below)		
5) Are you aware of commonly known or reasonably ascertainable information about the site that would help the environmental professional to identify conditions indicative of releases or threatened releases (40 CFR 312.30)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below)		
6) Based on your knowledge and experience related to the site, are there any obvious indicators that point to the presence or likely presence of contamination at the site (40 CFR 312.31)? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (If yes, explain below)		
Comments or explanations:		

Please return this form with the signed authorization to proceed.

Proposal No. P65217355



1949 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021



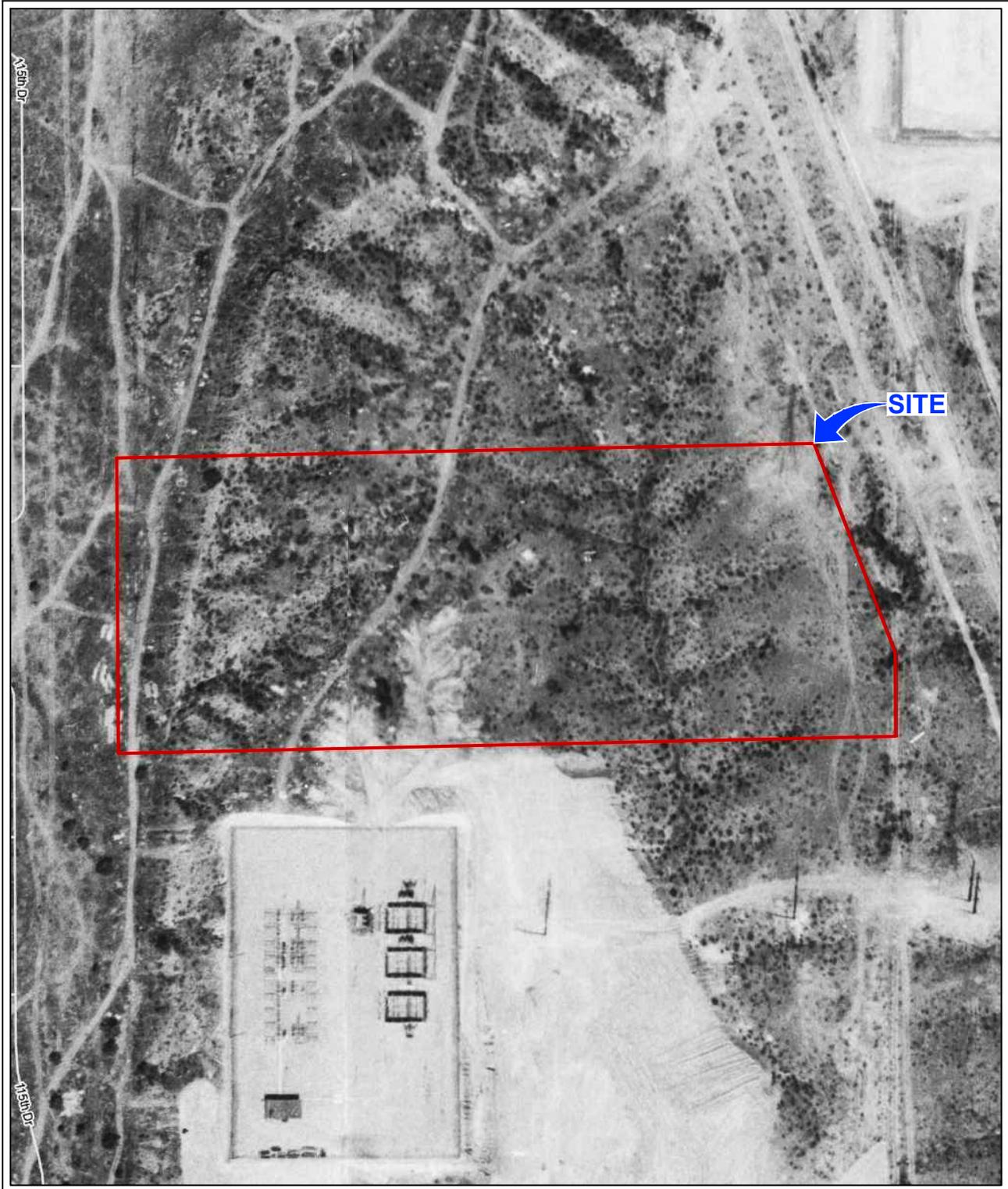
n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C1 Aerial

Project Mngr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/11/2021

Terracon
 Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
 El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

PHOTO
 C1



1976 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021



n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C2 Aerial

Project Mngr:	NJE
Drawn By:	KLJ
Checked By:	JCT
Approved By:	JCT

Project No.:	65217816
Scale:	as shown
File No.:	65217816
Date:	11/11/2021

Terracon
 Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
 El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

PHOTO
 C2



2001 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021



n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C3 Aerial

Project Mgr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/11/2021

Terracon
 Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
 El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

PHOTO
 C3



2003 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021

0 125' 250'
APPROXIMATE SCALE



n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C4 Aerial

Project Mgr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/11/2021

Terracon
 Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
 El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

PHOTO
 C4



2004 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021



n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C5 Aerial

Project Mngr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/12/2021

Terracon
Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

PHOTO
C5



2006 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021



n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C6 Aerial

Project Mgr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/12/2021

Terracon
 Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
 El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

PHOTO
 C6



2009 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021



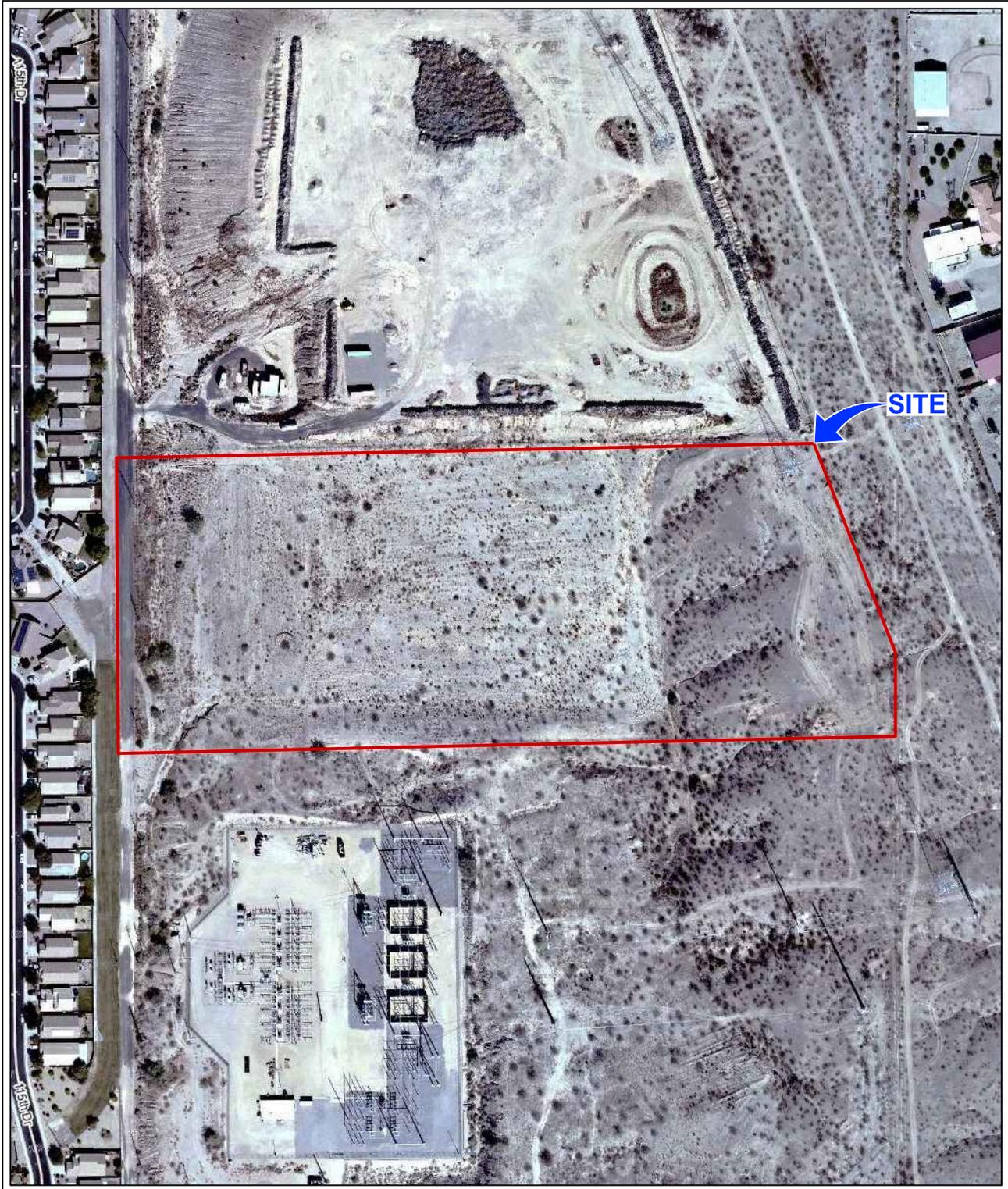
n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C7 Aerial

Project Mgr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/12/2021

Terracon
Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

PHOTO
C7



2019 AERIAL PHOTOGRAPH

SOURCE: MARICOPA COUNTY ONLINE HISTORICAL AERIAL MAPS, 2021

0 125' 250'
APPROXIMATE SCALE



n:\projects\2021\65217816\working_files\diagrams-drawings-figures\cod\65217816.dwg / tab: Exh C8 Aerial

Project Mgr:	NJE	Project No.:	65217816
Drawn By:	KLJ	Scale:	as shown
Checked By:	JCT	File No.:	65217816
Approved By:	JCT	Date:	11/12/2021

Terracon
 Consulting Engineers and Scientists
 4685 South Ash Avenue, Suite H-4 Tempe, AZ 85282
 PH. (480) 897-8200 FAX. (480) 897-1133

HISTORIC AERIAL PHOTO
El Sol Energy Storage Phase I ESA
 Northwest of West Olive Avenue and North 111th Avenue
 Youngtown, Arizona 85363

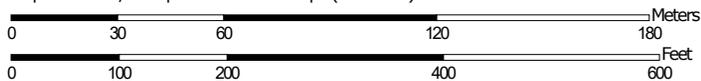
PHOTO
C8

Soil Map—Maricopa County, Arizona, Central Part



Soil Map may not be valid at this scale.

Map Scale: 1:2,120 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Maricopa County, Arizona, Central Part

Survey Area Data: Version 16, Sep 16, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 15, 2020—May 22, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CA2	Calciorthids and Torriorthents, eroded	7.1	50.8%
PeA	Perryville gravelly loam, 0 to 1 percent slopes	6.9	49.1%
Vg	Vint loamy fine sand	0.0	0.2%
Totals for Area of Interest		14.0	100.0%

65217355

Not Reported

Sun City, AZ 85351

Inquiry Number: 6476033.3

May 03, 2021

Certified Sanborn® Map Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

05/03/21

Site Name:

65217355
Not Reported
Sun City, AZ 85351
EDR Inquiry # 6476033.3

Client Name:

Terracon
4685 South Ash Ave
Tempe, AZ 85282
Contact: Martha Leal



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Terracon were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 70A7-44E0-BEEF
PO # NA
Project 65217355 El Sol

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Sanborn® Library search results

Certification #: 70A7-44E0-BEEF

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

The Sanborn Library LLC Since 1866™

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REQUEST FOR PUBLIC RECORDS INFORMATION AND INSTRUCTION SHEET

Requesting Party: Please read and note the following information and instructions.

Fill out form and mail to Town of Youngtown, Attn: Town Clerk, 12030 Clubhouse Square, Youngtown, AZ 85363. You may also fax the form to (623)933-5951 or email to nsmart@youngtownaz.org. Town Code and recent amending ordinances may be viewed and printed free of charge at www.youngtownaz.org.

Pursuant to A.R.S. § 39-121.01(D), any person may request to examine or be furnished copies, printouts, or photographs of public records during regular office hours (8:00 a.m. to 4:00p.m., Monday through Friday) or may request that a copy of a public record not otherwise available on the Town's website be provided to the requesting person.

A person requesting inspection or copies, printouts, or photographs of public records must complete the Town of Youngtown's PUBLIC RECORDS INSPECTION AND COPY REQUEST FORM. A request for copies, printouts, or photographs may be mailed, faxed, or emailed to the Town Clerk and must include a completed copy request form. The Town Clerk will charge an amount in accordance with the below fee schedule. Such amount shall be paid prior to delivery of the material.

Pursuant to A.R.S. § 39-121.03, any person requesting copies, printouts or photographs of public records for a COMMERCIAL PURPOSE must provide a written statement setting forth the commercial purpose for which the copies, printouts or photographs will be used.

Commercial Request

1. There is a special section on the Public Records Inspection and Copy Request Form for record requests that are made for commercial purposes. A "commercial purpose" is defined as:

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 for solicitation or for any purpose in which the purchaser can reasonably anticipate the receipt of monetary gain from the direct or indirect use of such 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. A.R.S. § 39-121.03(D).

2. Charges for a commercial request shall include:

- A. A portion of the cost to the Town for obtaining the original or copies of the documents, printout or photographs to be reproduced.
- B. A reasonable fee for the cost of time, materials, equipment, and personnel in making the copies.
- C. The value of the reproduction on the commercial market. Note: The Town may charge the requestor the same amount for the copy of the public record that he or she would pay a private vendor for the same information or record.

3. If the requestor obtains records for a commercial purpose without indicating the purpose, or if he or she obtains the records for a non-commercial purpose, and then uses or allows the use of the records for a commercial purpose, in addition to other penalties, he or she will be liable for damages three times what the Town could have charged had it known the information would be used for a commercial purpose, plus costs and attorney fees. A.R.S § 39-121.03(C). If a false statement is given, the requestor may be guilty of a felony (A.R.S. § 39-161).

Duty to Disclose Public Records; Legal Exceptions

Any record created or received by the Town of Youngtown is presumed to be public in nature and must be released upon request. However, Arizona law permits denial of access to certain kinds of information if release of the information impinges on privacy interests, is confidential, would interfere with a legitimate government function, would not be in the best interest of the Town, or is otherwise legally protected. If the custodian of records believes that the commercial purpose of a copy or copies is a misuse of public records or an abuse of the right to receive them, the custodian of records may refuse a request.

Public Records Request Fees

Note: Not all documents are considered a public record. You will be advised if what you are requesting is considered protected information and will not be disclosed.

These are our service fees:	Copies	\$ 0.50 per page (letter size) \$ 0.75 per page (legal size) \$ 1.00 per page (11x17)
	Town Code	\$ 300.00
	Zoning Code	\$ 200.00
	CD Discs/USB	\$ 15.00

Research= \$25.00 per hour (\$5.00 minimum) for (COMMERCIAL PURPOSES ONLY)

TOWN OF YOUNGTOWN
PUBLIC RECORDS INSPECTION AND COPY REQUEST FORM

Name: Martha Leal Phone #: 5867471411

Business Name: Terracon

Address: 4685 S Ash Ave #4, Tempe, AZ 85282

Date of Request: 11/5/21 Time of Request: 5:00 p.m.

It is requested that the following records be released: (Please be specific)

Public planning and fire records for APN: 142-70-007D

In accordance with the provisions of Arizona Revised Statutes, **Section 39-121.03.**, certain legal restrictions exist on the commercial use of public records. The requested records will be used for:

Personal/Non-Commercial **Commercial purposes** **Media**

These records will be used for the following purpose(s): (Please be specific.)
Preparing a Phase I ESA report.

Please check to confirm: **I am requesting to inspect the designated records only.**

I am requesting a copy of the designated records.

I, Martha Leal, declare that I have read the Information and Instructions attached to this form and understand the contents herein. Under penalty of perjury, I declare the information I have provided is true and correct and that the records received pursuant to this request will not be used for a purpose other than has been identified herein.

Martha Leal
Requestor's Signature

11/5/21
Date

NOTE: Charges are as set forth in the fee schedule in the Information and Instruction Sheet. Commercial requests may have additional fees. Transmittal of records will be by hard copy unless the Town and requesting party agree to some other form. If you are requesting the Town provide you copies by mail or email (subject to Town approval), you will first need to pay the associated fees. Please provide the applicable information:

Email martha.leal@terracon.com Mail _____ Pick-Up _____

REQUEST FOR PUBLIC RECORDS
Town of Youngtown-Documents & Records for all Departments

INVOICE

EMPLOYEE ISSUING COPIES: _____

DATE COMPLETED: _____

DATE CALLED: _____

DATE PICKED UP: _____ TIME PICKED UP: _____

_____ # OF PAGES X _____ COST = _____ # OF AUDIO TAPES @ \$5 EA. = _____

_____ # of CD DISC'S @\$15.00 each = _____

_____ # OF RESEARCH HRS. X \$25= _____ OR \$5 MINIMUM (COMMERCIAL USE ONLY)

_____ # OF TOWN CODE BOOKS @ \$300.00 EACH = _____

_____ # OF TOWN ZONING BOOKS @ \$55.00 EACH = _____

Shipping and handling fee/first class rate = \$ _____

Note: Town Code (including zoning code) and recent ordinances are available on Town Website at www.youngtownaz.org

.....
CHARGE FOR SERVICE \$ _____

LESS PRE-PAYMENTS MADE \$ _____

TOTAL AMOUNT DUE: \$ _____

RECEIPT #: _____

RECEIPT #: _____

Method of payment:

CASH: _____

***CHECK: _____

***MONEY ORDER or ***CASHIER'S CHECK: _____

*****ATTACH A COPY TO THIS FORM.**
.....

For commercial purposes; the cost for obtaining original or copies of the records \$ _____

For commercial purposes; the value of the reproduction on the commercial market \$ _____

To Pay Fees, Check Status search for your permit or application in progress by entering in the **General Search** section, below:

For assistance, please contact the Data Center at 602-506-6616.

General Search

Permit Number:

Project Name:

Permit T

Start Date:

End Date:

License Type:

State License Number:

Name of Business:

Business

First:

Last:

Street No.:

 -

Direction:

Street

Street Type:

Unit Type:

Unit N

City:

State:

Zip:

Country:

Parcel No.:

Search Clear

Notice:

Your search returned no results. Please modify your search criteria.



QUICKLINKS

- Contact Us
- Employment
- Complaints
- Open Government
- Public Records Request

For technical assistance, email our [Help Desk](#)

USING THIS SITE

- Accessibility
- Copyright Notices
- Site Terms & Privacy Policy
- Home

Search for Permit/Case or Application

Enter information below to search the Maricopa County Planning and Development Database. You can search for the following:

- Building permits
- Standard Plan reviews
- Compliance Inspections
- Code Compliance cases, i.e., violation cases
- Land Use cases

If you are searching for a Planning Case or MCDOT right-of-way permit, please use the [Planning Case Search](#) link. If you are looking for a project submitted prior to May 18, 2009 please visit our [website](#) to view project options.

Schedule an Inspection

To schedule an inspection, you may search for your project tracking number using the [Project Tracking Number Search](#) link below. The scheduling function will only allow for Building and Drainage inspections on permits. Inspections for other agencies' permits must be scheduled through their scheduling process.

What kind of inspection do I need? To learn more about inspections and the inspection process, click [here](#).

If you have questions on the inspection process, or need assistance in scheduling an inspection, contact our Customer Service team at (602) 506-3301 or submit a question through our [online inquiry form](#). You can also use our automated inspection phone service by calling (602) 506-3692.

Search Tips:

- To find your permit:
 - Enter your permit tracking number in the Permit /Case number field. If your project has not been accepted for plan review or the Address Information has not been completed, you must have the permit tracking number to search.
 - Enter the numbers of the address into the Street No. field.
 - Licensed professionals may search using their license number.
- To find your property –
 - In order to find your property, it must be in our database.

- The parcel or APN number is the most efficient way to search
- Using the first 3 numbers of your parcel number will return a begin with those numbers. Then select your parcel number for other information will auto load into the other fields.

General Search

General Search

Permit/Case Number:

Permit/Case Type:

Project Name

Start Date:

End Date:

License Type:

State License Number:

First:

Last:

Name of Busi

Business License #:

Street No.:

 -

Direction:

Street Nan

Street Type:

Unit Type:

Unit No.:

Parcel No.:

City:

State:

Zip:

Country:

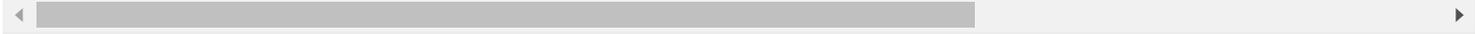
 [Search Additional Criteria](#)

Search

Clear

Notice:

Your search returned no results. Please modify your search criteria and try again.



QUICKLINKS

- Contact Us
- Employment
- Code Compliance
- Open Government
- Public Records Request

USING THIS SITE

- Accessibility
- Copyright Notices
- Site Terms & Privacy Policy
- Home

For technical assistance, submit a question through our [online inquiry system](#).

MEGASEARCH

Records Center Database

Drywell

UST/LUST

Waste Programs

Hazardous Waste (Accounts)

Hazardous Waste (Manifests)

Special Waste (Manifests)

Water Quality App/Permit/Stormwater

Waste Water Facilities

Water Quality Monitoring

Revenue Management System

State Assurance Fund

Solid Waste

Solid Waste Facilities/Programs

Surface Water

Air Permit Compliance

Vehicle Emissions Inspection

Superfund Remediation

Voluntary Remediation

Select / Deselect ALL

- Records Center Database Results

No Records found in Records Center Database for your selection.

- Drywell Database Results

No Records found in Drywell Database for your selection.

- Underground Storage/LUST Database Results

No Records found in Underground Storage Database for your selection.

- Waste Programs Database Results

No Records found in Waste Programs Database for your selection.

- Hazardous Waste (Accounts) Database Results

No Records found in Hazardous Waste (Accounts)Database for your selection.

- Hazardous Waste (Manifests) Database Results

No Records found in Hazardous Waste (Manifests) Database for your selection.

- Special Waste (Manifests) Database Results

No Records found in Special Waste (Manifests) Database for your selection.

- Water Quality (Applications) Database Results

No Records found in Water Quality(Applications) Database for your selection.

- Water Quality (Permits) Database Results

No Records found in Water Quality(Permits) Database for your selection.

- Water Quality (Stormwater) Database Results

No Records found in Water Quality (Stormwater) Database for your selection.

- Waste Water Facilities Database Results

No Records found in Waste Water Facilities Database for your selection.

- Water Quality Monitoring Database Results

No Records found in Water Quality Monitoring Database for your selection.

- Revenue Management System Database Results

No Records found in Revenue Management System Database for your selection.

- State Assurance Fund Database Results

No Records found in State Assurance Fund Database for your selection.

- Solid Waste Database Results

No Records found in Solid Waste Database for your selection.

- Solid Waste Facilities Database Results

No Records found in Solid Waste Facilities Database for your selection.

- Solid Waste Programs Database Results

No Records found in Solid Waste Programs Database for your selection.

- Surface Water Database Results

No Records found in Surface Water Database for your selection.

- Air Permit Compliance Database Results

No Records found in Air Permit Compliance Database for your selection.

- Vehicle Emissions Inspection Database Results

No Records found in Vehicle Emissions Inspection Database for your selection.

- Superfund Remediation Database Results

No Records found in Superfund Remediation Database for your selection.

- Voluntary Remediation Database Results

No Records found in Voluntary Remediation Database for your selection.

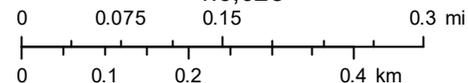
Submit Records Request

ADEQ map



10/27/2021

1:9,028



- | | | | |
|--|--|--|---|
| ● Drywell Places - myDEQ | UST - Tanks | UST - Releases | Suspected |
| ● Drywells - myDEQ | Open | Closed | Cities and Towns |
| ● Drywell Places - Historical | Perm Closed | Confirmed | ★ County Seats |
| | Temp Closed | False Alarm | |

The Arizona Department of Environmental Quality has compiled this map as a service to our customers using information from various sources. ADEQ cannot ensure that the information is accurate, current or complete. Neither the information presented nor the maps themselves are official documents.

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user

APPENDIX D
ENVIRONMENTAL DATABASE INFORMATION

Not Reported

Not Reported

Sun City, AZ 85351

Inquiry Number: 6724651.2s

October 28, 2021

The EDR Radius Map™ Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	9
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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MAPPED SITES SUMMARY

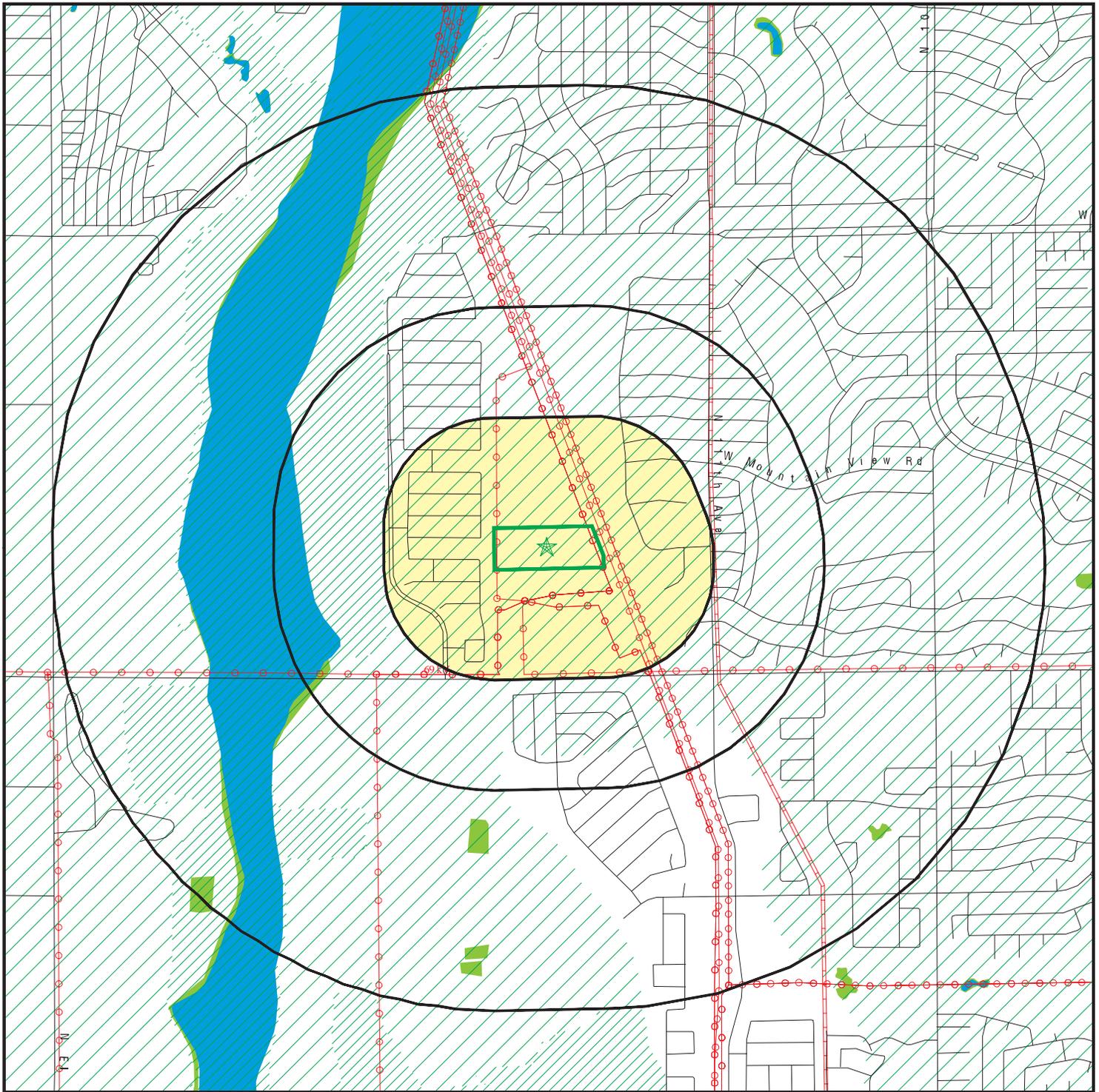
Target Property Address:
NOT REPORTED
SUN CITY, AZ 85351

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
--------	-----------	---------	-------------------	--------------------	----------------------------

NO MAPPED SITES FOUND

OVERVIEW MAP - 6724651.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Pipelines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

DOD Sites: AZ DEQ

Water Quality Assurance Revolving Fund Areas

AZ NPL

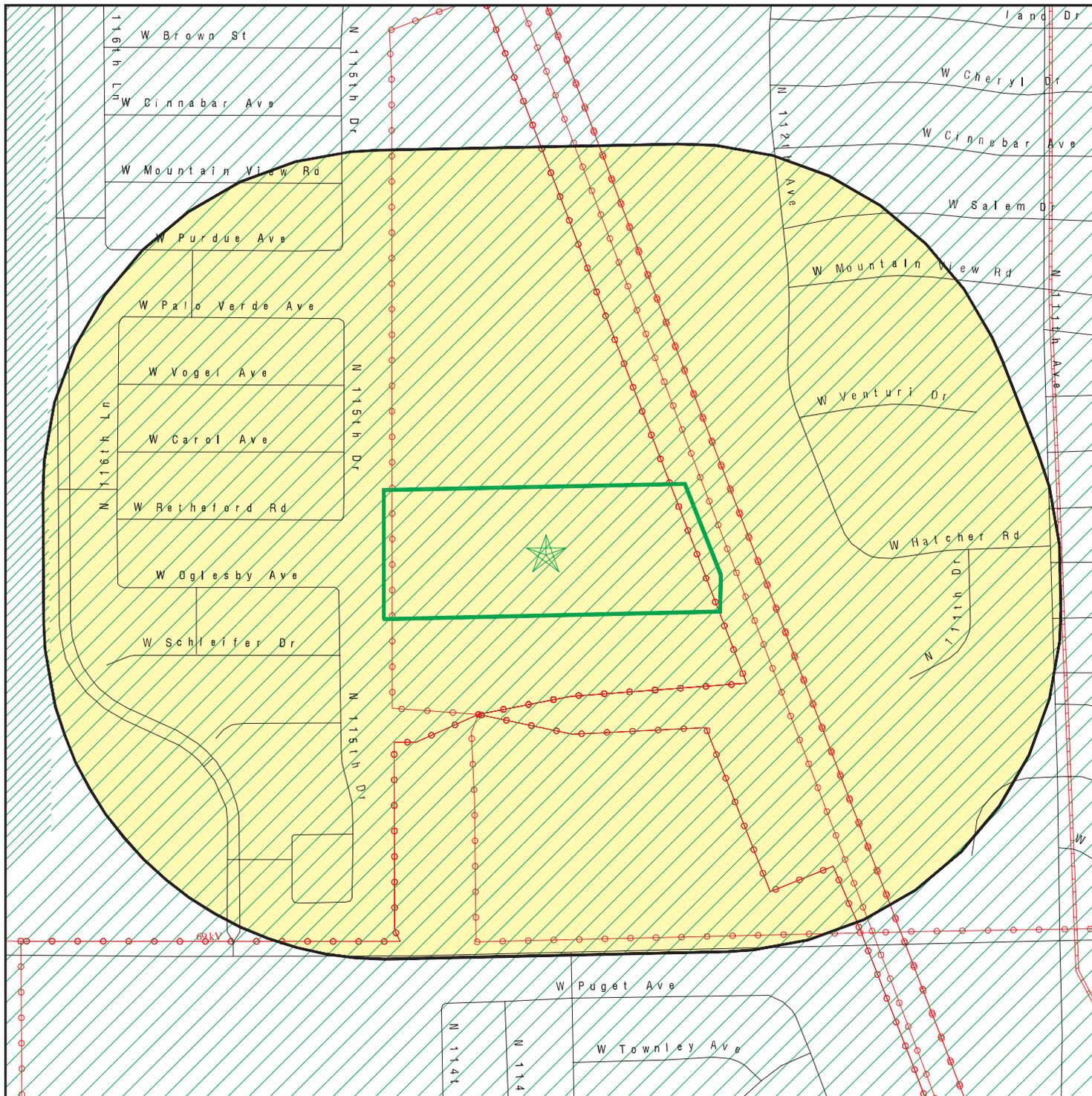


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Not Reported
 ADDRESS: Not Reported
 Sun City AZ 85351
 LAT/LONG: 33.569677 / 112.305072

CLIENT: Terracon
 CONTACT: Martha Leal
 INQUIRY #: 6724651.2s
 DATE: October 28, 2021 8:51 am

DETAIL MAP - 6724651.2S



 Target Property

 Sites at elevations higher than or equal to the target property

 Sites at elevations lower than the target property

 Manufactured Gas Plants

 Sensitive Receptors

 National Priority List Sites

 Dept. Defense Sites

 Indian Reservations BIA

 Power transmission lines

 Pipelines

 Special Flood Hazard Area (1%)

 0.2% Annual Chance Flood Hazard

 DOD Sites: AZ DEQ

 Water Quality Assurance Revolving Fund Areas

 AZ NPL

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Not Reported
 ADDRESS: Not Reported
 Sun City AZ 85351
 LAT/LONG: 33.569677 / 112.305072

CLIENT: Terracon
 CONTACT: Martha Leal
 INQUIRY #: 6724651.2s
 DATE: October 28, 2021 8:51 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL</i>								
AZ NPL	1.000		0	0	0	0	NR	0
AZ WQARF	1.000		0	0	0	0	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
SPL	1.000		0	0	0	0	NR	0
SHWS	1.000		0	0	0	0	NR	0
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal institutional control / engineering control registries</i>								
AZURITE	0.500		0	0	0	NR	NR	0
AUL	0.500		0	0	0	NR	NR	0
<i>State and tribal voluntary cleanup sites</i>								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
<i>State and tribal Brownfields sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
SWTIRE	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
<i>Local Land Records</i>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
<i>Records of Emergency Release Reports</i>								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
<i>Other Ascertainable Records</i>								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
Aquifer	TP		NR	NR	NR	NR	NR	0
AZ DOD	0.500		0	0	0	NR	NR	0
Dry Wells	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMAP	TP		NR	NR	NR	NR	NR	0
Enforcement	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
SPDES	TP		NR	NR	NR	NR	NR	0
VAPOR	0.500		0	0	0	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
WWFAC	0.500		0	0	0	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
---------	-------	--	---	---	---	---	----	---

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
<u>EDR RECOVERED GOVERNMENT ARCHIVES</u>								
<i>Exclusive Recovered Govt. Archives</i>								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	0	0	0	0	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NO SITES FOUND

Count: 4 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
EL MIRAGE	1023962769	EL MIRAGE INDUSTRIAL LANDFILL	11141 N 115TH AVENUE	85335	SEMS-ARCHIVE
PEORIA	S103392042	115TH AND NORTHERN AVENUE	115TH AVE. AND NORTHERN AVE.	85345	SHWS
PEORIA	1000482897	AMERICAN CONTINENTAL CORP.	115TH AVENUE AND NORTHERN AVEN	85345	SHWS
PEORIA	1003879497	AMERICAN CONTINENTAL CORP. - A.K.A	115TH AVENUE AND NORTHERN AVEN	85345	SEMS-ARCHIVE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
AZ	AIRS	Arizona Airs Database	Department of Environmental Quality	09/24/2021	09/28/2021	09/29/2021
AZ	AQUIFER	Aquifer Protection Permits List	Department of Environmental Quality	05/06/2021	05/07/2021	07/23/2021
AZ	AST	List of Aboveground Storage Tanks	Department of Building & Fire Safety	12/05/2019	12/06/2019	01/31/2020
AZ	AST 2	Aboveground Storage Tank Listing	Department of Environmental Quality	04/14/2021	06/04/2021	08/26/2021
AZ	AUL	DEUR Database	Department of Environmental Quality	03/15/2021	03/16/2021	06/02/2021
AZ	AZ MANIFEST	Manifest Information	Department of Environmental Quality	12/31/2018	06/15/2021	09/09/2021
AZ	AZ NPL	NPL Detail Listing	Department of Environmental Quality	12/31/2020	03/25/2021	06/10/2021
AZ	AZURITE	Remediation and DEUR/VEMUR Tracking System	Department of Environmental Quality	03/15/2021	03/16/2021	06/02/2021
AZ	BROWNFIELDS	Brownfields Tracking System	Department of Environmental Quality	03/30/2021	06/23/2021	09/17/2021
AZ	CDL	Clandestine Drug Labs	Board of Technical Registration	10/28/2019	10/30/2019	12/12/2019
AZ	DOD	Department of Defense Sites	Department of Environmental Quality	12/31/2020	03/23/2021	06/10/2021
AZ	DRY WELLS	Drywell Registration	Department of Environmental Quality	06/10/2019	06/13/2019	08/20/2019
AZ	DRYCLEANERS	Drycleaner Facility Listing	Department of Environmental Quality	06/17/2019	07/20/2020	10/07/2020
AZ	EMAP	All Places of Interest Listing	Department of Environmental Quality	05/26/2021	05/28/2021	06/07/2021
AZ	ENF	Enforcement and Violation Listing	Department of Environmental Quality	07/23/2021	07/27/2021	10/15/2021
AZ	Financial Assurance 1	Financial Assurance Information Listing	Department of Environmental Quality	06/17/2021	06/22/2021	09/16/2021
AZ	LUST	Leaking Underground Storage Tank Listing	Department of Environmental Quality	10/04/2021	10/07/2021	10/15/2021
AZ	NPDES	Notice of Intent Construction Stormwater General Permits Dat	Department of Environmental Quality	07/07/2021	07/07/2021	09/29/2021
AZ	PFAS	PFAS Contamination Site Listing	Department of Environmental Quality	02/18/2021	04/30/2021	07/26/2021
AZ	RG A HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Quality		07/01/2013	01/02/2014
AZ	RG A LF	Recovered Government Archive Solid Waste Facilities List	Department of Environmental Quality		07/01/2013	01/15/2014
AZ	RG A LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Environmental Quality		07/01/2013	01/02/2014
AZ	SHWS	ZipAcids List	Department of Environmental Quality	01/03/2000	04/11/2000	05/16/2000
AZ	SPILLS	Hazardous Material Logbook	Department of Environmental Quality	11/15/2001	06/28/2007	07/24/2007
AZ	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	12/11/2001	01/03/2013	02/11/2013
AZ	SPL	Superfund Program List	Department of Environmental Quality	08/25/2004	04/04/2018	05/17/2018
AZ	SWF/LF	Directory of Solid Waste Facilities	Department of Environmental Quality	03/31/2021	06/23/2021	09/21/2021
AZ	SWTIRE	Solid Waste Tire Facilities	Department of Environmental Quality	05/11/2021	05/12/2021	07/28/2021
AZ	UIC	Underground Injection Control Wells	Arizona Geological Survey	09/30/2015	02/05/2016	04/05/2016
AZ	UST	Underground Storage Tank Listing	Department of Environmental Quality	10/04/2021	10/07/2021	10/15/2021
AZ	VAPOR	Vapor Intrusion	Department of Environmental Quality	04/21/2021	04/22/2021	07/09/2021
AZ	VCP	Voluntary Remediation Program Sites	Department of Environmental Quality	03/30/2021	04/07/2021	04/08/2021
AZ	WQARF	Water Quality Assurance Revolving Fund Sites	Department of Environmental Quality	12/31/2020	03/25/2021	06/10/2021
AZ	WWFAC	Waste Water Treatment Facilities	Department of Environmental Quality	07/09/2012	07/23/2012	09/06/2012
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	06/15/2021	06/16/2021	08/17/2021
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2017	06/22/2020	11/20/2020
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2019	12/01/2020	02/09/2021
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	06/30/2021	07/14/2021	07/16/2021
US	CORRACTS	Corrective Action Report	EPA	09/13/2021	09/15/2021	10/12/2021
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	DOT OPS	Incident and Accident Data	Department of Transportation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	07/29/2021	08/04/2021	08/31/2021
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	06/26/2021	07/01/2021	09/28/2021

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	06/14/2021	06/17/2021	08/17/2021
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	05/25/2021	06/24/2021	09/20/2021
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	01/29/2021	02/17/2021	03/22/2021
US	FINDS	Facility Index System/Facility Registry System	EPA	05/05/2021	05/18/2021	08/17/2021
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	08/10/2021	08/17/2021	10/22/2021
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	08/13/2021	08/13/2021	10/22/2021
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	07/26/2021	07/27/2021	10/22/2021
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	09/12/2021	09/13/2021	09/28/2021
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/28/2021	06/11/2021	09/07/2021
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/27/2021	06/11/2021	09/07/2021
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/06/2021	06/11/2021	09/07/2021
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	05/17/2021	06/11/2021	09/07/2021
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	06/01/2021	06/11/2021	09/07/2021
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	05/27/2021	06/11/2021	09/07/2021
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	05/27/2021	06/11/2021	09/07/2021
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/28/2021	06/11/2021	09/07/2021
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/27/2021	06/11/2021	09/07/2021
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/06/2021	06/11/2021	09/07/2021
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	05/17/2021	06/11/2021	09/07/2021
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	06/01/2021	06/11/2021	09/07/2021
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	05/27/2021	06/11/2021	09/07/2021
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	05/27/2021	06/11/2021	09/07/2021
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisiting	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	07/29/2021	08/04/2021	08/31/2021
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	07/29/2021	08/04/2021	08/31/2021
US	LUCIS	Land Use Control Information System	Department of the Navy	07/12/2021	08/06/2021	10/22/2021
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	06/30/2021	07/01/2021	09/28/2021
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	03/08/2021	03/11/2021	05/11/2021
US	NPL	National Priority List	EPA	07/29/2021	08/04/2021	08/31/2021

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	11/19/2020	01/08/2021	03/22/2021
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PCS INACTIVE	Listing of Inactive PCS Permits	EPA	11/05/2014	01/06/2015	05/06/2015
US	PRP	Potentially Responsible Parties	EPA	12/30/2020	01/14/2021	03/05/2021
US	Proposed NPL	Proposed National Priority List Sites	EPA	07/29/2021	08/04/2021	08/31/2021
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	09/13/2021	09/15/2021	10/12/2021
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	09/13/2021	09/15/2021	10/12/2021
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	09/13/2021	09/15/2021	10/12/2021
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	09/13/2021	09/15/2021	10/12/2021
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	09/13/2021	09/15/2021	10/12/2021
US	RMP	Risk Management Plans	Environmental Protection Agency	05/07/2021	05/13/2021	08/03/2021
US	ROD	Records Of Decision	EPA	07/29/2021	08/04/2021	08/31/2021
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	SEMS	Superfund Enterprise Management System	EPA	07/29/2021	08/04/2021	08/31/2021
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	07/29/2021	08/04/2021	08/31/2021
US	SSTS	Section 7 Tracking Systems	EPA	07/19/2021	07/19/2021	10/12/2021
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	06/10/2021	06/10/2021	08/17/2021
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	05/18/2021	05/18/2021	08/03/2021
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	05/17/2021	05/21/2021	08/11/2021
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	09/13/2021	09/15/2021	09/28/2021
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	05/18/2021	05/18/2021	08/03/2021
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	05/17/2021	05/21/2021	08/11/2021
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	05/03/2021	05/25/2021	08/11/2021
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2018	07/02/2020	09/17/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	03/24/2021	05/11/2021	07/28/2021
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	04/29/2020	07/10/2020
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2019	02/11/2021	02/24/2021
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
AZ	Daycare Centers	Sensitive Receptor: Child Care Facilities & Group Homes	Department of Health Services			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
AZ	State Wetlands	Riparian Vegetation Associated with Perennial Waters	State Land Department			
US	Topographic Map	Current USGS 7.5 Minute Topographic Map	U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

STREET AND ADDRESS INFORMATION

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**APPENDIX E
CREDENTIALS**

JENNIFER C. THIES, CEM

ENVIRONMENTAL DEPARTMENT MANAGER

PROFESSIONAL EXPERIENCE

Ms. Thies has over 20 years of experience in the environmental fields of site assessment/investigation and project management with 9 years in the government arena. As the Environmental Department Manager, she supervises a staff of over 16 professionals including biologists, geologist, environmental planners, and chemical engineers; many that are specialists in their practice areas. Terracon's Phoenix Environmental Department produces high quality and high caliber work products in one of the fastest growing regions in the Country. As the Departments lead, Phoenix continues to see solid growth, with over 1500 projects in 2020. Ms. Thies is an Environmental Site Assessment Authorized Project Reviewer.

As a senior scientist in the Phoenix office, her focus was on public sector and national clients. Significant projects include Phase I ESAs, Phase II investigation, Remedial Action and Regulatory Compliance. As part of the team, her responsibilities include project oversight, site inspections, records reviews, compliance audits and employee training. Phase I ESAs include environmental due diligence for purchases, leases and acquisitions. Phase II investigations include subsurface soil and groundwater quality sampling and soil vapor surveys. Remediation includes soil vapor extraction, air sparge, large-diameter treatment columns, in-situ biodegradation, and groundwater pump and treat systems. Regulatory Compliance includes Clean Water Act, Section 402 National Pollution Discharge Elimination System stormwater general permits and stormwater pollution prevention plans, monitoring, discharge monitoring reports, in Arizona for construction and industrial general permits utilizing the Arizona Department of Environmental Quality myDEQ website and EPA's Central Data Exchange. Spill Prevention Control and Countermeasure Plans for facilities with large storage quantities of petroleum. Ms. Thies is proficient in hydrogeology, with experience in groundwater monitoring and remediation well installations, piezometer temporary wells, proper procedures for well abandonment and development in association with non-aqueous phase liquids plumes.

PROJECT EXPERIENCE

Site Investigation, Remediation and Closure – SVE and Air Sparge Former Buckeye Food and Gas – Buckeye, AZ

Key Role: Soil, Vapor and Groundwater Sampling, Remediation Project, Modeling of Soil Vapor and Groundwater Contamination

Project Description: Assumed responsibility for the optimization of the soil vapor extraction/air sparge treatment system from another consultant. Conducted operation and maintenance activities, monitored telemetry system, completed soil borings and a soil vapor survey for confirmation of treatment system success. Oversaw quarterly groundwater well monitoring with active and passive sampling methods, Prepared Annual reports, system discharge air permitting, and a Corrective Action Completion Report under Tier III risk based corrective action guidelines.

Environmental Site Assessments

Performed numerous Phase I Environmental Site Assessments (ESA) for commercial retail and office buildings, industrial, and solid waste facilities throughout the United States. Ms. Thies is familiar with ASTM E 1527 standards and experience completing assessing Business Environmental Risks, historic recognized environmental conditions, and is knowledgeable with hydraulic lifts, oil/water separators, wash downs, maintenance operations.

EDUCATION

Master of Science,
Environmental Management,
University of Maryland, 2004

Bachelor of Science,
Environmental Sciences,
University of California,
Riverside, 1997

CERTIFICATIONS

Certified Environmental
Manager (CEM) #2445

Registered Sanitarian #903

PROFESSIONAL TRAINING

OSHA 40-hour Health & Safety
MSHA 24-hour Mine Safety

AFFILIATIONS

Artemis Leads Group
ADEQ Wastewater Discharge
Advisory Group
Env. Professionals of AZ
AZ SWANA

WORK HISTORY

Terracon Consultants, Inc.,
Senior Scientist: 2017-present

Civil & Environmental
Consultants,
Project Manager: 2015-2017

Republic Services, Inc,
Environmental Specialist, 2013-
2015

ADEQ,
State Superfund Unit Manager:
2010-2012,
WQARF Project Manager: 2005-
2010,
Solid Waste Inspector: 2004-
2005

NOELLE J. ESPINOSA, PH.D.

PROJECT SCIENTIST

PROFESSIONAL EXPERIENCE

Ms. Espinosa is a Project Scientist in Terracon's Phoenix office and has over 7 years of environmental experience and is a qualified Environmental Professional as defined in ASTM E1527. Significant work experience includes commercial and telecom Phase I Environmental Site Assessments (ESAs), long-term environmental monitoring projects, and Asbestos and Lead-Paint Surveys. Ms. Espinosa also has experience with Limited Site Investigations (LSIs), which include subsurface soil, soil vapor, and groundwater investigations, preparing proposals, health and safety plans, sampling and analysis plans, and NEPA reports. Ms. Espinosa received a Ph.D. in Natural Resource Management focusing on soil in December 2020.

SELECT PROJECT EXPERIENCE

Long Term Environmental Monitoring, Arizona

Huachuca City Landfill: Performed the continuing quarterly explosive gas monitoring activities on the municipal landfill located in Cochise County, Arizona. Project activities include client and regulatory agency communications. Sampling and ADEQ submittals.

Saginaw Hill Mine: Prepared the Sampling and Analysis Plan, site safety meetings, and quarterly groundwater sampling with reporting. Project activities include managing long-term project timelines and goals, data analyses, regular updates to client and formal reporting.

Environmental Site Assessments - Arizona

Phase I ESA reports and field activities for various commercial, industrial, and undeveloped properties as well as extensive experience working with telecommunications clients. Project activities include site reconnaissance, regulatory reviews, aerial and library reviews, and regulatory agency contact.

Air Monitoring, Arizona

Assisted in air monitoring for dust, pesticides and lead during the construction of a new hotel. Air sampling included both sample collection in media utilizing both low flow and high flow volume samplers and direct read monitoring equipment.

Site Characterization Reports, Tucson, Arizona

Subsurface site characterization of contaminated soils and groundwater. Project activities include concrete coring with soil and vapor intrusion sampling, hand auger soil sampling and grab sampling from soils. As a part of these projects Health and Safety Plans and Sampling and Analysis Plans are written and submitted for client or agency review and approval.

Grant Road Widening – City of Tucson

Performed Phase I ESA's, asbestos building inspections and assisted in limited site investigations (as needed) for properties slated for acquisition by the city of Tucson for Phase II of the Grant Road Widening Project.

Education

Ph.D., Natural Resource Management, University of Arizona, Tucson. December 2020

Bachelor of Science, Environmental Science, University of Arizona, Tucson, 2013

Certifications

Asbestos Building Inspector

CPR and First Aid

Affiliations

Environmental Professionals of Arizona, Board of Education Chair

Southern Arizona Environmental Management Society, Member (President, 2018)

Society for Ecological Restoration

American Geophysical Union

Soil Science Society of America

Work History

Terracon, Project Scientists, 2021

Terracon, Staff or Assistant Scientist, 2013-2020

University of Arizona, Graduate Teaching Assistant, 2013-Present

Steward Observatory, Instructor, University of Arizona, 2014-present

University of Arizona, Research Assistant, 2010-2013

Awards

Marshall Foundation Fellow, 2019

Southern Arizona Environmental Management Society Graduate Student Scholarship, 2015

Martha L. Leal

Assistant Scientist

PROFESSIONAL EXPERIENCE

Martha is an environmental Assistant Scientist in Terracon's Phoenix, Arizona office. Significant work experience includes commercial and telecom Phase I Environmental Site Assessments.

PROJECT EXPERIENCE

Environmental Site Assessments – Arizona

Phase I ESA reports and field responsibilities for various commercial, industrial, undeveloped, and telecommunication properties.

Responsibilities include regulatory reviews, aerial and library reviews, regulatory agency contact, and site reconnaissance.

EDUCATION

Bachelor of Environmental Science
Southern New Hampshire University
Manchester, New Hampshire

Bachelor of Anthropology
Southern New Hampshire University
Manchester, New Hampshire

PROFESSIONAL TRAINING

OSHA 40-hour HAZWOPER

Work Experience

Fulcrum Resources Environmental (2019-2020).

APPENDIX F
DESCRIPTION OF TERMS AND ACRONYMS

Description of Selected General Terms and Acronyms

Term/Acronym	Description
ACM	<p>Asbestos Containing Material. Asbestos is a naturally occurring mineral, three varieties of which (chrysotile, amosite, crocidolite) have been commonly used as fireproofing or binding agents in construction materials. Exposure to asbestos, as well as ACM, has been documented to cause lung diseases including asbestosis (scarring of the lung), lung cancer and mesothelioma (a cancer of the lung lining).</p> <p>Regulatory agencies have generally defined ACM as a material containing greater than one (1) percent asbestos, however some states (e.g. California) define ACM as materials having 0.1% asbestos. In order to define a homogenous material as non-ACM, a minimum number of samples must be collected from the material dependent upon its type and quantity. Homogenous materials defined as non-ACM must either have 1) no asbestos identified in all of its samples or 2) an identified asbestos concentration below the appropriate regulatory threshold. Asbestos concentrations are generally determined using polarized light microscopy or transmission electron microscopy. Point counting is an analytical method to statistically quantify the percentage of asbestos in a sample. The asbestos component of ACM may either be friable or non-friable. Friable materials, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure and have a higher potential for a fiber release than non-friable ACM. Non-friable ACM are materials that are firmly bound in a matrix by plastic, cement, etc. and, if handled carefully, will not become friable.</p> <p>Federal and state regulations require that either all suspect building materials be presumed ACM or that an asbestos survey be performed prior to renovation, dismantling, demolition, or other activities that may disturb potential ACM. Notifications are required prior to demolition and/or renovation activities that may impact the condition of ACM in a building. ACM removal may be required if the ACM is likely to be disturbed or damaged during the demolition or renovation. Abatement of friable or potentially friable ACM must be performed by a licensed abatement contractor in accordance with state rules and NESHAP. Additionally, OSHA regulations for work classification, worker training and worker protection will apply.</p>
AHERA	Asbestos Hazard Emergency Response Act
AST	Aboveground Storage Tanks. ASTs are generally described as storage tanks less than 10% of which are below ground (i.e., buried). Tanks located in a basement, but not buried, are also considered ASTs. Whether, and the extent to which, an AST is regulated, is determined on a case-by-case basis and depends upon tank size, its contents and the jurisdiction of its location.
BGS	Below Ground Surface
Brownfields	State and/or tribal listing of Brownfield properties addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments.
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes. BTEX are VOC components found in gasoline and commonly used as analytical indicators of a petroleum hydrocarbon release.

Description of Selected General Terms and Acronyms

Term/Acronym	Description
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (a.k.a. Superfund). CERCLA is the federal act that regulates abandoned or uncontrolled hazardous waste sites. Under this Act, joint and several liability may be imposed on potentially responsible parties for cleanup-related costs.
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System. An EPA compilation of sites having suspected or actual releases of hazardous substances to the environment. CERCLIS also contains information on site inspections, preliminary assessments and remediation of hazardous waste sites. These sites are typically reported to EPA by states and municipalities or by third parties pursuant to CERCLA Section 103.
CESQG	Conditionally Exempt Small Quantity Generators
CFR	Code of Federal Regulations
CREC	Controlled Recognized Environmental Condition is defined in ASTM E1527-13 as “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority) , with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment report.”
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System. An EPA-maintained federal database which stores information on notifications of oil discharges and hazardous substance releases in quantities greater than the applicable reportable quantity under CERCLA. ERNS is a cooperative data-sharing effort between EPA, DOT, and the National Response Center.
ESA	Environmental Site Assessment
FRP	Fiberglass Reinforced Plastic
Hazardous Substance	As defined under CERCLA, this is (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (with some exclusions); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any hazardous air pollutant listed under section 112 of the Clean Air Act; and (F) any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action under section 2606 of Title 15. This term does not include petroleum, including crude oil or any fraction thereof which is not otherwise listed as a hazardous substance under subparagraphs (A) through (F) above, and the term include natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Description of Selected General Terms and Acronyms

Term/Acronym	Description
Hazardous Waste	This is defined as having characteristics identified or listed under section 3001 of the Solid Waste Disposal Act (with some exceptions). RCRA, as amended by the Solid Waste Disposal Act of 1980, defines this term as a “solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”
HREC	Historical Recognized Environmental Condition is defined in ASTM E1527-13 as “a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time of the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the EP considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition.”
IC/EC	A listing of sites with institutional and/or engineering controls in place. IC include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. EC include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.
ILP	Innocent Landowner/Operator Program
LQG	Large Quantity Generators
LUST	Leaking Underground Storage Tank. This is a federal term set forth under RCRA for leaking USTs. Some states also utilize this term.
MCL	Maximum Contaminant Level. This Safe Drinking Water concept (and also used by many states as a ground water cleanup criteria) refers to the limit on drinking water contamination that determines whether a supplier can deliver water from a specific source without treatment.
MSDS	Material Safety Data Sheets. Written/printed forms prepared by chemical manufacturers, importers and employers which identify the physical and chemical traits of hazardous chemicals under OSHA’s Hazard Communication Standard.
NESHAP	National Emissions Standard for Hazardous Air Pollutants (Federal Clean Air Act). This part of the Clean Air Act regulates emissions of hazardous air pollutants.
NFRAP	Facilities where there is “No Further Remedial Action Planned,” as more particularly described under the Records Review section of this report.

Description of Selected General Terms and Acronyms

Term/Acronym	Description
NOV	Notice of Violation. A notice of violation or similar citation issued to an entity, company or individual by a state or federal regulatory body indicating a violation of applicable rule or regulations has been identified.
NPDES	National Pollutant Discharge Elimination System (Clean Water Act). The federal permit system for discharges of polluted water.
NPL	The NPL is the EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund Program.
OSHA	Occupational Safety and Health Administration or Occupational Safety and Health Act
PACM	Presumed Asbestos-Containing Material. A material that is suspected of containing or presumed to contain asbestos but which has not been analyzed to confirm the presence or absence of asbestos.
PCB	Polychlorinated Biphenyl. A halogenated organic compound commonly in the form of a viscous liquid or resin, a flowing yellow oil, or a waxy solid. This compound was historically used as dielectric fluid in electrical equipment (such as electrical transformers and capacitors, electrical ballasts, hydraulic and heat transfer fluids), and for numerous heat and fire sensitive applications. PCB was preferred due to its durability, stability (even at high temperatures), good chemical resistance, low volatility, flammability, and conductivity. PCBs, however, do not break down in the environment and are classified by the EPA as a suspected carcinogen. 1978 regulations, under the Toxic Substances Control Act, prohibit manufacturing of PCB-containing equipment; however, some of this equipment may still be in use today.
pCi/L	picoCuries per Liter of Air. Unit of measurement for Radon and similar radioactive materials.
PLM	Polarized Light Microscopy (see ACM section of the report, if included in the scope of services)
PST	Petroleum Storage Tank. An AST or UST that contains a petroleum product.
Radon	A radioactive gas resulting from radioactive decay of naturally-occurring radioactive materials in rocks and soils containing uranium, granite, shale, phosphate, and pitchblende. Radon concentrations are measured in picoCuries per Liter of Air. Exposure to elevated levels of radon creates a risk of lung cancer; this risk generally increases as the level of radon and the duration of exposure increases. Outdoors, radon is diluted to such low concentrations that it usually does not present a health concern. However, radon can accumulate in building basements or similar enclosed spaces to levels that can pose a risk to human health. Indoor radon concentrations depend primarily upon the building's construction, design and the concentration of radon in the underlying soil and ground water. The EPA recommended annual average indoor "action level" concentration for residential structures is 4.0 pCi/l.
RCRA	Resource Conservation and Recovery Act. Federal act regulating solid and hazardous wastes from point of generation to time of disposal ('cradle to grave'). 42 U.S.C. 6901 et seq.

Description of Selected General Terms and Acronyms

Term/Acronym	Description
RCRA Generators	The RCRA Generators database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as either large (LQG), small (SQG), or conditionally exempt (CESQG). LQG produce at least 1000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. SQG produce 100-1000 kg/month of non-acutely hazardous waste. CESQG are those that generate less than 100 kg/month of non-acutely hazardous waste.
RCRA CORRACTS/T SDs	The USEPA maintains a database of RCRA facilities associated with treatment, storage, and disposal (TSD) of hazardous materials which are undergoing "corrective action". A "corrective action" order is issued when there is a release of hazardous waste or constituents into the environment from a RCRA facility.
RCRA Non-CORRACTS/T SDs	The RCRA Non-CORRACTS/TSD Database is a compilation by the USEPA of facilities which report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required.
RCRA Violators List	RAATS. RCRA Administrative Actions Taken. RAATS information is now contained in the RCRIS database and includes records of administrative enforcement actions against facilities for noncompliance.
RCRIS	Resource Conservation and Recovery Information System, as defined in the Records Review section of this report.
REC	Recognized Environmental Conditions are defined by ASTM E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment. De minimis conditions are not recognized environmental conditions."
SCL	State "CERCLIS" List (see SPL /State Priority List, below).
SPCC	Spill Prevention, Control and Countermeasures. SPCC plans are required under federal law (Clean Water Act and Oil Pollution Act) for any facility storing petroleum in tanks and/or containers of 55-gallons or more that when taken in aggregate exceed 1,320 gallons. SPCC plans are also required for facilities with underground petroleum storage tanks with capacities of over 42,000 gallons. Many states have similar spill prevention programs, which may have additional requirements.
SPL	State Priority List. State list of confirmed sites having contamination in which the state is actively involved in clean up activities or is actively pursuing potentially responsible parties for clean up. Sometimes referred to as a State "CERCLIS" List.
SQG	Small Quantity Generator
SWF/LF	State and/or Tribal database of Solid Waste/Landfill facilities. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.
TPH	Total Petroleum Hydrocarbons
TRI	Toxic Release Inventory. Routine EPA report on releases of toxic chemicals to the environment based upon information submitted by entities subject to reporting under the Emergency Planning and Community Right to Know Act.
TSCA	Toxic Substances Control Act. A federal law regulating manufacture, import, processing and distribution of chemical substances not specifically regulated by other federal laws (such as asbestos, PCBs, lead-based paint and radon). 15 U.S.C 2601 et seq.

Description of Selected General Terms and Acronyms

Term/Acronym	Description
USACE	United States Army Corps of Engineers
USC	United States Code
USGS	United States Geological Survey
USNRCS	United States Department of Agriculture-Natural Resource Conservation Service
UST	Underground Storage Tank. Most federal and state regulations, as well as ASTM E1527-13, define this as any tank, incl., underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10% or more beneath the surface of the ground (i.e., buried).
VCP	State and/or Tribal facilities included as Voluntary Cleanup Program sites.
VOC	Volatile Organic Compound
Wetlands	<p>Areas that are typically saturated with surface or ground water that creates an environment supportive of wetland vegetation (i.e., swamps, marshes, bogs). The <u>Corps of Engineers Wetlands Delineation Manual</u> (Technical Report Y-87-1) defines wetlands as areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. For an area to be considered a jurisdictional wetland, it must meet the following criteria: more than 50 percent of the dominant plant species must be categorized as Obligate, Facultative Wetland, or Facultative on lists of plant species that occur in wetlands; the soil must be hydric; and, wetland hydrology must be present.</p> <p>The federal Clean Water Act which regulates “waters of the US,” also regulates wetlands, a program jointly administered by the USACE and the EPA. Waters of the U.S. are defined as: (1) waters used in interstate or foreign commerce, including all waters subject to the ebb and flow of tides; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, etc., which the use, degradation, or destruction could affect interstate/ foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U. S., (5) tributaries of waters identified in 1 through 4 above; (6) the territorial seas; and (7) wetlands adjacent to waters identified in 1 through 6 above. Only the USACE has the authority to make a final wetlands jurisdictional determination.</p>