

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural  
Resources Department

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	nOY1816446096
District RP	IRP-5090
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Armstrong Energy Corporation	OGRID
Contact Name Ron Hillman	Contact Telephone 505-625-2222
Contact email rhillman@aecnrm.com	Incident # nOY1816446096
Contact mailing address PO Box 1973, Roswell, NM 88202	

### Location of Release Source

Latitude 32.622519 Longitude -103.475553  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name West Pearl Queen	Site Type Abandoned
Date Release Discovered unknown	API# (if applicable)

Unit Letter	Section	Township	Range	County
B	32	19S	35E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) unknown	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) unknown	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)


Cause of Release unknown

Incident ID	nOY1816446096
District RP	1RP-5090
Facility ID	
Application ID	

<p>Was this a major release as defined by 19.15.29.7(A) NMAC?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>If YES, for what reason(s) does the responsible party consider this a major release?</p>
<p>If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?</p> <p>No, this was a historical spill that was acquired by Armstrong.</p>	

## Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:   	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Ronald D. Hillman	Title: Vice President
Signature: 	Date: 02/04/2022
email: rhillman@aecnm.com	Telephone: 505-625-2222

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State of New Mexico  
Oil Conservation Division

Incident ID	nOY1816446096
District RP	1RP-5090
Facility ID	
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**Site Assessment/Characterization***This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	>51 <100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

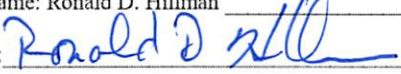
Form C-141

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Oil Conservation Division

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Printed Name: Ronald D. Hillman Title: Vice President  
Signature:  Date: 02/09/2022  
email: rhillman@aecnm.com Telephone: 505-625-2222

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_



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## Remediation Plan

**Remediation Plan Checklist:** Each of the following items must be included in the plan.

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** Each of the following items must be confirmed as part of any request for deferral of remediation.

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Ronald D. Hillman Title: Vice President  
Signature: Ronald D Hillman Date: 02/09/2022  
email: rhillman@aecnrm.com Telephone: 505-625-2222

**OCD Only**Received by: Chad Hensley Date: 03/18/2022

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved  
see App ID 247752

Signature: Nelson Velez Date: 11/03/2023



**Pima Environmental Services**  
**5614 N. Lovington Highway**  
**Hobbs, NM 88240**  
**575-964-7740**

July 5<sup>th</sup>, 2023

NMOCD District 2  
 811 S. First Street  
 Artesia, NM 88210

**Re: Work Plan and Variance Request Report**  
**West Pearl Queen**  
**API No. N/A**  
**GPS: Latitude 32.622519 Longitude -103.475553**  
**UL "B", Sec. 32, T19S, R35E**  
**Lea County, NM**  
**NMOCD Ref. NOY1816446096**

Pima Environmental Services, LLC (Pima) has been contracted by Armstrong Energy Corporation (Devon) to perform a spill assessment and to submit a work plan and variance request report for remediation activities on the open releases that occurred at the West Pearl Queen (WPQ). The initial C-141 was submitted on June 13<sup>th</sup>, 2018, and was assigned Incident ID NOY1816446096, by the New Mexico Oil Conservation Division (NMOCD). See Appendix C for Initial C-141.

#### Site Characterization

The WPQ is located approximately twelve (12) miles west of Monument, NM. This spill site is in Unit B, Section 32, Township 19S, Range 35E, Latitude 32.622519, Longitude -103.475553, Lea County, NM. Figure 1 references a location map.

Per the New Mexico Bureau of Geology and Mineral Resources, the geology is in the Eolian and piedmont deposits (Holocene to middle Pleistocene). The soil in the area is made up of Kermit soils and Dune land, 0 to 12 percent slopes according to the United States Department of Agriculture Natural Resources Conservation Service soil survey (Appendix B). The drainage courses in this area are well-drained. There is a low potential for karst geology to be present in the area of the WPQ (Figure 3).

According to the New Mexico Office of the State Engineer, depth to the nearest groundwater in this area is 28 feet below grade surface (BGS). According to the United States Geological Survey (USGS), the nearest depth to groundwater is greater than 31.91 feet below grade surface (BGS). The nearest surface water is an unnamed salt playa located 11.56 miles to the west of the WPQ. See Appendix A for referenced water surveys.

Table 1 NMAC and Closure Criteria 19.15.29					
Depth to Groundwater (Appendix A)	Constituent & Limits				
	Chlorides	Total TPH	GRO+DRO	BTEX	Benzene
<50' (Lack of GW)	600 mg/kg	100 mg/kg		50 mg/kg	10 mg/kg
51-100'	10,000 mg/kg	2,500 mg/kg	1,000 mg/kg	50 mg/kg	10 mg/kg
>100'	20,000 mg/kg	2,500 mg/kg	1,000 mg/kg	50 mg/kg	10 mg/kg

Reference Figure 2 for a TOPO Map.

#### Release Information

On June 13<sup>th</sup>, 2018, a notice was given by SLO that this station was abandoned and needed to be remediated.

### Site Assessment and Soil Sampling Results

On April 5<sup>th</sup>, and May 16<sup>th</sup>, 2023, Pima Environmental mobilized personnel to conduct a site assessment and obtain soil samples with a hand auger to various depths. Pima sampled the area located on the northern pit previously excavated by HRL along with the southeast slump. We collected a total of forty-two soil samples, soil sample points (S1-S8) were collected at various depths, with efforts to determine vertical delineation. Soil samples (SW1-SW10) were collected along the side walls of both open excavations in efforts to determine horizontal delineation. The laboratory results of this sampling event can be found in the following data table.

#### 4-5-2023 and 5-16-2023 Soil Sample Results

NMOCD Table 1 Closure Criteria 19.15.29 NMAC (Depth to Groundwater is 0-50')								
ARMSTRONG ENERGY - WEST PEARL QUEEN								
Sampling Date: 4/5/2023, 5/16/2023		NM Approved Laboratory Results						
Sample ID	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
S-1	4'	ND	ND	ND	36.8	54.8	91.6	524
	6'	ND	ND	ND	ND	ND	0	749
	8'	ND	ND	ND	ND	ND	0	1150
	9'	ND	ND	ND	ND	ND	0	ND
S-2	10'	ND	ND	ND	138	304	442	448
	12'	ND	ND	ND	105	210	315	47.3
	14'	ND	ND	ND	268	441	709	ND
	15'	ND	ND	ND	ND	ND	0	ND
S-3	Surface	ND	ND	ND	ND	ND	0	ND
	2'	ND	ND	ND	ND	ND	0	135
	4'	ND	ND	ND	ND	ND	0	889
	5'	ND	ND	ND	ND	ND	0	ND
S-4	3'	ND	ND	ND	292	469	761	ND
	5'	ND	ND	ND	329	762	1091	ND
	7'	ND	ND	ND	375	691	1066	ND
	8'	ND	ND	ND	ND	ND	0	ND
S-5	3'	ND	ND	ND	58.2	73.8	132	280
	5'	ND	ND	ND	ND	ND	0	ND
	7'	ND	ND	ND	ND	ND	0	ND
S-6	3'	ND	ND	ND	35.9	101	136.9	23.8
	5'	ND	ND	ND	ND	ND	0	ND
	7'	ND	ND	ND	ND	ND	0	31.1
S-7	6'	ND	ND	ND	570	961	1531	ND
	8'	ND	ND	ND	288	532	820	ND
	10'	ND	ND	ND	407	675	1082	ND
	11'	ND	ND	ND	ND	ND	0	ND
S-8	3'	ND	ND	ND	ND	ND	0	73
	5'	ND	ND	ND	ND	ND	0	43
	7'	ND	ND	ND	ND	ND	0	22.6
SW 1	6"	ND	ND	ND	ND	ND	0	ND
SW 2	6"	ND	ND	ND	ND	ND	0	ND
SW 3	6"	ND	ND	ND	ND	ND	0	ND
SW 4	6"	ND	ND	ND	614	1010	1624	ND
	6"	ND	ND	ND	ND	ND	0	ND
SW 5	6"	ND	ND	ND	631	941	1572	ND
	6"	ND	ND	ND	ND	ND	0	ND
SW 6	6"	ND	ND	ND	32.9	ND	32.9	27.4
	6"	ND	ND	ND	ND	ND	0	ND
SW 7	6"	ND	ND	ND	ND	ND	0	ND
SW 8	6"	ND	ND	ND	ND	ND	0	ND
SW 9	6"	ND	ND	ND	ND	ND	0	ND
SW 10	6"	ND	ND	ND	ND	ND	0	ND

ND- Non Detectable

Complete Laboratory Reports are attached in Appendix D.

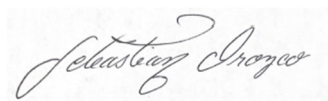
### Proposed Site Remediation and Variance Request

Pima proposes that the contaminated areas from the releases and from our sampling event that exceed NMAC Closure Criteria be remediated through excavation and removal using mechanical equipment. The following proposals are based on lab data. The areas surrounding soil sample S1 will be excavated to 9 feet in depth, S2 will be excavated to 15 feet, S3 will be excavated to 5 feet, S4 will be excavated to 8 feet, S5 and S6 will be excavated to 5 feet, S7 will be excavated to 11 feet. We are estimating approximately 3,953 cubic yards of contaminated material will be removed. The proposed schedule for remediation will be 60 days from approval.

Pima Environmental kindly requests that the sampling protocol be changed to incorporate one sample per every 500 square feet. Five-point composite bottom and sidewall samples will be obtained to ensure that the vertical and horizontal extents of the contamination have been removed. Laboratory analysis will include Method 8015 for TPH, including MRO, DRO, and GRO and Method SM-4500 for chlorides. Upon laboratory results showing all samples meet the required closure criteria, the excavation will be backfilled with locally obtained clean like material and contoured to match the surrounding location.

Should you have any questions or need additional information, please feel free to contact Sebastian Orozco at 619-721-4813 or [sebastian@pimaoil.com](mailto:sebastian@pimaoil.com).

Respectfully,



Sebastian Orozco  
Environmental Professional  
Pima Environmental Services, LLC

#### **Attachments**

##### Figures:

- 1- Location Map
- 2- TOPO Map
- 3- Karst Map
- 4- Site Map

##### Appendices:

- Appendix A- Referenced Water Surveys
- Appendix B- Soil Survey and Geological Data
- Appendix C- C-141's
- Appendix D- Laboratory Reports



Pima Environmental Services

**Figures:**

1-Location Map

2-Topographic Map

3-Karst Map



4-Site Map

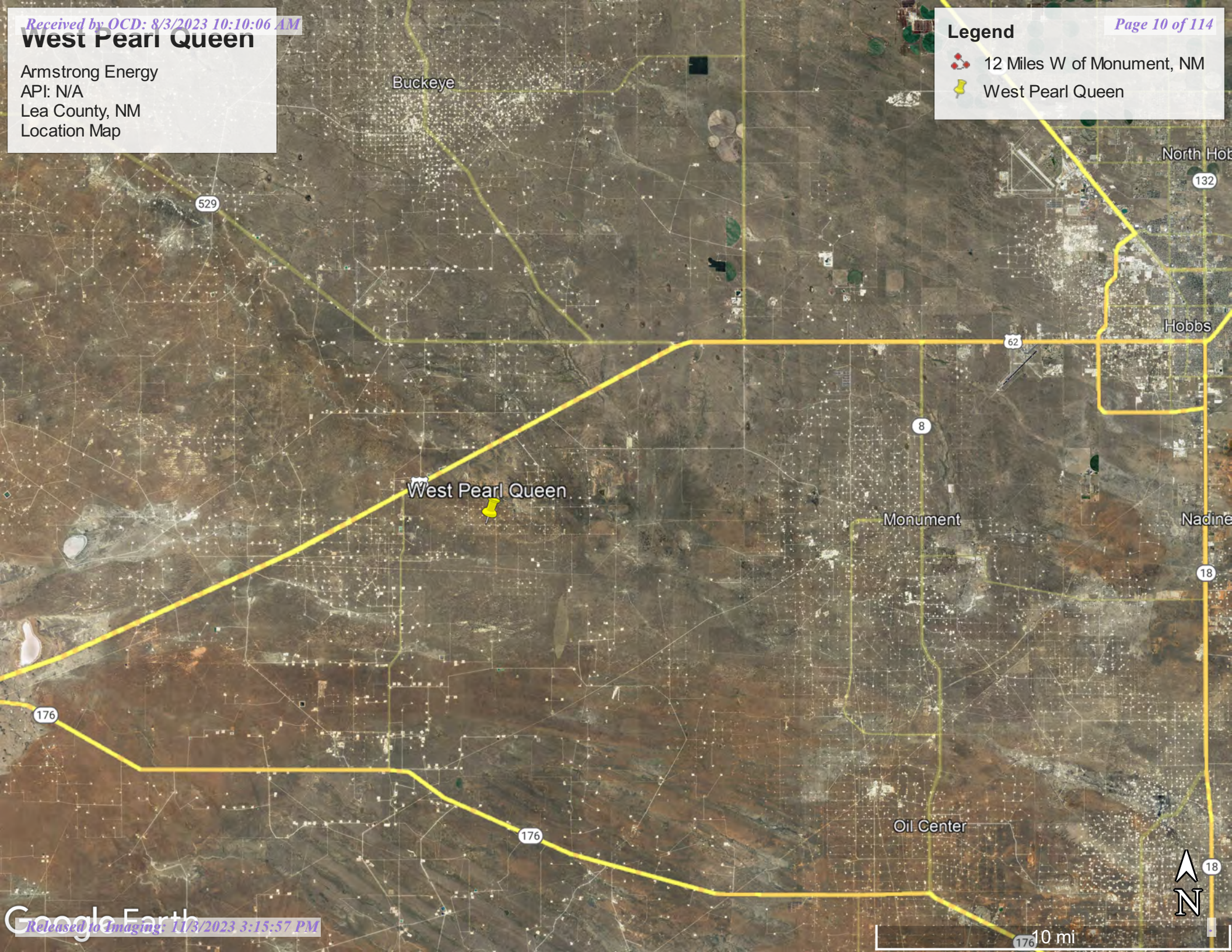


# West Pearl Queen

Armstrong Energy  
API: N/A  
Lea County, NM  
Location Map

## Legend

-  12 Miles W of Monument, NM
-  West Pearl Queen



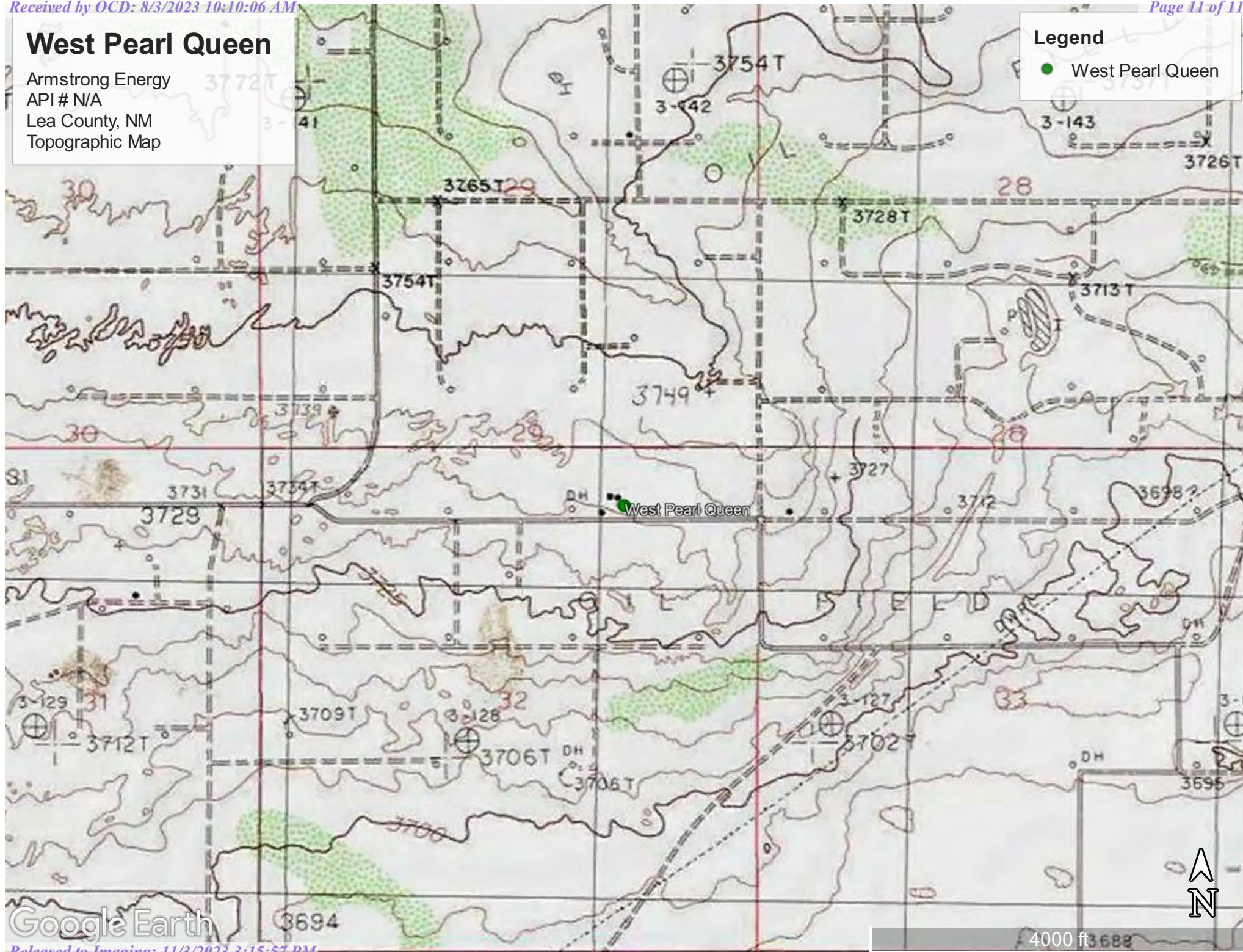


# West Pearl Queen

Armstrong Energy  
API # N/A  
Lea County, NM  
Topographic Map

## Legend

● West Pearl Queen



Google Earth

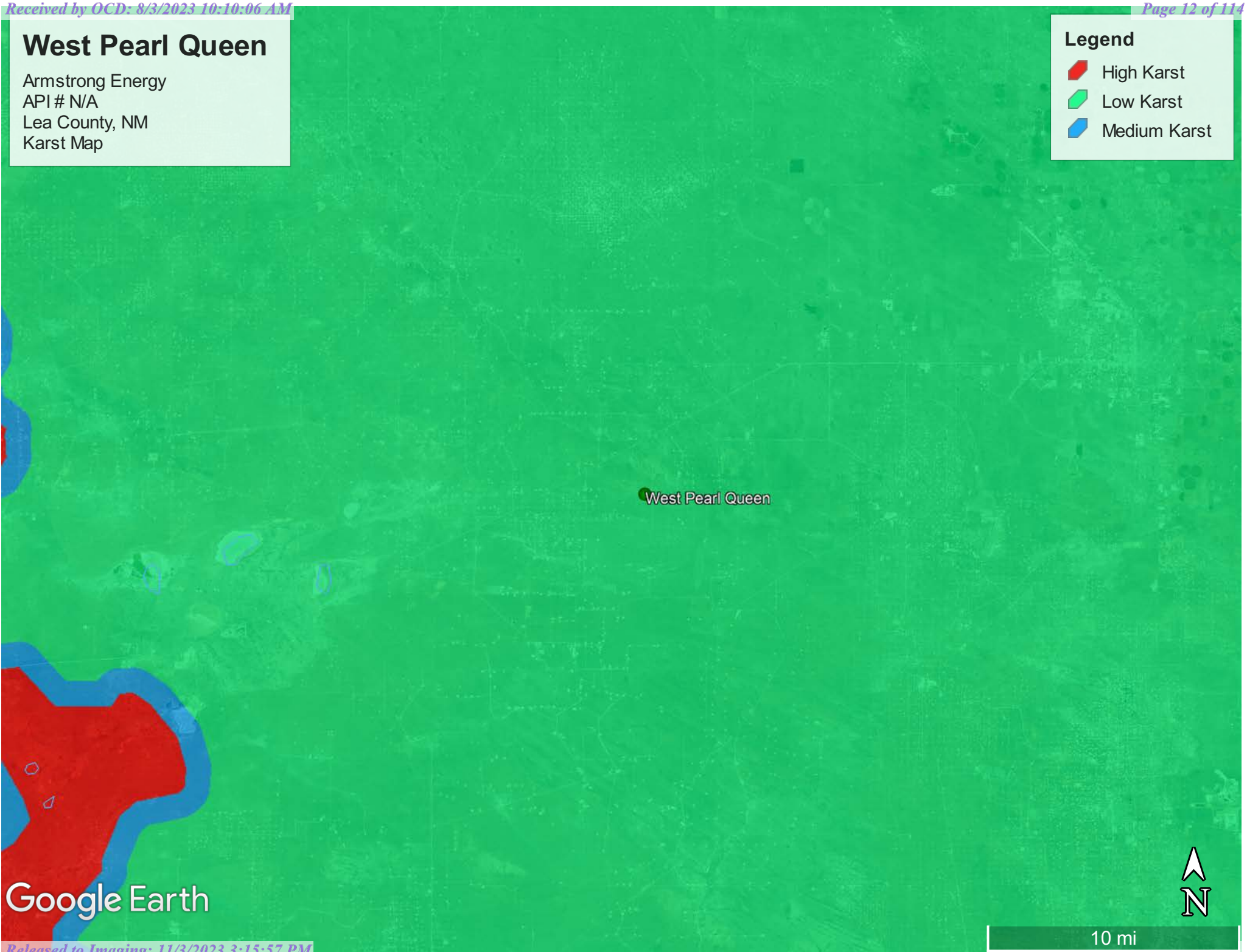
4000 ft



# West Pearl Queen

Armstrong Energy  
API # N/A  
Lea County, NM  
Karst Map

- Legend**
- High Karst
  - Low Karst
  - Medium Karst





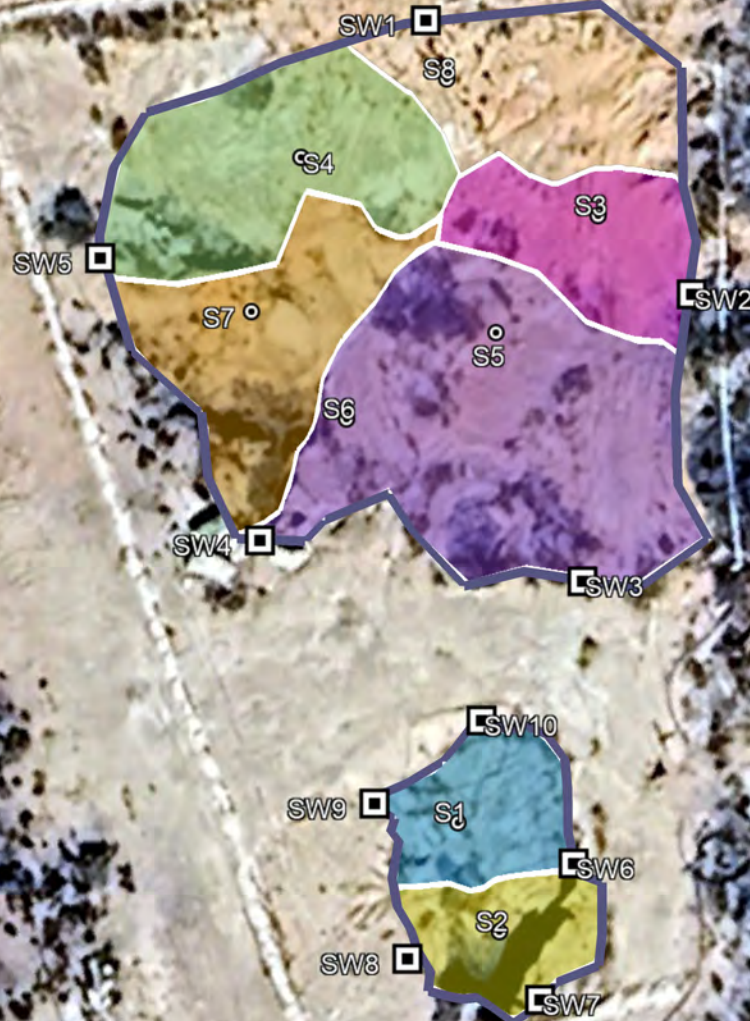
## West Pearl Queen

Armstrong Energy  
32.622519,-103.475553  
Eddy County, NM  
Site Map  
~19,900 ft<sup>2</sup>

West Pearl Queen

### Legend

- 1' Additional Excavation to 4-5' ~7120ft<sup>2</sup>
- 5' Additional Excavation to 11' ~3320ft<sup>2</sup>
- 5' Additional Excavation to 15' ~1539ft<sup>2</sup>
- 5' Additional Excavation to 8' ~3950ft<sup>2</sup>
- 5' Additional Excavation to 9' ~1700ft<sup>2</sup>
- 5' Excavation ~2253ft<sup>2</sup>
- Bottom Sample
- Side Wall Sample
- West Pearl Queen







Pima Environmental Services

**Appendix A**

Water Surveys:

OSE

USGS

Surface Water Map





# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">L 14876 POD1</a>		L	LE	2	1	2	32	19S	35E	643011	3610472	8	25	0	25
<a href="#">L 14876 POD2</a>		L	LE	2	1	2	32	19S	35E	642992	3610483	19	37	28	9
<a href="#">L 14876 POD10</a>		L	LE	2	1	2	32	19S	35E	642998	3610500	22			
<a href="#">L 14876 POD9</a>		L	LE	2	1	2	32	19S	35E	643000	3610508	29			
<a href="#">L 14876 POD13</a>		L	LE	2	1	2	32	19S	35E	642987	3610500	30		18	
<a href="#">L 14876 POD4</a>		L	LE	2	1	2	32	19S	35E	643016	3610516	35	25	22	3
<a href="#">L 14876 POD7</a>		L	LE	2	1	2	32	19S	35E	643026	3610515	38		19	
<a href="#">L 14876 POD8</a>		L	LE	2	1	2	32	19S	35E	642983	3610507	38			
<a href="#">L 14876 POD5</a>		L	LE	2	1	2	32	19S	35E	642992	3610517	40			
<a href="#">L 14876 POD11</a>		L	LE	2	1	2	32	19S	35E	642990	3610522	47			
<a href="#">L 14876 POD14</a>		L	LE	2	1	2	32	19S	35E	643023	3610529	50			
<a href="#">L 14876 POD12</a>		L	LE	2	1	2	32	19S	35E	642974	3610515	50			
<a href="#">L 14876 POD3</a>		L	LE	2	1	2	32	19S	35E	643014	3610535	54	40	0	40
<a href="#">L 15106 POD2</a>		L	LE	1	2	2	32	19S	35E	643119	3610506	111	55	51	4
<a href="#">L 15106 POD1</a>		L	LE	2	1	2	32	19S	35E	643002	3610606	125	56	21	35
<a href="#">L 15106 POD3</a>		L	LE	2	1	2	32	19S	35E	642875	3610512	139	55	28	27

Average Depth to Water: **20 feet**

Minimum Depth: **0 feet**

Maximum Depth: **51 feet**

**Record Count:** 16

**UTM NAD83 Radius Search (in meters):**

**Easting (X):** 643010.78

**Northing (Y):** 3610480.85

**Radius:** 1000

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/3/23 9:31 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



[USGS Home](#)  
[Contact USGS](#)  
[Search USGS](#)

## National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

- See the [Water Data for the Nation Blog](#) for the latest news and updates.

Groundwater levels for the Nation



Important: [Next Generation Monitoring Location Page](#)

## Search Results -- 1 sites found

site\_no list =

- 323616103272401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

## USGS 323616103272401 20S.35E.04.22131

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°36'16", Longitude 103°27'24" NAD27

Land-surface elevation 3,687 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

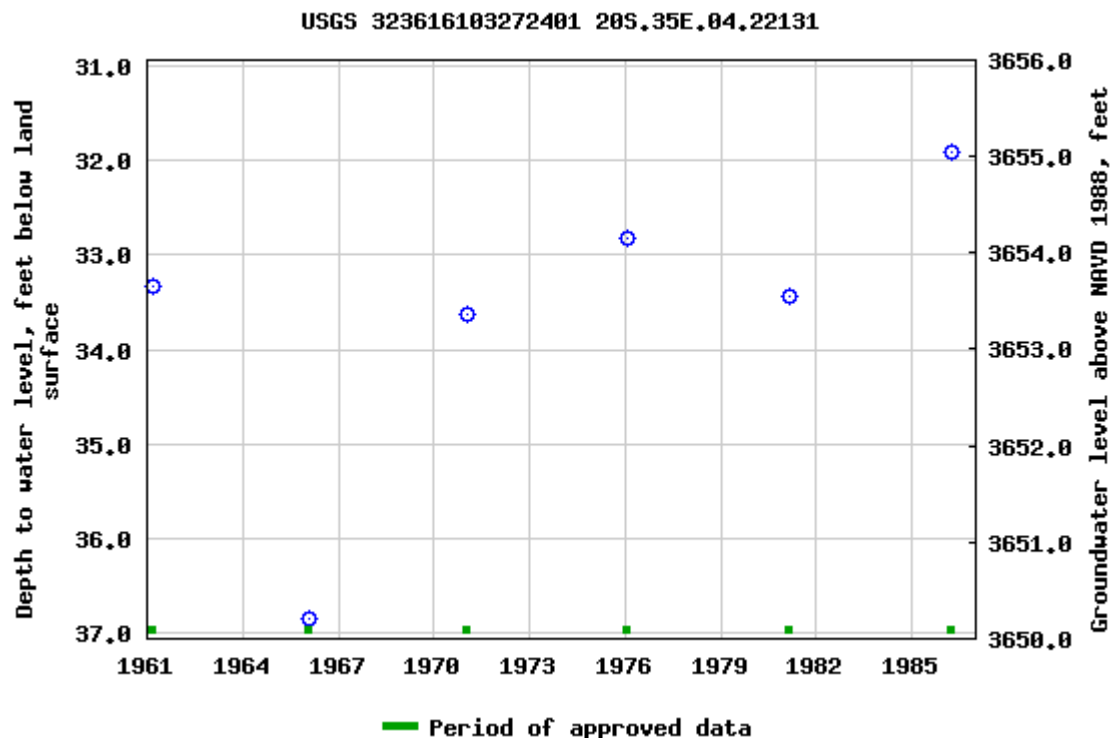
### Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

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**Title: Groundwater for USA: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>**

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2022-12-08 13:56:59 EST

0.56 0.49 nadww02







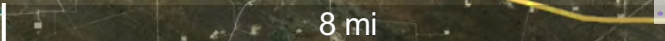
# West Pearl Queen

Armstrong Energy  
Lea County, NM  
Surface Water Map

Legend

 11.56 Miles

 West Pearl Queen







Pima Environmental Services

**Appendix B**

Soil Survey & Geological Data

FEMA Flood Map

Wetlands Map



Map Unit Description: Kermit soils and Dune land, 0 to 12 percent slopes---Lea County, New Mexico

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## Lea County, New Mexico

### KM—Kermit soils and Dune land, 0 to 12 percent slopes

#### Map Unit Setting

*National map unit symbol:* dmpx  
*Elevation:* 3,000 to 4,400 feet  
*Mean annual precipitation:* 10 to 15 inches  
*Mean annual air temperature:* 60 to 62 degrees F  
*Frost-free period:* 190 to 205 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Kermit and similar soils:* 46 percent  
*Dune land:* 44 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Kermit

##### Setting

*Landform:* Dunes  
*Landform position (two-dimensional):* Shoulder, backslope, footslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex, linear, concave  
*Across-slope shape:* Convex  
*Parent material:* Calcareous sandy eolian deposits derived from sedimentary rock

##### Typical profile

*A - 0 to 8 inches:* fine sand  
*C - 8 to 60 inches:* fine sand

##### Properties and qualities

*Slope:* 5 to 12 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Excessively drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* Very high (20.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 3 percent  
*Gypsum, maximum content:* 1 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 2.0  
*Available water supply, 0 to 60 inches:* Low (about 3.1 inches)

Map Unit Description: Kermit soils and Dune land, 0 to 12 percent slopes---Lea County, New Mexico

---

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* A

*Ecological site:* R070BC022NM - Sandhills

*Hydric soil rating:* No

**Description of Dune Land****Setting**

*Landform:* Dunes

*Landform position (two-dimensional):* Shoulder, backslope, footslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex, linear, concave

*Across-slope shape:* Convex

*Parent material:* Sandy eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 6 inches:* fine sand

*C - 6 to 60 inches:* fine sand

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8

*Hydrologic Soil Group:* A

*Hydric soil rating:* No

**Minor Components****Palomas**

*Percent of map unit:* 3 percent

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

**Pyote**

*Percent of map unit:* 3 percent

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

**Wink**

*Percent of map unit:* 2 percent

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

**Maljamar**

*Percent of map unit:* 2 percent

*Ecological site:* R070BD003NM - Loamy Sand

Map Unit Description: Kermit soils and Dune land, 0 to 12 percent slopes---Lea County, New Mexico

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*Hydric soil rating:* No

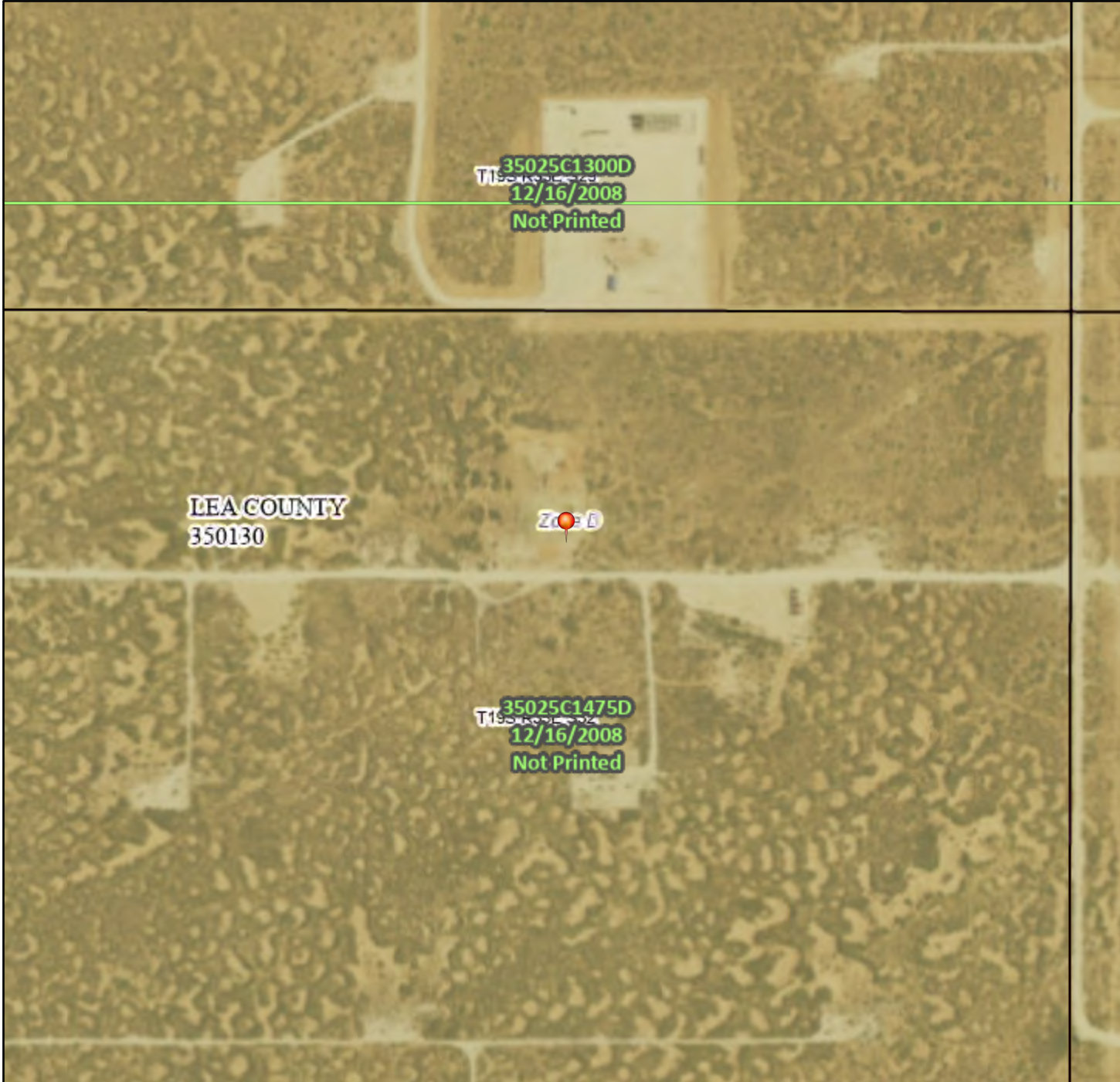
## Data Source Information

Soil Survey Area: Lea County, New Mexico  
Survey Area Data: Version 19, Sep 8, 2022

# National Flood Hazard Layer FIRMette



103°28'51"W 32°37'36"N



### Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

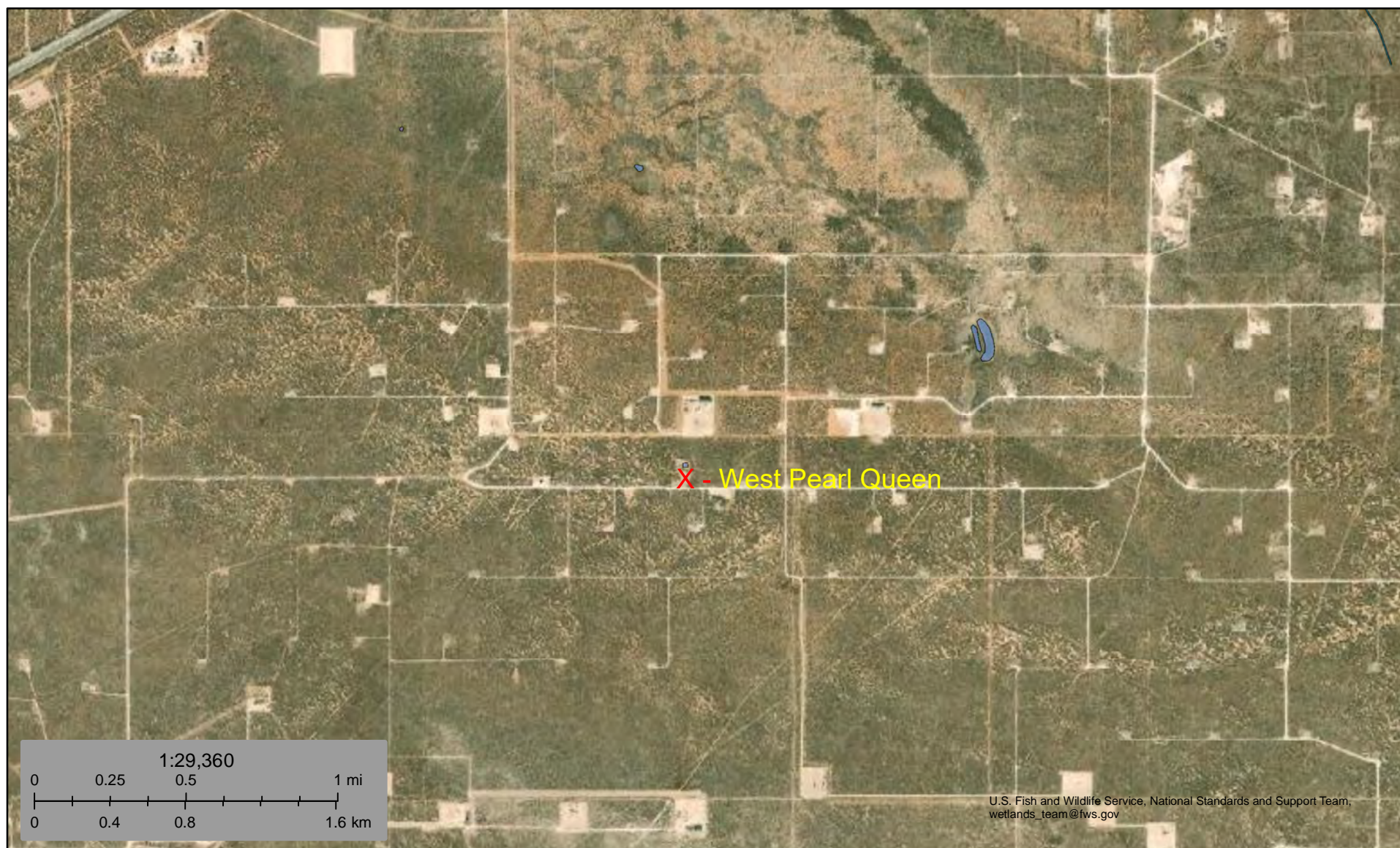
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/8/2022 at 2:04 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





## Wetlands Map



December 8, 2022

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.





Pima Environmental Services

**Appendix C**

C-141 Form

48-Hour Notification

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised April 3, 2017  
Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Armstrong Energy Corporation	Contact Kyle Alpers
Address PO Box 1973	Telephone No. 575-623-2999
Facility Name West Pearl Queen Site	Facility Type abandoned

Surface Owner: State	Mineral Owner: State	API No. N/A
----------------------	----------------------	-------------

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	32	19S	35E					

Latitude: 32.622519 Longitude: -103.475553 D83

#### NATURE OF RELEASE

Type of Release: Leak	Volume of Release: unknown	Volume Recovered: 1007 bbls
Source of Release: Pit	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: unknown
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

**RECEIVED**

By Olivia Yu at 12:39 pm, Jun 13, 2018

Describe Cause of Problem and Remedial Action Taken.\*

Notice was given by SLO that this station was abandoned and needed to be remediated. Delineation and discovery will occur once the surface is cleared of material. A work plan detailing the contamination and proposed remediation activity will be submitted in the future.

Describe Area Affected and Cleanup Action Taken.\*

Facility as determined by existing fenceline will be cleared of surface material. Standing liquid in lined pit has been removed.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Ronald D Hillman</i>		OIL CONSERVATION DIVISION	
Printed Name: Ronald D Hillman		Approved by Environmental Specialist: <i>mf</i>	
Title: UP	Approval Date: 6/13/2018	Expiration Date:	
E-mail Address: <i>chillman@aecnm.com</i>	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>	
Date: 6/12/18	Phone: (575) 625-2222		

\* Attach Additional Sheets If Necessary

Incident ID	NOY1816446096
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&lt;50'</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

### **Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	NOY1816446096
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Jeffery Tew Title: Operations Engineer  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
email: Jtew@aecnm.com Telephone: 575-420-7600

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	NOY1816446096
District RP	
Facility ID	
Application ID	

## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Jeffery Tew Title: Operations Engineer  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
email: Jtew@aecnm.com Telephone: 575-420-7600

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

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



Pima Environmental Services

## **Appendix D**

Photographic Documentation





**SITE PHOTOGRAPHS**  
**PIMA ENVIRONMENTAL**  
**West Pearl Queen**













Pima Environmental Services

## **Appendix E**

Laboratory Reports



Report to:  
Tom Bynum



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Pima Environmental Services-Carlsbad

Project Name: West Pearl Queen

Work Order: E304030

Job Number: 21064-0001

Received: 4/7/2023

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
4/13/23

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 4/13/23

Tom Bynum  
PO Box 247  
Plains, TX 79355-0247



Project Name: West Pearl Queen  
Workorder: E304030  
Date Received: 4/7/2023 8:15:00AM

Tom Bynum,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/7/2023 8:15:00AM, under the Project Name: West Pearl Queen.

The analytical test results summarized in this report with the Project Name: West Pearl Queen apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**  
**Lynn Jarboe**  
Technical Representative/Client Services  
Office: 505-421-LABS(5227)  
Cell: 505-320-4759  
[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**West Texas Midland/Odessa Area**  
**Rayny Hagan**  
Technical Representative  
Office: 505-421-LABS(5227)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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## Sample Summary

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	<b>Reported:</b> 04/13/23 10:24
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S7 - 10'	E304030-01A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S8 - 3'	E304030-02A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S8 - 5'	E304030-03A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S8 - 7'	E304030-04A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW1	E304030-05A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW2	E304030-06A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW3	E304030-07A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW4	E304030-08A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW5	E304030-09A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW6	E304030-10A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW7	E304030-11A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW8	E304030-12A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW9	E304030-13A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
SW10	E304030-14A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

S7 - 10'

E304030-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	97.4 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	97.4 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	407	25.0	1	04/10/23	04/11/23	
Oil Range Organics (C28-C36)	675	50.0	1	04/10/23	04/11/23	
Surrogate: n-Nonane	107 %	50-200		04/10/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

S8 - 3'

E304030-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	95.5 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	104 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	95.5 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	104 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/10/23	
Surrogate: n-Nonane	110 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	73.0	20.0	1	04/07/23	04/07/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

S8 - 5'

E304030-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/10/23	
Surrogate: n-Nonane	106 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	43.0	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

S8 - 7'

E304030-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	97.9 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	97.9 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/10/23	
Surrogate: n-Nonane	103 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	22.6	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW1

## E304030-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.1 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	101 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.1 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	101 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/10/23	
Surrogate: n-Nonane	108 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW2

## E304030-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	94.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	99.1 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	94.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	99.1 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/10/23	
Surrogate: n-Nonane	107 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW3

## E304030-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.9 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.2 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.9 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.2 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/10/23	
Surrogate: n-Nonane	108 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW4

## E304030-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	614	250	10	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	1010	500	10	04/10/23	04/10/23	
Surrogate: n-Nonane	119 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW5

## E304030-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.1 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.1 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	631	250	10	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	941	500	10	04/10/23	04/10/23	
Surrogate: n-Nonane	115 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW6

## E304030-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.5 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.5 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	32.9	25.0	1	04/10/23	04/11/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/11/23	
Surrogate: n-Nonane	110 %	50-200		04/10/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	27.4	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

SW7

E304030-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.5 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	97.1 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.5 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	97.1 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	50.0	2	04/10/23	04/10/23	
Oil Range Organics (C28-C36)	ND	100	2	04/10/23	04/10/23	
Surrogate: n-Nonane	106 %	50-200		04/10/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW8

## E304030-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	99.2 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	93.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	99.2 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/11/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/11/23	
Surrogate: n-Nonane	116 %	50-200		04/10/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW9

## E304030-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	91.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	91.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/11/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/11/23	
Surrogate: n-Nonane	111 %	50-200		04/10/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/08/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 10:24:08AM

## SW10

## E304030-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.0 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2314047
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	92.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	98.0 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2315001
Diesel Range Organics (C10-C28)	ND	25.0	1	04/10/23	04/11/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/10/23	04/11/23	
Surrogate: n-Nonane	111 %	50-200		04/10/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: BA		Batch: 2314058
Chloride	ND	20.0	1	04/07/23	04/08/23	





## QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	4/13/2023 10:24:08AM

## Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

## Blank (2314047-BLK1)

Prepared: 04/06/23 Analyzed: 04/06/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.488		0.500		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.513		0.500		103	70-130			
Surrogate: Toluene-d8	0.508		0.500		102	70-130			

## LCS (2314047-BS1)

Prepared: 04/06/23 Analyzed: 04/06/23

Benzene	2.32	0.0250	2.50		92.7	70-130			
Ethylbenzene	2.31	0.0250	2.50		92.3	70-130			
Toluene	2.27	0.0250	2.50		90.8	70-130			
o-Xylene	2.35	0.0250	2.50		93.9	70-130			
p,m-Xylene	4.56	0.0500	5.00		91.1	70-130			
Total Xylenes	6.90	0.0250	7.50		92.0	70-130			
Surrogate: Bromofluorobenzene	0.515		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.522		0.500		104	70-130			
Surrogate: Toluene-d8	0.498		0.500		99.6	70-130			

## Matrix Spike (2314047-MS1)

Source: E304022-02

Prepared: 04/06/23 Analyzed: 04/06/23

Benzene	2.35	0.0250	2.50	ND	94.2	48-131			
Ethylbenzene	2.35	0.0250	2.50	ND	93.9	45-135			
Toluene	2.30	0.0250	2.50	ND	91.9	48-130			
o-Xylene	2.37	0.0250	2.50	ND	95.0	43-135			
p,m-Xylene	4.64	0.0500	5.00	ND	92.7	43-135			
Total Xylenes	7.01	0.0250	7.50	ND	93.5	43-135			
Surrogate: Bromofluorobenzene	0.508		0.500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.525		0.500		105	70-130			
Surrogate: Toluene-d8	0.498		0.500		99.6	70-130			

## Matrix Spike Dup (2314047-MSD1)

Source: E304022-02

Prepared: 04/06/23 Analyzed: 04/06/23

Benzene	2.44	0.0250	2.50	ND	97.5	48-131	3.42	23	
Ethylbenzene	2.45	0.0250	2.50	ND	98.0	45-135	4.19	27	
Toluene	2.38	0.0250	2.50	ND	95.3	48-130	3.63	24	
o-Xylene	2.49	0.0250	2.50	ND	99.7	43-135	4.85	27	
p,m-Xylene	4.85	0.0500	5.00	ND	97.0	43-135	4.49	27	
Total Xylenes	7.34	0.0250	7.50	ND	97.9	43-135	4.61	27	
Surrogate: Bromofluorobenzene	0.515		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.531		0.500		106	70-130			
Surrogate: Toluene-d8	0.491		0.500		98.2	70-130			



## QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	<b>Reported:</b> 4/13/2023 10:24:08AM
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	

## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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## Blank (2314047-BLK1)

Prepared: 04/06/23 Analyzed: 04/06/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.488		0.500		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.513		0.500		103	70-130			
Surrogate: Toluene-d8	0.508		0.500		102	70-130			

## LCS (2314047-BS2)

Prepared: 04/06/23 Analyzed: 04/07/23

Gasoline Range Organics (C6-C10)	51.1	20.0	50.0		102	70-130			
Surrogate: Bromofluorobenzene	0.504		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.500		0.500		100	70-130			
Surrogate: Toluene-d8	0.506		0.500		101	70-130			

## Matrix Spike (2314047-MS2)

Source: E304022-02

Prepared: 04/06/23 Analyzed: 04/06/23

Gasoline Range Organics (C6-C10)	45.4	20.0	50.0	ND	90.9	70-130			
Surrogate: Bromofluorobenzene	0.501		0.500		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.519		0.500		104	70-130			
Surrogate: Toluene-d8	0.502		0.500		100	70-130			

## Matrix Spike Dup (2314047-MSD2)

Source: E304022-02

Prepared: 04/06/23 Analyzed: 04/06/23

Gasoline Range Organics (C6-C10)	47.3	20.0	50.0	ND	94.7	70-130	4.10	20	
Surrogate: Bromofluorobenzene	0.513		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.519		0.500		104	70-130			
Surrogate: Toluene-d8	0.503		0.500		101	70-130			



QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	4/13/2023 10:24:08AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2315001-BLK1)					Prepared: 04/10/23 Analyzed: 04/10/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	56.0		50.0		112	50-200			

LCS (2315001-BS1)					Prepared: 04/10/23 Analyzed: 04/10/23				
Diesel Range Organics (C10-C28)	317	25.0	250		127	38-132			
Surrogate: n-Nonane	52.1		50.0		104	50-200			

Matrix Spike (2315001-MS1)					Source: E304030-01		Prepared: 04/10/23 Analyzed: 04/11/23		
Diesel Range Organics (C10-C28)	695	25.0	250	407	115	38-132			
Surrogate: n-Nonane	55.7		50.0		111	50-200			

Matrix Spike Dup (2315001-MSD1)					Source: E304030-01		Prepared: 04/10/23 Analyzed: 04/11/23		
Diesel Range Organics (C10-C28)	710	25.0	250	407	121	38-132	2.11	20	
Surrogate: n-Nonane	52.4		50.0		105	50-200			





QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	4/13/2023 10:24:08AM

Anions by EPA 300.0/9056A

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2314058-BLK1)					Prepared: 04/07/23 Analyzed: 04/07/23				
Chloride	ND	20.0							
LCS (2314058-BS1)					Prepared: 04/07/23 Analyzed: 04/07/23				
Chloride	258	20.0	250		103	90-110			
Matrix Spike (2314058-MS1)					Source: E304030-01		Prepared: 04/07/23 Analyzed: 04/07/23		
Chloride	256	20.0	250	ND	102	80-120			
Matrix Spike Dup (2314058-MSD1)					Source: E304030-01		Prepared: 04/07/23 Analyzed: 04/07/23		
Chloride	260	20.0	250	ND	104	80-120	1.45	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	
PO Box 247	Project Number:	21064-0001	Reported:
Plains TX, 79355-0247	Project Manager:	Tom Bynum	04/13/23 10:24

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Project Information

## Chain of Custody

Client: Pima Environmental Services Project: <u>West Pearl Queen</u> Project Manager: Tom Bynum Address: 5614 N. Lovington Hwy. City, State, Zip: <u>Hobbs, NM, 88240</u> Phone: 580-748-1613 Email: <u>tom@pimaoil.com</u> Report due by:					Bill To Attention: <u>Pima</u> Address: City, State, Zip: Phone: Email: Pima Project # <u>19-12</u>					Lab Use Only Lab WO# <u>E304030</u> Job Number <u>21064-0001</u> Analysis and Method					TAT 1D 2D 3D Standard <u>X</u>				EPA Program CWA SDWA RCRA	
										State NM CO UT AZ TX <u>X</u>				Remarks						
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/PRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX							
	4/5/23	Soil	1-202	57-10'	1							X								
				58-3'	2															
				58-5'	3															
				58-7'	4															
				sw1	5															
				sw2	6															
				sw3	7															
				sw4	8															
				sw5	9															
				sw6	10															

**Additional Instructions:**

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: \_\_\_\_\_

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>4/6/23</u>	Time <u>1500</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>4-6-23</u>	Time <u>1500</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>4-6-23</u>	Time <u>1745</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>4-6-23</u>	Time <u>1745</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>4-6-23</u>	Time <u>2330</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>4/7/23</u>	Time <u>8:15</u>

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



Released to Imaging: 11/3/2023 3:15:57 PM

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.
Sampled by: _____	

Relinquished by: (Signature)  
Michelle Coughlin  
Relinquished by: (Signature)  
Doreen Rothen

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

## Envirotech Analytical Laboratory

Printed: 4/7/2023 9:58:39AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Pima Environmental Services-Carlsbad	Date Received:	04/07/23 08:15	Work Order ID:	E304030
Phone:	(575) 631-6977	Date Logged In:	04/07/23 08:51	Logged In By:	Caitlin Christian
Email:	tom@pimaoil.com	Due Date:	04/13/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? No
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: na

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Tom Bynum



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Pima Environmental Services-Carlsbad

Project Name: West Pearl Queen

Work Order: E304029

Job Number: 21064-0001

Received: 4/7/2023

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
4/13/23

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 4/13/23

Tom Bynum  
PO Box 247  
Plains, TX 79355-0247



Project Name: West Pearl Queen  
Workorder: E304029  
Date Received: 4/7/2023 8:15:00AM

Tom Bynum,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/7/2023 8:15:00AM, under the Project Name: West Pearl Queen.

The analytical test results summarized in this report with the Project Name: West Pearl Queen apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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## Sample Summary

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	04/13/23 13:59

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S1 - 4'	E304029-01A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S1 - 6'	E304029-02A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S1 - 8'	E304029-03A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S2 - 10'	E304029-04A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S2 - 12'	E304029-05A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S2 - 14'	E304029-06A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S3 - Surface	E304029-07A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S3 - 2'	E304029-08A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S3 - 4'	E304029-09A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S4 - 3'	E304029-10A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S4 - 5'	E304029-11A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S4 - 7'	E304029-12A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S5 - 3'	E304029-13A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S5 - 5'	E304029-14A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S5 - 7'	E304029-15A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S6 - 3'	E304029-16A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S6 - 5'	E304029-17A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S6 - 7'	E304029-18A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S7 - 6'	E304029-19A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.
S7 - 8'	E304029-20A	Soil	04/05/23	04/07/23	Glass Jar, 2 oz.



## Sample Data

Pima Environmental Services-Carlsbad PO Box 247 Plains TX, 79355-0247	Project Name: West Pearl Queen Project Number: 21064-0001 Project Manager: Tom Bynum	<b>Reported:</b> 4/13/2023 1:59:22PM
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S1 - 4'

E304029-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.9 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	117 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	101 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.9 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	117 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	101 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	36.8	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	54.8	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	96.6 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	524	20.0	1	04/07/23	04/07/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S1 - 6'

E304029-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	114 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	114 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	94.2 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	749	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S1 - 8'

E304029-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	95.4 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	1150	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S2 - 10'

E304029-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.7 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	138	125	5	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	304	250	5	04/07/23	04/11/23	
Surrogate: n-Nonane	103 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	448	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S2 - 12'

E304029-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	99.3 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	99.3 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	105	50.0	2	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	210	100	2	04/07/23	04/11/23	
Surrogate: n-Nonane	103 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	47.3	20.0	1	04/07/23	04/07/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S2 - 14'

E304029-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	101 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	101 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	268	50.0	2	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	441	100	2	04/07/23	04/11/23	
Surrogate: n-Nonane	101 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

## S3 - Surface

E304029-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	99.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	116 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	99.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	116 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	98.0 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S3 - 2'

E304029-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	99.0 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	99.0 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	100 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	135	20.0	1	04/07/23	04/07/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S3 - 4'

E304029-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.4 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	95.8 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	889	20.0	1	04/07/23	04/07/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S4 - 3'

E304029-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	96.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	96.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	292	125	5	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	469	250	5	04/07/23	04/11/23	
Surrogate: n-Nonane	96.1 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/10/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S4 - 5'

E304029-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.6 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	112 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.6 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	112 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	329	250	10	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	762	500	10	04/07/23	04/11/23	
Surrogate: n-Nonane	93.8 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/10/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S4 - 7'

E304029-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.6 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.6 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	375	125	5	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	691	250	5	04/07/23	04/11/23	
Surrogate: n-Nonane	98.8 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/10/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S5 - 3'

E304029-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	96.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	96.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	109 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	58.2	25.0	1	04/07/23	04/12/23	
Oil Range Organics (C28-C36)	73.8	50.0	1	04/07/23	04/12/23	
Surrogate: n-Nonane	104 %	50-200		04/07/23	04/12/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	280	20.0	1	04/07/23	04/10/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S5 - 5'

E304029-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	97.2 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	103 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/10/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S5 - 7'

E304029-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/07/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/07/23	
Toluene	ND	0.0250	1	04/07/23	04/07/23	
o-Xylene	ND	0.0250	1	04/07/23	04/07/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/07/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/07/23	
Surrogate: Bromofluorobenzene	98.8 %	70-130		04/07/23	04/07/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/07/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/07/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	101 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/10/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S6 - 3'

E304029-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/08/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/08/23	
Toluene	ND	0.0250	1	04/07/23	04/08/23	
o-Xylene	ND	0.0250	1	04/07/23	04/08/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/08/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	95.7 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	95.7 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	35.9	25.0	1	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	101	50.0	1	04/07/23	04/11/23	
Surrogate: n-Nonane	105 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	23.8	20.0	1	04/07/23	04/10/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S6 - 5'

E304029-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/08/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/08/23	
Toluene	ND	0.0250	1	04/07/23	04/08/23	
o-Xylene	ND	0.0250	1	04/07/23	04/08/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/08/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	96.6 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	96.6 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	104 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	107 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/10/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S6 - 7'

E304029-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/08/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/08/23	
Toluene	ND	0.0250	1	04/07/23	04/08/23	
o-Xylene	ND	0.0250	1	04/07/23	04/08/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/08/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	94.5 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	94.5 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	102 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	ND	25.0	1	04/07/23	04/10/23	
Oil Range Organics (C28-C36)	ND	50.0	1	04/07/23	04/10/23	
Surrogate: n-Nonane	86.3 %	50-200		04/07/23	04/10/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	31.1	20.0	1	04/07/23	04/10/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S7 - 6'

E304029-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/08/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/08/23	
Toluene	ND	0.0250	1	04/07/23	04/08/23	
o-Xylene	ND	0.0250	1	04/07/23	04/08/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/08/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	96.3 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	106 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	105 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/08/23	
Surrogate: Bromofluorobenzene	96.3 %	70-130		04/07/23	04/08/23	
Surrogate: 1,2-Dichloroethane-d4	106 %	70-130		04/07/23	04/08/23	
Surrogate: Toluene-d8	105 %	70-130		04/07/23	04/08/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	570	250	10	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	961	500	10	04/07/23	04/11/23	
Surrogate: n-Nonane	86.3 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/11/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
4/13/2023 1:59:22PM

S7 - 8'

E304029-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Benzene	ND	0.0250	1	04/07/23	04/10/23	
Ethylbenzene	ND	0.0250	1	04/07/23	04/10/23	
Toluene	ND	0.0250	1	04/07/23	04/10/23	
o-Xylene	ND	0.0250	1	04/07/23	04/10/23	
p,m-Xylene	ND	0.0500	1	04/07/23	04/10/23	
Total Xylenes	ND	0.0250	1	04/07/23	04/10/23	
Surrogate: Bromofluorobenzene	99.6 %	70-130		04/07/23	04/10/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/10/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/10/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: SL		Batch: 2314055
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/07/23	04/10/23	
Surrogate: Bromofluorobenzene	99.6 %	70-130		04/07/23	04/10/23	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130		04/07/23	04/10/23	
Surrogate: Toluene-d8	103 %	70-130		04/07/23	04/10/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2314059
Diesel Range Organics (C10-C28)	288	250	10	04/07/23	04/11/23	
Oil Range Organics (C28-C36)	532	500	10	04/07/23	04/11/23	
Surrogate: n-Nonane	87.5 %	50-200		04/07/23	04/11/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2314057
Chloride	ND	20.0	1	04/07/23	04/11/23	



## QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	4/13/2023 1:59:22PM

## Volatile Organic Compounds by EPA 8260B

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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## Blank (2314055-BLK1)

Prepared: 04/07/23 Analyzed: 04/07/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.503		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.592		0.500		118	70-130			
Surrogate: Toluene-d8	0.506		0.500		101	70-130			

## LCS (2314055-BS1)

Prepared: 04/07/23 Analyzed: 04/07/23

Benzene	2.67	0.0250	2.50		107	70-130			
Ethylbenzene	2.57	0.0250	2.50		103	70-130			
Toluene	2.65	0.0250	2.50		106	70-130			
o-Xylene	2.55	0.0250	2.50		102	70-130			
p,m-Xylene	5.18	0.0500	5.00		104	70-130			
Total Xylenes	7.73	0.0250	7.50		103	70-130			
Surrogate: Bromofluorobenzene	0.520		0.500		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.570		0.500		114	70-130			
Surrogate: Toluene-d8	0.505		0.500		101	70-130			

## Matrix Spike (2314055-MS1)

Source: E304029-05

Prepared: 04/07/23 Analyzed: 04/07/23

Benzene	2.62	0.0250	2.50	ND	105	48-131			
Ethylbenzene	2.55	0.0250	2.50	ND	102	45-135			
Toluene	2.61	0.0250	2.50	ND	104	48-130			
o-Xylene	2.57	0.0250	2.50	ND	103	43-135			
p,m-Xylene	5.10	0.0500	5.00	ND	102	43-135			
Total Xylenes	7.67	0.0250	7.50	ND	102	43-135			
Surrogate: Bromofluorobenzene	0.538		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.542		0.500		108	70-130			
Surrogate: Toluene-d8	0.518		0.500		104	70-130			

## Matrix Spike Dup (2314055-MSD1)

Source: E304029-05

Prepared: 04/07/23 Analyzed: 04/07/23

Benzene	2.86	0.0250	2.50	ND	114	48-131	8.79	23	
Ethylbenzene	2.76	0.0250	2.50	ND	110	45-135	7.79	27	
Toluene	2.85	0.0250	2.50	ND	114	48-130	8.52	24	
o-Xylene	2.78	0.0250	2.50	ND	111	43-135	7.84	27	
p,m-Xylene	5.56	0.0500	5.00	ND	111	43-135	8.61	27	
Total Xylenes	8.34	0.0250	7.50	ND	111	43-135	8.36	27	
Surrogate: Bromofluorobenzene	0.536		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.544		0.500		109	70-130			
Surrogate: Toluene-d8	0.506		0.500		101	70-130			



## QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	<b>Reported:</b> 4/13/2023 1:59:22PM
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	

## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: SL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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## Blank (2314055-BLK1)

Prepared: 04/07/23 Analyzed: 04/07/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.503		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.592		0.500		118	70-130			
Surrogate: Toluene-d8	0.506		0.500		101	70-130			

## LCS (2314055-BS2)

Prepared: 04/07/23 Analyzed: 04/07/23

Gasoline Range Organics (C6-C10)	54.9	20.0	50.0		110	70-130			
Surrogate: Bromofluorobenzene	0.528		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.570		0.500		114	70-130			
Surrogate: Toluene-d8	0.531		0.500		106	70-130			

## Matrix Spike (2314055-MS2)

Source: E304029-05

Prepared: 04/07/23 Analyzed: 04/07/23

Gasoline Range Organics (C6-C10)	59.3	20.0	50.0	ND	119	70-130			
Surrogate: Bromofluorobenzene	0.510		0.500		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.556		0.500		111	70-130			
Surrogate: Toluene-d8	0.528		0.500		106	70-130			

## Matrix Spike Dup (2314055-MSD2)

Source: E304029-05

Prepared: 04/07/23 Analyzed: 04/10/23

Gasoline Range Organics (C6-C10)	60.0	20.0	50.0	ND	120	70-130	1.29	20	
Surrogate: Bromofluorobenzene	0.517		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.547		0.500		109	70-130			
Surrogate: Toluene-d8	0.528		0.500		106	70-130			



QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:  4/13/2023 1:59:22PM
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2314059-BLK1)					Prepared: 04/07/23 Analyzed: 04/10/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	46.7		50.0		93.3	50-200			

LCS (2314059-BS1)					Prepared: 04/07/23 Analyzed: 04/10/23				
Diesel Range Organics (C10-C28)	257	25.0	250		103	38-132			
Surrogate: n-Nonane	45.6		50.0		91.1	50-200			

Matrix Spike (2314059-MS1)					Source: E304029-11		Prepared: 04/07/23 Analyzed: 04/11/23		
Diesel Range Organics (C10-C28)	522	250	250	329	77.4	38-132			
Surrogate: n-Nonane	40.5		50.0		80.9	50-200			

Matrix Spike Dup (2314059-MSD1)					Source: E304029-11		Prepared: 04/07/23 Analyzed: 04/11/23		
Diesel Range Organics (C10-C28)	570	250	250	329	96.4	38-132	8.69	20	
Surrogate: n-Nonane	42.1		50.0		84.2	50-200			





QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	4/13/2023 1:59:22PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2314057-BLK1)					Prepared: 04/07/23 Analyzed: 04/07/23				
Chloride	ND	20.0							
LCS (2314057-BS1)					Prepared: 04/07/23 Analyzed: 04/07/23				
Chloride	254	20.0	250		102	90-110			
Matrix Spike (2314057-MS1)					Source: E304029-01		Prepared: 04/07/23 Analyzed: 04/07/23		
Chloride	777	20.0	250	524	101	80-120			
Matrix Spike Dup (2314057-MSD1)					Source: E304029-01		Prepared: 04/07/23 Analyzed: 04/07/23		
Chloride	743	20.0	250	524	87.5	80-120	4.41	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	
PO Box 247	Project Number:	21064-0001	Reported:
Plains TX, 79355-0247	Project Manager:	Tom Bynum	04/13/23 13:59

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Project Information

## Chain of Custody

Page 1 of 4

Client: Pima Environmental Services Project: <u>West Pearl Queen</u> Project Manager: Tom Bynum Address: 5614 N. Lovington Hwy. City, State, Zip: Hobbs, NM, 88240 Phone: 580-748-1613 Email: tom@pimaoil.com Report due by:					Bill To Attention: <u>Bill Pima</u> Address: City, State, Zip Phone: Email: Pima Project # <u>19-12</u>					Lab Use Only Lab WO# <u>F 304 029</u> Job Number <u>21064-0001</u> Analysis and Method DRO/DRO by 8015 GRO/DRO by 8015 BTX by 8021 VOC by 8260 Metals 6010 Chloride 300.0 BGDOC NM BGDOC TX					TAT 1D 2D 3D Standard X				EPA Program CWA SDWA RCRA State NM CO UT AZ TX X	
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX	Remarks						
	4/5/23	Soil	1-202	S1-4'	1							X								
				S1-6'	2															
				S1-8'	3															
				S2-10'	4															
				S2-12'	5															
				S2-14'	6															
				S3-Surface	7															
				S3-2'	8															
				S3-4'	9															
				S4-3'	10															

## Additional Instructions:


I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by:

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 5 °C on subsequent days.

Relinquished by: (Signature) <u>Robert J. J.</u>	Date <u>4/6/23</u>	Time <u>1500</u>	Received by: (Signature) <u>Michelle Gungor</u>	Date <u>4-6-23</u>	Time <u>1500</u>	Lab Use Only
Relinquished by: (Signature) <u>Michelle Gungor</u>	Date <u>4-6-23</u>	Time <u>1745</u>	Received by: (Signature) <u>Robert J. J.</u>	Date <u>4-6-23</u>	Time <u>1745</u>	Received on ice: <u>(Y)</u> / N
Relinquished by: (Signature) <u>Robert J. J.</u>	Date <u>4-6-23</u>	Time <u>2330</u>	Received by: (Signature) <u>Carli Chit</u>	Date <u>4/7/23</u>	Time <u>8:15</u>	T1: T2: T3:
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other						AVG Temp °C <u>4</u>
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA						

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.


**envirotech**



## Project Information

## Chain of Custody

Client: Pima Environmental Services					Bill To		Lab Use Only				TAT				EPA Program	
Project: <u>West Pearl Queen</u>					Attention: <u>Pima</u>		Lab WO# <u>E304029</u>		Job Number <u>210604-0001</u>		1D	2D	3D	Standard	CWA	SDWA
Project Manager: Tom Bynum					Address:		Analysis and Method								RCRA	
Address: <u>5614 N. Lovington Hwy.</u>					City, State, Zip											
City, State, Zip <u>Hobbs, NM, 88240</u>					Phone:											
Phone: <u>580-748-1613</u>					Email:											
Email: <u>tom@pimaoil.com</u>					Pima Project # <u>19-12</u>											
Report due by:																
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX	Remarks		
	4/5/23	Soil	1-202	S4-5'	11							X				
				S4-7'	12											
				S5-3'	13											
				S5-5'	14											
				S5-7'	15											
				S6-3'	16											
				S6-5'	17											
				S6-7'	18											
				S7-6'	19											
				S7-8'	20											

## Additional Instructions:


I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by:

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <u>Michelle Gungah</u>	Date <u>4/6/23</u>	Time <u>1500</u>	Received by: (Signature) <u>Michelle Gungah</u>	Date <u>4-6-23</u>	Time <u>1500</u>	Lab Use Only
Relinquished by: (Signature) <u>Michelle Gungah</u>	Date <u>4-6-23</u>	Time <u>1745</u>	Received by: (Signature) <u>Lorena Lee</u>	Date <u>4-6-23</u>	Time <u>1745</u>	Received on ice: <u>(Y)</u> / N
Relinquished by: (Signature) <u>Lorena Lee</u>	Date <u>4-6-23</u>	Time <u>2330</u>	Received by: (Signature) <u>Carla Chit</u>	Date <u>4/7/23</u>	Time <u>8:15</u>	T1 _____ T2 _____ T3 _____
Sample Matrix: <u>S</u> - Soil, <u>Sd</u> - Solid, <u>Sg</u> - Sludge, <u>A</u> - Aqueous, <u>O</u> - Other _____				Container Type: <u>g</u> - glass, <u>p</u> - poly/plastic, <u>ag</u> - amber glass, <u>v</u> - VOA		

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.


**envirotech**

## Envirotech Analytical Laboratory

Printed: 4/7/2023 10:04:56AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Pima Environmental Services-Carlsbad	Date Received:	04/07/23 08:15	Work Order ID:	E304029
Phone:	(575) 631-6977	Date Logged In:	04/07/23 08:50	Logged In By:	Caitlin Christian
Email:	tom@pimaoil.com	Due Date:	04/13/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
  2. Does the number of samples per sampling site location match the COC? Yes
  3. Were samples dropped off by client or carrier? Yes
  4. Was the COC complete, i.e., signatures, dates/times, requested analyses? No
  5. Were all samples received within holding time? Yes
- Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Project West Pearl Queen has been separated into 2 reports due to sample volume. Workorders are as follows: E304029 & E304030. Time sampled not provided on COC per client.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: na

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Tom Bynum



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Pima Environmental Services-Carlsbad

Project Name: West Pearl Queen

Work Order: E305111

Job Number: 21064-0001

Received: 5/18/2023

Revision: 2

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/24/23

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/24/23

Tom Bynum  
PO Box 247  
Plains, TX 79355-0247



Project Name: West Pearl Queen  
Workorder: E305111  
Date Received: 5/18/2023 8:20:00AM

Tom Bynum,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/18/2023 8:20:00AM, under the Project Name: West Pearl Queen.

The analytical test results summarized in this report with the Project Name: West Pearl Queen apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
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Technical Representative  
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## Sample Summary

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	<b>Reported:</b> 05/24/23 15:39
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S1 - 9'	E305111-01A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.
S2 - 15'	E305111-02A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.
S3 - 5'	E305111-03A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.
S4 - 8'	E305111-04A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.
S7 - 11'	E305111-05A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.
SW4	E305111-06A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.
SW5	E305111-07A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.
SW6	E305111-08A	Soil	05/16/23	05/18/23	Glass Jar, 4 oz.



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

S1 - 9'

E305111-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Benzene	ND	0.0250	1	05/18/23	05/18/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/18/23	
Toluene	ND	0.0250	1	05/18/23	05/18/23	
o-Xylene	ND	0.0250	1	05/18/23	05/18/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/18/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/18/23	
Surrogate: 4-Bromochlorobenzene-PID	98.4 %	70-130		05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/18/23	
Surrogate: 1-Chloro-4-fluorobenzene-FID	87.2 %	70-130		05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2320088
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
Surrogate: n-Nonane	110 %	50-200		05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2320079
Chloride	ND	20.0	1	05/18/23	05/22/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

S2 - 15'

E305111-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Benzene	ND	0.0250	1	05/18/23	05/18/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/18/23	
Toluene	ND	0.0250	1	05/18/23	05/18/23	
o-Xylene	ND	0.0250	1	05/18/23	05/18/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/18/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/18/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		100 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/18/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		87.7 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2320088
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
<i>Surrogate: n-Nonane</i>						
		103 %	50-200	05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2320079
Chloride	ND	20.0	1	05/18/23	05/22/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

S3 - 5'

E305111-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Benzene	ND	0.0250	1	05/18/23	05/18/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/18/23	
Toluene	ND	0.0250	1	05/18/23	05/18/23	
o-Xylene	ND	0.0250	1	05/18/23	05/18/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/18/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/18/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		102 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/18/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		83.4 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2320088
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
<i>Surrogate: n-Nonane</i>						
		95.8 %	50-200	05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2320079
Chloride	ND	20.0	1	05/18/23	05/22/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

S4 - 8'

E305111-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Benzene	ND	0.0250	1	05/18/23	05/18/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/18/23	
Toluene	ND	0.0250	1	05/18/23	05/18/23	
o-Xylene	ND	0.0250	1	05/18/23	05/18/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/18/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/18/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/18/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		86.5 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2320088
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
<i>Surrogate: n-Nonane</i>						
		98.6 %	50-200	05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2320079
Chloride	ND	20.0	1	05/18/23	05/22/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

S7 - 11'

E305111-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Benzene	ND	0.0250	1	05/18/23	05/18/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/18/23	
Toluene	ND	0.0250	1	05/18/23	05/18/23	
o-Xylene	ND	0.0250	1	05/18/23	05/18/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/18/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/18/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		102 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/18/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		85.5 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2320088
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
<i>Surrogate: n-Nonane</i>						
		97.3 %	50-200	05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2320079
Chloride	ND	20.0	1	05/18/23	05/22/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

## SW4

## E305111-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Benzene	ND	0.0250	1	05/18/23	05/18/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/18/23	
Toluene	ND	0.0250	1	05/18/23	05/18/23	
o-Xylene	ND	0.0250	1	05/18/23	05/18/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/18/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/18/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/18/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		82.7 %	70-130	05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2320088
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
<i>Surrogate: n-Nonane</i>						
		98.5 %	50-200	05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2320079
Chloride	ND	20.0	1	05/18/23	05/22/23	





## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

## SW5

## E305111-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2320072	
Benzene	ND	0.0250	1	05/18/23	05/18/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/18/23	
Toluene	ND	0.0250	1	05/18/23	05/18/23	
o-Xylene	ND	0.0250	1	05/18/23	05/18/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/18/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/18/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	99.5 %	70-130		05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2320072	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/18/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	86.3 %	70-130		05/18/23	05/18/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: JL		Batch: 2320088	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
<i>Surrogate: n-Nonane</i>						
	99.1 %	50-200		05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2320079	
Chloride	ND	20.0	1	05/18/23	05/22/23	



## Sample Data

Pima Environmental Services-Carlsbad  
PO Box 247  
Plains TX, 79355-0247

Project Name: West Pearl Queen  
Project Number: 21064-0001  
Project Manager: Tom Bynum

**Reported:**  
5/24/2023 3:39:59PM

## SW6

## E305111-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Benzene	ND	0.0250	1	05/18/23	05/19/23	
Ethylbenzene	ND	0.0250	1	05/18/23	05/19/23	
Toluene	ND	0.0250	1	05/18/23	05/19/23	
o-Xylene	ND	0.0250	1	05/18/23	05/19/23	
p,m-Xylene	ND	0.0500	1	05/18/23	05/19/23	
Total Xylenes	ND	0.0250	1	05/18/23	05/19/23	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	05/18/23	05/19/23	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2320072
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/18/23	05/19/23	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		85.5 %	70-130	05/18/23	05/19/23	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2320088
Diesel Range Organics (C10-C28)	ND	25.0	1	05/19/23	05/20/23	
Oil Range Organics (C28-C36)	ND	50.0	1	05/19/23	05/20/23	
<i>Surrogate: n-Nonane</i>						
		101 %	50-200	05/19/23	05/20/23	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2320079
Chloride	ND	20.0	1	05/18/23	05/22/23	



## QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	5/24/2023 3:39:59PM

## Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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## Blank (2320072-BLK1)

Prepared: 05/18/23 Analyzed: 05/19/23

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.67		8.00		95.9	70-130			

## LCS (2320072-BS1)

Prepared: 05/18/23 Analyzed: 05/19/23

Benzene	4.55	0.0250	5.00		91.1	70-130			
Ethylbenzene	4.77	0.0250	5.00		95.3	70-130			
Toluene	4.83	0.0250	5.00		96.6	70-130			
o-Xylene	4.91	0.0250	5.00		98.1	70-130			
p,m-Xylene	9.71	0.0500	10.0		97.1	70-130			
Total Xylenes	14.6	0.0250	15.0		97.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.66		8.00		95.8	70-130			

## Matrix Spike (2320072-MS1)

Source: E305111-01

Prepared: 05/18/23 Analyzed: 05/18/23

Benzene	4.37	0.0250	5.00	ND	87.3	54-133			
Ethylbenzene	4.55	0.0250	5.00	ND	91.1	61-133			
Toluene	4.64	0.0250	5.00	ND	92.9	61-130			
o-Xylene	4.73	0.0250	5.00	ND	94.6	63-131			
p,m-Xylene	9.28	0.0500	10.0	ND	92.8	63-131			
Total Xylenes	14.0	0.0250	15.0	ND	93.4	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.99		8.00		99.9	70-130			

## Matrix Spike Dup (2320072-MSD1)

Source: E305111-01

Prepared: 05/18/23 Analyzed: 05/18/23

Benzene	4.78	0.0250	5.00	ND	95.6	54-133	9.01	20	
Ethylbenzene	4.99	0.0250	5.00	ND	99.8	61-133	9.08	20	
Toluene	5.07	0.0250	5.00	ND	101	61-130	8.78	20	
o-Xylene	5.15	0.0250	5.00	ND	103	63-131	8.45	20	
p,m-Xylene	10.1	0.0500	10.0	ND	101	63-131	8.81	20	
Total Xylenes	15.3	0.0250	15.0	ND	102	63-131	8.69	20	
Surrogate: 4-Bromochlorobenzene-PID	8.07		8.00		101	70-130			



## QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	5/24/2023 3:39:59PM

## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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## Blank (2320072-BLK1)

Prepared: 05/18/23 Analyzed: 05/19/23

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.08		8.00		88.5	70-130			

## LCS (2320072-BS2)

Prepared: 05/18/23 Analyzed: 05/18/23

Gasoline Range Organics (C6-C10)	44.2	20.0	50.0		88.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.19		8.00		89.9	70-130			

## Matrix Spike (2320072-MS2)

Source: E305111-01

Prepared: 05/18/23 Analyzed: 05/19/23

Gasoline Range Organics (C6-C10)	42.6	20.0	50.0	ND	85.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	6.79		8.00		84.8	70-130			

## Matrix Spike Dup (2320072-MSD2)

Source: E305111-01

Prepared: 05/18/23 Analyzed: 05/18/23

Gasoline Range Organics (C6-C10)	41.7	20.0	50.0	ND	83.5	70-130	2.02	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.19		8.00		89.9	70-130			



QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:  5/24/2023 3:39:59PM
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2320088-BLK1)					Prepared: 05/19/23 Analyzed: 05/19/23				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	50.0		50.0		100	50-200			

LCS (2320088-BS1)					Prepared: 05/19/23 Analyzed: 05/19/23				
Diesel Range Organics (C10-C28)	245	25.0	250		98.0	38-132			
Surrogate: n-Nonane	49.4		50.0		98.8	50-200			

Matrix Spike (2320088-MS1)					Source: E305111-02		Prepared: 05/19/23 Analyzed: 05/19/23		
Diesel Range Organics (C10-C28)	245	25.0	250	ND	98.0	38-132			
Surrogate: n-Nonane	47.4		50.0		94.8	50-200			

Matrix Spike Dup (2320088-MSD1)					Source: E305111-02		Prepared: 05/19/23 Analyzed: 05/19/23		
Diesel Range Organics (C10-C28)	245	25.0	250	ND	97.8	38-132	0.207	20	
Surrogate: n-Nonane	45.1		50.0		90.2	50-200			





QC Summary Data

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	Reported:
PO Box 247	Project Number:	21064-0001	
Plains TX, 79355-0247	Project Manager:	Tom Bynum	5/24/2023 3:39:59PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2320079-BLK1)					Prepared: 05/18/23 Analyzed: 05/22/23				
Chloride	ND	20.0							
LCS (2320079-BS1)					Prepared: 05/18/23 Analyzed: 05/22/23				
Chloride	254	20.0	250		102	90-110			
Matrix Spike (2320079-MS1)					Source: E305111-01		Prepared: 05/18/23 Analyzed: 05/22/23		
Chloride	253	20.0	250	ND	101	80-120			
Matrix Spike Dup (2320079-MSD1)					Source: E305111-01		Prepared: 05/18/23 Analyzed: 05/22/23		
Chloride	254	20.0	250	ND	102	80-120	0.378	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Pima Environmental Services-Carlsbad	Project Name:	West Pearl Queen	
PO Box 247	Project Number:	21064-0001	Reported:
Plains TX, 79355-0247	Project Manager:	Tom Bynum	05/24/23 15:39

- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Project Information

## Chain of Custody

Page 1 of 1

21064-0001 Cm

Client: Pima Environmental Services Project: <u>West Pearl Green</u> Project Manager: Tom Bynum Address: 5614 N. Lovington Hwy. City, State, Zip: Hobbs, NM, 88240 Phone: 580-748-1613 Email: tom@pimaoil.com Report due by:					Attention: <u>K.A. Bill To <del>Dr. J. Armstrong</del> Energy</u> Address: City, State, Zip: Phone: Email: Pima Project # <u>19-12</u>					Lab Use Only				TAT				EPA Program	
										Lab WO#		Job Number		1D	2D	3D	Standard	CWA	SDWA
										E <u>305111</u>		<del>22093-0001</del>					X		
										Analysis and Method									
										State									
										NM	CO	UT	AZ	TX					
										Remarks									
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX						
2:05	5/16/23	S	1	S1-9'	1							X							
2:10				S2-15'	2														
2:15				S3-5'	3														
2:20				S4-8'	4														
2:25				S7-11'	5														
2:30				SW4	6														
2:35				SW5	7														
2:40				SW6	8														
Additional Instructions: <u>Bill Pima</u>																			
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.											Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.								
Sampled by:											Lab Use Only								
Relinquished by: (Signature) <u>Kerina Adams</u>			Date <u>5/17</u>		Time <u>1445</u>		Received by: (Signature) <u>[Signature]</u>			Date <u>5-17-23</u>		Time <u>1445</u>		Received on ice: <u>(Y) N</u>					
Relinquished by: (Signature) <u>[Signature]</u>			Date <u>5-17-23</u>		Time <u>1910</u>		Received by: (Signature) <u>Andrew Musso</u>			Date <u>5-17-23</u>		Time <u>2000</u>		T1 _____ T2 _____ T3 _____					
Relinquished by: (Signature) <u>Andrew Musso</u>			Date <u>5-18-23</u>		Time <u>0300</u>		Received by: (Signature) <u>Cathy Mauer</u>			Date <u>5/18/23</u>		Time <u>8:20</u>		AVG Temp °C <u>4</u>					
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____											Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA								
Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																			

## Envirotech Analytical Laboratory

Printed: 5/18/2023 11:59:34AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Pima Environmental Services-Carlsbad	Date Received:	05/18/23 08:20	Work Order ID:	E305111
Phone:	(575) 631-6977	Date Logged In:	05/18/23 09:55	Logged In By:	Caitlin Mars
Email:	tom@pimaoil.com	Due Date:	05/24/23 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 247752

CONDITIONS

Operator: ARMSTRONG ENERGY CORP P.O. Box 1973 Roswell, NM 88202	OGRID: 1092
	Action Number: 247752
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan is approved with the following conditions; 1. Request to incorporate one sample per 500 square feet is denied. Due to the depth to water determination, operator is expected to collect a 5 point composite not to exceed 200 square feet. 2. Lab analyses must include all constituents listed in Table 1 of 19.15.29 NMAC. 3. Remediation Due date updated to February 1, 2024 (90-days) to submit its final closure report or request a time extension if needed.	11/3/2023