

SCS ENGINEERS



Groundwater Summary Report

**Pioneer Paint and Varnish Site
471 West Congress Street
Tucson, Arizona**

**ADEQ Facility ID #0-003930,
LUST ID #0912.01**

Presented to:

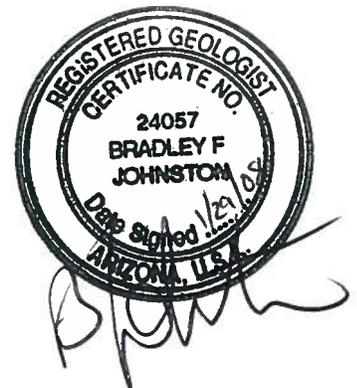
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January 29, 2008
File No. 10204058.06

**Offices Nationwide
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SCS ENGINEERS

January 29, 2008
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Ms. Lynne Birkinbine
City of Tucson Environmental Services
100 North Stone Avenue, 2nd Floor
Tucson, AZ 85701

Subject: Groundwater Summary Report
Pioneer Paint and Varnish Site
471 West Congress Street
Tucson, Arizona

ADEQ Facility ID #0-003930,
LUST ID #0912.01

Dear Lynne:

SCS Engineers (SCS) is pleased to submit this Groundwater Summary Report for the above-referenced project located in Tucson, Arizona. SCS appreciates the opportunity to assist you with this project. If you have any questions regarding this report, please feel free to contact Pat Hartshorne at (520) 696-1617 or Brad Johnston at (602) 840-2596.

Sincerely,



Patricia M. Hartshorne, RG
Project Manager



Bradley F. Johnston, RG
Vice President

SCS ENGINEERS



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BACKGROUND

The Pioneer Paint & Varnish (PP&V) facility was formerly located at the southeast corner of West Congress Street and South Central Avenue, east of Interstate 10, in downtown Tucson, Arizona (see Figure 1). From the mid-1930s to the late 1980s, the facility mixed raw materials and distributed paint products; they also distributed a limited amount of raw materials, primarily thinners. Four underground storage tanks (USTs) that reportedly contained mineral spirits, naphtha solvent, toluene, and xylenes were located near the current location of monitoring well WR-252A (see Figure 2). Impacts to soil from one or more of these USTs were observed during their removal in 1989, and the site was identified as a leaking UST site (ADEQ Facility ID #0-003930, LUST ID #0912.01).

The property is currently owned by the City of Tucson (COT), and the operator of the former UST system is PP&V. Both parties have performed site characterization and monitoring activities related to soil and groundwater at the site. Perched groundwater in one monitoring well (WR-252A) at the former UST system location has contained benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations above Aquifer Water Quality Standards (AWQS), and free phase product has been intermittently detected. The former operator is responsible for performing monitored natural attenuation (MNA) for remediation of the perched groundwater impact as approved by the Arizona Department of Environmental Quality (ADEQ).

Because existing soil characterization data was more than 10 years old and soil vapor extraction had been performed during that time, SCS Engineers (SCS) was retained in June 2007 by COT to perform a Limited Phase II Environmental Site Assessment (ESA) that included drilling and sampling of 22 soil borings, six of which were located at the former UST system area. The findings of this investigation were described in a report titled *Limited Phase II Environmental Site Assessment, Pioneer Paints and Associated Properties, September 4, 2007*, which was submitted to ADEQ in October 2007. These borings did not detect soil contamination exceeding soil remediation levels or groundwater protection levels (except for arsenic, which was representative of naturally-occurring background levels). Based on these findings, it appears that soil contamination associated with the USTs is no longer a potential source of groundwater contamination, and it was concluded that further soil remediation is not necessary.

The Limited Phase II ESA also included installation of another perched groundwater monitoring well (PPM-529A) east of WR-252A to further characterize the extent of BTEX exceeding AWQS in the perched aquifer at the former UST system location (see Figure 2). SCS also collected perched groundwater grab samples from two of the soil borings (B2 and B4) and from the groundwater monitoring well (B3 / PPM-529A).

This report summarizes the findings of groundwater monitoring of the perched aquifer contamination associated with the former UST system, and requests that closure of the LUST case be considered based on the limited extent of groundwater contamination and other factors.

PERCHED AQUIFER CHARACTERISTICS

Based on lithology encountered during the recent soil boring investigation, review of boring logs for previous investigations in the area of the former USTs, and review of the lithologic

discussion by Brown (1994), clay and silt is generally predominant from the ground surface to about 20 feet below ground surface (bgs), sand and increasing gravels and cobbles are present from about 20 feet bgs to a depth between about 32 to 35 feet, and interbedded layers of clay and sand, clayey sand, and sandy clay are present from about 35 feet to 60 feet, where a laterally extensive layer of clay is encountered. There may be a wet or very moist zone in some locations above the clay at 35 feet, but the main perched zone in the former UST area occurs between about 40 to 45 feet bgs. The clay and sand layers observed between about 35 to 60 feet bgs appear variable and are likely not continuous. Previous estimations of flow direction in the main perched aquifer have been to the east, but may not be applicable if the perched zones are not continuous.

Boring logs and well diagrams were compared for the perched aquifer well WR-252A and three other perched aquifer wells, PPM-529A (approximately 42 feet east-northeast), WR-250A (approximately 32 feet east), and WR-251A (approximately 120 feet northwest). The screened interval and perched water level for WR-251A is at a higher elevation (by about 10 feet) than in the other wells, indicating that it probably represents a different perched zone than the other wells. The depth at which the underlying confining clay layer was encountered varied from 45 feet bgs in WR-252A and WR-250A to 56 feet in PPM-529A. In addition, according to Brown (1994), it cannot be certain that this perched zone is a single continuous zone based on the absence of perched water in other borings that were drilled in this area.

Visual observations of groundwater samples collected from perched well WR-252A indicated that the water is black in color. Water collected from WR-250 and WR-251 was frequently described as gray in color and with a “swampy” or “septic” odor. This may indicate that the water is stagnant in and around these wells. Furthermore, the highest sustainable pumping rate that was achieved in WR-252A when it was redeveloped in March 2007 was 0.5 gallons per minute (which still caused a one foot drop in groundwater level), indicating that this zone is of low permeability and/or the amount of water available in the zone is small.

Construction and location information for the five perched zone monitoring wells is included in Table 1.

GROUNDWATER QUALITY SAMPLING RESULTS

Perched Aquifer

As shown on Table 2, samples from the perched aquifer wells WR-250A and WR-252A have exceeded AWQS for volatile organic compounds (VOCs). Samples from WR-250A exceeded the AWQS for toluene, ethylbenzene, and xylenes (TEX) in March 1994 and for toluene in 1996 through 1999. Samples from WR-252A exceeded the AWQS for TEX in April 2004 and for BTEX in December 2004, September 2006, and September 2007. The sample from December 2007 also exceeded the AWQS for TEX; benzene may also have exceeded the AWQS, but this could not be confirmed because the laboratory reporting limit was greater than the AWQS. Concentrations of contaminants appear to have decreased in WR-250A, but there is no clear trend of increasing or decreasing concentrations over time in the sample results for WR-252A.

During the recent Limited Phase II ESA, SCS collected perched groundwater grab samples from soil borings B2 and B4, located approximately 27 and 32 feet from WR-252A, respectively. These samples were collected from the open drill stem using a bailer. The grab samples from B2 and B4 did not contain detectable VOCs. This indicates that the lateral extent of perched groundwater that exceeds AWQS may not exceed a radius of 27 feet around WR-252A.

Since 2004 and possibly earlier, none of the samples collected from the perched aquifer wells surrounding WR-252A have exceeded AWQS for VOCs. The closest wells to WR-252A are WR-250A and PPM-529A, which are located approximately 32 feet west and 42 feet east-northeast of WR-252A, respectively. These results confirm that the lateral extent of groundwater that exceeds AWQS in WR-252A is limited to an area with a radius of less than 32 feet.

Regional Aquifer

Groundwater samples from the regional aquifer wells on the site have not contained detectable concentrations of BTEX, except for toluene in samples from WR-248A and WR-249A in 1990. Trichloroethene (TCE) was detected in the majority of samples collected from the regional wells, most recently at concentrations that are less than the AWQS; TCE was not detected in groundwater samples from the perched aquifer wells, except for one low concentration in a sample collected from former perched aquifer well WR-270A in 1996. Therefore, it appears that BTEX present in WR-252A has not impacted the regional aquifer. Conversely, the lack of TCE in the perched aquifer wells indicates that the Pioneer Paint site is not the source of the TCE contamination in the regional aquifer.

FREE PRODUCT MEASUREMENT AND RECOVERY

Free phase product has been detected only in perched aquifer well WR-252A. The well has been equipped with a passive free product adsorbing “sock” since May 2004, and it is emptied quarterly and periodically replaced with a new sock by Geomatrix (on behalf of PP&V). Between May 2004 and August 2007, the amount of free phase product recovered each quarter has ranged from a trace to 14 ounces, and the total recovered since 2004 is 58 ounces (0.45 gallon). The 96-ounce capacity of the unit has never been exceeded.

The presence and thickness of free phase product is measured during each sampling event. A measurable thickness of free phase product has not been detected since August 2005, when Geomatrix measured 0.12 foot of free phase product in WR-252A. These measurements may have been influenced by the presence of the free product adsorbing sock. However, for the December 2007 sampling event, the sock was removed one week before measurements were made, and no free phase product was detected.

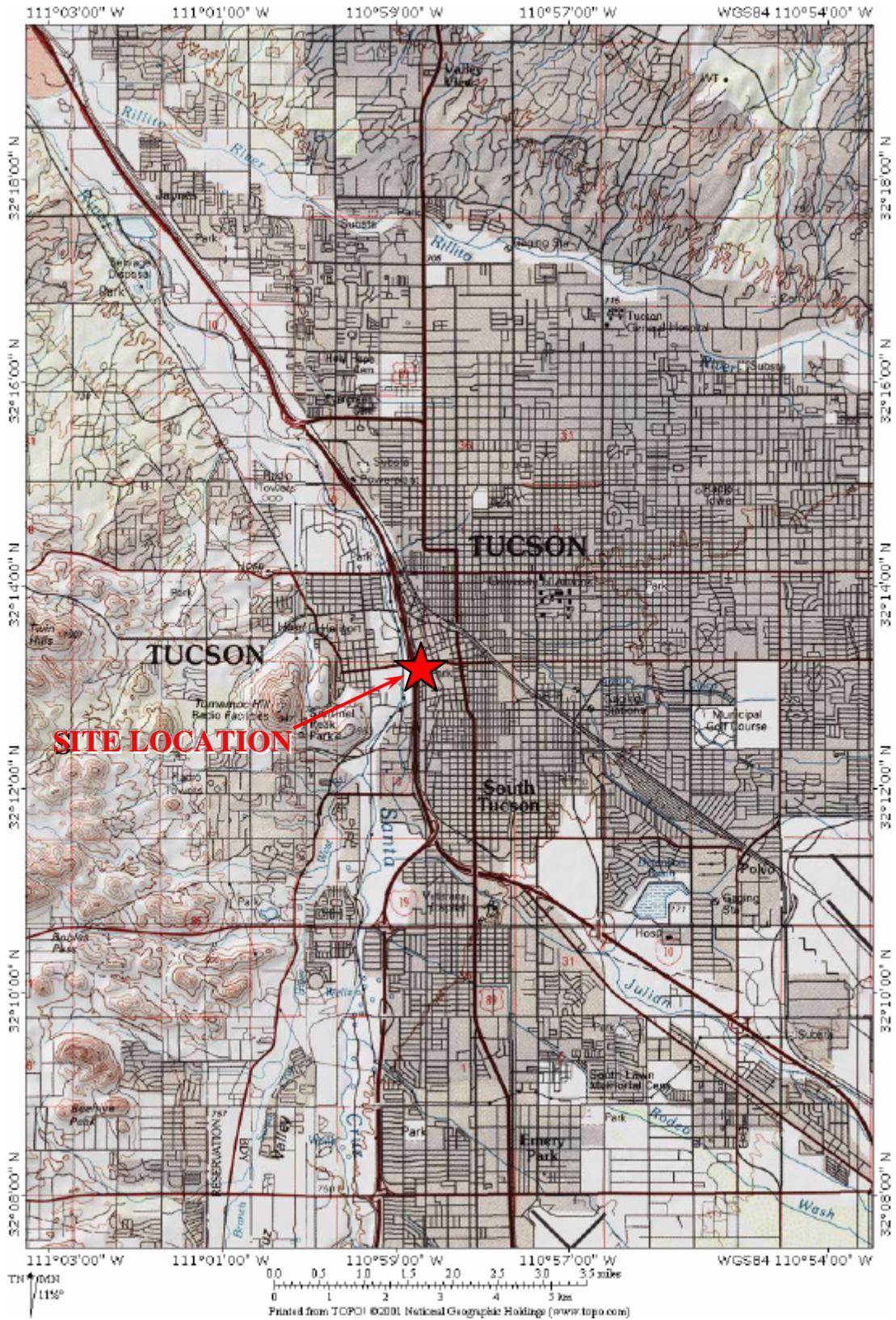
CONCLUSIONS

Based on the soil investigation results in the September 2007 Limited Phase II ESA, lithologic logs of wells and soil borings, and existing groundwater monitoring results, SCS concludes the following:

- The vadose zone source of BTEX groundwater contamination in the perched aquifer at monitoring well WR-252A is no longer present.
- The lateral extent of that portion of the perched aquifer that was impacted by BTEX appears to be limited.
- Due to low permeability of the perched aquifer in WR-252A and/or the relatively small volume of water present, the potential for migration of BTEX in the perched aquifer is low.
- BTEX detected in the perched aquifer has not impacted the underlying regional aquifer.
- The lateral extent of VOCs exceeding AWQS in the perched aquifer at well WR-252A appears to be limited to an area with a radius of approximately 30 feet.
- The amount of free phase product in the area around WR-252A also appears limited, and its migration potential is low.

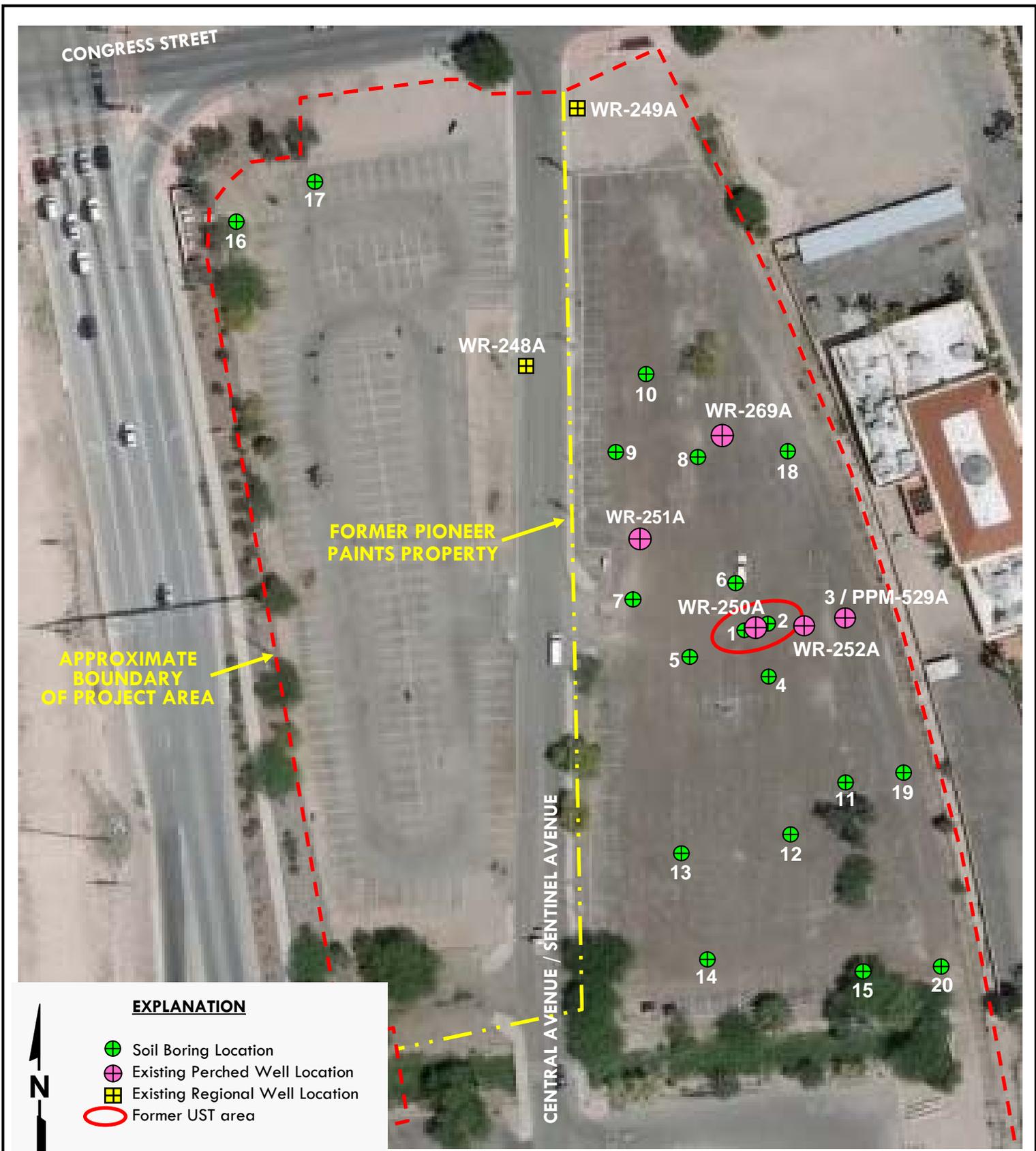
APPENDICES

APPENDIX A
FIGURES



Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

<p>SCS ENGINEERS "Superior Customer Service"</p>	<p>Site Location Map Pioneer Paints Project 471 West Congress Street Tucson, Arizona</p>	<p>Project Number 10.204058.06</p>
		<p>Figure 1</p>



Source: Live Search Website, Microsoft Virtual Earth, 2006 or 2007 Aerial

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

SCS ENGINEERS	Monitoring Well and Recent Soil Boring Locations	Project Number 10.204058.06
<i>"Superior Customer Service"</i>	Pioneer Paints Project 471 West Congress Street Tucson, Arizona	Figure 2

APPENDIX B

TABLES

TABLE 1. MONITOR WELL INFORMATION

City of Tucson Well ID	ADWR #	Construction Date	Well Diameter (in)	Screen Interval (ft bgs)	Material of Constuction	Total Depth (ft)	Easting	Northing	Benchmark Elev. (ft AMSL)
Perched Groundwater Monitor Wells									
WR-250A	55-535809	Jul-92	4	35-45	PVC	45	990178.545	445001.968	2350.47
WR-251A	55-541080	Feb-94	4	25-40	PVC	40	990120.665	445081.750	2350.21
WR-252A	55-542382	Feb-94	4	35-45	PVC	45	990210.784	445001.627	2350.62
WR-269A	55-556250	Oct-96	4	25-50	PVC	50	990153.091	445129.992	2349.52
WR-270A	55-556251	Oct-96	Abandoned						
PPM-529A	55-907396	Jul-07	4	34-54	PVC	57	990252.030	445007.422	2351.60
Regional Groundwater Monitor Wells									
WR-248A	55-529533	Sep-90	4	100-140	PVC	141	990052.672	445156.687	2350.10
WR-249A	55-529534	Sep-90	4	145-175	PVC	175	990085.668	445326.246	2350.80
WR-271A	55-556258	Dec-96	Abandoned						
WR-271B*	55-206680	Mar-05	5	110-200	PVC	200	990296.068	444652.501	2353.31

Notes: *Has nested vapor probes at 40 and 90 feet bgs
in = inches
ft bgs = feet below ground surface
ft = feet
ft AMSL = feet Above Mean Sea Level

TABLE 2. GROUNDWATER MONITORING DATA

Well ID, ADWR # & Constr. Date	Well Datum & CF	Sample Date	Measured Depth to GW (ft bgs)	Corrected Depth to GW (ft bgs)	GW Elevation (ft amsl)	Free Product Volume (oz)	Free Product Thickness (ft)	Comments	B	T	E	X	PCE	TCE	cis-1,2 DCE	VC	1,2,4 TMB	1,3,5 TMB	SOURCE		
									AWQS→	0.005	1	0.7	10	0.005	0.005	0.07	0.002	none	none		
Perched Groundwater Monitor Wells																					
WR-250A (MW-1) 55-535809 Jul-92	2348.08	07/23/92							<0.0002	0.7539	0.0559	1.498							EEC		
		03/23/94							<0.025	4.0	4.5	12.93	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	EEC		
		10/06/95							<0.0005	0.0064	0.021	0.552								Verde	
		12/29/95	40.40		2307.68				none	<0.005	0.085	0.58	1.51	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	HLA	
		03/14/96	40.71		2307.37					<0.0025	0.0050	0.14	0.357							HLA	
		05/29/96	41.32		2306.76					<0.005	<0.005	0.016	0.14							HLA	
		2347.04	10/23/96	41.40		2305.64				moderate odor	<0.250	<0.250	3.9	9.42	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	HLA
			04/16/97	41.09		2305.95				dk gray, solvent odor	<0.050	<0.050	1.8	5.7							HLA
			10/27/97	41.69		2305.35				slight solvent odor, sheen	<0.013	<0.013	0.32	0.85	<0.013	<0.013					HLA
			04/27/98	41.81		2305.23					<0.050	<0.050	1.7	2.8							HLA
	02/16/99		40.95		2306.09				gray, swampy odor	<0.0005	0.0018	0.72	0.57							HLA	
	04/27/04		41.91	43.13	2307.34				septic odor	<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	URS	
	2350.47 CF 1.22	12/16/04	42.18	43.40	2307.07				septic odor	<0.0005	<0.003	0.0086	0.027	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	URS	
		12/16/04	Duplicate						duplicate											URS	
		09/14/06	37.88	39.10	2311.37					Not Sampled?										COT	
		09/19/06	Not measured ?							<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	COT	
		10/27/06	38.19	39.41	2311.06															COT	
		02/16/07	39.07	40.29	2310.18															COT	
		04/17/07	Not measured ?							<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	COT	
		05/23/07	40.77	41.99	2308.48															COT	
09/18/07		42.40	43.62	2306.85					Not Sampled?										COT		
WR-251A (MW-2) 55-541080 Feb-94		2347.70	10/19/93							<0.0005	<0.0005	<0.0005	<0.002							EEC	
	03/23/94								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	EEC		
	10/06/95								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	Verde		
	12/29/95		31.03		2316.67				gray, no odor	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	<0.0005	HLA	
	03/14/96		30.96		2316.74					<0.0005	0.0010	<0.0005	<0.0005							HLA	
	05/29/96		31.50		2316.20					<0.0005	<0.0005	<0.0005	<0.0005							HLA	
	2346.71		10/23/96	30.68		2316.03				slight odor	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA
			04/16/97	31.30		2315.41				sulfur odor	<0.0005	<0.0005	<0.0005	<0.0005							HLA
			10/27/97	31.29		2315.42				stagnant odor	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005					HLA
			04/27/98	30.77		2315.94					<0.0005	<0.0005	<0.0005	<0.0005							HLA
		02/16/99	31.08		2315.63				gray, swampy odor	<0.0005	<0.001	<0.001	0.0017							HLA	
		04/27/04	31.36	32.63	2317.58					<0.0005	<0.003	0.0038	0.013	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	URS	
	2350.21 CF 1.27	12/17/04	Dry							Not Sampled										URS	
		09/14/06	30.64	31.91	2318.30					Not Sampled?										COT	
		09/21/06	Not measured ?							<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	COT	
		10/27/06	31.28	32.55	2317.66															COT	
		02/16/07	31.27	32.54	2317.67															COT	
		04/19/07	Not measured ?							<0.0005	<0.003	0.0066	0.021	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	COT	
		05/23/07	33.23	34.50	2315.71															COT	
		09/19/07	31.45	32.72	2317.49					<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	COT	
WR-252A (MW-3) 55-542382 Feb-94		2348.20	10/19/93							<0.0005	<0.0005	<0.0005	<0.002							EEC	
			03/23/94							<0.500	19.4	5.9	51	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	EEC	
	10/06/95								<0.200	6.2	17	54							Verde		
	12/29/95		42.37		2305.83				strong solvent odor, sheen	<0.500	7.6	17	103	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	HLA	
	03/14/96		42.19		2306.01					Not Sampled										HLA	
	05/29/96		42.38		2305.82					Not Sampled										HLA	
	2347.23		10/23/96	42.31		2304.92					Not Sampled										HLA
			04/16/97	41.48		2305.75					Not Sampled										HLA
			10/27/97	42.00		2305.23				none	<1.300	7.9	21	73	<1.300	<1.300					HLA
			04/27/98	40.10		2307.13					<1.000	<1.000	18	64							HLA
		02/16/99	41.14		2306.09				solvent smell	0.069	8.1	27	100							HLA	
		07/29/99	41.76		2305.47				none	<1.000	8.1	38	88							COT	
	2350.62 CF 1.32	04/21/04	Unknown				little to none	unknown		Not Sampled										Geomatrix	
		04/27/04	42.52	43.84	2306.78		installed sock	no sheen	<0.050	2.5	22	72	<0.050	<0.050	<0.050	<0.050	<0.2	<0.15	URS		
		05/14/04	42.27	43.59	2307.03					Not Sampled										Geomatrix	
		12/16/04	42.39	43.71	2306.91				product odor	<0.050	2.2	18	60	<0.050	<0.050	<0.05	<0.050	<0.2	<0.15	URS	
		12/16/04	Duplicate						duplicate	0.052	2.5	19	63	<0.050	<0.050	<0.05	<0.050	<0.2	<0.15	URS	
		08/18/05	42.42	43.74	2306.88		unknown	0.12		Not Sampled										Geomatrix	
		10/20/05	Not measured				12	not detected		Not Sampled										Geomatrix	
		12/13/05	42.10	43.42	2307.20					Not Sampled										Geomatrix	
02/27/06		42.26	43.58	2307.04		unknown	not detected		Not Sampled										Geomatrix		
06/15/06		Not measured				4-6	not detected		Not Sampled										Geomatrix		
09/14/06	39.39	40.71	2309.91					Not Sampled?										COT			

TABLE 2. GROUNDWATER MONITORING DATA

Well ID, ADWR # & Constr. Date	Well Datum & CF	Sample Date	Measured Depth to GW (ft bgs)	Corrected Depth to GW (ft bgs)	GW Elevation (ft amsl)	Free Product Volume (oz)	Free Product Thickness (ft)	Comments	B	T	E	X	PCE	TCE	cis-1,2 DCE	VC	1,2,4 TMB	1,3,5 TMB	SOURCE			
AWQS→									0.005	1	0.7	10	0.005	0.005	0.07	0.002	none	none				
		09/19/06	Not measured ?						0.024	2.1	15	58	<0.005	<0.005	<0.005	<0.005	0.55	0.24	COT			
		09/21/06	39.58	40.90	2309.72	4	not detected		Not Sampled										Geomatrix			
		10/27/06	40.66	41.98	2308.64														COT			
		12/15/06	41.03	42.35	2308.27	1	not detected		Not Sampled										Geomatrix			
		02/16/07	41.32	42.64	2307.98														COT			
		02/28/07	41.29	42.61	2308.01	3	not detected		Not Sampled										Geomatrix			
		03/27/07	41.50	42.82	2307.80				Redevelopment of well										Verdad			
		04/18/07	42.01	43.33	2307.29														COT			
		05/23/07	42.14	43.46	2307.16														COT			
		06/19/07	42.13	43.45	2307.17	14	not measured		Not Sampled										Geomatrix			
		08/06/07	41.97	43.29	2307.33	6	not detected		Not Sampled										Geomatrix			
		09/20/07	41.31	42.63	2307.99			blackish, dark, smelly	0.014	1.6	21	86	<0.005	<0.005	<0.005	<0.005	0.4	0.2	COT			
		12/17/07	41.75	43.07	2307.55			blackish, dark, smelly	<0.025	2.2	27	96	<0.025	<0.025	<0.025	<0.025	0.340	0.180	COT			
		12/17/07	Duplicate					duplicate	<0.025	2.1	26	93	<0.025	<0.025	<0.025	<0.025	0.330	0.170	COT			
WR-269A 55-556250 Oct-96	2347.82	10/23/96	41.72		2306.10			clear	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA		
		10/23/96	Duplicate					duplicate	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA	
		04/16/97	41.64		2306.18			slight HC odor	<0.0005	<0.0005	<0.0005	<0.0005								HLA		
		10/27/97	41.84		2305.98			slight solvent odor	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005							HLA	
		04/27/98	40.47		2307.35				<0.0005	<0.0005	<0.0005	<0.0005									HLA	
		02/16/99	41.00		2306.82			no odor	<0.0005	<0.001	<0.001	<0.0015									HLA	
		02/16/99	Duplicate					duplicate	<0.0005	<0.001	<0.001	<0.0015									HLA	
	2349.52 CF 0	04/27/04	41.74		2307.78					<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015		URS	
		12/17/04	41.96		2307.56					Not sampled										URS		
		10/20/06	37.80		2311.72																COT	
		11/21/06							<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015		COT		
		02/16/07	38.90		2310.62																COT	
		04/19/07	Not measured ?							<0.0005	<0.003	<0.002	0.017	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015		COT	
		05/23/07	41.51		2308.01																COT	
09/19/07	43.00		2306.52					<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015		COT			
WR-270A 55-556251 Oct-96	2347.29	10/23/96	46.98		2300.31			no odor	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00056	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA		
		12/17/96	48.53		2298.76			no odor or sheen	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA		
		04/16/97	Dry						Not Sampled										HLA			
		10/27/97	Dry						Not Sampled										HLA			
		04/27/98	Dry						Not Sampled										HLA			
02/16/99	Dry						Not Sampled										HLA					
PPM-529A 55-907396 Jul-07	2351.60 CF 0.55	07/26/07	45.80	46.35	2305.25				<0.0005	<0.003	0.0036	0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015		SCS		
		09/19/07	45.21	45.76	2305.84				<0.0005	<0.003	0.0048	<0.003	0.00063	<0.0005	<0.0005	<0.0005	<0.002	<0.0015		COT		
		12/17/07	45.66	46.21	2305.39				<0.0005	<0.003	<0.002	<0.003	0.00051	<0.0005	<0.0005	<0.0005	<0.002	<0.0015		COT		
Regional Groundwater Monitor Wells																						
WR-248A 55-529533 Sep-90	2147.14	10/05/90							<0.0002	0.0011	<0.0005	<0.0005		<0.0002						EEC		
		10/06/95							<0.0005	<0.0005	<0.0005	<0.001		0.0036						Verde		
		12/29/95	112.99		2034.15			no odor	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0069	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA	
		12/29/95	Duplicate					duplicate	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0066	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA	
		03/14/96	Not measured						<0.0005	<0.0005	<0.0005	<0.0005		0.0065							HLA	
		05/20/96	113.64		2033.50										0.0062						HLA	
		05/29/96							<0.0005	<0.0005	<0.0005	<0.0005			0.0062						HLA	
		10/23/96	Not measured						<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0056	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA	
		10/23/96	Duplicate						<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0055	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA	
		04/16/97	115.69		2031.45			no odor	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0054			<0.0005	<0.0005		HLA	
		10/28/97	138.55		2008.59			no odor	<0.0005	<0.0005	<0.0005	<0.0005			0.0071						HLA	
		2350.10 CF 0.80	04/28/99	120.50	121.30	2228.80			none													COT
			06/03/99	120.84	121.64	2228.46			none													COT
	07/29/99		121.35	122.15	2227.95			none	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	0.0046	<0.0005	<0.0005		na	na	COT		
	09/25/00		122.77	123.57	2226.53			none	<0.001	<0.001	<0.001	<0.002	<0.001	0.0034	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	COT	
	09/25/00		Duplicate					duplicate	<0.001	<0.001	<0.001	<0.002	<0.001	0.0034	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	COT	
	10/04/01		123.58	124.38	2225.72			none	<0.001	<0.001	<0.001	<0.002	<0.001	0.0027	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	COT	
	10/16/02		125.26	126.06	2224.04			none	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	COT	
	09/15/03		127.20	128.00	2222.10			none	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0026	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	COT	
	09/15/03		Duplicate						<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0027	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	COT	
	04/28/04		127.34	128.14	2221.96			none	<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0020	<0.0005	<0.0005	<0.002	<0.0015			URS	
	09/20/04	127.61	128.41	2221.69				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		COT		
	12/16/04	127.79	128.59	2221.51				Not Sampled										URS				
09/26/05	128.35	129.15	2220.95				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0031	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	COT			
09/14/06	128.24	129.04	2221.06				Not Sampled?										COT					

TABLE 2. GROUNDWATER MONITORING DATA

Well ID, ADWR # & Constr. Date	Well Datum & CF	Sample Date	Measured Depth to GW (ft bgs)	Corrected Depth to GW (ft bgs)	GW Elevation (ft amsl)	Free Product Volume (oz)	Free Product Thickness (ft)	Comments	B	T	E	X	PCE	TCE	cis-1,2 DCE	VC	1,2,4 TMB	1,3,5 TMB	SOURCE		
								AWQS→	0.005	1	0.7	10	0.005	0.005	0.07	0.002	none	none			
		09/19/06		Not measured ?					<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0029	<0.0005	<0.0005	<0.0020	<0.0015	COT		
		10/27/06	128.61	129.41	2220.69														COT		
		02/16/07	128.45	129.25	2220.85														COT		
		04/17/07		Not measured ?					<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0027	<0.0005	<0.0005	<0.0020	<0.0015	COT		
		05/23/07	127.55	128.35	2221.75														COT		
		09/19/07	128.79	129.59	2220.51				<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0024	<0.0005	<0.0005	<0.0020	<0.0015	COT		
WR-249A 55-529534 Sep-90	2348.37	10/05/90							<0.0002	0.0045	<0.0005	<0.0005		<0.0002					EEC		
		10/06/95							<0.0005	<0.0005	<0.0005	<0.001		<0.0005					Verde		
		12/29/95	116.34		2232.03			no odor	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	HLA	
		03/14/96			Not measured				<0.0005	<0.0005	<0.0005	<0.0005			0.0006					HLA	
		05/20/96	117.13		2231.24															HLA	
		05/29/96								<0.0005	<0.0005	<0.0005	<0.0005		0.0011					HLA	
		10/22/96			Not measured					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0011	<0.0005	<0.0005	<0.0005	<0.0005	HLA	
		12/17/96			Not measured					<0.0005	<0.0005	<0.0005	<0.0005		0.0065					HLA	
		04/16/97	119.16		2229.21			no odor	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0015			<0.0005	<0.0005	HLA	
		10/28/97	120.88		2227.49			no odor	<0.0005	<0.0005	<0.0005	<0.0005			0.0011					HLA	
		07/29/99	125.98	126.25	2224.55			none	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	0.0009	<0.0005	<0.0005	na	na	COT	
		09/25/00	127.27	127.54	2223.26			none	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.0008	<0.0005	<0.001	<0.001	<0.001	COT	
		09/13/01	127.73	128.00	2222.80			none													COT
		10/04/01	127.65	127.92	2222.88			none	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.0008	<0.0005	<0.001	<0.001	<0.001	COT	
		10/04/01			Duplicate			duplicate	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.0008	<0.0005	<0.001	<0.001	<0.001	COT	
	10/16/02	130.10	130.37	2220.43			none	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0001	<0.001	<0.001	<0.001	COT		
	10/16/02			Duplicate			duplicate	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0035	<0.001	<0.001	<0.001	<0.001	COT		
	09/15/03	132.14	132.41	2218.39				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	COT		
	04/28/04	132.85	133.12	2217.68				<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0015	URS		
	09/20/04	133.37	133.64	2217.16				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	COT		
	09/20/04			Duplicate				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	COT		
	12/17/04	132.74	133.01	2217.79																URS	
	09/26/05	133.96	134.23	2216.57				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0005	<0.0005	<0.0005	COT		
	09/26/05			Duplicate				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0005	<0.0005	<0.0005	COT		
	09/14/06	133.69	133.96	2216.84																COT	
	09/19/06			Not measured ?						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.00067	<0.0005	<0.0005	<0.002	<0.0015	COT	
	10/27/06	133.61	133.88	2216.92																COT	
	02/16/07	133.53	133.80	2217.00																COT	
	04/17/07			Not measured ?						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.00084	<0.0005	<0.0005	<0.002	<0.0015	COT	
	05/23/07	132.78	133.05	2217.75						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.00064	<0.0005	<0.0005	<0.002	<0.0015	COT	
09/19/07	137.80	138.07	2212.73						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.00064	<0.0005	<0.0005	<0.002	<0.0015	COT		
WR-271A 55-556258 Dec-96	2351.74 CF 0	12/17/96	117.05		2234.69			no odor or sheen	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0065	<0.0005	<0.0005	<0.0005	<0.0005	HLA		
		12/17/96			Duplicate			duplicate	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0060	<0.0005	<0.0005	<0.0005	<0.0005	HLA		
		04/16/97	117.66		2234.08			rusty	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0082			<0.0005	<0.0005	HLA		
		04/16/97			Duplicate			duplicate	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0080			<0.0005	<0.0005	HLA		
		10/28/97	118.79		2232.95			rusty						0.010					HLA		
		10/28/97			Duplicate			duplicate						0.0085					HLA		
		03/25/99	121.92		2229.82			none												COT	
		04/28/99	123.26		2228.48			none												COT	
		08/02/99	124.48		2227.26			very brown	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	0.0071	<0.0005	<0.0005	na	na	COT	
		08/02/99			Duplicate			duplicate	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	0.0070	<0.0005	<0.0005	na	na	COT	
		02/02/00	125.45		2226.29			none												COT	
		09/25/00			Not measured (lost sounder in well)			very rusty	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.0049	<0.0005	<0.001	<0.001	<0.001	COT	
		10/16/02	126.47		2225.27			none												COT	
		10/17/02			Not measured			none	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0039	<0.001	<0.001	<0.001	<0.001	COT	
		09/15/03	129.70		2222.04															COT	
	09/16/03			Not measured						<0.0005	<0.0005	<0.0005	<0.0005	0.0044	<0.0005	<0.0005	<0.0005	<0.0005	COT		
	04/28/04	129.94		2221.80															URS		
	04/29/04			Not measured						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0048	<0.0005	<0.0005	<0.002	<0.0015	URS	
	04/29/04			Duplicate						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0050	<0.0005	<0.0005	<0.002	<0.0015	URS	
	06/01/04	130.10		2221.64																URS	
	06/02/04	129.47		2222.27																URS	
	09/20/04	129.68		2222.06																COT	
	09/27/04	129.80		2221.94						<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0053	<0.0005	<0.0005	<0.0005	<0.0005	COT	
	12/16/04	130.15		2221.59																URS	
	12/17/04	130.21		2221.53						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0043	<0.0005	<0.0005	<0.002	<0.0015	URS	

TABLE 2. GROUNDWATER MONITORING DATA

Well ID, ADWR # & Constr. Date	Well Datum & CF	Sample Date	Measured Depth to GW (ft bgs)	Corrected Depth to GW (ft bgs)	GW Elevation (ft amsl)	Free Product Volume (oz)	Free Product Thickness (ft)	Comments	B	T	E	X	PCE	TCE	cis-1,2 DCE	VC	1,2,4 TMB	1,3,5 TMB	SOURCE		
									AWQS→	0.005	1	0.7	10	0.005	0.005	0.07	0.002	none	none		
WR-271B 55-206680 Mar-05	2353.31 CF -0.79	08/02/05	130.14	129.35	2223.96			none	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	COT	
		08/02/05	Duplicate					duplicate	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	COT
		09/14/06	129.61	128.82	2224.49				Not Sampled?												COT
		09/18/06	Not measured ?						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.00053	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	COT	
		09/18/06	Duplicate						<0.0005	<0.003	<0.002	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0015	COT		
		10/27/06	129.63	128.84	2224.47																COT
		11/21/06							<0.0005	<0.003	<0.002	<0.003	<0.0005	0.0007	<0.0005	<0.0005	<0.002	<0.0015	COT		
		02/16/07	129.29	128.50	2224.81																COT
		04/17/07	Not measured ?						<0.0005	<0.003	<0.002	<0.003	<0.0005	0.00094	<0.0005	<0.0005	<0.002	<0.0015	COT		
		05/23/07	129.49	128.70	2224.61																COT
09/20/07	129.60	128.81	2224.50										<0.0005	0.00013	<0.0005	<0.0005	<0.002	<0.0015	COT		

Notes:

All water quality chemical concentrations are in milligrams per liter (mg/L)

Well datum - levels are in feet above mean sea level

CF = Correction Factor - Feet added or subtracted from the measured depth to groundwater due to changes in well surface completion elements (began during 1999)

Bold values denote detectable concentrations of chemicals.

Yellow shaded and bolded values exceed the AWQS.

Bold laboratory reporting limits were not detected, but exceed the AWQS.

Blank squares indicate information was not found, there was no measurement, or the analyte was not tested.

Blue shaded depth to groundwater appears to be in error.

Due to casing corrosion and purging dry, well WR-271A was replaced by WR-271B in March 2005

B = Benzene

TCE = Trichloroethene

T = Toluene

cis 1,2DCE = cis-1,2-Dichloroethene

E = Ethylbenzene

VC = Vinyl Chloride

X = Total Xylenes

1,2,4 TMB = 1,2,4 Trimethylbenzene

PCE = Tetrachloroethene

1,3,5 TMB = 1,3,5 Trimethylbenzene

Other VOCs were detected in some samples.

Sources: COT = City of Tucson files (includes numerous reports).

EEC = Environmental Engineering Consultants (referenced in other reports).

Geomatrix. October 5, 2007. Former Pioneer Paint and Varnish Co., LUST File #0912.01 Facility ID# 0-003930, 438 West Congress, Tucson, Arizona

HLA = Harding Lawson & Associates. Numerous reports.

SCS = SCS Engineers. September 4, 2007. Limited Phase II Environmental Site Assessment, Pioneer Paints and Associated Properties, 471 West Congress Street, Tucson, Arizona.

URS. January 26, 2005. Historical Research - Groundwater and Soil Sampling, City of Tucson - Property #2407.

Verde (referenced in other reports)