

### Red Butte Creek Oil Release Air Monitoring Journal

Date	Location (Time)	Analyte	Method	Result	GPS Location	Comment	
7/1/10	Miller Park (0835-0850)	Volatile Organic Compounds (VOCs)	Passive Dosimeters	N/A	40°44'56.31"N, 111°50'32.54"W	Set up two passive dosimeters in the area where crews were pressure-washing the creek.	
	Miller Park, along Red Butte Creek (1140-1155)	Volatile Organic Compounds (VOCs)	PID	1.0-3.0 ppm <sup>1</sup>	40°44'46.37"N, 111°50'48.60"W	~20 yards from outlet from Miller Park, 10 ft above creek	
				3.2-5.4 ppm <sup>1</sup>	40°44'46.60"N, 111°50'46.30"W	~50 yards from outlet, on edge of creek	
				4.4-6.8 ppm <sup>1</sup>	40°44'47.10"N, 111°50'45.55"W	~75 yards from outlet, 2 ft above creek	
				1.5-4.5 ppm <sup>1</sup>	40°44'47.72"N, 111°50'43.65"W	At waterfall on bridge, 12 ft above creek	
		Hydrogen Sulfide (H <sub>2</sub> S)	QRAEII	0.0 ppm <sup>2</sup>	At all locations along Red Butte Creek at Miller Park. Workers were scrubbing the creek at least 200 yards upstream. Odors were moderate in this area. Sheen visible in water.		
		Carbon Monoxide (CO)	QRAEII	0.0 ppm			
		Lower Explosive Limit (LEL)	QRAEII	0.0%			
	Miller Park (1430-1445)	Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	8.8-25.0 ppm <sup>1</sup>	40°44'56.31"N, 111°50'32.54"W	Sample taken at creek, 5 yards from pressure-washing crew.	
		Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	4.0-21.0 ppm <sup>1</sup>		Sample taken on bridge, 5 yards above water.	
		Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	0.4-6.5 ppm <sup>1</sup>		Sample taken on trail along creek, 10 yards from crew.	
	Confluence of Jordan River and Red Butte Creek (1045-1055)	Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	0.0-0.2 ppm <sup>1</sup>	40°44'29.75"N, 111°55'3.68"W	At inlet to Jordan River, 3 ft from water. No odors were detected. Sheen in water is visible.	
		Hydrogen Sulfide (H <sub>2</sub> S)	QRAEII	0.0 ppm <sup>2</sup>			
		Carbon Monoxide (CO)	QRAEII	0.0 ppm			
Lower Explosive Limit (LEL)		QRAEII	0.0%				

<sup>1</sup> PID readings for VOCs are used as a screening method to determine contaminants typically associated with crude oil. If high levels of VOCs are detected, additional sampling is conducted

<sup>2</sup> 10ppm Hydrogen Sulfide (ceiling) - NIOSH recommended exposure level

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7/1/10	Garden Park Ward, 1140 East Harvard (1125-1130)	Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	0.0 ppm <sup>1</sup>	40°44'42.01"N, 111°51'29.60"W	At the creek's edge. There were workers in the creek. No odor detected by technician on bridge near the entrance or along creek.
		Hydrogen Sulfide (H <sub>2</sub> S)	QRAEII	0.0 ppm <sup>2</sup>		
		Carbon Monoxide (CO)	QRAEII	0.0 ppm		
		Lower Explosive Limit (LEL)	QRAEII	0.0%		
	1100 East Harvard (1130-1135)	Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	1.0-3.0 ppm <sup>1</sup>	40°44'42.1"N, 111°51'34.0"W	Sample taken at culvert opening.
		Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	0.3-1.0 ppm <sup>1</sup>		North of Harvard where Red Butte Creek goes underneath 1100 East. Faint odors detected by technician.
		Hydrogen Sulfide (H <sub>2</sub> S)	QRAEII	0.0 ppm <sup>2</sup>		
		Carbon Monoxide (CO)	QRAEII	0.0 ppm		
		Lower Explosive Limit (LEL)	QRAEII	0.0%		
	Liberty Park (1105-1120)	Volatile Organic Compounds (VOCs)	Photo Ionization Detector (PID)	0.0 ppm <sup>1</sup>	In between 40°44'37.96"N, 111°52'25.29"W and 40°44'38.41"N, 111°52'21.04"W	Sampling along the north side of the lake. No odor was detected by technician.
		Hydrogen Sulfide (H <sub>2</sub> S)	QRAEII	0.0 ppm <sup>2</sup>		
		Carbon Monoxide (CO)	QRAEII	0.0 ppm		
		Lower Explosive Limit (LEL)	QRAEII	0.0%		

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<b>Weather Conditions for:</b>	<b>K7PB Salt Lake City, UT (AS230)</b>				Elev: 4615 ft; Latitude: 40.73067; Longitude: -111.82667				
Time: (MDT)	Temp. (f)	Dew Point (f)	Relative Humidity (%)	Wind Direction	Wind Speed (mph)	Altimeter Setting (inches)	Station Pressure (inches)	Precip 24 hour (inches)	Quality Control
01 Jul 2:40 pm	86	29	13	SE	2G20	29.63	24.792	0.00	OK
01 Jul 2:25 pm	85	37	18	S	3G17	29.63	24.792	0.00	OK
01 Jul 2:10 pm	85	35	17	SSE	7G11	29.62	24.783	0.00	OK
01 Jul 1:55 pm	87	32	14	SSE	4G15	29.62	24.783	0.00	OK
01 Jul 1:40 pm	85	38	19	SSE	9G15	29.64	24.800	0.00	OK
01 Jul 1:25 pm	87	24	10	SSE	3G17	29.64	24.800	0.00	OK
01 Jul 1:10 pm	87	24	10	SSE	2G13	29.65	24.809	0.00	OK
01 Jul 12:55 pm	87	32	14	SSE	G12	29.65	24.809	0.00	OK
01 Jul 12:40 pm	86	33	15	S	5G11	29.66	24.818	0.00	OK
01 Jul 12:25 pm	86	29	13	SSE	G14	29.66	24.818	0.00	OK
01 Jul 12:10 pm	85	27	12	SSE	5G14	29.66	24.818	0.00	OK
01 Jul 11:55 am	84	28	13	SSE	1G16	29.67	24.826	0.00	OK
01 Jul 11:40 am	83	32	16	S	1G16	29.69	24.844	0.00	OK
01 Jul 11:25 am	83	32	16	SSE	3G08	29.68	24.835	0.00	OK
01 Jul 11:10 am	81	41	24	NNE	1G02	29.70	24.852	0.00	OK
01 Jul 10:55 am	79	41	26	NNE	G03	29.70	24.852	0.00	OK
01 Jul 10:40 am	78	43	29	NNE	G03	29.70	24.852	0.00	OK
01 Jul 10:25 am	77	40	26	NNE	G05	29.72	24.869	0.00	OK
01 Jul 10:10 am	75	46	35	NNE	3G03	29.73	24.878	0.00	OK
01 Jul 9:55 am	73	45	36	NNE	2G03	29.74	24.887	0.00	OK
01 Jul 9:40 am	71	50	47	NNE		29.73	24.878	0.00	OK
01 Jul 9:25 am	72	50	46	NNE	G02	29.72	24.869	0.00	OK
01 Jul 9:10 am	73	48	41	NNE	G02	29.72	24.869	0.00	OK
01 Jul 8:55 am	73	47	39	NNE	3G05	29.71	24.861	0.00	OK
01 Jul 8:40 am	74	41	31	NE	G02	29.71	24.861	0.00	OK
01 Jul 8:25 am	73	41	31	NE	G08	29.73	24.878	0.00	OK

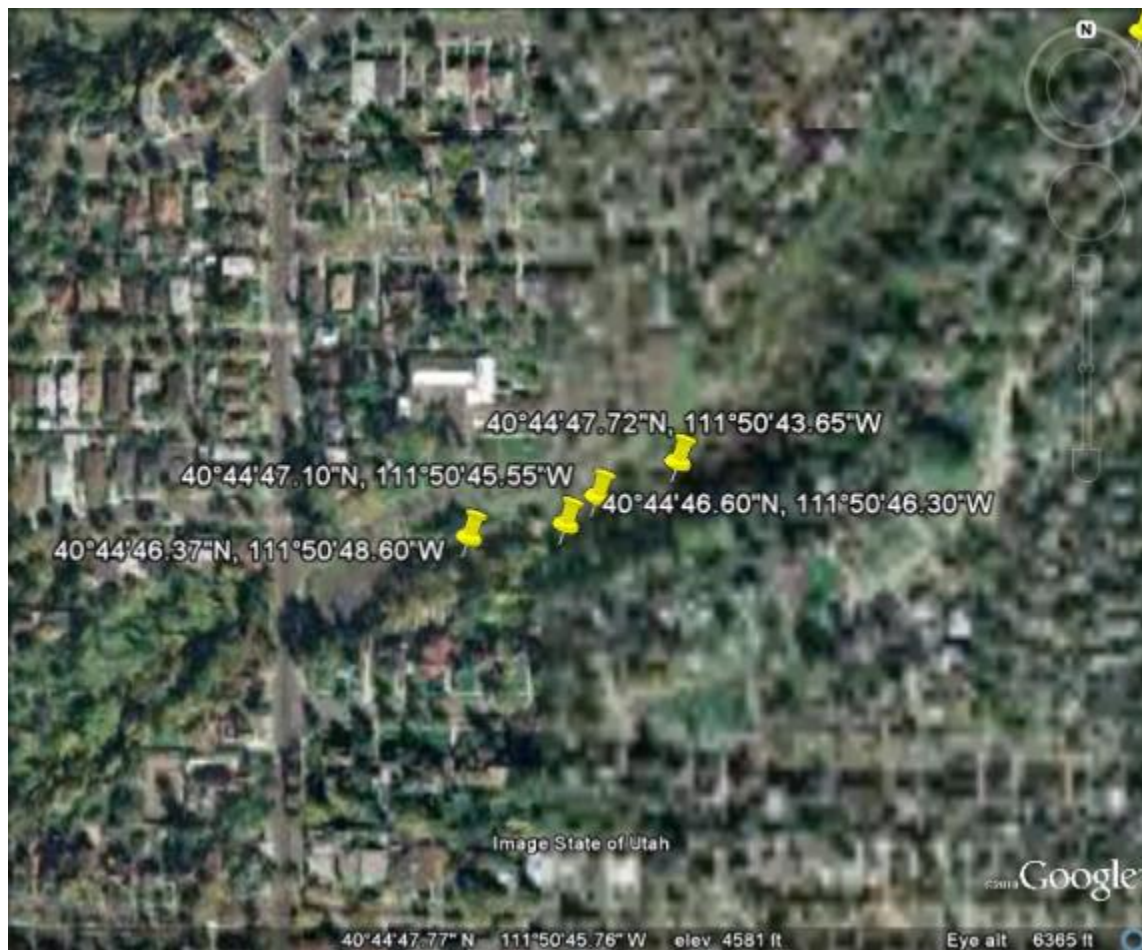
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## Liberty Park Sample Sites



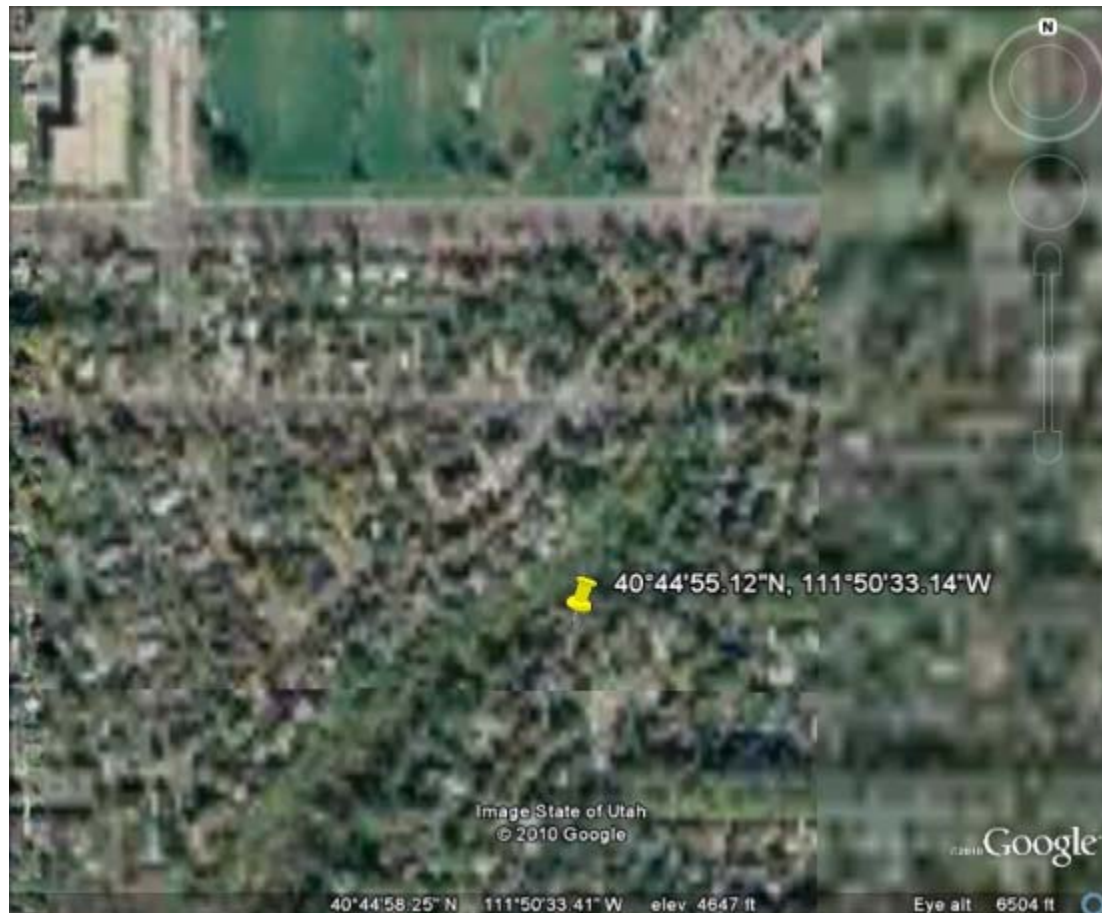
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## Miller Park Sample Sites



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## Resident Sample Site at 966 Military



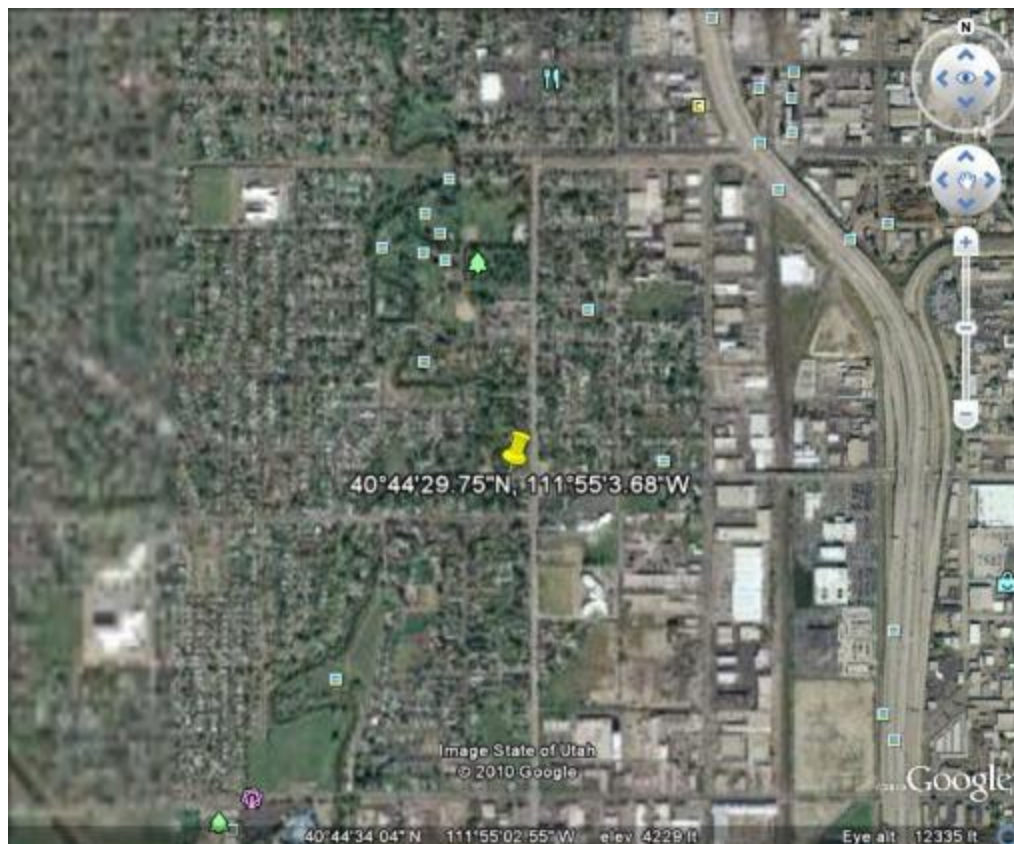
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### Garden Ward Sample Site at 11<sup>th</sup> East and Harvard



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### Sample Site at the Jordan River Confluence





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### Sample Site at Sunnyside Park

