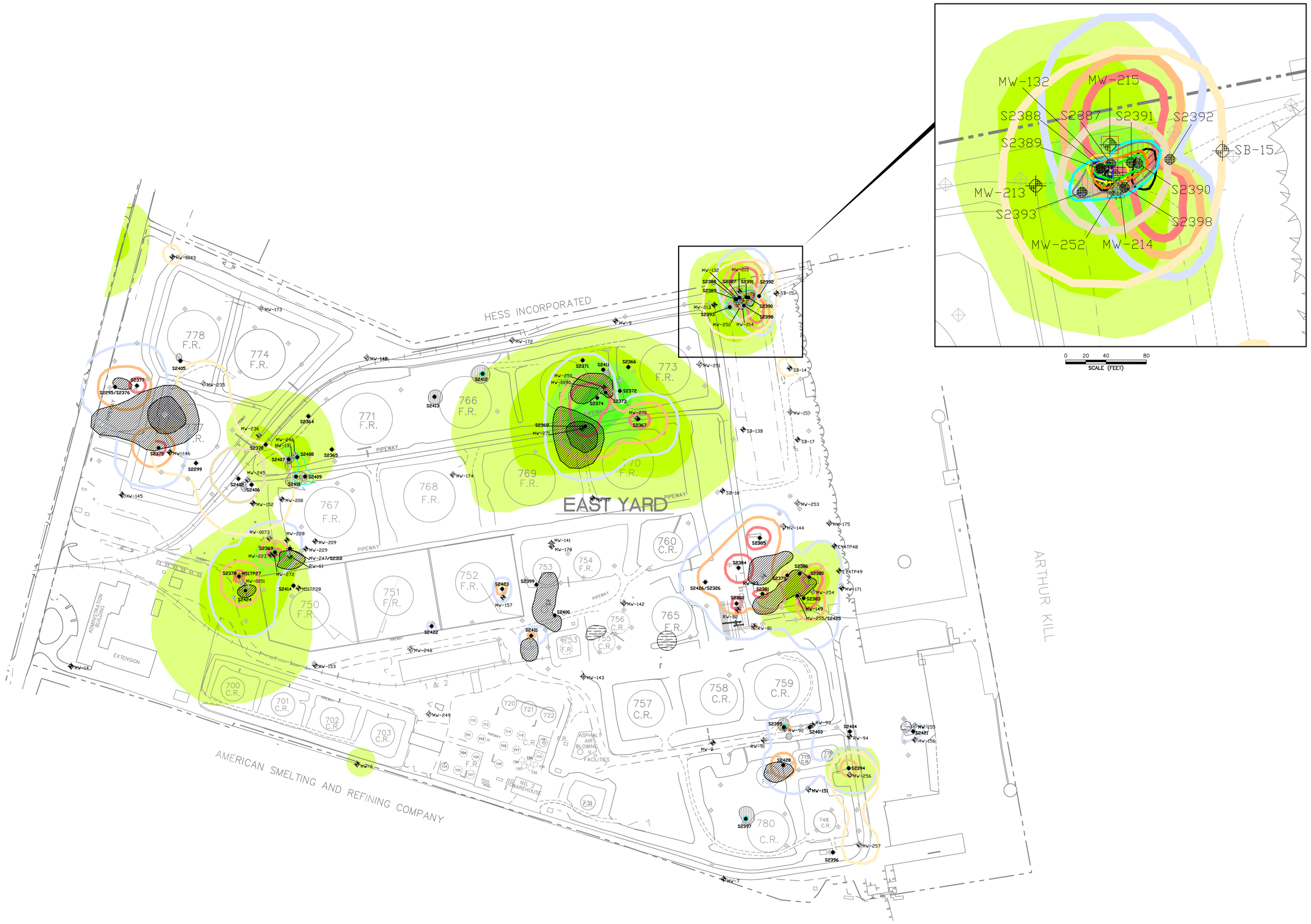
EAST YARD SAMPLING PLAN SUMMARY

Sample Location ID, Sampling Date, Coordinates and Analytical Parameters							Sampling Rationale					
MRS Sample Location ID	Chevron ID	Sampling Date	Sample Depth (Ft)	Northing	Easting	Analytical Parameters (Abbreviations Defined in Notes at Bottom of Table)	No Prior Sample and Near or At High OVM or TPH Conc., or Where NAPL or LNAPL Is Present	Delineate Soil Benzene Conc. >13 mg/Kg	Delineate Soil Lead Conc. >400 mg/Kg	Confirm Anomalous Exceedance	Test for Hazardous Waste TCLP Characteristics	Delineate Benzene-Impacted GW
CMS-EY-SB1	S2405	1/18/2007	6.5 - 7.0	620440.49	556491.54	L, TCLP-L				X	X	
CMS-EY-SB2	S2406	1/18/2007	9.0 - 9.5	620072.31	556703.23	L, TCLP-L				X	X	
CMS-EY-SB3	S2407	1/18/2007	8.0 - 8.5	620147.80	556813.41	L, TCLP-L			X		X	
CMS-EY-SB4	S2408	1/19/2007	7.5 - 8.0	620154.02	556839.16	L, TCLP-L			X		X	
CMS-EY-SB5	S2410	1/19/2007	12.5 - 13.0	620096.43	556835.30	L, TCLP-L			X		X	
CMS-EY-SB6	S2409	1/19/2007	11.5 - 12.0	620096.42	556862.23	L, TCLP-L			X		X	
CMS-EY-SB7	S2413	1/22/2007	1.5 - 2.0	620333.82	559246.86	L, TCLP-L				X	X	
CMS-EY-SB8	S2412	1/22/2007	2.0 - 2.5	620402.17	559389.99	L, TCLP-L				X	X	
CMS-EY-SB9	S2411	1/22/2007	6.5 - 7.0	620414.27	559748.28	L, TCLP-L				X	X	
CMS-EY-SB10	S2393	1/8/2007	4.0 - 4.5	620600.30	560124.65	V L, TCLP-L, TCLP-B			X		X	
CMS-EY-SB11	S2387	1/4/2007	11.5 - 12.0	620623.36	560142.25	L, TCLP-L			X		X	
CMS-EY-SB12	S2389	1/5/2007	5.0 - 5.5	620628.43	560153.23	L, TCLP-L			X		X	
CMS-EY-SB13	S2390	1/5/2007	10.0 - 10.5	620629.14	560179.91	L, TCLP-L			X		X	
CMS-EY-SB14	S2386	1/4/2007	9.0 - 9.5	619808.17	560332.28	L, TCLP-L				X	X	
CMS-EY-SB15	S2395	1/8/2007	4.0 - 4.5	619951.71	560265.53	L, TCLP-L				X	X	
CMS-EY-SB16	S2397	1/10/2007	7.5 - 8.0	619079.30	560172.19	L, TCLP-L				X	X	
CMS-EY-SB17	S2295 and S2376	12/5/2006 and 12/21/2006	10.5 - 11.0	620363.00	558297.65	V, TCLP-B		X			X	
CMS-EY-SB18	S2377	12/21/2006	9.0 - 9.5	620366.62	558362.51	V, TCLP-B		X			X	
CMS-EY-SB19	S2375	12/21/2006	3.0 - 3.5	620181.51	558426.89	V, TCLP-B				X	X	
CMS-EY-SB20	S2299	12/4/2006	8.5 - 9.0; 10.5 - 11.0	620136.59	558538.05	V	X					
CMS-EY-SB21	S2378	12/21/2006	3.0 - 3.5	619799.72	558865.46	V, TCLP-B	X				X	
CMS-EY-SB22	S2424	1/25/2007	5.5 - 6.0	619757.81	558884.77	V, TCLP-B	X				X	
CMS-EY-SB23	S2402	1/12/2007	7.5 - 8.0	620090.18	558864.07	V, TCLP-B	X				X	
CMS-EY-SB24	S2310	12/20/2006	7.5 - 8.0; 10.0 - 10.5	619882.00	558817.10	V	X					
CMS-EY-SB25	S2422	1/25/2007	5.0 - 5.5	619651.79	559238.35	V	X					
CMS-EY-SB26	S2423	1/24/2007	2.5 - 3.0	619762.63	559448.20	V	X				X	
CMS-EY-SB27	S2399	1/11/2007	4.0 - 4.5	619775.28	559550.12	V, TCLP-B				X	X	
CMS-EY-SB28	S2401	1/11/2007	5.0 - 5.5	619623.27	559634.40	V, TCLP-B		X			X	
CMS-EY-SB29	S2400	1/11/2007	7.0 - 7.5	619693.93	559604.50	V, TCLP-B		X			X	
CMS-EY-SB30	S2374	12/21/2006	6.0 - 6.5	620330.49	559730.61	V				X		
CMS-EY-SB31	S2373	12/05/2006	6.5 - 7.0	620346.59	559755.88	V, TCLP-B	X				X	
CMS-EY-SB32	S2372	12/20/2006	8.0 - 8.5	620351.27	559797.82	V				X		
CMS-EY-SB34	S2398	1/10/2007	26.0 - 26.5	620605.06	560166.59	V, TCLP-B		X			X	
CMS-EY-SB35	S2388	1/4/2007	7.5 - 8.0	620624.11	560143.50	V, TCLP-B		X			X	
CMS-EY-SB36	S2391	1/5/2007	8.0 - 8.5; 10.0 - 10.5	620629.58	560173.30	V, TCLP-B		X			X	
CMS-EY-SB37	S2392	1/5/2007	5.5 - 6.0	620632.94	560211.63	V, TCLP-B		X			X	
CMS-EY-SB38	S2326 and S2426	12/12/2006 and 1/25/2007	8.5 - 9.0; 12.0 - 12.5	619782.73	560051.69	V, TCLP-B	X				X	
CMS-EY-SB39	S2384	1/3/2007	4.5 - 5.0	619825.14	560150.58	V, TCLP-B				X	X	
CMS-EY-SB40	S2385	1/4/2007	13.5 - 14.0	619913.98	560213.66	V	X					
CMS-EY-SB41	S2382	1/3/2007	1.5 - 2.0	619719.04	560144.63	V, TCLP-B	X				X	
CMS-EY-SB42	S2381	1/3/2007	3.0 - 3.5	619747.91	560221.81	V, TCLP-B		X			X	
CMS-EY-SB43	S2379	1/3/2007	7.0 - 7.5	619802.99	560295.61	V, TCLP-B		X			X	
CMS-EY-SB44	S2425	1/25/2007	7.5 - 8.0; 8.5 - 9.0	619742.39	560325.26	V, TCLP-B		X			X	
CMS-EY-SB45	S2383	1/3/2007	7.0 - 7.5	619734.96	560344.35	V, TCLP-B		X			X	
CMS-EY-SB46	S2380	1/3/2007	4.0 - 4.5	619797.48	560360.70	V, TCLP-B		X			X	
CMS-EY-SB47	S2403	1/12/2007	8.0 - 8.5	619351.13	560362.14	V	X					
CMS-EY-SB48	S2404	1/12/2007	8.0 -8.5	619338.53	560481.36	V, TCLP-B	X				X	
CMS-EY-SB49	S2421	1/23/2007	5.0 - 5.5	619339.00	560669.86	V, TCLP-B	X				X	
CMS-EY-SB50	S2428	1/29/2007	6.5 - 7.0	619238.63	560283.47	V	X					
CMS-EY-SB51	S2394	1/8/2007	8.0 - 8.5	619229.51	560478.17	V, TCLP-B	X				X	
CMS-EY-SB52	S2396	1/9/2007	10.5 - 11.0	618979.43	560431.37	V	X					
CMS-EY-GW1	S2370/H1014	12/20/2006	3.0 - 3.5	620191.59	558745.25	S/V, GW/V						X
CMS-EY-GW2	S2364/H1008	12/15/2006	11.5 - 12.0	620276.12	558872.10	S/V, GW/V						X
CMS-EY-GW3	S2365/H1009	12/15/2006	2.0 - 2.5	620177.10	558941.82	S/V, GW/V						X
CMS-EY-GW4	S2369/H1013	12/19/2006	6.5 - 7.0	619871.65	558772.72	S/V, GW/V						X
CMS-EY-GW4	MW-272	2/26/2007 2/27/2007	5.5 - 15.5	619864.11	558770.74	V						X
CMS-EY-GW5	S2414/H1016	1/23/2007	9.0 - 9.5	619772.18	558827.81	S/V, GW/V						X
CMS-EY-GW6	S2371/H015	12/23/2006	2.0 - 2.5	620442.17	559687.40	S/V, GW/V						X
CMS-EY-GW7	S2366/H1010	12/18/2006	13.5 - 14.0	620422.06	559823.11	S/V, GW/V						X
CMS-EY-GW8	S2367/H1011	12/18/2006	13.5 - 14.0	620267.62	559852.79	S/V, GW/V						X
CMS-EY-GW8	MW-270	2/26/2007 2/27/2007	15.0 - 25.0	620269.23	559849.61	V						X
CMS-EY-GW9	S2368/H1012	12/19/2006	13.5 - 14.0	620246.04	559694.93	S/V, GW/V						X
CMS-EY-GW9	MW-271	7/12/2006 7/13/2006	8.5 - 18.5	620239.51	559686.05	V						X

Notes:
GW = Groundwater
S = Soil
B = benzene
L = lead (tetra ethyl lead and total lead analyses)
V = volatile organic compounds (VOCs) analysis
OVM = organic vapor meter
TPH = total petroleum hydrocarbons
NAPL = non-aqueous phase liquid
LNAPL = light non-aqueous phase liquid
TCLP = toxicity characteristic leaching procedure



LEGEND:

- MW-102 — ACTIVE MONITORING WELL, RECOVERY WELL, OR PIEZOMETER
- S2397 — SOIL BORING ID FOR A CMS SAMPLE LOCATION
- GROUND WATER MONITORING LOCATION WITH LNAPL PRESENT IN FIRST QUARTER 2007
- SOIL BORING LOCATION WHERE NO NAPL IS PRESENT.
- SOIL BORING LOCATION WITH ORGANIC VAPOR METER (OVM) DATA

ESTIMATED GROUNDWATER BENZENE DISTRIBUTION:
- 1–10 ug/L
- 10–100 ug/L
- 100–1,000 ug/L
- 1,000–10,000 ug/L

ESTIMATED DELINEATION OF GROUNDWATER LEAD CONCENTRATIONS:
- 5–50 ug/L
- >50 ug/L

ESTIMATED DELINEATION OF SOIL VOC CONCENTRATIONS AS MEASURED BY AN ORGANIC VAPOR METER (OVM):
- 1,000 ppm
- 300 ppm
- 100 ppm

ESTIMATED DELINEATION OF TCLP BENZENE CONCENTRATIONS:
- 0.5 mg/L
- 5 mg/L

ESTIMATED DELINEATION OF TCLP LEAD CONCENTRATIONS:
- 5 mg/L
- 50 mg/L
- 500 mg/L

ESTIMATED EXTENT OF LEAD IMPACTED SOILS:
- 800–8,000 mg/Kg
- >8,000 mg/Kg

ESTIMATED EXTENT OF BENZENE IMPACTED SOILS:
- 13–100 mg/Kg
- >100 mg/Kg

ESTIMATED EXTENT OF BENZO(A)PYRENE IMPACTED SOILS:
- >10 mg/Kg

ABBREVIATIONS:

OVM: ORGANIC VAPOR METER
VOC: VOLATILE ORGANIC COMPOUND
TCLP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE

NOTES:

1. THE LATEST LNAPL THICKNESS DISTRIBUTION FOR THE SITE IS SHOWN IN FIGURE 12. THE INDICATION OF THE PRESENCE OF LNAPL IN THIS FIGURE IS LIMITED TO THE MONITORING WELLS SAMPLED IN THE FIRST QUARTER 2007.
2. THE DISTRIBUTION OF ARSENIC CONTAMINATED SOIL IN THE MAIN YARD AND EAST YARD IS SHOWN IN FIGURES 8 AND 9, RESPECTIVELY.

0 60 120 240
SCALE (FEET)

CHEVRON PRODUCTS COMPANY
PERTH AMBOY, NEW JERSEY
CORRECTIVE MEASURES STUDY

EAST YARD SUMMARY OF PRINCIPAL CONTAMINANTS OF CONCERN DISTRIBUTION IN SOIL AND GROUNDWATER

Chevron Asphalt Perth Amboy

DATE: 11/17/08
URS JOB NO: 38547450

FIGURE 6

K:\CRA\ORD\CHEVRON\CMS Report\CADD Figures\EY_GW_and_Soil_Summary FIG 6.dwg, Layout1 CD, 12/12/2008 3:43:14 PM