

**Appendix F**  
**Soil Boring Field Screening Results**

## SOIL BORING SAMPLING – FIELD SCREENING RESULTS

Property	Boring No.	Depth Interval (ft)	Maximum PID Scan <sup>a</sup> (ppm)	Maximum Rad Scan <sup>b</sup> (cpm)	Maximum Headspace Reading <sup>a</sup> (ppm)	Remarks
Stepan	C4	(1–3)	1	85	8	
		(3–5) <sup>c</sup>	3	70	9.4	
		(5–7) <sup>c</sup>	3	76	10.0	
		(7–9) <sup>c</sup>	3	67	11.7	
		(9–11)	0	65	12	
	C5	(0–2) <sup>c</sup>	0 <sup>d</sup>	50	0 <sup>d</sup>	
		(2–4) <sup>c</sup>	0 <sup>d</sup>	50	0 <sup>d</sup>	
	C20	(0.5–2.5)	0	76	0	
		(2.5–4.5) <sup>c</sup>	0.2	77	0	
		(4.5–6.5) <sup>c</sup>	103	40	1345	
		(6.5–8.5) <sup>c,e</sup>	75	92	1543	The 7.5–to–8.5–ft. interval contained black stained gravel and exhibited a chemical odor.
	C38	(0–2)	0	78	0	
		(2–4)	0	70	0	
		(4–6)	2	210	2	Hydrogen sulfide odor. Black and gray fill material.
		(6–8)	7	590	17.8	Hydrogen sulfide odor. Black clay fill material with white mottling.
		(8–10) <sup>c</sup>	20 <sup>f</sup>	18600	20	Black sludge material.
		(10–12) <sup>c,e</sup>	0	27400	10	Black sludge material.
		(12–14) <sup>c,e</sup>	0	569	Not taken <sup>g</sup>	Sludge material, with native soil in the 13–to–14–ft. interval.
	C39	(0–2) <sup>c</sup>	0	60	3.2	
		(2–4)	1	57	2.1	
		(4–6) <sup>c</sup>	0	42	2.0	
		(6–8) <sup>c</sup>	0.2	68	3.6	
	C40	(0–2)	0 <sup>d</sup>	Not taken <sup>h</sup>	4.9	
		(2–4) <sup>c</sup>	0 <sup>d</sup>	60	6.8	
		(4–6) <sup>c</sup>	0 <sup>d</sup>	47	10.8	
		(6–8) <sup>c</sup>	0 <sup>d</sup>	45	10.1	
		(8–10) <sup>c</sup>	0 <sup>d</sup>	48	10.8	

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Stepan	C41	(0–2) <sup>c</sup>	0 <sup>d</sup>	50	0 <sup>d</sup>	
		(2–4)	0 <sup>d</sup>	80	0 <sup>d</sup>	Streaks of black staining in the soil.
		(4–6) <sup>c</sup>	0 <sup>d</sup>	50	0 <sup>d</sup>	Streaks of black staining in the soil.
		(6–8) <sup>c</sup>	0 <sup>d</sup>	80	0 <sup>d</sup>	
		(8–10)	0 <sup>d</sup>	80	0 <sup>d</sup>	
		(10–12)	1 <sup>d</sup>	75	0 <sup>d</sup>	
		(12–14)	0 <sup>d</sup>	65	0 <sup>d</sup>	
	C42	(0–2)	17	69	111	Similar chemical odors to C20 and C43.
		(2–4)	38	70	108	Gray, black, and orange stained fill material.
		(4–6) <sup>c</sup>	115	47	112	Gray and black sludge material.
		(6–8) <sup>c</sup>	14	85	100	
		(8–10)	0 <sup>d</sup>	35	55	The 8–to–9–ft. interval contained sludge.
		(10–12) <sup>c</sup>	0	58	8.8	
		(12–14)	50 <sup>d</sup>	88	7.0	
	C43	(14–16)	20 <sup>d</sup>	87	18.8 <sup>d</sup>	
		(1–3)	0.4	71	13.8	Black staining within fill material. Similar chemical odor to C20.
		(3–5) <sup>c</sup>	8	40	45	Black staining within fill material.
		(5–7)	0.5	70	3.5	
		(7–9) <sup>c</sup>	0	84	30	
		(9–11)	13	67	31.3	
	C44	(11–13) <sup>c</sup>	35	96	111	
		(0–2)	2.9 <sup>d</sup>	Not taken <sup>h</sup>	21	
		(2–4)	15 <sup>d</sup>	50	211	Soils emitted a chemical odor.
		(4–6) <sup>c</sup>	5 <sup>i</sup>	65	49.9	Soils emitted a chemical odor.
		(6–8) <sup>c</sup>	500 <sup>i</sup>	21	143	Soils emitted a chemical odor.
		(8–10) <sup>c</sup>	20 <sup>i</sup>	70	190	Soils emitted a chemical odor.
Federal Express	C26	(10–12)	8 <sup>i</sup>	21	26.4	Soils emitted a chemical odor.
		(0–2) <sup>c</sup>	1	70	7	
		(2–4) <sup>c</sup>	3	80	9	
		(4–6) <sup>c</sup>	3	65	10	
		(6–8)	0	75	Not taken <sup>j</sup>	

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Property	Boring No.	Depth Interval (ft)	Maximum PID Scan <sup>a</sup> (ppm)	Maximum Rad Scan <sup>b</sup> (cpm)	Maximum Headspace Reading <sup>a</sup> (ppm)	Remarks
Federal Express	C28	(1-3)	0.5	100	3.1	
		(3-5) <sup>c</sup>	0.7	60	3	
		(5-7) <sup>c</sup>	1	98	3.6	
		(7-9) <sup>c</sup>	1	76	3.4	
	C30	(1-3) <sup>c</sup>	0	56	1.4	Encountered bedrock at 2.5 feet. The 0-to-1-ft. interval was asphalt and trap rock.
	C32	(1-3) <sup>c</sup>	0	55	0.5	The 0-to-1-ft. interval contained asphalt.
		(3-5) <sup>c</sup>	0	70	2.3	
		(5-7) <sup>c</sup>	0	52	1.2	
		(7-9)	0	58	Not taken <sup>h</sup>	
	C35	(1-3)	0.2	83	4	The 0-to-1-ft. interval contained asphalt.
		(3-5) <sup>c</sup>	0.5	73	3	
		(5-7) <sup>c</sup>	2	60	4	
		(7-9) <sup>c</sup>	1	80	1	
SWS	C25	(0.5-2.5) <sup>c</sup>	113	70	600	The 0-to-0.5-ft. interval contained asphalt. Soil from the 0.5-to-2.5-ft. interval was stained and emitted a petroleum odor.
		(2.5-4.5)	1000	60	1520	Sample emitted a petroleum odor.
		(4.5-6.5) <sup>c</sup>	600	60	1680	Sample emitted a petroleum odor.
		(6.5-8.5)	470	65	1450	Sample emitted a petroleum odor.
		(8.5-10.5) <sup>c</sup>	1300	40	3777	Sample emitted a petroleum odor.
	C34	(1-3) <sup>c</sup>	0	65	8	
		(3-5) <sup>c</sup>	0	55	5.6	
		(5-7) <sup>c</sup>	0	70	5.3	
		(7-9)	0	80	5.8	
DeSaussure	C27	(0-2)	0	10	0	The 1.7-to-2-ft. interval contained white fill material.
		(2-4) <sup>c</sup>	0	12	0	Sample contained a soft gray, white, and tan fill material.
		(4-6) <sup>c</sup>	0	17	0	
		(6-8) <sup>c</sup>	0	8	0	

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DeSaussure	C31	(0-2)	0.2	80	3	
		(2-4) <sup>c</sup>	0.5	65	1	
		(4-6) <sup>c</sup>	0.5	65	2	
		(6-8) <sup>c</sup>	0.5	70	4.4	
		(8-10)	0	80	1	
	C37	(0-2) <sup>c,e</sup>	0	150	0.5	
		(2-4) <sup>c</sup>	1.0	90	2.2	The 3.5-to-4.0-ft. interval contained gray streaks.
Sunoco	C15	(0-2) <sup>c</sup>	2.1	Not taken <sup>k</sup>	2.5	Due to underground tanks in close proximity to boring, sample was taken from sidewalls after excavation with a shovel.
		(3-5) <sup>c,e</sup>	4.0	500	34.8	Slight petroleum odor. Gray sand with some black fill material. Black fill material exhibited elevated rad readings.
		(5-7) <sup>c</sup>	1.3	60	6.5	
		(7-9)	1.2	55	3.4	
	C33	(1-3) <sup>c</sup>	8	65	4.3	
		(3-5) <sup>c</sup>	3.7	95	3.6	The 4.5-to-5.0-ft. interval contained black organic material similar to the 3-to-5-ft. interval within C15.
		(5-7)	1	65	4.2	
		(7-9) <sup>c</sup>	3	50	7.9	
		(9-11)	0	80	3.3	
Gulf	C11	(1-3)	0	75	3.3	
		(3-5) <sup>c</sup>	0	45	13.8	
		(5-7) <sup>c</sup>	0	40	5.4	
		(7-9) <sup>c</sup>	0	42	4.8	
		(9-11)	0	55	Not taken <sup>l</sup>	
AMP	C22	(1-3) <sup>c</sup>	1	48	5.6	
		(3-5) <sup>c</sup>	0	69	2.0	
		(5-7) <sup>c</sup>	2	60	3.0	
		(7-9)	2	75	Not taken <sup>l</sup>	
Sears	C1	(1-3) <sup>c</sup>	0 <sup>d</sup>	90	0 <sup>d</sup>	
		(3-5) <sup>c</sup>	0 <sup>d</sup>	60	0 <sup>d</sup>	
		(5-7) <sup>c</sup>	0.3 <sup>d</sup>	50	0 <sup>d</sup>	Soils emitted a petroleum odor.
		(7-9)	15 <sup>d</sup>	70	290 <sup>d</sup>	Soils emitted a petroleum odor.

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Sears	C2 <sup>m</sup>	(0–2) <sup>c</sup>	0	60	0	
		(2–4)	0	60	0	Sampled only the 3–to–4–ft. interval.
	C3	(0–2) <sup>c</sup>	0	60	1.6	The 0–to–0.5–ft. interval was concrete. Sample was collected from the 1.5–to–2–ft. interval.
		(2–4) <sup>c</sup>	1.4	60	1.7	
		(4–6)	0.2	Not taken <sup>i</sup>	Not taken <sup>i</sup>	
	C6	(0–2) <sup>c</sup>	0	60	0	Interval contained black gravel (railroad ballast).
		(2–4)	0	Not taken <sup>k</sup>	Not taken <sup>k</sup>	
	C7 <sup>n</sup>	(0–2)	0	60	0	
		(2–4) <sup>c</sup>	4.1	290	2.0	Soils emitted a hydrogen sulfide odor. Soft, black and gray fill material.
		(4–6) <sup>c,e</sup>	1.2	190	2.7	Encountered black and white fill material. Soils emitted a hydrogen sulfide odor.
		(6–8) <sup>c</sup>	0	70	2.9	
	C8	(0–2) <sup>c</sup>	0	130	2.0	
		(2–4) <sup>c,e</sup>	0	47	1.6	The 2–to–3–ft. interval contained slough from interval above. Sample was collected from the 3–to–4–ft. interval.
		(4–6)	0	Not taken <sup>o</sup>	Not taken <sup>o</sup>	
		(6–8)	0	60	3.4	
	C9	(0–2) <sup>c,e</sup>	0.7	100	3.1	
		(2–4)				No recovery.
		(4–6) <sup>c</sup>	1.7	60	22	Some dark staining and pieces of concrete were present.
		(6–8)	2.0	60	Not taken <sup>k</sup>	Soils emitted a petroleum odor.
	C10 <sup>p</sup>	(0–2)	0	400	2.3	The 1–to–2–ft. interval contained white and gray fill material.
		(2–4)	0	100	2.4	
		(4–6) <sup>c</sup>	1.2	100	2.3	
		(6–8) <sup>c</sup>	0	70	1.6	
	C12	(0.5–2.5) <sup>c</sup>	0	60	0.7	The 0.5–to–1–ft. interval contained gravel and asphalt.
		(2.5–4.5) <sup>c</sup>	0	60	1.2	
		(4.5–6.5)				No recovery.
		(6.5–8.5)	0	60	Not taken <sup>k</sup>	

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Sears	C13	(1–3) <sup>c</sup>	0 <sup>d</sup>	50	0 <sup>d</sup>	The 2.5–to–3–ft. interval contained black stained soils.
		(3–5) <sup>c</sup>	0 <sup>d</sup>	60	0 <sup>d</sup>	Some black staining.
		(5–7) <sup>c</sup>	0 <sup>d</sup>	60	0 <sup>d</sup>	
		(7–9)	0 <sup>d</sup>	60	0 <sup>d</sup>	
	C14	(0–2)	0	230	1.0	The 0.7–to–1–ft. interval contained fill which was light gray with pale pink streaks.
		(2–4) <sup>c,e</sup>	0.6	200	2.2	The 2–to–3.5–ft. interval contained gray and white fill.
		(4–6) <sup>c</sup>	0	100	2.0	
		(6–8)	0	100	1.9	
	C16 <sup>q</sup>	(0–2)	0	200 <sup>h</sup>	0	The 1.5–to–2–ft. interval contained gray and white fill material.
		(2–4) <sup>c,e</sup>	0	250	0	The 3.5–to–4–ft. interval contained gray and white fill material. Sample emitted a hydrogen sulfide odor.
		(4–6)	0	200	0	
		(6–8)	0	200	0	
	C17 <sup>r</sup>	(0–2) <sup>c</sup>	0	180	0	
		(2–4)	0	130	0	
		(4–6)	0	80	0	
	C18	(0–2) <sup>c</sup>	0	60	0	
		(2–4) <sup>c</sup>	0	60	0	
	C19	(0–2) <sup>c</sup>	0	60	0	Sample contained small amounts of blue material.
		(2–4) <sup>c</sup>	0	60	0	
		(4–6) <sup>c</sup>	0	60	0	
	C21	(0–2) <sup>c</sup>	0	400	0	The 1–to–2–ft. interval contained gray and white fill material.
		(2–4) <sup>c,e</sup>	0	150	0	The 3–to–4–ft. interval contained grayish sand and white fill material.
		(4–6)	0	150	Not taken <sup>k</sup>	Encountered gray sand material.
	C23	(0–2) <sup>c</sup>	0	60	0	
		(2–4)	0	60	0	
		(4–6) <sup>c</sup>	0	60	0	
		(6–8)	0	60	Not taken <sup>k</sup>	
	C24	(0–2)	0	200	0	
		(2–4) <sup>c,e</sup>	0	200	0	
		(4–6) <sup>c</sup>	0	200	0	

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Sears	C29	(1–3) <sup>c</sup>	0	250	0	Black fill material with gray mottling.
		(3–5)	0	80	0	Black/brown sludge.
		(5–7) <sup>c,e</sup>	0	200	0	
		(7–9) <sup>c</sup>	0	60	0	Sample emitted a petroleum odor.
	C36	(0–2) <sup>c</sup>	0	60	0	
		(2–4) <sup>c</sup>	0	60	0	
		(4–6) <sup>c</sup>	0	60	0	

<sup>a</sup> PID scan and headspace screening were performed using a Photon PID, except where noted. PID scan measurements often fluctuated as the instrument was moved along the soil in the split spoon. Only the maximum PID readings have been presented in this table.

<sup>b</sup> Radiological scan was performed using an HP–210 or HP–260 probe.

<sup>c</sup> Sample interval sent for chemical analysis.

<sup>d</sup> PID scan and/or headspace screening were performed using an OVM.

<sup>e</sup> Sample interval was sent for radiological analysis.

<sup>f</sup> PID scan and headspace screening were performed using an HNu PID.

<sup>g</sup> Headspace sample spilled before reading was taken.

<sup>h</sup> Instrument was not working properly.

<sup>i</sup> PID scan and headspace screening were performed using an OVA.

<sup>j</sup> Headspace reading not taken because no sample was collected due to shallow bedrock.

<sup>k</sup> Rad scan inadvertently not taken for this sample.

<sup>l</sup> Headspace reading and/or rad scan were not taken because no sample was collected due to the shallow occurrence of groundwater.

<sup>m</sup> The sample from the 3–to–4–ft. interval of boring C2 was sent for chemical analysis.

<sup>n</sup> The samples from the 4–to–5–ft., 5–to–7–ft., and 7–to–8–ft. intervals of boring C7 were sent for chemical analysis.

<sup>o</sup> Headspace and/or rad scan were not taken because the sample was not representative of the interval.

<sup>p</sup> Samples from the 2–to–3–ft., 4–to–6–ft., and 6–to–8–ft. intervals of boring C10 were sent for semivolatile, metals, cyanide, caffeine, d–limonene, and a–pinene analysis. VOC analysis, however, was done only on the sample from the 3–to–4–ft. interval.

<sup>q</sup> The samples from the 1.5–to–2.5–ft., 2.5–to–4.0–ft., and 4.0–to–5.5–ft. intervals of boring C16 were sent for chemical analysis.

<sup>r</sup> The samples from the 2–to–3–ft. and 3–to–4–ft. intervals of boring C17 were sent for chemical analysis.