State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

# Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

Page 1 of 29

### GENERAL INSTRUCTIONS, PURPOSE AND APPLICABILITY OF THIS FORM:

Completion of the applicable portions of this form is required under Wis. Admin. Code § NR 724.13(3). Failure to submit this form as required is a violation of that rule section and is subject to the penalties in Wis. Stats. § 292.99. This form must be submitted every six months for remediation projects that report operation and maintenance progress, in accordance with Wis. Admin. Code §. NR 724.13(3). A narrative report or letter containing the equivalent information required in this form may be submitted in lieu of the actual form. Submittal of this form is not a substitute for reporting required by department programs such as Waste Water or Air Management.

#### Notes:

- Long-term monitoring results submitted in accordance with Wis. Admin. Code § NR 724.17(3) are required to be submitted within 10 business days of receiving sampling results and are not required to be submitted using this form. However, portions of this form require monitoring data summary information that may be based on information previously submitted in accordance with that section of code.
- Responsible parties should check with the department Project Manager assigned to the site to determine if this form is required to be submitted at sites responded to under the Federal Comprehensive Environmental Response and Compensation Act (commonly known as Superfund) or an equivalent state-lead response.
- 3. Responsible parties should check with the department Project Manager assigned to the site to determine if any of the information required in this form may be omitted or changed and should obtain prior written approval for any omissions or changes.
- Responsible parties are required to report separately on a semi-annual basis under Wis. Admin. Code § NR 700.11(1). Reporting
  under that provision is through an internet-based form. More information can be found at:
  <a href="http://dnr.wi.gov/topic/Brownfields/documents/regs/NR700progreport.pdf">http://dnr.wi.gov/topic/Brownfields/documents/regs/NR700progreport.pdf</a>.
- 5. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by Remediation and Redevelopment Program. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (Wis. Stats. §§ 19.31–19.39).

Section GI - General Site Inf	ormation			See See See							
A. General Information  1. Site name											
Harborview Cleaners											
	07/01/2019	To: 1	2/31/2019	Days in	noriod:		1	84			
Regulatory agency (enter DN			4. BRRTS ID No			digit			specific)		
DNR		S A35 <b>3</b>	02-46-548092					au 🔾 a avena s			
5. Site location									Topical States		
Region	County		Address								
Southeast Region	Ozaukee		134 E Grand	d Avenue							
Municipality name City	Town O Village			Township	Range	<b>⊚</b> E	Section	1/4	1/4 1/4		
Port Washington				11 N	22	OW	28	SE	NW		
6. Responsible party	100		7. Consultant								
Name			Select if the following information has changed since the last								
Harborview Cleaners			u submittal				·				
Mailing address			Company nan								
134 E Grand Avenue, Port V	Vashington, WI 5	3074	EnviroForen								
Phone number			Mailing addres		las Dais	C.		hone nun	nber		
(262)	284-2370		N16W23390 Stone Ridge Drive, Suite G Waukesha, WI 53188 (262) 290-4001								
8. Contaminants			and the same and t					<u> </u>			
Volatile Organic Compound	s (Tetrachloroeth	nene)									
9. Soil types (USCS or USDA)	^ ^										
CL, ML, SM											
10. Hydraulic conductivity(cm/se	ec):	1	11. Average li	near velocit	y of grou	ındwa	ater (ft/yr)				
3.3 x 10-4			19								

Site name: Harborview Cleaners	Remediation Site Operation, Maintenance,
Reporting period from: <u>07/01/2019</u> To: <u>12/31/2019</u>	Monitoring & Optimization Report
Days in period: 184	Form 4400-194 (R 07/19) Page 2 of 29
12. If soil is treated ex situ, is the treatment location off site? Yes	○ No
If yes, give location: Region	County
Municipality name City Town Village	Township Range OE Section 1/4 1/4 1/4
B. Remediation Method	
Only submit sections that apply to an individual site. Check all that apply	ſ.
Groundwater extraction (submit a completed Section GW-1).  Free product recovery (submit a completed Section GW-1).  In situ air sparging (submit a completed Section GW-2).  Groundwater natural attenuation (submit a completed Section GW-3).  Other groundwater remediation method (submit a completed Section Soil venting (including soil vapor extraction building venting and biov Soil natural attenuation (submit a completed Section IS-2).  Other in situ soil remediation method (submit a completed Section IS Biopiles (submit a completed Section ES-1).  Landspreading/thinspreading of petroleum contaminated soil (submit Other ex situ remediation method (submit a completed Section ES-3).  Site is a landfill (submit a completed Section LF-1).	n GW-4). venting submit a completed Section IS-1). S-3). it a completed Section ES-2).
C. General Effectiveness Evaluation for All Active Systems  If the remediation is active (not natural attentuation), complete this subset  1. Is the system operating at design rates and specifications?   Ye  If the answer is no, explain whether or not modifications are necessar	es O No
Are modifications to the system warranted to improve effectiveness     If yes, explain:	◯ Yes ● No
<ul> <li>3. Is natural attenuation an effective low cost option at this time?</li> <li>4. Is closure sampling warranted at this time? Yes No</li> <li>5. Are there any modifications that can be made to the remediation to im If yes, explain:</li> </ul>	Yes ● No  nprove cost effectiveness?  Yes ● No

Site name: Harborview Cleaners	Remediation Site Operation, Maintenance,
Reporting period from: <u>07/01/2019</u> To: <u>12/31/2019</u>	Monitoring & Optimization Report
Days in period: 184	Form 4400-194 (R 07/19) Page 3 of 29
D. Economic and Cost Data to Date	
1. Total investigation cost: \$183,400.00	
2. Implementation costs (design, capital and installation costs, exc	luding investigation costs: \$145,900.00
3. Total costs during the previous reporting period: \$22,000	0.00
4. Total costs during this reporting period: \$17,000.00	
5. Total anticipated costs for the next reporting period: \$22	,000.00
6. Are any unusual or one-time costs listed in the reporting periods	covered by D.3., D.4. or D.5. above? Yes  No
If yes, explain:	
7. If closure is anticipated within 12 months, estimated costs for pr	
E. Name(s), Signature(s) and Date of Person(s) Submitting F	
	it reports under ch. NR 712 Wis. Adm. Code are to sign this form for gation. Other persons may sign this form for sites with no response
Registered Professional Engineers:	
of ch. A-E 4, Wis. Adm. Code; that this document has been prepar	State of Wisconsin, registered in accordance with the requirements ed in accordance with the rules of Professional Conduct in ch. A-E mation contained in this document is correct and the document was 8 700 to 726, Wis. Adm. Code.
Print name	Title
Robert Fedorchak	Senior Engineer
Signature	Date 01/20/2020
Hydrogeologists:	
I hereby certify that I am a hydrogeologist as that term is defined i knowledge, all information contained in this document is correct an requirements in chs. NR 700 to 726, Wis. Adm. Code.	
Print name	Title
Brian Kappen	Project Manager
Signature B A 72	Date 1/21/2020
Scientists:	<del></del>
	R 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, nent was prepared in compliance with all applicable requirements in
Print name	Title
Signature	Date
Other Persons:	
Print name	Title
Signature	Date

Cita	nama:	Harborview	01
Sile	name.	Harborview	Cleaners

Days in period: 184

Reporting period from: 07/01/2019

To: 12/31/2019

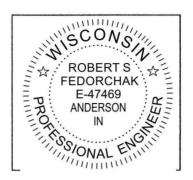
# Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

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## Professional Seal(s), if applicable:





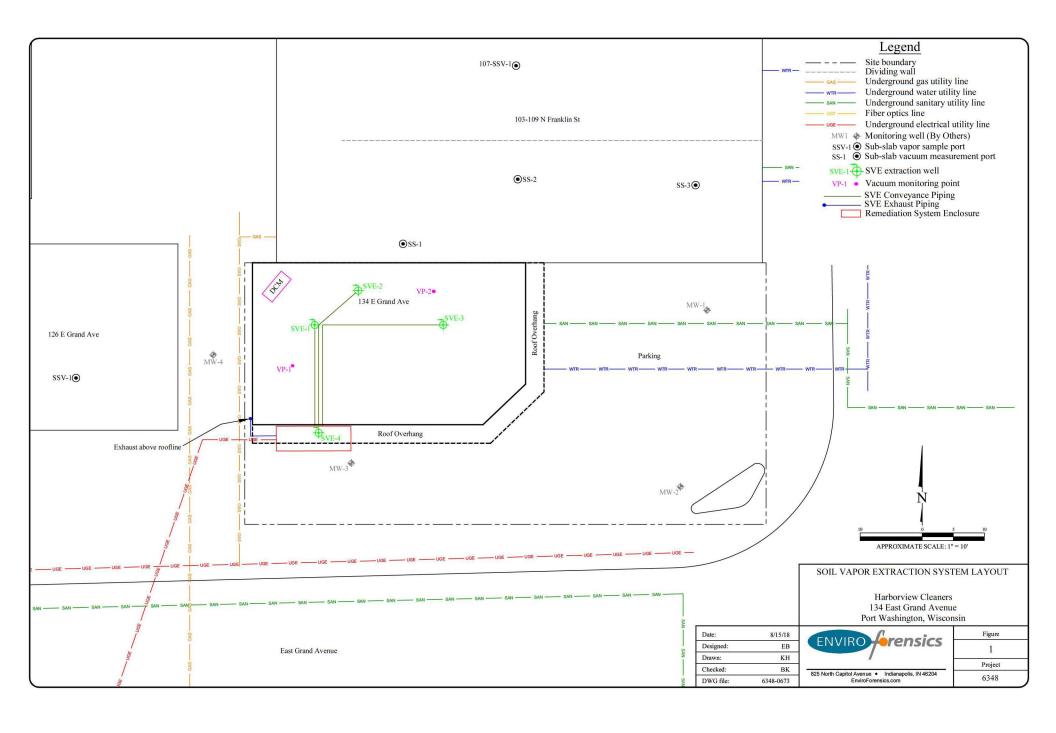
Site name: Harborview Cleaners			diation Site Operat	
Reporting period from: 07/01/2019	To: <u>12/31/2019</u>		oring & Optimization	•
Days in period: 184		Form 440	00-194 (R 07/19)	Page 10 of 29
Section IS-1, Soil Venting (Including A. Soil Venting Operation	ng Soil Vapor Extraction,	Building Vent	ing and Bioventing)	
Note: This form is not required for bui and are not considered part of ongoing	lding vapor mitigation system active soil remediation.	s that are instal	lled proactively to protect bu	uilding occupants/users
1. Number of air extraction wells availa	ble and number of wells actu	ally in use durir	ng the period:	4
<ol> <li>Number of days of operation (only lift 134 days. All four (4) extraction higher vacuum was applied to or intentionally closed are listed wittwo occasions during the reporting.</li> <li>System utilization in percent (days of 73%. Downtime was caused by</li> </ol>	wells were available for a solution with well were available for a solution well well as the solution were as the solution with the solution were as the solution were available for the solution well as the solution were available for the solution were av	use during the s to target extra (attached). To sociated with	reporting period. Howe raction from specific area The system shutdown for power interruption.	ver, at certain times as. Wells that were extended periods on
Average depth to groundwater:	11 gpm			
B. Building Basement/Subslab Ven	ting System Operation			
1. Number of venting points available a	and number of points actually	in use during th	he period:	
2. Number of days of operation (only list	st the number of days the sys	stem actually op	perated, if unknown explain)	:
3. System utilization in percent (days of	of operation divided by report	ting time period	multiplied by 100). If < 80%	6, explain:
C. Effectiveness Evaluation				
1. Average contaminant removal rate for	or the entire system:	0.06	pounds per day	, , , , , , , , , , , , , , , , , , ,
2. Average contaminant removal rate p	er well or venting point:	0.03	pounds per day	
<ol><li>If the average contaminant removal rate per well is less than one tenth o</li></ol>			entire system, or if the avera	ge contaminant removal
a. If contaminants are aerobically bid	odegradable and confirmation	n borings have i	not been drilled in the past	year:
i. Oxygen levels in extracted air:	percent			
ii. Methane levels in extracted air	(ppm <sub>V</sub> ) If over 10 ppm <sub>V</sub> , exp	olain:		
iii. If methane is not present abov	e 10 ppm <sub>V</sub> and if oxygen is g uring the next reporting perio			

- Or, perform an in situ respirometry test in a zone of high contamination. Do not perform the test in an air extraction well, use a gas probe or water table well. If a zero order rate of decay based on oxygen depletion is less than 2 mg/kg per day, then you should drill confirmation borings, if the entire site should be considered for closure. If the rate of decay is between 2 and 10 mg/kg, operate for one more reporting period before evaluating further. If the zero order rate of decay is greater than 10 mg/kg total hydrocarbons, continue operating the system in a manner than maximizes aerobic biodegradation.
- b. If contaminants are not aerobically biodegradable and confirmation borings have not been recently drilled during the past year, you should drill confirmation borings during the next reporting period if the entire site should be considered for closure.
- c. If soil borings were drilled during the past year and soil contamination remains above acceptable levels, explain if the system effectiveness can be increased and/or if other options need to be considered to achieve cleanup criteria.

### D. Additional Attachments

Attach the following to this form:

- Well and soil sample location map indicating all air extraction wells. If forced air injection wells are also in use, identify those wells.
- If water table monitoring wells are present at the site, a map of well locations.
- Time versus vapor phase contaminant concentration graph.
- Time versus cumulative contaminant removal graph.
- Groundwater elevations table, if water table wells are present at the site; also list screen lengths and elevations.
- Table of soil contaminant chemistry data.
- · Soil gas data, if gas probes are used to monitor subsurface conditions in locations other than where air is extracted.
- System operational data table.



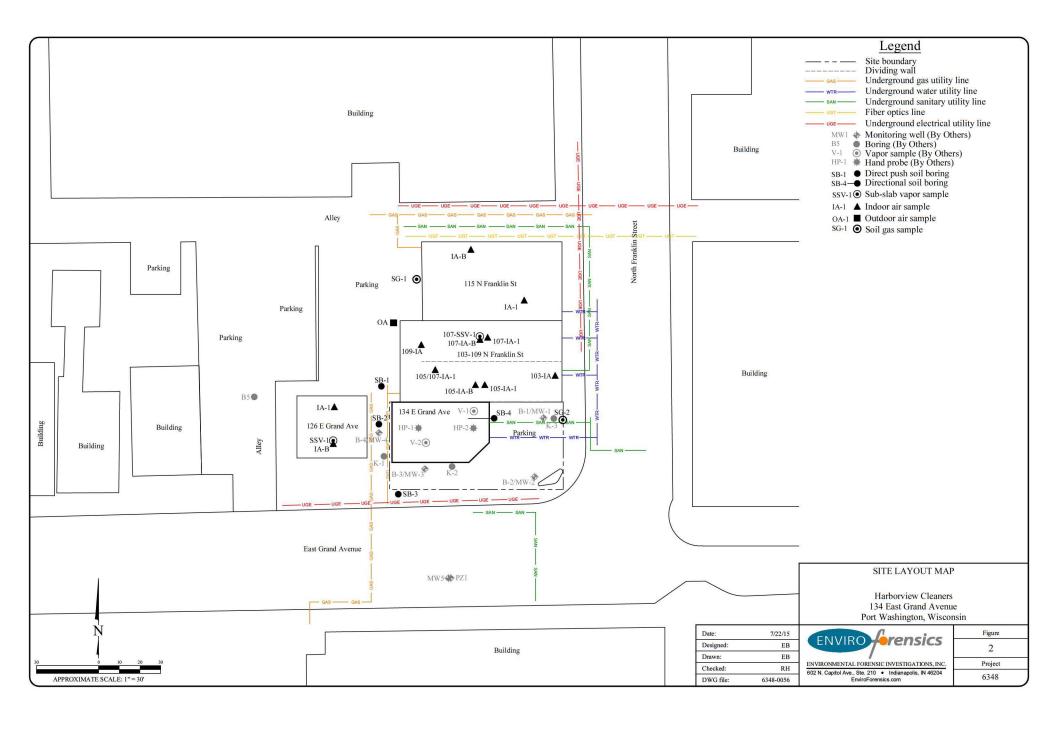
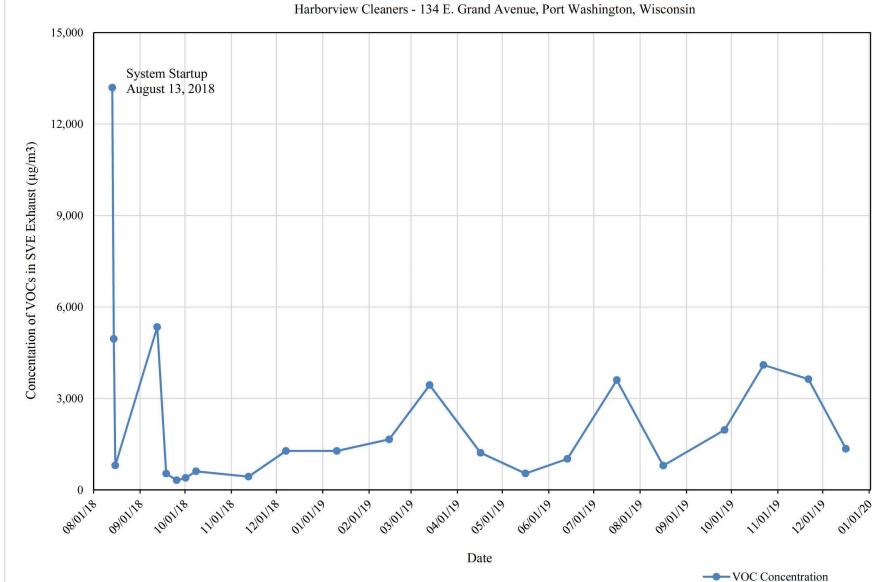
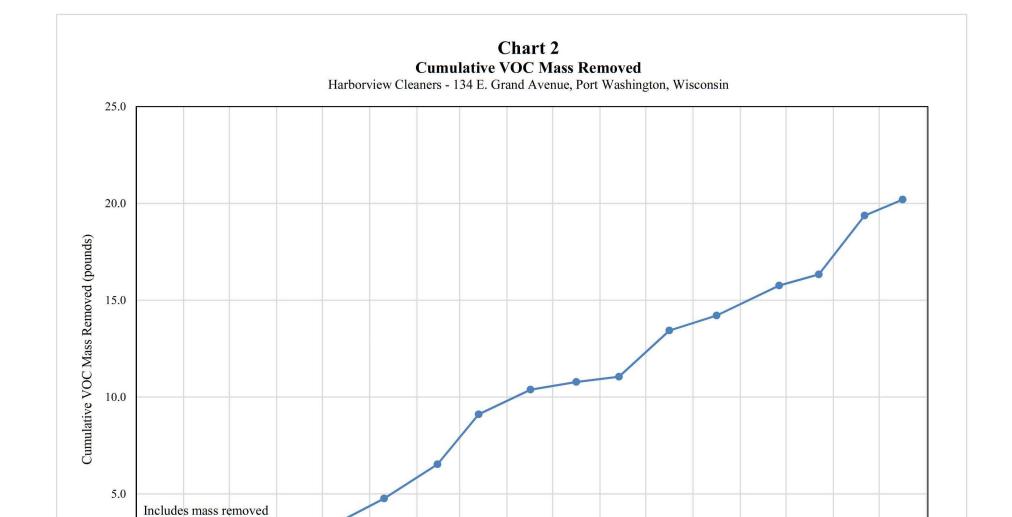


Chart 1
SVE Effluent VOC Concentration Trend





Date

alaria allaria asaria alaria diala diala diala

during pilot test

0.0 L

# TABLE 1 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

Harborview Cleaners

134 East Grand Avenue, Port Washington, Wisconsin

Boring Identification	Sample Depth (feet)	Sample Date	Consultant	Tetrachloroethene	Trichloroethene	Chloroform	n-Butylbenzene	Ethylbenzene	Methylene Chloride	Napthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Xylenes (total)
Industrial RC	L 1			145,000	8,410	2,130	108,000	35,400	1,150,000	24,100	264,000	818,000	219,000	182,000	260,000
Non-Industria	I RCL 1		Ī	33,000	1,300	423	108,000	8,020	61,800	5,520	264,000	818,000	219,000	182,000	260,000
Soil to Goundy	vater RCL 1			4.5	3.6	3.3	N.E.	1,570	2.6	658	1,970	1,107	1,382	1,382	3,960
	4-6	5/30/2006	RMT	870	<34	<34	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-1	10-12	5/30/2006	RMT	<27	<27	<27	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4-6	5/31/2006	RMT	<27	<27	<27	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-2	10-12	5/31/2006	RMT	<27	<27	<27	NA	NA	NA	NA	NA	NA	NA	NA	NA
~ .	4-6	5/30/2006	RMT	59	<27	<27	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-3	10-12	5/30/2006	RMT	<27	<27	<27	NA	NA	NA	NA	NA	NA	NA	NA	NA
CP 4	4-6	5/30/2006	RMT	<29	<29	<29	NA	NA	NA	<57	NA	<29	<29	NA	NA
GP-4	10-12	5/30/2006	RMT	<27	<27	<27	NA	NA	NA	<55	NA	<27	<27	NA	NA
CD 5	4-6	5/30/2006	RMT	<27	<27	<27	NA	NA	NA	<55	NA	<27	<27	NA	NA
GP-5	8-9.5	5/30/2006	RMT	<27	<27	<27	NA	NA	NA	<55	NA	<27	<27	NA	NA
GP-6	4-6	5/30/2006	RMT	<27	<27	<27	NA	NA	NA	58	NA	28	28	NA	NA
GP-0	10-12	5/30/2006	RMT	<29	<29	<29	NA	NA	NA	<58	NA	<29	<29	NA	NA
K-1	3-4	11/20/2006	Konicek	1,300	<25	<25	<40	<25	84	<25	<25	<25	<25	<25	<75
K-2	3-4	11/20/2006	Konicek	660	<25	<25	<40	<25	69	<25	<25	<25	<25	<25	<75
K-3	3-4	11/20/2006	Konicek	<25	<25	<25	<40	<25	65	<25	<25	<25	<25	<25	<75
K-3	9	11/20/2006	Konicek	150	<25	<25	<40	<25	67	<25	<25	<25	<25	<25	<75
B-1/MW-1	2-4	12/20/2007	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
B-1/1VI W-1	18-20	12/20/2007	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
B-2/MW-2	2-4	12/20/2007	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
D-2/W W-2	13	12/20/2007	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
	2-4	12/20/2007	Konicek	670	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
B-3/MW-3	14-16	12/20/2007	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
	14-16 D	12/20/2007	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
B-4/MW-4	2-4	12/20/2007	Konicek	4,100	63 Q	<26	<42	<26	<26	<26	<26	<26	<26	<26	<78
D-4/101 40 -4	14-16	12/20/2007	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
B-5	8-10	1/16/2008	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
<b>D</b> -3	14-15	1/16/2008	Konicek	<25	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75

# TABLE 1 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

Harborview Cleaners

134 East Grand Avenue, Port Washington, Wisconsin

Boring Identification	Sample Depth (feet)	Sample Date	Consultant	Tetrachloroethene	Trichloroethene	Chloroform	n-Butylbenzene	Ethylbenzene	Methylene Chloride	Napthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Xylenes (total)
Industrial RO	CL 1			145,000	8,410	2,130	108,000	35,400	1,150,000	24,100	264,000	818,000	219,000	182,000	260,000
Non-Industri	al RCL 1		Ĩ	33,000	1,300	423	108,000	8,020	61,800	5,520	264,000	818,000	219,000	182,000	260,000
Soil to Gound	water RCL 1			4.5	3.6	3.3	N.E.	1,570	2.6	658	1,970	1,107	1,382	1,382	3,960
	4-6	3/13/2008	Konicek	<25	<25	42.5 J	<40.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
D7 1	10-12	3/13/2008	Konicek	<25.3	<25.3	<25.3	<40.8	<25.3	<25.3	<25.3	<25.3	<25.3	<25.3	<25.3	<50.6
PZ-1	14-16	3/13/2008	Konicek	<25	<25	<25.0	<40.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
	32-35	3/13/2008	Konicek	<25	<25	<25.0	<40.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
HP-1	2-4	1/16/2008	Konicek	29,000	<120	<120	<200	<120	<120	<120	<120	<120	<120	<120	<370
nr-i	6-8	1/16/2008	Konicek	81,000	<310	<310	<500	<310	<310	<310	<310	<310	<310	<310	<930
HP-2	2-4	1/16/2008	Konicek	45 Q	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
HF-2	6-8	1/16/2008	Konicek	1,200	<25	<25	<40	<25	<25	<25	<25	<25	<25	<25	<75
SB-1	8-10	12/2/2015	EnviroForensics	<54	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
30-1	14-16	12/2/2015	EnviroForensics	<54	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
SB-2	6-8	12/2/2015	EnviroForensics	3,800	<42	<260	1,470 J	690 J	<2200	4,400	1,020 J	380 J	7,200	2,200 J	4,560
3D-2	11-13	12/2/2015	EnviroForensics	<54	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
	6-8	12/2/2015	EnviroForensics	1,720	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
SB-3	10-12	12/2/2015	EnviroForensics	500	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
	14-16	12/2/2015	EnviroForensics	<54	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
	6-8 (4.5-6.5 vertical)	12/2/2015	EnviroForensics	<54	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
SB-4	12-14 (9.5-11.5 vertical)	12/2/2015	EnviroForensics	186	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
	16-18 (13-15 vertical)	12/2/2015	EnviroForensics	<54	<42	<26	<86	<27	<220	<87	<35	<31	<78	<89	< 0.99
SB-5	1-2	4/11/2017	EnviroForensics	<32	<41	<35	<40	<35	<150	<94	<33	<32	<25	<32	<44
SB-6	1-2	4/11/2017	EnviroForensics	<32	<41	<35	<40	<35	<150	<94	<33	<32	<25	<32	<44
SB-7	1.	4/11/2017	EnviroForensics	<32	<41	<35	<40	<35	<150	<94	<33	<32	<25	<32	<44

#### Notes:

Bolded values are above laboratory detection limits

Bolded and Green Shaded value indicates an exceedance of the Non-Industrial Residual Contaminant Level

Bolded and Blue Shaded value indicates an exceedance of the Soil to Groundwater Residual Contaminant Level



Residual Contaminant Levels calculated according to the procedures described in WDNR Publication RR-890.
All concentrations reported in micrograms per kilogram µg/kg

J, Q = Estimated concentration between the laboratory detection limit and reporting limit

NE = Not established

NA = Not available

# TABLE 2 GROUNDWATER ELEVATION DATA SUMMARY

Harborview Cleaners 134 East Grand Avenue Port Washington, Wisconsin

Well ID	TOC Elevation (feet AMSL)	Screened Interval (feet below TOC)	Date	Depth to Water (feet below TOC)	HIEVATION		
MW-1	591.69	4.6 - 19.6	4/18/2016	8.38	583.31		
11111	371.07	1.0 19.0	7/19/2016	8.76	582.93		
MW-2	591.81	2.6 - 12.6	4/18/2016	8.44	583.37		
101 00 -2	371,81	2.0 - 12.0	7/19/2016	8.71	583.10		
MW-3	MW-3 592.69	4.4 - 14.4	4/18/2016	11.19	581.50		
101 00 -3	392.09	4.4 - 14.4	7/19/2016	11.38	581.31		
MW-4	593.84	4.9 - 14.9	4/18/2016	11.83	582.01		
101 00 -4	373.84	4.7 - 14.7	7/19/2016	12.08	581.76		
MW-5	592.34	7.7 - 17.7	4/18/2016	10.98	581.36		
101 00 -2	372.34	7.7-17.7	7/19/2016	11.14	581.20		
PZ-1	592.42	29.3 - 34.3	4/18/2016	3.63	588.79		
PZ-1	332.42	47.3 - 34.3	7/19/2016	8.75	583.67		

### Notes:

All values are in feet

AMSL = above mean sea level

TOC = top of casing reported in the 2009 Site Investigation Report



# TABLE 3 SOIL VAPOR EXTRACTION SYSTEM OPERATIONAL DATA

Harborview Cleaners

134 E. Grand Avenue, Port Washington, Wisconsin

		System Runtime	VFD Setting	System Vacuum	Conv	eyance	Line Va	cuum	Exhaust Pressure	Inlet Filter Differential Pressure	Exhaust Differential Pressure	Calculated Flow Rate	Intake Temperature	Exhaust Temperature	Effluent VOC Concentration
Date	Time	Panel Display	Panel Display	AWS	1	1 2 3 4 Exhaust Pip		Exhaust Pipe	Filter Housing	Pitot Tube		AWS	Exhaust Pipe	Exhaust Port	
		Hours	Hertz	in Hg		in	Hg		in H <sub>2</sub> O	in H <sub>2</sub> O	in H <sub>2</sub> O	SCFM	°F	°F	μg/m³
08/13/18	1103	3.5	60.0	-6.0	-7.0	0.0	-7.0	0.0	8.0	0.0	2.2	287		143	13,197
08/14/18	1100	26.4	60.0	-5.5	-7.0	0.0	-8.0	0.0	9.0	0.0	2.2	289		145	4,956
08/15/18	1345	50.6	50.0	-2.0	-2.0	-1.5	-1.8	-1.8	4.0	0.0	2.2	319		109	803
09/12/18	1333	187.8	51.2	-2.0	-3.0	-2.0	-2.0	-2.5	8.0	0.0	2.2	321	68	110	5,344
09/18/18	950	328.2	51.2	-2.0	-2.5	-2.0	-2.0	-2.0	8.0	0.0	2.1	306	63	103	536
09/25/18	1520	501.7	51.2	-5.0	-6.0	0.0	-5.5	0.0	5.0	0.0	1.7	254	65	123	319
10/01/18	1050	641.2	51.2	-3.2	0.0	-3.0	0.0	-3.0	7.0	0.0	2.0	295	57	110	397
10/08/18	1210	687.9	51.2	-5.6	-6.0	0.0	-5.5	0.0	5.0	0.0	1.7	260	60	116	612
11/12/18	1207	1,503.9	51.2	-1.5	-2.5	-1.5	-2.0	-2.0	7.0	0.0	2.2	332	48	82	437
12/07/18	1220	2,129.0	51.2	-3.1	0.0	-3.0	-3.0	0.0	6.0	0.0	2.1	310	49	88	1,280
01/10/19	1315	2,946.0	60.0	-3.3	0.0	-2.5	-3.0	0.0	7.5	0.0	2.8	355	48	96	1,280
02/14/19	924	3,781.3	59.0	-3.7	0.0	0.0	-3.0	-3.5	7.0	0.0	2.6	340	40	94	1,660
03/13/19	733	4,427.2	60.0	-5.0	0.0	-4.5	0.0	0.0	4.0	0.0	2.3	310	45	110	3,440
04/16/19	1235	5,247.8	60.0	-3.0	0.0	-2.5	-3.0	0.0	6.0	0.0	2.6	340	49	106	1,220
05/16/19	1024	5,965.7	60.0	-6.3	0.0	0.0	0.0	-6.7	2.4	0.0	2.0	272	45	123	541
06/13/19	1031	6,252.5	60.0	-8.0	0.0	0.0	-8.5	0.0	1.0	0.0	1.8	246	58	156	1,020
07/16/19	1335	6,765.1	60.0	-5.0	0.0	-5.5	0.0	0.0	2.0	0.0	2.8	345	57	90	3,603
08/16/19	1000	7,500.4	60.0	-2.8	0.0	-2.9	-3.0	0.0	4.5	0.0	2.8	351	63	119	799
09/26/19	910	8,154.9	60.0	-4.4	-5.4	0.0	0.0	-5.0	2.2	0.0	2.5	321	54	120	1,970
10/22/19	1020	8,278.7	60.0	-5.2	0.0	-5.2	0.0	0.0	2.5	0.0	2.3	302	57	124	4,100
11/21/19	911	8,998.5	60.0	-5.7	-5.2	0.0	-5.2	0.0	2.0	0.0	2.3	310	48	117	3,633
12/16/19	1050	9,516.8	60.0	-4.7	0.0	-4.9	0.0	0.0	NM	0.0	2.4	315	47	112	1,350

#### Notes:

in Hg = inches of mercury

in  $H_2O$  = inches of water

 $\mu g/m^3 = micrograms \ per \ cubic \ meter$ 

AWS = Air-water separator

NM = not measured due to gauge malfunction

SCFM = Standard cubic feet per minute

