





ARCO Recycling, 1705 Noble Road								 hio Ohio Environmental Protection Agency			
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)		January 31, 2017-April 2, 2018									
		24 Hour Upwind Sampling Results									
Compound list		Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source				
		ppb	ppb	ppb		ppb					
Acetone		3.35	BDL	10.80	88	13,000	MRLs (intermed.)				
<b>Acrolein*</b>		0.28	BDL	0.74	11	0.04	MRLs (intermed.)				
Benzene		0.23	BDL	0.85	114	6	MRLs (intermed.)				
1,3-Butadiene		0.05	BDL	0.20	2	10,000	ERPG-1				
n-Butane		1.60	BDL	5.31	105	18,000	MAGLC				
2-Butanone		0.31	BDL	1.06	17	200,000	AEGL-1				
Carbon tetrachloride		0.06	BDL	0.12	27	30	MRLs (intermed.)				
Chloromethane		0.65	0.37	1.09	115	200	MRLs (intermed.)				
Cyclohexane		0.05	BDL	0.12	1	2,400	MAGLC				
1,2-Dichlorobenzene		0.05	BDL	0.14	1	595	MAGLC				
1,3-Dichlorobenzene		0.05	BDL	0.11	1	NA					
1,4-Dichlorobenzene		0.05	BDL	0.13	1	200	MRLs (intermed.)				
Dichlorodifluoromethane		0.54	0.41	0.79	115	24,000	MAGLC				
Ethanol		3.97	BDL	14.70	111	1,800,000	MAGLC				
Ethyl acetate		0.06	BDL	0.49	9	9,500	MAGLC				
Ethylbenzene		0.05	BDL	0.15	6	2,000	MRLs (intermed.)				
n-Heptane		0.06	BDL	0.31	16	10,000	MAGLC				
Hexachlorobutadiene		0.06	BDL	0.81	2	1,000	ERPG-1				
Hexane		0.19	BDL	0.58	93	1,190	MAGLC				
2-Hexanone		0.05	BDL	0.48	1	120	MAGLC				
Isopropyl alcohol		0.76	BDL	7.49	52	5,000	MAGLC				
Methyl methacrylate		0.07	BDL	0.72	7	17,000	AEGL-1				
Methylene chloride		0.09	BDL	0.42	69	300	MRLs (intermed.)				
4-Methyl-2-pentanone		0.05	BDL	0.15	1	476	MAGLC				
Naphthalene		0.11	BDL	0.81	5	240	MAGLC				
n-Pentane		0.59	0.11	1.98	115	14,286	MAGLC				
Propylene		0.76	BDL	2.80	114	11,905	MAGLC				
Styrene		0.07	BDL	0.60	9	200	MRL(chronic)*				
Toluene		0.32	BDL	1.83	109	1000	MRL(chronic)*				
Tetrachloroethylene		0.05	BDL	0.28	3	6	MRLs (intermed.)				
Trichlorofluoromethane		0.25	0.14	0.59	115	24,000	MAGLC				
1,2,4-Trichlorobenzene		0.25	BDL	0.74	1	88	MAGLC				
1,2,4-Trimethylbenzene		0.07	BDL	0.29	32	595	MAGLC				
2,2,4-Trimethylpentane		0.11	BDL	0.35	8	7,143	MAGLC				
1,1,2-Trichloro-1,2,2-Trifluoroethane		0.05	BDL	0.11	2	24000	MAGLC				
Vinyl acetate		0.13	BDL	0.70	16	10	MRLs (intermed.)				
o-Xylene		0.06	BDL	0.20	12	600	MRLs (intermed.)				
Total m&p-xylenes		0.13	BDL	0.47	18	600	MRLs (intermed.)				

ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCS)						
	January 31, 2017-April 2, 2018					
	24 Hour Downwind Sampling Results					
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb		ppb	
Acetone	4.06	BDL	24.10	97	13,000	MRLs (intermed.)
Acrolein****	0.36	BDL	5.94	11	0.04	MRLs (intermed.)
Benzene	0.78	BDL	29.10	114	6	MRLs (intermed.)
1,3-Butadiene	0.19	BDL	12.30	4	10,000	ERPG-1
n-Butane	1.46	BDL	5.76	112	18,000	MAGLC
2-Butanone	0.42	BDL	5.50	26	200,000	AEGL-1
Bromomethane	0.05	BDL	0.47	1	50	MRLs (intermed.)
Carbon disulfide	0.25	BDL	1.03	1	1,000	ERPG-1
Carbon tetrachloride	0.07	BDL	0.25	32	30	MRLs (intermed.)
Chlorobenzene	0.05	BDL	0.13	2	10,000	AEGL-1
Chloroethane	0.06	BDL	0.56	3	3,789	IRIS(chronic)*
Chloromethane	1.96	BDL	61.00	116	200	MRLs (intermed.)
Cumene	0.06	BDL	0.63	3	50,000	AEGL-1
Cyclohexane	0.05	BDL	0.12	2	2,400	MAGLC
1,4-Dioxane	0.10	BDL	0.20	2	200	MRLs (intermed.)
Dichlorodifluoromethane	0.60	0.38	2.76	117	24,000	MAGLC
Ethanol	4.02	BDL	15.40	106	1,800,000	MAGLC
Ethyl acetate	0.07	BDL	0.45	12	9,500	MAGLC
Ethylbenzene	0.17	BDL	5.37	15	2,000	MRLs (intermed.)
4-Ethyltoluene	0.05	BDL	0.37	3	NA	
n-Heptane	0.08	BDL	1.17	18	10,000	MAGLC
Hexane	0.21	BDL	1.90	92	1,190	MAGLC
2-Hexanone	0.05	BDL	0.13	2	120	MAGLC
Isopropyl alcohol	0.71	BDL	7.12	51	5,000	MAGLC
Methylene chloride	0.10	BDL	0.25	66	300	MRLs (intermed.)
Methyl methacrylate	0.08	BDL	1.44	13	17,000	AEGL-1
4-Methyl-2-pentanone	0.05	BDL	0.12	4	476	MAGLC
Naphthalene	0.14	BDL	2.34	10	240	MAGLC
n-Nonane	0.06	BDL	0.59	6	4,762	MAGLC
n-Pentane	0.69	BDL	6.14	114	14,286	MAGLC
Propylene	1.52	BDL	57.50	112	11,905	MAGLC
n-Propylbenzene	0.06	BDL	0.32	4	NA	
Styrene	0.18	BDL	5.70	18	200	MRL(chronic)*
Tetrahydrofuran	0.18	BDL	2.82	10	1190	MAGLC
Tetrachloroethylene	0.06	BDL	0.92	3	6	MRLs (intermed.)
Toluene	0.58	BDL	11.80	103	1000	MRL(chronic)*
Trichloroethene	0.05	BDL	0.12	1	0.4	MRLs (intermed.)
Trichlorofluoromethane	0.33	0.15	1.52	117	24,000	MAGLC
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.06	BDL	0.55	5	24,000	MAGLC
1,3,5-Trimethylbenzene	0.14	BDL	5.22	3	595	MAGLC
1,2,4-Trimethylbenzene	0.14	BDL	6.25	40	595	MAGLC
2,2,4-Trimethylpentane	0.11	BDL	0.33	6	7,143	MAGLC
Vinyl acetate	0.17	BDL	5.13	15	10	MRLs (intermed.)
o-Xylene	0.09	BDL	1.32	17	600	MRLs (intermed.)
Total m&p-xylenes	0.23	BDL	6.28	28	600	MRLs (intermed.)
<b>BDL= below detection limits</b>						
<b>ATSDR Minimum Risk Level (MRLs)</b>						
<b>ERPG-Emergency Response Planning Guidelines.</b> The first tier (e.g., ERPG-1) is a temporary, non-disabling effects threshold						
<b>AEGL-1 = Acute exposure guideline levels for mild effects</b>						
<b>MAGLC= TLV/42</b>						
*MRL/IRIS (chronic)-No intermediate value available.						
** Average (% method detection limit): The arithmetic mean (average) listed uses one-half of the method detection limit (1/2 MDL) as the numerical value for non-detected compounds when computing the average of multiple sampling events. This method is standard practice to estimate averages with non-detected values.						
Method Detection limit: The method detection limit is the lowest measurement the collection / analysis procedure can accurately quantify as a true measurement of the ambient air concentration.						
*** Count: Total detections out of 117 sampling events (other samples were below detection limits)						
**** Acrolein: Sample results for Acrolein are suspect. This compound can be created within the sample canister itself: U.S. EPA is refining the test method to correct for this problem.						





