

ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)						
January 31, 2017- August 14, 2017						
24 Hour Residential Sampling Results						
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb		ppb	
Acetone	3.99	BDL	8.36	30	13,000	MRLs (intermed.)
Acrolein*	0.31	BDL	0.87	5	0.04	MRLs (intermed.)
Benzene	0.27	0.12	1.06	37	6	MRLs (intermed.)
n-Butane	1.39	0.47	3.54	36	18,000	MAGLC
2-Butanone	0.36	BDL	0.87	11	200,000	AEGL-1
Carbon tetrachloride	0.06	BDL	0.12	9	30	MRLs (intermed.)
Chloromethane	0.69	0.44	0.98	37	200	MRLs (intermed.)
Cyclohexane	0.05	BDL	0.12	1	2,400	MAGLC
Dichlorodifluoromethane	0.58	0.38	0.78	37	24,000	MAGLC
Ethanol	4.77	BDL	15.80	36	1,800,000	MAGLC
Ethyl Acetate	0.06	BDL	0.24	3	9,500	MAGLC
Ethyl Benzene	0.06	BDL	0.18	4	5,000	MRLs (intermed.)
n-Heptane	0.07	BDL	0.24	8	10,000	MAGLC
Hexane	0.24	BDL	0.74	32	1,190	MAGLC
2-Hexanone	0.05	BDL	0.12	1	120	MAGLC
Isopropyl alcohol	0.99	BDL	6.07	28	5,000	MAGLC
Methyl methacrylate	0.06	BDL	0.27	2	17,000	AEGL-1
4-Methyl-2-pentanone	0.06	BDL	0.18	2	476	MAGLC
Methylene chloride	0.13	BDL	0.56	28	300	MRLs (intermed.)
Naphthalene	0.11	BDL	0.25	2	240	MAGLC
n-Pentane	0.71	0.18	2.63	37	14,286	MAGLC
Propylene	0.60	0.28	1.30	37	11,905	MAGLC
Styrene	0.07	BDL	0.43	3	5,000	MRLs
Tetrachloroethylene	0.11	BDL	0.29	3	6	MRLs (intermed.)
Trichloroethene	0.05	BDL	0.11	1	0.4	MRLs (intermed.)
Toluene	0.40	0.10	1.24	37	2000	MRLs
Trichlorofluoromethane	0.23	0.16	0.42	37	24,000	MAGLC
1,1,2-Trichloro-1,2,2-	0.10	BDL	0.10	2	24,000	MAGLC
1,2,4-Trimethylbenzene	0.08	BDL	0.28	15	595	MAGLC
2,2,4-Trimethylpentane	0.11	BDL	0.22	2	7,143	MAGLC
Vinyl acetate	0.15	BDL	0.58	7	10	MRLs (intermed.)
o-Xylene	0.07	BDL	0.23	7	600	MRLs (intermed.)
Total m&p-xylenes	0.16	BDL	0.56	14	600	MRLs (intermed.)
BDL= below detection limits						
ATSDR Minimum Risk Level (MRLs)						
AEGL-1 = Acute exposure guideline levels for mild effects						
MAGLC= TLV/42						

* 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.

** Average (½ 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 37 sampling events (other samples were below detection limits)

ARCO Recycling, 1705 Noble Road											
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)											
			January 31, 2017- August 14, 2017								
			24 Hour Upwind Sampling Results								
Compound list			Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source			
			ppb	ppb	ppb		ppb				
Acetone			4.57	BDL	10.80	32	13,000	MRLs (intermed.)			
Acrolein*			0.32	BDL	0.74	7	0.04	MRLs (intermed.)			
Benzene			0.24	0.10	0.85	37	6	MRLs (intermed.)			
1,3-Butadiene			0.05	BDL	0.20	1	10000	ERPG-1			
n-Butane			1.38	0.31	3.98	27	18,000	MAGLC			
2-Butanone			0.39	BDL	1.06	12	200,000	AEGL-1			
Carbon tetrachloride			0.06	BDL	0.11	8	30	MRLs (intermed.)			
Chloromethane			0.68	0.47	1.02	37	200	MRLs (intermed.)			
Cyclohexane			0.05	BDL	0.12	1	2,400	MAGLC			
Dichlorodifluoromethane			0.57	0.41	0.76	37	24,000	MAGLC			
Ethanol			4.76	BDL	14.70	35	1,800,000	MAGLC			
Ethyl acetate			0.06	BDL	0.21	2	9,500	MAGLC			
Ethylbenzene			0.05	BDL	0.15	2	2,000	MRLs (intermed.)			
n-Heptane			0.06	BDL	0.15	7	10,000	MAGLC			
Hexane			0.21	BDL	0.58	33	1,190	MAGLC			
2-Hexanone			0.06	BDL	0.48	1	120	MAGLC			
Isopropyl alcohol			1.40	BDL	7.49	27	5,000	MAGLC			
Methyl methacrylate			0.07	BDL	0.46	2	17,000	AEGL-1			
Methylene chloride			0.12	BDL	0.42	28	300	MRLs (intermed.)			
4-Methyl-2-pentanone			0.05	BDL	0.15	1	476	MAGLC			
Naphthalene			0.11	BDL	0.37	3	240	MAGLC			
n-Pentane			0.61	0.16	1.98	37	14,286	MAGLC			
Propylene			0.77	0.28	2.48	36	11,905	MAGLC			
Styrene			0.08	BDL	0.60	4	5,000	MRLs			
Toluene			0.38	BDL	1.42	36	2000	MRLs			
Tetrachloroethylene			0.06	BDL	0.28	2	6	MRLs (intermed.)			
Trichlorofluoromethane			0.23	0.16	0.42	37	24,000	MAGLC			
1,2,4-Trimethylbenzene			0.09	BDL	0.29	15	595	MAGLC			
2,2,4-Trimethylpentane			0.10	BDL	0.21	1	7,143	MAGLC			
1,1,2-Trichloro-1,2,2-Trifluoroethane			0.05	BDL	0.11	2	24000	MAGLC			
Vinyl acetate			0.17	BDL	0.70	11	10	MRLs (intermed.)			
o-Xylene			0.06	BDL	0.20	6	600	MRLs (intermed.)			
Total m&p-xylenes			0.14	BDL	0.47	9	600	MRLs (intermed.)			
BDL= below detection limits											
ATSDR Minimum Risk Level (MRLs)											
AEGL-1 = Acute exposure guideline levels for mild effects											
ERPG-Emergency Response Planning Guidelines.The first tier (e.g., ERPG-1) is a temporary, non-disabling effects threshold											
MAGLC= TLV/42											
* 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. ** Average (½ 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 37 sampling events (other samples were below detection limits)											

ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)					 Ohio Environmental Protection Agency	
		January 31, 2017- August 14, 2017				
		24 Hour Downwind Sampling Results				
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb		ppb	
Acetone	4.99	BDL	13.50	34	13,000	MRLs (intermed.)
Acrolein*	0.42	BDL	3.06	7	0.04	MRLs (intermed.)
Benzene	0.31	BDL	1.95	36	6	MRLs (intermed.)
1,3-Butadiene	0.06	BDL	0.16	1	10,000	ERPG-1
n-Butane	1.00	BDL	2.97	33	18,000	MAGLC
2-Butanone	0.42	BDL	1.61	16	200,000	AEGL-1
Carbon disulfide	0.25	BDL	1.03	1	1,000	ERPG-1
Carbon tetrachloride	0.08	BDL	0.25	10	30	MRLs (intermed.)
Chloromethane	0.77	0.43	2.34	37	200	MRLs (intermed.)
Cyclohexane	0.05	BDL	0.12	1	2,400	MAGLC
Dichlorodifluoromethane	0.75	0.38	2.76	38	24,000	MAGLC
Ethanol	4.08	BDL	11.90	30	1,800,000	MAGLC
Ethyl acetate	0.07	BDL	0.21	6	9,500	MAGLC
Ethylbenzene	0.10	BDL	1.84	4	2,000	MRLs
n-Heptane	0.07	BDL	0.16	6	10,000	MAGLC
Hexane	0.19	BDL	0.56	31	1,190	MAGLC
2-Hexanone	0.05	BDL	0.12	1	120	MAGLC
Isopropyl alcohol	1.26	BDL	7.12	25	5,000	MAGLC
Methylene chloride	0.12	BDL	0.21	28	300	MRLs (intermed.)
Methyl methacrylate	0.06	BDL	0.26	3	1,190	MAGLC
4-Methyl-2-pentanone	0.06	BDL	0.12	2	476	MAGLC
Naphthalene	0.13	BDL	0.93	3	240	MAGLC
n-Pentane	0.53	BDL	1.81	35	14,286	MAGLC
Propylene	0.53	BDL	1.21	34	11,905	MAGLC
Styrene	0.08	BDL	0.41	5	5,000	MRLs
Tetrahydrofuran	0.21	BDL	2.82	5	1190	MAGLC
Tetrachloroethylene	0.08	BDL	0.92	2	6	MRLs (intermed.)
Toluene	0.48	BDL	6.10	33	2000	MRLs
Trichloroethene	0.06	BDL	0.12	1	0.4	MRLs (intermed.)
Trichlorofluoromethane	0.36	0.15	1.52	38	24,000	MAGLC
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.07	BDL	0.55	4	24,000	MAGLC
1,3,5-Trimethylbenzene	0.23	BDL	5.22	1	595	MAGLC
1,2,4-Trimethylbenzene	0.25	BDL	6.25	15	595	MAGLC
2,2,4-Trimethylpentane	0.10	BDL	0.21	2	7,143	MAGLC
Vinyl acetate	0.17	BDL	0.85	12	10	MRLs (intermed.)
o-Xylene	0.11	BDL	0.24	4	600	MRLs (intermed.)
Total m&p-xylenes	0.30	BDL	6.28	10	600	MRLs (intermed.)

BDL= below detection limits

ATSDR Minimum Risk Level (MRLs)

ERPG-Emergency Response Planning Guidelines.The first tier (e.g., ERPG-1) is a temporary, non-disabling effects threshold

AEGL-1 = Acute exposure guideline levels for mild effects

MAGLC= TLV/42

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