

ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)						
						
January 31, 2017- January 22, 2018						
24 Hour Residential Sampling Results						
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb		ppb	
Acetone	3.55	BDL	9.03	80	13,000	MRLs (intermed.)
Acrolein****	0.28	BDL	0.87	8	0.04	MRLs (intermed.)
Benzene	0.27	BDL	1.77	95	6	MRLs (intermed.)
n-Butane	1.56	BDL	6.19	90	18,000	MAGLC
1,3 Butadiene	0.05	BDL	0.10	1	10,000	ERPG-1
2-Butanone	0.32	BDL	1.39	15	200,000	AEGL-1
Carbon tetrachloride	0.06	BDL	0.13	25	30	MRLs (intermed.)
Chloromethane	0.69	0.40	4.56	96	200	MRLs (intermed.)
Cyclohexane	0.05	BDL	0.12	2	2,400	MAGLC
Dichlorodifluoromethane	0.54	BDL	0.78	94	24,000	MAGLC
Ethanol	4.50	BDL	21.50	93	1,800,000	MAGLC
Ethyl Acetate	0.07	BDL	0.50	4	9,500	MAGLC
Ethyl Benzene	0.07	BDL	0.50	14	2,000	MRLs (intermed.)
n-Heptane	0.08	BDL	0.50	21	10,000	MAGLC
Hexane	0.23	BDL	0.74	86	1,190	MAGLC
Hexachlorobutadiene	0.06	BDL	0.50	1	1,000	ERPG-1
2-Hexanone	0.05	BDL	0.12	1	120	MAGLC
Isopropyl alcohol	0.70	BDL	6.07	51	5,000	MAGLC
Methyl methacrylate	0.07	BDL	0.77	4	17,000	AEGL-1
4-Methyl-2-pentanone	0.05	BDL	0.18	2	476	MAGLC
Methylene chloride	0.10	BDL	0.56	57	300	MRLs (intermed.)
Naphthalene	0.11	BDL	0.25	6	240	MAGLC
n-Pentane	0.71	0.14	2.63	96	14,286	MAGLC
Propylene	0.67	0.28	3.20	96	11,905	MAGLC
Styrene	0.07	BDL	0.57	8	200	MRL(chronic)*
Tetrachloroethylene	0.10	BDL	0.29	4	6	MRLs (intermed.)
Trichloroethene	0.05	BDL	0.11	1	0.4	MRLs (intermed.)
Toluene	0.39	BDL	1.25	94	1000	MRL(chronic)*
Trichlorofluoromethane	0.27	0.16	1.04	96	24,000	MAGLC
1,1,2-Trichloro-1,2,2-	0.10	BDL	0.10	3	24,000	MAGLC
1,2,4-Trimethylbenzene	0.08	BDL	0.28	31	595	MAGLC
2,2,4-Trimethylpentane	0.12	BDL	0.44	10	7,143	MAGLC
Vinyl acetate	0.13	BDL	0.58	13	10	MRLs (intermed.)
o-Xylene	0.07	BDL	0.25	20	600	MRLs (intermed.)
Total m&p-xylenes	0.16	BDL	0.61	33	600	MRLs (intermed.)
BDL= below detection limits						
ATSDR Minimum Risk Level (MRLs)						
AEGL-1 = Acute exposure guideline levels for mild effects						
MAGLC= TLV/42						
*MRL(chronic)-No intermediate value available.						
** 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 96 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.						

ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)						
	November 2, 2017- January 22, 2018					
	24 Hour Offsite-Residence Sampling Results					
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb			
1,2,4-Trimethylbenzene	0.06	BDL	0.21	6	595	MAGLC
2,2,4-Trimethylpentane	0.10	BDL	0.24	2	7,143	MAGLC
Acetone	2.50	BDL	4.32	29	13000	MRLs (intermed.)
Benzene	0.24	BDL	0.43	33	6	MRLs (intermed.)
Carbon tetrachloride	0.07	BDL	0.11	13	30	MRLs (intermed.)
Chloromethane	0.64	0.53	1.11	34	200	MRLs (intermed.)
Cyclohexane	0.05	BDL	0.16	1	2,400	MAGLC
Dichlorodifluoromethane	0.50	0.44	0.62	34	24,000	MAGLC
Ethanol	4.34	BDL	12.40	33	1,800,000	ERPG-1
Ethylbenzene	0.06	BDL	0.15	4	2,000	MRLs (intermed.)
Hexane	0.22	BDL	0.54	31	1,190	MAGLC
Isopropyl alcohol	0.33	BDL	0.83	5	5,000	MAGLC
Methyl methacrylate	0.10	BDL	0.10	2	17,000	AEGL-1
Methylene chloride	0.08	BDL	0.12	16	300	MRLs (intermed.)
Naphthalene	0.14	BDL	0.37	6	240	MAGLC
n-Butane	1.89	0.37	4.61	34	18,000	MAGLC
n-Heptane	0.06	BDL	0.18	6	10,000	MAGLC
n-Pentane	0.73	0.12	1.70	34	14,286	MAGLC
o-Xylene	0.06	BDL	0.20	5	600	MRLs (intermed.)
Propylene	0.72	BDL	2.02	33	11,905	MAGLC
Styrene	0.05	BDL	0.14	1	200	MRL(chronic)*
Toluene	0.30	0.10	1.21	33	2,000	MRLs (acute)*
Total m&p-xylenes	0.14	BDL	0.49	6	600	MRLs (intermed.)
Trichlorofluoromethane	0.25	0.16	0.34	34	24,000	MAGLC
Vinyl acetate	0.11	BDL	0.33	1	10	MRLs (intermed.)
BDL= below detection limits						
ATSDR Minimum Risk Level (MRLs)						
*MRL(acute)-No intermediate value available.						
ERPG-Emergency Response Planning Guidelines.The first tier (e.g., ERPG-1) is a temporary, non-disabling						
AEGL-1 = Acute exposure guideline levels for mild effects						
MAGLC= TLV/42						
** 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 34 sampling events (other samples were below detection limits)						

ARCO Recycling, 1705 Noble Road								
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)								
			January 31, 2017- January 22, 2018					
			24 Hour Upwind Sampling Results					
Compound list			Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
			ppb	ppb	ppb		ppb	
Acetone			3.64	BDL	10.80	77	13,000	MRLs (intermed.)
Acrolein*			0.29	BDL	0.74	11	0.04	MRLs (intermed.)
Benzene			0.24	BDL	0.85	94	6	MRLs (intermed.)
1,3-Butadiene			0.05	BDL	0.20	2	10,000	ERPG-1
n-Butane			1.64	BDL	5.31	85	18,000	MAGLC
2-Butanone			0.31	BDL	1.06	15	200,000	AEGL-1
Carbon tetrachloride			0.06	BDL	0.12	21	30	MRLs (intermed.)
Chloromethane			0.65	0.37	1.09	95	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			0.55	0.41	0.79	95	24,000	MAGLC
Ethanol			4.11	BDL	14.70	92	1,800,000	MAGLC
Ethyl acetate			0.06	BDL	0.49	6	9,500	MAGLC
Ethylbenzene			0.05	BDL	0.15	6	2,000	MRLs (intermed.)
n-Heptane			0.06	BDL	0.31	15	10,000	MAGLC
Hexachlorobutadiene			0.06	BDL	0.81	2	1,000	ERPG-1
Hexane			0.20	BDL	0.58	81	1,190	MAGLC
2-Hexanone			0.05	BDL	0.48	1	120	MAGLC
Isopropyl alcohol			0.87	BDL	7.49	47	5,000	MAGLC
Methyl methacrylate			0.07	BDL	0.72	5	17,000	AEGL-1
Methylene chloride			0.10	BDL	0.42	56	300	MRLs (intermed.)
4-Methyl-2-pentanone			0.05	BDL	0.15	1	476	MAGLC
Naphthalene			0.12	BDL	0.81	5	240	MAGLC
n-Pentane			0.63	0.11	1.98	95	14,286	MAGLC
Propylene			0.77	BDL	2.80	94	11,905	MAGLC
Styrene			0.07	BDL	0.60	6	200	MRL(chronic)*
Toluene			0.34	BDL	1.83	92	1000	MRL(chronic)*
Tetrachloroethylene			0.05	BDL	0.28	3	6	MRLs (intermed.)
Trichlorofluoromethane			0.25	0.14	0.59	95	24,000	MAGLC
1,2,4-Trichlorobenzene			0.26	BDL	0.74	1	88	MAGLC
1,2,4-Trimethylbenzene			0.08	BDL	0.29	28	595	MAGLC
2,2,4-Trimethylpentane			0.12	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	12	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.)

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

MAGLC= TLV/42

*MRL/IRIS (chronic)-No intermediate value available.

** 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 95 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.

ARCO Recycling, 1705 Noble Road					hio Ohio Environmental Protection Agency	
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)						
January 31, 2017- January 22, 2018						
24 Hour Downwind Sampling Results						
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb		ppb	
Acetone	4.50	BDL	24.10	86	13,000	MRLs (intermed.)
Acrolein****	0.38	BDL	5.94	11	0.04	MRLs (intermed.)
Benzene	0.90	BDL	29.10	94	6	MRLs (intermed.)
1,3-Butadiene	0.22	BDL	12.30	4	10,000	ERPG-1
n-Butane	1.49	BDL	5.76	92	18,000	MAGLC
2-Butanone	0.46	BDL	5.50	25	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	25	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	2.22	BDL	61.00	96	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	0.11	BDL	0.52	2	200	MRLs (intermed.)
Dichlorodifluoromethane	0.61	0.38	2.76	96	24,000	MAGLC
Ethanol	4.20	BDL	15.40	86	1,800,000	MAGLC
Ethyl acetate	0.06	BDL	0.45	8	9,500	MAGLC
Ethylbenzene	0.20	BDL	5.37	15	2,000	MRLs (intermed.)
4-Ethyltoluene	0.06	BDL	0.37	3	NA	
n-Heptane	0.09	BDL	1.17	17	10,000	MAGLC
Hexane	0.23	BDL	1.90	81	1,190	MAGLC
2-Hexanone	0.05	BDL	0.13	2	120	MAGLC
Isopropyl alcohol	0.79	BDL	7.12	46	5,000	MAGLC
Methylene chloride	0.10	BDL	0.25	57	300	MRLs (intermed.)
Methyl methacrylate	0.08	BDL	1.44	11	17,000	AEGL-1
4-Methyl-2-pentanone	0.05	BDL	0.12	4	476	MAGLC
Naphthalene	0.14	BDL	2.34	9	240	MAGLC
n-Nonane	0.06	BDL	0.59	6	4,762	MAGLC
n-Pentane	0.75	BDL	6.14	94	14,286	MAGLC
Propylene	1.70	BDL	57.50	92	11,905	MAGLC
n-Propylbenzene	0.06	BDL	0.32	4	NA	
Styrene	0.21	BDL	5.70	16	200	MRL(chronic)*
Tetrahydrofuran	0.19	BDL	2.82	10	1190	MAGLC
Tetrachloroethylene	0.06	BDL	0.92	3	6	MRLs (intermed.)
Toluene	0.66	BDL	11.80	88	1000	MRL(chronic)*
Trichloroethene	0.05	BDL	0.12	1	0.4	MRLs (intermed.)
Trichlorofluoromethane	0.35	0.15	1.52	97	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	0.15	BDL	6.25	34	595	MAGLC
2,2,4-Trimethylpentane	0.11	BDL	0.33	6	7,143	MAGLC
Vinyl acetate	0.19	BDL	5.13	15	10	MRLs (intermed.)
o-Xylene	0.10	BDL	1.32	16	600	MRLs (intermed.)
Total m&p-xylenes	0.26	BDL	6.28	27	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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[illegible]



ARCO PM10 Air Quality Summary				
DATE	Day	24-hour concentration $\mu\text{g}/\text{m}^3$	High 1-hour value $\mu\text{g}/\text{m}^3$	High hour
January				
1/25/2018	Thursday	11.9	27	15
1/26/2018	Friday	19.5	47.3	24
1/27/2018	Saturday	14.4	20.1	19
1/28/2018	Sunday	12.8	22.5	20
1/29/2018	Monday	11.5	15.5	12
1/30/2018	Tuesday	5.3	8.9	25
1/31/2018	Wednesday	12.1	26.5	18
Note: NAAQS for PM10 - 150 $\mu\text{g}/\text{m}^3$ - 24 hour average				