



ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)						
	January 31, 2017- March 6, 2018					
	24 Hour Upwind Sampling Results					
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb			
Acetone	3.45	BDL	10.80	83	13,000	MRLs (intermed.)
Acrolein*	0.29	BDL	0.74	11	0.04	MRLs (intermed.)
Benzene	0.24	BDL	0.85	106	6	MRLs (intermed.)
1,3-Butadiene	0.05	BDL	0.20	2	10,000	ERPG-1
n-Butane	1.65	BDL	5.31	97	18,000	MAGLC
2-Butanone	0.31	BDL	1.06	16	200,000	AEGL-1
Carbon tetrachloride	0.07	BDL	0.12	27	30	MRLs (intermed.)
Chloromethane	0.65	0.37	1.09	107	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	107	24,000	MAGLC
Ethanol	3.98	BDL	14.70	103	1,800,000	MAGLC
Ethyl acetate	0.06	BDL	0.49	8	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	0.19	BDL	0.58	90	1,190	MAGLC
2-Hexanone	0.05	BDL	0.48	1	120	MAGLC
Isopropyl alcohol	0.79	BDL	7.49	49	5,000	MAGLC
Methyl methacrylate	0.07	BDL	0.72	5	17,000	AEGL-1
Methylene chloride	0.09	BDL	0.42	64	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	0.61	0.11	1.98	107	14,286	MAGLC
Propylene	0.78	BDL	2.80	106	11,905	MAGLC
Styrene	0.07	BDL	0.60	6	200	MRL(chronic)*
Toluene	0.33	BDL	1.83	104	1000	MRL(chronic)*
Tetrachloroethylene	0.05	BDL	0.28	3	6	MRLs (intermed.)
Trichlorofluoromethane	0.25	0.14	0.59	107	24,000	MAGLC
1,2,4-Trichlorobenzene	0.25	BDL	0.74	1	88	MAGLC
1,2,4-Trimethylbenzene	0.07	BDL	0.29	30	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	14	10	MRLs (intermed.)
o-Xylene	0.06	BDL	0.20	12	600	MRLs (intermed.)
Total m&p-xyles	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 (% 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 107 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- March 6, 2018				
	24 Hour Downwind Sampling Results				
Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values
	ppb	ppb	ppb		ppb
Acetone	4.24	BDL	24.10	94	13,000 MRLs (intermed.)
Acrolein****	0.37	BDL	5.94	11	0.04 MRLs (intermed.)
Benzene	0.82	BDL	29.10	106	6 MRLs (intermed.)
1,3-Butadiene	0.20	BDL	12.30	4	10,000 ERPG-1
n-Butane	1.50	BDL	5.76	104	18,000 MAGLC
2-Butanone	0.43	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	2.05	BDL	61.00	108	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	0.61	0.38	2.76	109	24,000 MAGLC
Ethanol	4.05	BDL	15.40	98	1,800,000 MAGLC
Ethyl acetate	0.06	BDL	0.45	10	9,500 MAGLC
Ethylbenzene	0.18	BDL	5.37	15	2,000 MRLs (intermed.)
4-Ethyltoluene	0.06	BDL	0.37	3	NA
n-Heptane	0.09	BDL	1.17	18	10,000 MAGLC
Hexane	0.22	BDL	1.90	90	1,190 MAGLC
2-Hexanone	0.05	BDL	0.13	2	120 MAGLC
Isopropyl alcohol	0.74	BDL	7.12	50	5,000 MAGLC
Methylene chloride	0.10	BDL	0.25	61	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	10	240 MAGLC
n-Nonane	0.06	BDL	0.59	6	4,762 MAGLC
n-Pentane	0.72	BDL	6.14	106	14,286 MAGLC
Propylene	1.60	BDL	57.50	104	11,905 MAGLC
n-Propylbenzene	0.06	BDL	0.32	4	NA
Styrene	0.19	BDL	5.70	16	200 MRL(chronic)*
Tetrahydrofuran	0.18	BDL	2.82	10	1190 MAGLC
Tetrachloroethylene	0.06	BDL	0.92	3	6 MRLs (intermed.)
Toluene	0.61	BDL	11.80	100	1000 MRL(chronic)*
Trichloroethene	0.05	BDL	0.12	1	0.4 MRLs (intermed.)
Trichlorofluoromethane	0.34	0.15	1.52	109	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	37	595 MAGLC
2,2,4-Trimethylpentane	0.11	BDL	0.33	6	7,143 MAGLC
Vinyl acetate	0.18	BDL	5.13	15	10 MRLs (intermed.)
o-Xylene	0.10	BDL	1.32	17	600 MRLs (intermed.)
Total m&p-xylenes	0.24	BDL	6.28	28	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					
*MRL/IRIS (chronic)-No intermediate value available.					
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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 109 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.					

Site Name/Address/Project	Date	PM2.5 (µg/m³)	PM10 (µg/m³)	Ozone (ppb)	SO2 (ppb)	NO2 (ppb)	CO (ppm)	Temperature (°C)	Relative Humidity (%)	Wind Speed (m/s)	Wind Direction (°)	Dew Point (°C)	Cloud Cover (%)	Barometric Pressure (hPa)	UV Index	Precipitation (mm)	Visibility (km)	Dust (µg/m³)	PM2.5 (µg/m³) - 24 hour average	PM10 (µg/m³) - 24 hour average	Ozone (ppb) - 24 hour average	SO2 (ppb) - 24 hour average	NO2 (ppb) - 24 hour average	CO (ppm) - 24 hour average	Temperature (°C) - 24 hour average	Relative Humidity (%) - 24 hour average	Wind Speed (m/s) - 24 hour average	Wind Direction (°) - 24 hour average	Dew Point (°C) - 24 hour average	Cloud Cover (%) - 24 hour average	Barometric Pressure (hPa) - 24 hour average	UV Index - 24 hour average	Precipitation (mm) - 24 hour average	Visibility (km) - 24 hour average	Dust (µg/m³) - 24 hour average
Site 1	2018-03-01	12.5	25.0	15.0	10.0	18.0	0.5	15.0	60	5.0	330	10.0	80	1013.2	4	0.0	10.0	12.5	25.0	15.0	10.0	18.0	0.5	15.0	60	5.0	330	10.0	80	1013.2	4	0.0			
Site 2	2018-03-02	13.0	26.0	16.0	11.0	19.0	0.6	16.0	62	5.5	335	10.5	82	1013.0	5	0.0	10.5	13.0	26.0	16.0	11.0	19.0	0.6	16.0	62	5.5	335	10.5	82	1013.0	5	0.0			
Site 3	2018-03-03	14.0	27.0	17.0	12.0	20.0	0.7	17.0	64	6.0	340	11.0	84	1012.8	6	0.0	11.0	14.0	27.0	17.0	12.0	20.0	0.7	17.0	64	6.0	340	11.0	84	1012.8	6	0.0			
Site 4	2018-03-04	15.0	28.0	18.0	13.0	21.0	0.8	18.0	66	6.5	345	11.5	86	1012.6	7	0.0	11.5	15.0	28.0	18.0	13.0	21.0	0.8	18.0	66	6.5	345	11.5	86	1012.6	7	0.0			
Site 5	2018-03-05	16.0	29.0	19.0	14.0	22.0	0.9	19.0	68	7.0	350	12.0	88	1012.4	8	0.0	12.0	16.0	29.0	19.0	14.0	22.0	0.9	19.0	68	7.0	350	12.0	88	1012.4	8	0.0			
Site 6	2018-03-06	17.0	30.0	20.0	15.0	23.0	1.0	20.0	70	7.5	355	12.5	90	1012.2	9	0.0	12.5	17.0	30.0	20.0	15.0	23.0	1.0	20.0	70	7.5	355	12.5	90	1012.2	9	0.0			
Site 7	2018-03-07	18.0	31.0	21.0	16.0	24.0	1.1	21.0	72	8.0	360	13.0	92	1012.0	10	0.0	13.0	18.0	31.0	21.0	16.0	24.0	1.1	21.0	72	8.0	360	13.0	92	1012.0	10	0.0			
Site 8	2018-03-08	19.0	32.0	22.0	17.0	25.0	1.2	22.0	74	8.5	365	13.5	94	1011.8	11	0.0	13.5	19.0	32.0	22.0	17.0	25.0	1.2	22.0	74	8.5	365	13.5	94	1011.8	11	0.0			
Site 9	2018-03-09	20.0	33.0	23.0	18.0	26.0	1.3	23.0	76	9.0	370	14.0	96	1011.6	12	0.0	14.0	20.0	33.0	23.0	18.0	26.0	1.3	23.0	76	9.0	370	14.0	96	1011.6	12	0.0			
Site 10	2018-03-10	21.0	34.0	24.0	19.0	27.0	1.4	24.0	78	9.5	375	14.5	98	1011.4	13	0.0	14.5	21.0	34.0	24.0	19.0	27.0	1.4	24.0	78	9.5	375	14.5	98	1011.4	13	0.0			
Site 11	2018-03-11	22.0	35.0	25.0	20.0	28.0	1.5	25.0	80	10.0	380	15.0	100	1011.2	14	0.0	15.0	22.0	35.0	25.0	20.0	28.0	1.5	25.0	80	10.0	380	15.0	100	1011.2	14	0.0			
Site 12	2018-03-12	23.0	36.0	26.0	21.0	29.0	1.6	26.0	82	10.5	385	15.5	102	1011.0	15	0.0	15.5	23.0	36.0	26.0	21.0	29.0	1.6	26.0	82	10.5	385	15.5	102	1011.0	15	0.0			
Site 13	2018-03-13	24.0	37.0	27.0	22.0	30.0	1.7	27.0	84	11.0	390	16.0	104	1010.8	16	0.0	16.0	24.0	37.0	27.0	22.0	30.0	1.7	27.0	84	11.0	390	16.0	104	1010.8	16	0.0			
Site 14	2018-03-14	25.0	38.0	28.0	23.0	31.0	1.8	28.0	86	11.5	395	16.5	106	1010.6	17	0.0	16.5	25.0	38.0	28.0	23.0	31.0	1.8	28.0	86	11.5	395	16.5	106	1010.6	17	0.0			
Site 15	2018-03-15	26.0	39.0	29.0	24.0	32.0	1.9	29.0	88	12.0	400	17.0	108	1010.4	18	0.0	17.0	26.0	39.0	29.0	24.0	32.0	1.9	29.0	88	12.0	400	17.0	108	1010.4	18	0.0			
Site 16	2018-03-16	27.0	40.0	30.0	25.0	33.0	2.0	30.0	90	12.5	405	17.5	110	1010.2	19	0.0	17.5	27.0	40.0	30.0	25.0	33.0	2.0	30.0	90	12.5	405	17.5	110	1010.2	19	0.0			
Site 17	2018-03-17	28.0	41.0	31.0	26.0	34.0	2.1	31.0	92	13.0	410	18.0	112	1010.0	20	0.0	18.0	28.0	41.0	31.0	26.0	34.0	2.1	31.0	92	13.0	410	18.0	112	1010.0	20	0.0			
Site 18	2018-03-18	29.0	42.0	32.0	27.0	35.0	2.2	32.0	94	13.5	415	18.5	114	1009.8	21	0.0	18.5	29.0	42.0	32.0	27.0	35.0	2.2	32.0	94	13.5	415	18.5	114	1009.8	21	0.0			
Site 19	2018-03-19	30.0	43.0	33.0	28.0	36.0	2.3	33.0	96	14.0	420	19.0	116	1009.6	22	0.0	19.0	30.0	43.0	33.0	28.0	36.0	2.3	33.0	96	14.0	420	19.0	116	1009.6	22	0.0			
Site 20	2018-03-20	31.0	44.0	34.0	29.0	37.0	2.4	34.0	98	14.5	425	19.5	118	1009.4	23	0.0	19.5	31.0	44.0	34.0	29.0	37.0	2.4	34.0	98	14.5	425	19.5	118	1009.4	23	0.0			
Site 21	2018-03-21	32.0	45.0	35.0	30.0	38.0	2.5	35.0	100	15.0	430	20.0	120	1009.2	24	0.0	20.0	32.0	45.0	35.0	30.0	38.0	2.5	35.0	100	15.0	430	20.0	120	1009.2	24	0.0			
Site 22	2018-03-22	33.0	46.0	36.0	31.0	39.0	2.6	36.0	102	15.5	435	20.5	122	1009.0	25	0.0	20.5	33.0	46.0	36.0	31.0	39.0	2.6	36.0	102	15.5	435	20.5	122	1009.0	25	0.0			
Site 23	2018-03-23	34.0	47.0	37.0	32.0	40.0	2.7	37.0	104	16.0	440	21.0	124	1008.8	26	0.0	21.0	34.0	47.0	37.0	32.0	40.0	2.7	37.0	104	16.0	440	21.0	124	1008.8	26	0.0			
Site 24	2018-03-24	35.0	48.0	38.0	33.0	41.0	2.8	38.0	106	16.5	445	21.5	126	1008.6	27	0.0	21.5	35.0	48.0	38.0	33.0	41.0	2.8	38.0	106	16.5	445	21.5	126	1008.6	27	0.0			
Site 25	2018-03-25	36.0	49.0	39.0	34.0	42.0	2.9	39.0	108	17.0	450	22.0	128	1008.4	28	0.0	22.0	36.0	49.0	39.0	34.0	42.0	2.9	39.0	108	17.0	450	22.0	128	1008.4	28	0.0			
Site 26	2018-03-26	37.0	50.0	40.0	35.0	43.0	3.0	40.0	110	17.5	455	22.5	130	1008.2	29	0.0	22.5	37.0	50.0	40.0	35.0	43.0	3.0	40.0	110	17.5	455	22.5	130	1008.2	29	0.0			
Site 27	2018-03-27	38.0	51.0	41.0	36.0	44.0	3.1	41.0	112	18.0	460	23.0	132	1008.0	30	0.0	23.0	38.0	51.0	41.0	36.0	44.0	3.1	41.0	112	18.0	460	23.0	132	1008.0	30	0.0			
Site 28	2018-03-28	39.0	52.0	42.0	37.0	45.0	3.2	42.0	114	18.5	465	23.5	134	1007.8	31	0.0	23.5	39.0	52.0	42.0	37.0	45.0	3.2	42.0	114	18.5	465	23.5	134	1007.8	31	0.0			
Site 29	2018-03-29	40.0	53.0	43.0	38.0	46.0	3.3	43.0	116	19.0	470	24.0	136	1007.6	32	0.0	24.0	40.0	53.0	43.0	38.0	46.0	3.3	43.0	116	19.0	470	24.0	136	1007.6	32	0.0			
Site 30	2018-03-30	41.0	54.0	44.0	39.0	47.0	3.4	44.0	118	19.5	475	24.5	138	1007.4	33	0.0	24.5	41.0	54.0	44.0	39.0	47.0	3.4	44.0	118	19.5	475	24.5	138	1007.4	33	0.0			
Site 31	2018-03-31	42.0	55.0	45.0	40.0	48.0	3.5	45.0	120	20.0	480	25.0	140	1007.2	34	0.0	25.0	42.0	55.0	45.0	40.0	48.0	3.5	45.0	120	20.0	480	25.0	140	1007.2	34	0.0			
Site 32	2018-04-01	43.0	56.0	46.0	41.0	49.0	3.6	46.0	122	20.5	485	25.5	142	1007.0	35	0.0	25.5	43.0	56.0	46.0	41.0	49.0	3.6	46.0	122	20.5	485	25.5	142	1007.0	35	0.0			
Site 33	2018-04-02	44.0	57.0	47.0	42.0	50.0	3.7	47.0	124	21.0	490	26.0	144	1006.8	36	0.0	26.0	44.0	57.0	47.0	42.0	50.0	3.7	47.0	124	21.0	490	26.0	144	1006.8	36	0.0			
Site 34	2018-04-03	45.0	58.0	48.0	43.0	51.0	3.8	48.0	126	21.5	495	26.5	146	1006.6	37	0.0	26.5	45.0	58.0	48.0	43.0	51.0	3.8	48.0	126	21.5	495	26.5	146	1006.6	37	0.0			
Site 35	2018-04-04	46.0	59.0	49.0	44.0	52.0	3.9	49.0	128	22.0	500	27.0	148	1006.4	38	0.0	27.0	46.0	59.0	49.0	44.0	52.0	3.9	49.0	128	22.0	500	27.0	148	1006.4	38	0.0			
Site 36	2018-04-05	47.0	60.0	50.0	45.0	53.0	4.0	50.0	130	22.5	505	27.5	150	1006.2	39	0.0	27.5	47.0	60.0	50.0	45.0	53.0	4.0	50.0	130	22.5	505	27.5	150	1006.2	39	0.0			
Site 37	2018-04-06	48.0	61.0	51.0	46.0	54.0	4.1	51.0	132	23.0	510	28.0	152	1006.0	40	0.0	28.0	48.0	61.0	51.0	46.0	54.0	4.1	51.0	132	23.0	510	28.0	152	1006.0	40	0.0			
Site 38	2018-04-07	49.0	62.0	52.0	47.0	55.0	4.2	52.0	134	23.5	515	28.5	154	1005.8	41	0.0	28.5	49.0	62.0	52.0	47.0	55.0	4.												