ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)						
	January 31, 2017- October 25, 2017					
	24 Hour Residential Sampling Results					
Compound list	**Average (1/2mdl)****	**Minimum**	**Maximum**	**Count*****	**Short-term Screening Values**	**Source**
	ppb	**ppb**	**ppb**		**ppb**	
Acetone	4.23	BDL	9.03	50	13,000	MRLs (intermed.)
Acrolein*	0.30	BDL	0.87	8	0.04	MRLs (intermed.)
Benzene	0.26	0.10	1.06	57	6	MRLs (intermed.)
n-Butane	1.52	0.47	4.29	51	18,000	MAGLC
2-Butanone	0.36	BDL	1.39	14	200,000	AEGL-1
Carbon tetrachloride	0.06	BDL	0.12	12	30	MRLs (intermed.)
Chloromethane	0.66	0.44	0.98	57	200	MRLs (intermed.)
Cyclohexane	0.05	BDL	0.12	2	2,400	MAGLC
Dichlorodifluoromethane	0.56	0.38	0.78	55	24,000	MAGLC
Ethanol	5.35	BDL	21.50	55	1,800,000	ERPG-1
Ethyl Acetate	0.06	BDL	0.30	4	9,500	MAGLC
Ethyl Benzene	0.06	BDL	0.18	9	5,000	MRLs (intermed.)
n-Heptane	0.08	BDL	0.24	18	10,000	MAGLC
Hexane	0.26	BDL	0.74	52	1,190	MAGLC
2-Hexanone	0.05	BDL	0.12	1	120	MAGLC
Isopropyl alcohol	0.92	BDL	6.07	43	5,000	MAGLC
Methyl methacrylate	0.08	BDL	0.77	4	17,000	AEGL-1
4-Methyl-2-pentanone	0.06	BDL	0.18	2	476	MAGLC
Methylene chloride	0.11	BDL	0.56	36	300	MRLs (intermed.)
Naphthalene	0.11	BDL	0.25	4	240	MAGLC
n-Pentane	0.78	0.18	2.63	57	14,286	MAGLC
Propylene	0.61	0.28	1.41	57	11,905	MAGLC
Styrene	0.08	BDL	0.57	5	5,000	MRLs
Tetrachloroethylene	0.11	BDL	0.29	4	6	MRLs (intermed.)
Trichloroethene	0.05	BDL	0.11	1	0.4	MRLs (intermed.)
Toluene	0.46	0.10	1.25	57	2000	MRLs
Trichlorofluoromethane	0.23	0.16	0.42	57	24,000	MAGLC
1,1,2-Trichloro-1,2,2-	0.10	BDL	0.10	3	24,000	MAGLC
1,2,4-Trimethylbenzene	0.10	BDL	0.28	28	595	MAGLC
2,2,4-Trimethylpentane	0.13	BDL	0.44	10	7,143	MAGLC
Vinyl acetate	0.15	BDL	0.58	13	10	MRLs (intermed.)
o-Xylene	0.08	BDL	0.25	17	600	MRLs (intermed.)
Total m&p-xylenes	0.19	BDL	0.61	26	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 57 sampling events (other samples were below detection limits)

ARCO Recycling, 1705 Noble Road						
Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)						
	January 31, 2017- October 25, 2017					
	24 Hour Upwind Sampling Results					
Compound list	**Average (1/2mdl)****	**Minimum**	**Maximum**	**Count*****	**Short-term Screening Values**	**Source**
	ppb	**ppb**	**ppb**		**ppb**	
Acetone	4.58	BDL	10.80	50	13,000	MRLs (intermed.)
Acrolein*	0.32	BDL	0.74	11	0.04	MRLs (intermed.)
Benzene	0.23	0.10	0.85	55	6	MRLs (intermed.)
1,3-Butadiene	0.05	BDL	0.20	2	10000	ERPG-1
n-Butane	1.58	0.31	5.31	46	18,000	MAGLC
2-Butanone	0.36	BDL	1.06	15	200,000	AEGL-1
Carbon tetrachloride	0.06	BDL	0.11	11	30	MRLs (intermed.)
Chloromethane	0.65	0.37	1.02	56	200	MRLs (intermed.)
Cyclohexane	0.05	BDL	0.12	1	2,400	MAGLC
Dichlorodifluoromethane	0.56	0.41	0.79	56	24,000	MAGLC
Ethanol	4.85	BDL	14.70	54	1,800,000	ERPG-1
Ethyl acetate	0.07	BDL	0.49	6	9,500	MAGLC
Ethylbenzene	0.06	BDL	0.15	4	2,000	MRLs (intermed.)
n-Heptane	0.07	BDL	0.31	13	10,000	MAGLC
Hexane	0.22	BDL	0.58	52	1,190	MAGLC
2-Hexanone	0.06	BDL	0.48	1	120	MAGLC
Isopropyl alcohol	1.20	BDL	7.49	38	5,000	MAGLC
Methyl methacrylate	0.08	BDL	0.72	4	17,000	AEGL-1
Methylene chloride	0.10	BDL	0.42	35	300	MRLs (intermed.)
4-Methyl-2-pentanone	0.05	BDL	0.15	1	476	MAGLC
Naphthalene	0.11	BDL	0.37	4	240	MAGLC
n-Pentane	0.67	0.16	1.98	56	14,286	MAGLC
Propylene	0.80	0.26	2.80	55	11,905	MAGLC
Styrene	0.08	BDL	0.60	6	5,000	MRLs
Toluene	0.41	BDL	1.83	55	2000	MRLs
Tetrachloroethylene	0.06	BDL	0.28	3	6	MRLs (intermed.)
Trichlorofluoromethane	0.23	0.14	0.42	56	24,000	MAGLC
1,2,4-Trimethylbenzene	0.09	BDL	0.29	25	595	MAGLC
2,2,4-Trimethylpentane	0.12	BDL	0.35	7	7,143	MAGLC
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.05	BDL	0.11	2	24000	MAGLC
Vinyl acetate	0.16	BDL	0.70	12	10	MRLs (intermed.)
o-Xylene	0.07	BDL	0.20	11	600	MRLs (intermed.)
Total m&p-xylenes	0.15	BDL	0.47	16	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 56 sampling events (other samples were below detection limits)

ARCO Recycling, 1705 Noble Road

Ambient Air Sampling Results-Volatile Organic Compounds(VOCs)

January 31, 2017- October 25, 2017

24 Hour Downwind Sampling Results

Compound list	Average (1/2mdl)**	Minimum	Maximum	Count***	Short-term Screening Values	Source
	ppb	ppb	ppb		ppb	
Acetone	4.97	BDL	13.50	54	13,000	MRLs (intermed.)
Acrolein*	0.37	BDL	3.06	10	0.04	MRLs (intermed.)
Benzene	0.27	BDL	1.95	55	6	MRLs (intermed.)
1,3-Butadiene	0.05	BDL	0.16	1	10,000	ERPG-1
n-Butane	1.23	BDL	5.76	53	18,000	MAGLC
2-Butanone	0.38	BDL	1.61	19	200,000	AEGL-1
Carbon disulfide	0.25	BDL	1.03	1	1,000	ERPG-1
Carbon tetrachloride	0.07	BDL	0.25	12	30	MRLs (intermed.)
Chloromethane	0.74	0.43	2.34	57	200	MRLs (intermed.)
Cyclohexane	0.05	BDL	0.12	1	2,400	MAGLC
Dichlorodifluoromethane	0.68	0.38	2.76	58	24,000	MAGLC
Ethanol	4.24	BDL	11.90	50	1,800,000	ERPG-1
Ethyl acetate	0.07	BDL	0.45	8	9,500	MAGLC
Ethylbenzene	0.09	BDL	1.84	6	2,000	MRLs (intermed.)
n-Heptane	0.07	BDL	0.43	10	10,000	MAGLC
Hexane	0.20	BDL	0.69	49	1,190	MAGLC
2-Hexanone	0.05	BDL	0.12	1	120	MAGLC
Isopropyl alcohol	1.08	BDL	7.12	35	5,000	MAGLC
Methylene chloride	0.11	BDL	0.25	37	300	MRLs (intermed.)
Methyl methacrylate	0.08	BDL	0.79	5	1,190	MAGLC
4-Methyl-2-pentanone	0.06	BDL	0.12	4	476	MAGLC
Naphthalene	0.12	BDL	0.93	5	240	MAGLC
n-Nonane	0.05	BDL	0.10	2	4,762	MAGLC
n-Pentane	0.58	BDL	1.81	55	14,286	MAGLC
Propylene	0.56	BDL	1.53	53	11,905	MAGLC
Styrene	0.08	BDL	0.60	6	5,000	MRLs
Tetrahydrofuran	0.17	BDL	2.82	5	1190	MAGLC
Tetrachloroethylene	0.07	BDL	0.92	2	6	MRLs (intermed.)
Toluene	0.47	BDL	6.10	51	2000	MRLs
Trichloroethene	0.05	BDL	0.12	1	0.4	MRLs (intermed.)
Trichlorofluoromethane	0.32	0.15	1.52	58	24,000	MAGLC
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.06	BDL	0.55	5	24,000	MAGLC
1,3,5-Trimethylbenzene	0.19	BDL	5.22	1	595	MAGLC
1,2,4-Trimethylbenzene	0.20	BDL	6.25	27	595	MAGLC
2,2,4-Trimethylpentane	0.11	BDL	0.33	6	7,143	MAGLC
Vinyl acetate	0.15	BDL	0.85	12	10	MRLs (intermed.)
o-Xylene	0.09	BDL	0.24	9	600	MRLs (intermed.)
Total m&p-xylenes	0.25	BDL	6.28	19	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

* 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 58 sampling events (other samples were below detection limits)

ARCO Recycling, 1705 Noble Road

Ambient Air Sampling Results-Reduced Sulfur Compounds

January 31, 2017-October 31, 2017

24 Hour Downwind Sampling Results

Client Sample ID:		EPA 028473/SN 20101	EPA 027118/SN 11491	EPA 027747/SN 11496	EPA 028472/SN 20100 Canister	EPA 028472/SN 20100 Canister	EPA 027735/SN 11515	EPA 028203/SN 11500	EPA 028202/SN 11490	EPA028372/ SN20893	EPA 027733/SN 11514	EPA 027743/SN 11518	EPA 028378/SN 20912	EPA 028469/SN 20085	EPA 027121/SN 11407	EPA027731/ SN11492	EPA 011518	EPA 027116	EPA 028377	EPA 28205	EPA 027733	EPA 028374	EPA 017054	EPA11522 - Downwind H2S	EPA 027129 Downwind H2S	EPA 028201 Downwind H2S	EPA 027115 Downwind H2S	EPA 027130 Downwind H2S	EPA 028382 Downwind H2S	EPA 028469 Downwind H2S	EPA 028373 Downwind H2S	EPA027735	EPA028378 - Downwind H2S	**Short-term Screening Values**	**Source**
DAT Sample ID:		0117038-1	217004	217012	217022	217022	217030	317014	0317050-1	0417013-1	0517015-1	0517036-1	0617014-1	0617019-1	0617027-1	0717001-1	0717025-1	..		0817003-01	0817012-1	0817018-1	0817033-1	0817042-1	0917005-1	0917018-1	0917030-1	0917038-1	1017008-1	1017019-1	1017030-1	1017038-1	1117003-1		
Date Analyzed:		1/1/26/ 17-	01/31/2017- 02/01/2017	02/07/2017- 02/08/2017	02/14/2017- 02/15/2017	02/14/2017- 02/15/2017	04	03/08/2017- 03/09/2017	03/29/2017- 03/30/2017	04/10/2017- 04/11/2017	5/8/2017- 5/9/17	5/18/2017- 5/19/2017	6/07/17- 6/08/17	6/12/2017- 6/13/2017	6/22/2017- 6/23/2017	7/03/2017- /04/2017	7/17/2017- /18/2017	7/20/2017- /21/2017	7/25/2017- 7/26/2017	7/31/2017- 8/01/2017	8/08/2017- 8/09/2017	8/14/2017- 8/15/2017	8/22/2017- 8/23/2017	8/28/2017- 8/29/2017	9/05/2017- 9/06/2017	9/11/2017- 9/12/2017	9/19/2017- 9/20/2017	9/25/2017- 9/26/2017	10/03/2017- 10/04/2017	10/09/2017 10/10/2017	10/16/2017- 10/17/2017	10/23/2017 10/24/2017	10/31/2017- 11/01/2017		
		ppb	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**
Hydrogen sulfide	773-06-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.09	ND	ND	70	
Carbonyl sulfide	463-58-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	23,000	AEGL 2
Methyl mercaptan	74-93-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7,300	AEGL 2
Ethyl mercaptan	75-08-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	AEGL 2
Dimethyl sulfide	75-17-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	
Carbon disulfide	75-15-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	EPRG-1
tert-Butyl mercaptan	75-66-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
n-Propyl mercaptan	107-03-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
n-Butyl mercaptan	109-79-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Dimethyl disulfide	75-18-3	ND	ND	ND	0.2	0.187	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	EPRG1

ARCO Recycling Asbestos Results					May 5, 2017-November 1, 2017																																			
Sample Decription		PCM upwind	PCM downwind	0.8 um PCM filter	0.8 um PCM filter	East end Resident.	West end Resident.																																	
Laboratory Sample ID		1701676 -1	1701676 -2	1702819 -1	1702819 -2	1702819 -1	1702819 -2	1703014 -1	1703014 -2	1703160 -1	1703160-2	1703219 -1	1703219 -2	1703344 -1	1703344 -2	1703487 -1	1703487 -2	1703545 -1	1703545 -2	1703706 -1	1703706 -2	1703823 -1	1703823 -2	1704090 -1	1704090 -2	1704193 -	1704193 -2	1704266 -1	1704266 -2	1704193 -	1704193 -2	1704537 -	1704537 -2						
Client ID		CQ796344	CQ796344	Site #1 CQ796484	Site #2 CQ796334	Site #1 CQ796243	Site #2 CQ796122	Site #1 CQ796036	Site #2 CQ796384	Site #1 CQ795984	Site #2 CQ796387	Site #1 (CQ796436)	Site #2 (CQ796025)	Site #1 (CQ795929)	Site #2 (CQ796061)	Site #1 (CS334674)	Site #2 (CS334638)	Site #1 (CS334458)	Site #2 (CS334478)	Site #1 (CS334406)	Site #2 (CS334437)	Site #1 CS334393)	Site #2 (CS334374)	Site #1 (CQ795974)	Site #2 (CS334597)	Site #1 (CS334390)	Site #2 (CS334421	site#1	Site#2	Site #1 (CS334454)	Site #2 (CS334400)	Site #1 (CS334395)	Site #2 (CS334737)						
Date Collected		5/5/2017	5/5/2017	7/19/2017	7/19/2017	7/27/2017	7/27/2017	8/1/2017	8/1/2017	8/10/2017	8/10/2017	8/15/2017	8/15/2017	8/23/2017	8/23/2017	8/31/2017	8/31/2017	9/5/2017	9/5/2017	9/13/2017	9/13/2017	9/21/2017	9/21/2017	10/4/2017	10/4/2017	10/12/2017	10/12/2017	10/16/2017	10/16/2017	10/24/2017	10/24/2017	11/1/2017	11/1/2017						
Fiber Concentration	(f/cc)	<0.01	<0.01	0.011	0.008	0.008	0.009	0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					

ARCO Recycling Lead Results				July 18, 2017- October 28, 2017				
1705 Noble Road, East Cleveland								
Cleveland ARCO Project Metals Data -								
	units -- µg/m³							
	Parameters							
- designated								
Month/ Date	Arsenic	Beryllium	Cadmium	Chromium	Lead	Manganese	Nickel	Zinc
July								
18-Jul-17	< 0.00285	< 0.000285	**0.0001**	**0.001**	0.004	0.021	0.003	0.031
24-Jul-17	< 0.00273	< 0.000273	0.0004	0.003	0.029	0.059	0.004	0.063
30-Jul-17	< 0.00271	< 0.000271	0.0003	**0.001**	0.009	0.018	0.003	0.048
August								
5-Aug-17	< 0.00272	< 0.000272	**0.0001**	**0.001**	0.004	**0.007**	**0.001**	0.031
11-Aug-17	< 0.00271	< 0.000271	**0.0001**	**0.001**	0.010	0.019	**0.001**	0.048
17-Aug-17	<0.0027	<0.00027	**0.0001**	**0.001**	0.019	0.036	0.011	0.070
23-Aug-17	<0.00272	<0.000272	0.0003	0.003	0.016	0.053	**0.001**	0.065
29-Aug-17	<0.00272	<0.000272	0.0005	0.004	0.031	0.076	0.005	0.082
September								
4-Sep-17	<0.00272	<0.000272	0.0006	**0.001**	0.010	0.033	**0.001**	0.061
10-Sep-17	< 0.00271	< 0.000271	**0.0001**	**0.001**	**0.001**	**0.007**	**0.001**	**0.014**
16-Sep-17	0.00335	<0.000269	0.0003	0.007	0.010	0.017	0.013	0.052
22-Sep-17	<0.00271	<0.000271	0.0004	0.004	0.030	0.067	0.004	0.077
28-Sep-17	< 0.00271	< 0.000271	**0.0001**	**0.001**	0.016	0.029	**0.001**	**0.014**
October								
4-Oct-17	<0.0027	<0.00027	0.0004	0.003	0.019	0.058	0.004	0.072
10-Oct-17	<0.00269	<0.00135	0.0005	**0.007**	0.011	0.041	**0.007**	0.087
16-Oct-17	<0.00274	<0.000274	**0.0001**	**0.001**	0.022	0.033	**0.001**	0.038
22-Oct-17	<0.00269	<0.000269	0.00071	**0.001**	0.012	0.025	**0.001**	0.056
28-Oct-17	<0.00277	<0.000277	**0.0001**	**0.001**	0.012	0.024	**0.001**	0.039
Average	ND	ND	0.0003	0.003	0.015	0.035	0.004	0.053
Screening Value	**0.002**	**0.004**	**0.03**	**0.3**	**0.15**	**0.3**	**0.2**	**6000**
Source	**IRIS**	**IRIS**	**MRLs**	**MRLs**	**NAAQS**	**MRLs**	**MRLs**	**PAC-1**

Bold values=1/2 detection limit
ND= Non-Detect
MRLs=ATSDR Minimum Risk Level
IRIS= U.S. EPA Integrated Risk Information System
NAAQS= National Ambient Air Quality Standard
PAC-1=DOE Protective Action level
Concentration estimated due to interference with the internal standard.

ARCO PM10 Air Quality Summary				
DATE	Day	24- hour concentration µg/m³	High 1-hour value µg/m³	High hour
November				
11/2/2017	Thursday	14.9	21.4	18
11/3/2017	Friday	9.1	15.9	13
11/4/2017	Saturday	28.6	85.6	7
11/5/2017	Sunday	12	26.3	0
11/6/2017	Monday	7.1	13	2
11/7/2017	Tuesday	17.4	48.5	13
11/8/2017	Wednesday	23.1	78.4	8
Note: NAAQS for PM10 - 150 µg/m³ - 24 hour average				