

Appendix N

Q/d Analysis Ranking Lists for Four-Factor Analysis Selected Sources

This page intentionally left blank

IDEM Source Ranking for Four-Factor Analysis

EIS ID	Facility Name	NAICS	County Name	LADCO Rank	NPS Rank	IDEM Rank	2018 NO _x (tons/yr)	2018 SO ₂ (tons/yr)	2018 Q	2018 Q/D	Dist. D (km)	Closest Monitor
8017211	Indiana Michigan Power Agency dba AEP - Rockport	221112	Spencer	2	1	1	8741	21241	29982	259.537	116	MACA1
7363111	Duke Energy Indiana LLC - Gibson	221112	Gibson	3	2	2	10256	16213	26469	134.828	196	MACA1
7362411	Indianapolis Power and Light - Petersburg	221112	Pike	4	3	3	8225	6570	14795	83.679	177	MACA1
8181811	Alcoa Warrick LLC	331313	Warrick	28		4	8048	2927	10975	80.859	136	MACA1
7744211	Indiana-Kentucky Electric Corporation - Clifty Creek	221112	Jefferson	7	4	5	6139	5127	11266	65.675	172	MACA1
7376511	ArcelorMittal - Burns Harbor LLC	331110	Porter	1	5	6	9686	11452	21138	42.783	494	MACA1
7248511	Duke Energy Indiana LLC - Cayuga	221112	Vermillion	5	9	7	8977	2656	11633	36.419	319	MACA1
8166111	SIGECO - AB Brown	221112	Posey	15		8	2128	3528	5656	34.540	164	MACA1
8183111	Alcoa Warrick Power Plant - AGC Div	221112	Warrick	9	7	9	3028	1234	4262	31.318	136	MACA1
8183011	SIGECO - Culley	221112	Warrick	27	10	10	1529	1896	3425	25.346	135	MACA1
8396211	Hoosier Energy Rec Inc - Merom	221112	Sullivan	14	12	11	1835	3803	5638	23.612	239	MACA1
7957011	NIPSCO - R M Schahfer	221112	Jasper	11		12	6090	1467	7557	16.147	468	MACA1
8225311	Lehigh Cement Company LLC	32731	Lawrence	25	13	13	1889	753	2642	15.747	168	MACA1
7742411	Duke Energy Indiana, LLC - Gallagher	221112	Floyd	31	16	14	535	1149	1684	15.036	112	MACA1
3988011	Cokenergy LLC - contractor of ArcelorMittal	221112	Lake	10	18	15		5398	5398	10.695	505	MACA1
3986511	ArcelorMittal - USA LLC	331110	Lake	6	14	16	3023	2249	5272	10.462	504	MACA1
7431611	Lone Star Industries Inc	32731	Putnam	30	22	17	1713	104	1817	6.700	271	MACA1
8192011	US Steel - Gary Works	324199	Lake	8	11	18	3119	0.1	3119	6.290	496	MACA1
3986611	ArcelorMittal - Indiana Harbor LLC	331110	Lake	18	17	19	1153	1512	2665	5.298	503	MACA1
7364611	SABIC Innovative Plastics - Mt Vernon LLC	325211	Posey	16	8	20	374	591	965	5.292	182	MACA1
8198511	Lehigh Cement Company LLC	32731	Clark	44	15	21	500	312	812	4.840	168	MACA1
4478911	Duke Energy Indiana LLC Edwardsport	221112	Knox	43	27	22	867	58	925	4.582	202	MACA1
7744611	Covanta Indianapolis Inc	562213	Marion	40	32	23	1078	68	1146	4.177	274	MACA1
8011511	NIPSCO - Michigan City	221112	La Porte	17		24	990	997	1987	3.862	515	MACA1

7376411	Tate & Lyle Ingredients Americas LLC	311221	Tippecanoe	32	35	25	460	759	1219	3.387	360	MACA1
7247711	BP Products North America Inc - Whiting Refinery	32411	Lake	13	21	26	1378	291	1669	3.310	504	MACA1
5506011	Indiana Municipal Power Agency	221112	Wayne	29	30	27	99	880	979	3.284	298	MACA1
8182811	Indiana Harbor Coke Company LP contract	324199	Lake	33	24	28	717	576	1293	2.571	503	MACA1
5453011	Ardagh Glass Inc	327213	Randolph	41	34	29	586	233	819	2.445	335	MACA1
8224911	Nucor Steel	331110	Montgomery	48	40	30	451	228	679	2.197	309	MACA1
8202711	Carmeuse Lime Inc	32741	Lake	20	25	31	962	89	1051	2.100	500	MACA1
7255211	Indianapolis Power & Light Co Harding	221112	Marion	34		32	551	5	556	1.937	287	MACA1
4883811	Owens Brockway Glass Container Inc	327213	Madison	52		33	314	278	592	1.809	327	MACA1
4747911	Anchor Glass Container Corporation	327213	Dearborn		44	34	32	351	383	1.665	230	MACA1
4912511	Purdue University	61131	Tippecanoe	49	31	35	273	219	492	1.373	358	MACA1
8537211	Waupaca Foundry Inc	331511	Perry	55	42	36	101	33	134	1.301	103	MACA1
7376911	SDI Steel Dynamics Incorporated	331110	De Kalb	37	43	37	369	229	598	1.283	466	MACA1
5552011	University of Notre Dame	61131	St Joseph	39		38	271	322	593	1.166	509	MACA1
4885311	Citizens Thermal	22133	Marion	54	23	39	317	1	318	1.146	277	MACA1
8199711	Steel Dynamics, Inc. (SDI), Structural	331110	Whitley	50		40	352	153	505	1.125	449	MACA1
8184011	Thermafiber Inc., Wabash Plant	327993	Wabash	46	41	41	32	351	383	0.977	392	MACA1
8074511	Tate & Lyle Ingredients Americas LLC	311221	Tippecanoe	47		42	145	71	216	0.590	366	MACA1
7376611	NIPSCO - Bailly	221112	Porter	19		43	196	53	249	0.489	509	MACA1
8223611	Eli Lilly & Company - Clinton Laboratory	325411	Vermillion	24	20	44	113	0	113	0.378	299	MACA1
8201111	Knauf Insulation Incorporated	327993	Shelby	53		45	95	3	98	0.365	268	MACA1
8186411	General Motors LLC - Fort Wayne Assembly	336112	Allen	23		46	119	0	119	0.275	434	MACA1
1.8E+07	ERP Iron Ore	21221	White	21		47	0	0	0	0.000	409	MACA1
4147311	Duke Energy Indiana, LLC - Wabash River	221112	Vigo	12		48			0	0.000	289	MACA1
7744711	Logansport Municipal Utilities	221112	Cass	22	26	49			0	0.000	389	MACA1
8225111	Indianapolis Power & Light CO - Eagle Valley	221112	Morgan	36	6	50			0	0.000	249	MACA1

LADCO 2016 Emissions for Indiana Q/d Analysis

County Name	Facility Id	NH3	NOX	PM25	SO2	LADCO Rank	NPS Rank	Facility Name	NAICS	Longitude	Latitude	Local Q/D	Local Sum Q/D	All Areas Q/D
Porter	7376511	28.2364	8599	3425	12831	1	5	ARCELORMITTAL BURNS HARBOR LLC	331110	-87.13749	41.6344	24.35662	48.16672	25.23754
Spencer	8017211	2.57509	12891	803	24341	2	1	INDIANA MICHIGAN POWER DBA AEP ROCKPO	221112	-87.03596	37.9258	26.02595	40.88446	206.0193
Gibson	7363111	3.29084	13190	2133	14963	3	2	Duke Energy Indiana LLC - Gibson Genera	221112	-87.76707	38.3713	16.73836	34.138415	75.43116
Pike	7362411	1.72929	10814	267	12838	4	3	Indianapolis Power and Light Petersburg	221112	-87.25286	38.5278	14.74712	27.627445	70.05046
Vermillion	7248511	1.44859	12379	810	2819	5	9	Duke Energy Indiana LLC - Cayuga Genera	221112	-87.42888	39.9229	17.22317	22.389568	37.49898
Lake	3986511	18.7746	4132	1387	2392	6	14	ARCELORMITTAL USA LLC	331110	-87.44227	41.6659	7.820615	16.956568	7.99382
Jefferson	7744211	1.83742	9356	114	4561	7	4	Indiana-Kentucky Electric Corporation -	221112	-85.4192	38.7383	11.11557	16.730155	49.25638
Lake	8192011	31.3517	3143	1940	2590	8	11	US STEEL GARY WORKS	324199	-87.31745	41.615	5.911288	14.865217	6.173441
Warrick	8183111	0.82309	7080	1680	3457	9	7	ALCOA Warrick Power Plant AGC Div of Al	221112	-87.33296	37.9147	7.538746	13.222271	51.9934
Lake	3988011	0	0	128	6298	10	18	Cokenergy LLC - contractor of ArcelorMi	221112	-87.41687	41.6795	11.96509	12.209024	12.16136
Jasper	7957011	1.56362	4397	661	1441	11		NIPSCO R M SCHAFER GENERATING STATI	221112	-87.02426	41.2173	7.698071	11.519777	9.536304
Vigo	4147311	0.10884	781	446	6843	12		Duke Energy Indiana, LLC- Wabash River	221112	-87.42349	39.5273	8.978039	10.597482	23.67869
Lake	7247711	49.95	1485	745	388	13	21	BP Products North America Inc Whiting R	32411	-87.47964	41.6631	2.805955	6.7933168	2.871311
Sullivan	8396211	1.08101	1945	46	3144	14	12	HOOSIER ENERGY REC INC MEROM GENERA	221112	-87.51109	39.0693	3.863539	6.4175875	12.75222
Posey	8166111	2.63472	1708	311	3855	15		Sigeco AB Brown South Indiana Gas & Ele	221112	-87.7142	37.9048	4.081662	6.2564582	23.66907
Posey	7364611	20.4213	1784	146	3469	16	8	SABIC Innovative Plastics Mt Vernon LLC	325211	-87.9271	37.9072	3.662867	6.152103	19.35505
La Porte	8011511	1.44519	817	208	1901	17		NIPSCO Michigan City	221112	-86.90937	41.7204	3.696184	5.7966058	3.696184
Lake	3986611	8.97643	893	646	1387	18	17	ARCELORMITTAL INDIANA HARBOR LLC	331110	-87.46374	41.6576	2.619895	5.709719	2.687095
Porter	7376611	1.0415	1346	244	808	19		NIPSCO BAILLY STATION	221112	-87.12557	41.6439	2.560267	4.6546237	2.642245
Lake	8202711	0	1556	121	361	20	25	CARMEUSE LIME INC	32741	-87.408	41.6408	2.933915	3.85223	3.030556
White	1.8E+07	0	0	1976	286	21		ERP Iron Ore	21221	-86.87256	40.7655	3.189933	3.667852	4.826535
Cass	7744711	0.02108	328	30	1715	22	26	Logansport Municipal Utilities	221112	-86.36012	40.759	2.782761	3.3669827	4.244167
Allen	8186411	2.24423	115	80	1	23		General Motors LLC Fort Wayne Assembly	336112	-85.30049	40.9733	2.858528	3.1914455	3.913986
Vermillion	8223611	1.69034	659	20	1111	24	20	ELI LILLY & COMPANY CLINTON LABS	325411	-87.39488	39.7339	1.503853	3.0460403	3.592381
Lawrence	8225311	0.27426	1767	131	519	25	13	LEHIGH CEMENT COMPANY LLC	32731	-86.45782	38.7374	2.099774	2.9075738	9.77512
Dearborn	8165511	0.28151	29	11	0	26		MGPI of Indiana	31214	-84.86404	39.1003	2.802901	2.8527321	9.162923
Warrick	8183011	0.5087	1119	173	1311	27	10	SIGECO - Culley, Newburgh	221112	-87.3251	37.9095	1.39503	2.7934764	9.690564
Warrick	8181811	7.78312	214	335	1374	28		ALCOA Warrick LLC	331313	-87.32712	37.9178	1.463247	2.7867087	10.10003
Wayne	5506011	0.0418	125	93	1727	29	30	Indiana Municipal Power Agency	221112	-84.89527	39.8028	2.374719	2.6751255	5.451457
Putnam	7431611	0	1581	172	139	30	22	LONE STAR INDUSTRIES INC	32731	-86.87587	39.6165	2.117605	2.5633139	5.570757
Floyd	7742411	0.31977	649	55	1457	31	16	Duke Energy Indiana, LLC-Gallagher Gene	221112	-85.83761	38.2629	1.631109	2.4250588	11.31097
Tippecanoe	7376411	3.366	504	146	705	32	35	Tate & Lyle Ingredients Americas LLC So	311221	-86.84202	40.376	1.064486	2.4122498	1.925103
Lake	8182811	78.0015	688	54	439	33	24	Indiana Harbor Coke Company LP contract	324199	-87.45052	41.6558	1.299454	2.3803678	1.333782
Marion	7255211	24.987	1043	77	275	34		INDIANAPOLIS POWER & LIGHT CO HARDIN	221112	-86.1975	39.7119	1.424543	1.9929438	3.63227
Marion	9661711	0	1079	26	104	35		Indianapolis Intl	48811	-86.30976	39.7125	1.472507	1.9383369	3.750879
Morgan	8225111	0.03023	183	3	1217	36	6	INDIANAPOLIS POWER & LIGHT CO EAGLE V	221112	-86.41862	39.4853	1.605357	1.853516	4.627848
De Kalb	7376911	4.8716	379	197	248	37	43	SDI Steel Dynamics Incorporated	331110	-84.92166	41.3701	0.685212	1.6822498	0.784769
Gibson	7363211	1.75079	55	70	0	38		TOYOTA MOTOR MANUFACTURING INDIANA INCO	336111	-87.56322	38.293	1.508791	1.6493884	7.561233
St Joseph	5552011	0.54395	308	20	479	39		UNIVERSITY OF NOTRE DAME DU LAC	61131	-86.23637	41.7052	0.938217	1.5926161	0.941166
Marion	7744611	0.03387	1078	6	68	40	32	COVANTA INDIANAPOLIS INC	562213	-86.18953	39.7342	1.476364	1.5772484	3.71957

Randolph	5453011	1.59	593	200	237	41	34	Ardagh Glass Inc	327213	-84.97282	40.1738	0.865113	1.5379366	1.676221
Tippecanoe	8186811	0.21977	45	10	0	42		SUBARU OF INDIANA AUTOMOTIVE INC SIA	336111	-86.79876	40.3833	1.313416	1.3973335	2.369754
Knox	4478911	12.4963	863	35	190	43	27	Duke Energy Indiana LLC Edwardsport Gen	221112	-87.24743	38.8063	1.027635	1.3283783	4.111038
Clark	8198511	0.00462	581	328	212	44	15	Lehigh Cement Company LLC	32731	-85.75157	38.4139	0.662445	1.3273618	3.953217
Cass	8224411	0	556	158	85	45	37	Lehigh Cement Company LLC	32731	-86.43344	40.7345	0.897292	1.3086524	1.383485
Wabash	8184011	33.93	39	85	434	46	41	Thermafiber Inc., Wabash Plant	327993	-85.86211	40.7911	0.708812	1.1109386	1.063031
Tippecanoe	8074511	3.69972	142	113	120	47		Tate & Lyle Ingredients Americas LLC (N	311221	-86.85972	40.4419	0.511916	1.0910506	0.897488
Montgomery	8224911	4.54218	348	119	208	48	40	Nucor Steel	331110	-86.83025	39.9752	0.492731	1.0685766	1.08085
Tippecanoe	4912511	0.81369	293	24	278	49	31	PURDUE UNIVERSITY	61131	-86.91152	40.4174	0.445159	0.9206121	0.788293
Whitley	8199711	0	277	83	140	50		Steel Dynamics, Inc. (SDI), Structural	331110	-85.34999	41.12	0.480225	0.8779141	0.617213
Kosciusko	1.5E+07	1.9584	46	27	0	51		Louis Dreyfus Company Agricultural Indu	54184	-85.8897	41.1232	0.704868	0.8361524	0.911133
Madison	4883811	0.76176	256	56	229	52		OWENS BROCKWAY GLASS CONTAINER INC	327213	-85.85797	40.0649	0.369544	0.8045875	0.781901
Shelby	8201111	58.71	101	330	5	53		Knauf Insulation Incorporated	327993	-85.77756	39.5265	0.43875	0.7991355	1.23016
Marion	4885311	6.97515	539	16	1	54	23	Citizens Thermal	22133	-86.16648	39.763	0.741499	0.7981992	1.839613
Perry	8537211	0.5536	91	150	36	55	42	Waupaca Foundry Inc	331511	-86.77223	37.9868	0.399191	0.6993408	3.363392
Cass	4729411	0.005	120	27	1			The Andersons Clymers Ethanol LLC	325193	-86.42562	40.7234	0.447416	0.6857857	0.693376
Vigo	1.3E+07	49.5595	181	40	241			Wabash River Combined Cycle Plant	221112	-87.42479	39.5308	0.316585	0.6740457	0.833404
Clinton	8165111	1.70967	42	11	0			ARCHER DANIELS MIDLAND CO FRANKFORT	311224	-86.55399	40.2831	0.588726	0.6698812	1.119338
Hendrick	9662811	1.75475	212	60	174			Steel Dynamics Incorporated Engineered	331110	-86.48426	39.8774	0.296913	0.666673	0.691448
Marion	4885211	376.229	63	1	0			CWA Authority Inc Belmont Adv Wastewate	22132	-86.19534	39.728	0.514938	0.6515066	1.301641
Shelby	8201411	1.915	21	75	0			Bunge North America (East), LLC	54184	-85.68698	39.6761	0.514503	0.6472939	1.324504
Elkhart	8202511	0.14664	5	13	0			MasterBrand Cabinets Inc	33711	-85.81935	41.5566	0.606581	0.6402713	0.647802
Dearborn	4747911	0.66796	276	42	151		44	Anchor Glass Container Corporation	327213	-84.84677	39.1242	0.343974	0.5966951	1.107278
Lake	3988511	28	111	133	8			WHITING CLEAN ENERGY INC	221112	-87.4775	41.6739	0.251071	0.5907925	0.25577
Dearborn	1.1E+07	55.08	294	106	16			Lawrenceberg Power LLC	221112	-84.8666	39.0908	0.364423	0.5898488	1.197888
Monroe	4553211	0.3027	94	9	336			INDIANA UNIVERSITY	61131	-86.52038	39.1737	0.423438	0.5579467	1.463099
Adams	8223211	3.39222	99	29	1			Bunge North America East LLC	311224	-84.92603	40.8417	0.336176	0.5514853	0.482607
Tippecanoe	8186711	0.16752	258	7	15			Caterpillar Incorporated	333618	-86.84842	40.4114	0.39117	0.5371823	0.695741
Elkhart	1.4E+07	0.10774	241	7	0			ELKHART	488210	-86.00794	41.669	0.468207	0.5183955	0.476623
Jackson	4680611	0.08741	352	20	14			Cummins Incorporated Seymour Engine Pla	333618	-85.88044	38.9614	0.430979	0.5154705	1.714757
Huntington	4679911	0	34	67	184			US Mineral Products Company dba Isolate	54184	-85.46892	40.8856	0.305624	0.4954691	0.436547
Lake	8197711	0.30653	25	5	225			Eco Services Operations Corp	325998	-87.47915	41.6087	0.420564	0.4921264	0.440176
Morgan	4554111	0	169	97	15			HYDRAULIC PRESS BRICK CO	212399	-86.37065	39.5387	0.224497	0.4650962	0.628583
Lake	7362011	0	10	49	185			Lafarge North America - contractor of A	331110	-87.44973	41.6522	0.349555	0.4633372	0.35933
Adams	7882411	0	1	68	0			REV Recreation Group	336213	-84.90324	40.8429	0.333066	0.4463864	0.477532
Jay	8537511	1.88163	120	28	99			Ardagh Glass Incorporated	327213	-85.19813	40.3711	0.181673	0.4316117	0.324933
Clinton	4746811	0.15337	103	44	128			Frito Lay Incorporated	311919	-86.5596	40.2841	0.191158	0.4195919	0.363243
Putnam	1.7E+07	2.0944	116	63	1			POET Biorefining - Cloverdale LLC	325193	-86.8148	39.5485	0.177028	0.418419	0.484688
Lake	8164811	0.7264	193	27	0			W.R. Grace & Co. - Conn.	325998	-87.45943	41.6189	0.361947	0.4174174	0.37724
Marion	7972111	10.015	165	20	30			Vertellus Integrated Pyridines LLC	325194	-86.21681	39.7445	0.226089	0.4026625	0.566428
Tippecanoe	4917411	0.8503	27	18	0			CARGILL INC SOYBEAN PROCESSING DIV	311225	-86.90348	40.4065	0.332711	0.4024982	0.592272
Posey	8166211	1.07365	34	15	0			CONSOLIDATED GRAIN & BARGE CO	311224	-87.87619	37.9291	0.340718	0.3934171	1.822226
Allen	7956311	0.87122	26	17	0			BF GOODRICH TIRE MANUFACTURING	326211	-84.89848	41.1328	0.311928	0.3887836	0.394913

St Joseph	4215411	3.1952	155	22	1		I N TEK & I N KOTE	332813	-86.47226	41.694	0.302873	0.3720846	0.305603
Posey	8166011	0.5492	117	28	45		Countrymark Refining and Logistics LLC	32411	-87.91018	37.9413	0.160512	0.3634743	0.842098
Lake	8163611	2.31617	73	49	16		CARGILL INC	311221	-87.51631	41.6884	0.139342	0.3566248	0.141093
Wabash	8181611	1.11677	74	65	21		Aleris Specification Alloys LLC	331314	-85.86988	40.7932	0.120558	0.3434654	0.180649
Wabash	4148511	0	151	1	0		PaperWorks Industries Inc	32213	-85.83252	40.7934	0.247126	0.337158	0.370113
Marion	7971911	0.41063	200	14	11		ALLISON TRANSMISSION INC SPEEDWAY MA	33635	-86.24025	39.7796	0.27613	0.3321986	0.678928
Tippecanoe	7246511	1.82058	117	34	2		Evonik Corporation Tippecanoe Laborator	325412	-86.93416	40.3898	0.17613	0.3247288	0.315696
Lake	8198611	2.22465	83	6	71		Safety Kleen Oil Recovery Company Incor	324191	-87.47869	41.6496	0.156345	0.3176614	0.160885
Daviess	8165311	3.8464	103	48	13		GRAIN PROCESSING CORP	311221	-87.2262	38.6335	0.12051	0.3138193	0.538476
Randolph	1.6E+07	0	99	46	0		CARDINAL ETHANOL LLC	325193	-84.8655	40.1841	0.144329	0.3090517	0.276574
Dubois	7246611	0.0944	3	38	0		MasterBrand Cabinets, Inc-# 4/22	33711	-86.8686	38.2197	0.260246	0.3057704	1.715497
Hendrick	5000011	0	100	47	11		Twin Bridges Recycling and Disposal Fac	562212	-86.50313	39.7531	0.137457	0.2908998	0.341453
Porter	7376811	2.29899	137	8	0		U S STEEL MIDWEST PLANT	331221	-87.17387	41.6262	0.259509	0.2877191	0.26982
Decatur	1.3E+07	0.73685	24	4	0		HONDA MANUFACTURING OF INDIANA LLC	336111	-85.54381	39.368	0.249474	0.2870285	0.755992
Lake	3984811	0.8004	25	42	0		JUPITER ALUMINUM CORPORATION	331315	-87.48648	41.5978	0.157091	0.2828425	0.165153
Marion	8235411	0	56	95	3		QUEMETCO INC	331492	-86.30016	39.7554	0.13016	0.2796108	0.324048
Montgomery	1.7E+07	0	77	50	1		Valero Renewable Fuels Company LLC (DBA	325193	-86.9099	40.1975	0.112478	0.2782526	0.220832
Jennings	5591911	0.00147	23	8	189		MUSCATATUCK URBAN TRNG CTR	92811	-85.53569	39.0508	0.234233	0.2720289	0.857618
Grant	1.7E+07	1.03216	82	28	0		CENTRAL INDIANA ETHANOL LLC	32512	-85.729	40.5642	0.129051	0.2711338	0.214355
St Joseph	5552711	0	112	15	4		PRAIRIE VIEW RECYCLING & DISPOSAL FACIL	562212	-86.16591	41.4944	0.209753	0.2644905	0.230641
Jasper	4681411	0.00379	12	5	141		SAINT JOSEPHS COLLEGE	61131	-87.15888	40.9205	0.233171	0.2616299	0.32778
Vigo	4148011	14.17	82	59	5		NIPSCO Sugar Creek Generating Station	221112	-87.51178	39.3929	0.105786	0.2600287	0.295569
Adams	1.6E+07	0.00356	1	23	0		Dolco Packaging	54184	-84.94836	40.8248	0.219458	0.2589124	0.3176
Jasper	4681811	1.5472	59	65	0		GEORGIA PACIFIC GYPSUM LLC	32742	-87.03778	41.2211	0.11353	0.2571902	0.140389
Vigo	1.3E+07	0.01963	49	80	66		BORAL BRICKS TERRE HAUTE PLANT	327120	-87.33147	39.3197	0.10163	0.2540437	0.301064
Porter	4691211	5.64077	103	12	1		PORTSIDE ENERGY LLC	221112	-87.17286	41.6315	0.196128	0.2394524	0.203459
Marion	8165811	2.0928	53	85	2		Ingredion Incorporated Indianapolis Pla	311221	-86.17435	39.7448	0.116911	0.2341387	0.292874
Henry	8111511	0.1032	11	77	5		Grede LLC	331511	-85.3499	39.9254	0.108606	0.2257308	0.24201
Porter	8187311	0.94101	56	9	18		NLMK Indiana	331110	-87.16108	41.626	0.106361	0.2211289	0.110599
Jackson	1.1E+07	0	62	13	3		ROSE ACRE FARMS INC	311224	-86.04222	38.9711	0.121477	0.2171235	0.482814
Kosciusko	8201611	0.28632	23	44	1		DALTON CORPORATION WARSAW MANUFACTURING	331511	-85.83202	41.2352	0.094706	0.216391	0.116451
Vigo	7743511	2.17862	22	24	115		sgSolutions LLC	325199	-87.42627	39.5225	0.150993	0.2146006	0.399074
De Kalb	1.4E+07	0.03918	104	3	0		GARRETT	488210	-85.13574	41.3526	0.187541	0.2064718	0.21717
Hamilton	4561111	35.6493	67	26	3		Duke Energy Indiana LLC - Noblesville G	221112	-85.9707	40.0959	0.096525	0.2024713	0.201453
Delaware	7789911	0	76	24	32		EXIDE TECHNOLOGIES	331492	-85.41742	40.157	0.111122	0.1965776	0.221784
Porter	5435811	2.89012	19	20	1		Pratt (Jet Corr), Inc./Pratt Paper (IN)	32213	-87.0268	41.4407	0.115764	0.1934969	0.130298
La Porte	1.6E+07	0.97493	30	2	0		Monosol LLC	326113	-86.705	41.6314	0.124881	0.1899053	0.129547
Dubois	1.7E+07	165.19	0	0	0		SOLAR SOURCES INC SHAMROCK PREPARATION FACILITY	213113	-87.04356	38.4446	0.188182	0.1881816	0.994944
Bartholomew	8414111	0.1936	127	4	3		CUMMINS INC COLUMBUS TECHNOLOGY CENTER	54138	-85.90657	39.2101	0.161188	0.1815388	0.546738
De Kalb	4872011	0.42115	1	18	1		Metal Technologies Auburn LLC	331511	-85.08315	41.3512	0.142088	0.1790743	0.164492
Morgan	7971311	0	30	8	94		GENERAL SHALE BRICK INC	327120	-86.3696	39.5747	0.125651	0.1775006	0.344831
Allen	9664311	0	66	5	9		Fort Wayne Internationa	48811	-85.20148	40.9831	0.11035	0.1774775	0.150108
Dubois	7246711	0.04	1	14	0		MASTERBRAND CABINETS INC DECORA NO 3	33711	-86.90957	38.3683	0.160465	0.1773446	0.927784

Clark	8198411	0	0	93	0		JEFFBOAT LLC	48839	-85.72441	38.277	0.104267	0.1741492	0.700254
Spencer	8017311	5.09284	72	43	1		AK STEEL CORPORATION	331110	-87.02606	37.982	0.077158	0.1694934	0.585918
Lake	3985311	0.46862	15	6	0		Huhtamaki Inc.	322299	-87.4797	41.5936	0.130444	0.1693745	0.137381
St Joseph	5552411	3.51352	16	13	1		Noble Americas South Bend Ethanol LLC	32512	-86.29685	41.6552	0.099543	0.1645957	0.102084
Lawrence	8089111	0.67179	21	54	2		General Motors LLC	331523	-86.48542	38.8787	0.070271	0.1645583	0.295107
White	8199611	0	11	1	0		BALL METAL BEVERAGE CONTAINER CORP	332431	-86.77027	40.7506	0.144753	0.1643389	0.220841
Martin	4552511	0	33	84	1		CRANE DIV NAVAL SURFACE WARFARE CTR NSW	92811	-86.87551	38.8747	0.100988	0.1625988	0.40979
La Porte	7972711	0.50505	16	1	0		Precoat Metals	332812	-86.67006	41.5185	0.122088	0.1550033	0.132984
Howard	7361711	1.57656	67	23	3		HAYNES INTERNATIONAL INC	331491	-86.15946	40.472	0.103759	0.1541465	0.180753
Kosciusk	8201711	0.6944	25	5	0		LSC Communications	323111	-85.89441	41.2429	0.0961	0.1506775	0.117825
Bartholo	7255811	0.7877	25	58	0		ENKEI AMERICA INC	331523	-85.9547	39.1371	0.072548	0.1484204	0.257997
Marshall	7377611	0	1	63	1		BREMEN CASTINGS INC	331511	-86.15738	41.4507	0.116256	0.1477797	0.130294
Rush	5016511	0	1	20	1		INTAT Precision Incorporated	331511	-85.4451	39.6434	0.114773	0.1446549	0.297088
Marion	7972011	0.23986	43	11	30		ROLLS ROYCE CORPORATION	336412	-86.21212	39.7374	0.059296	0.1430372	0.149128
Jay	1.7E+07	1.536	46	8	1		POET BIOREFINING PORTLAND	325193	-85.0248	40.4137	0.069544	0.138127	0.121076
Lake	3988411	2.74098	16	18	30		Ironside Energy LLC contractor of Acelo	221112	-87.45298	41.6639	0.05704	0.1352773	0.05835
St Joseph	9674611	0	41	4	6		South Bend Regional	48811	-86.32906	41.7106	0.079614	0.1341484	0.079709
Blackfor	1.7E+07	0.15387	5	73	0		Naturally Recycled Proteins of Indiana	311111	-85.29733	40.5494	0.113819	0.1338854	0.188296
Wayne	8182111	0.69094	32	46	9		Johns Manville, Inc.	327993	-84.91249	39.8344	0.062926	0.133326	0.142475
Lake	7250911	0.0011	60	5	0		PRAXAIR INC	32512	-87.47218	41.6677	0.113366	0.1325367	0.115785
Posey	1.6E+07	0.8	20	51	9		Valero Renewable Fuels Co LLC dba Valer	325193	-87.8734	37.9336	0.054153	0.1308341	0.289403
Vigo	1.4E+07	0.03918	90	3	0		DUANE	488210	-87.38243	39.4974	0.117864	0.1297722	0.316848
White	5507911	0	46	9	13		Liberty Lndfl, Inc-Waste Mgmt Svc Ctr	54184	-86.7008	40.8875	0.07612	0.1281275	0.109312
Newton	4554311	0	22	15	5		NEWTON COUNTY LANDFILL	562212	-87.34425	40.9298	0.055944	0.1252476	0.078023
Hendrick	1.4E+07	0.02938	82	2	0		AVON	488210	-86.3538	39.7569	0.112223	0.1235505	0.279005
Lake	8111411	0.2016	54	1	0		Armsted Rail Company Inc	332613	-87.5175	41.625	0.100942	0.121921	0.104924
De Kalb	4871911	0	30	9	1		NUCOR FASTENER	332722	-84.8534	41.3134	0.053132	0.1215746	0.062251
La Porte	5014611	0	57	1	3		Deercroft Recycling & Disposal Facility	54184	-86.90568	41.6529	0.109007	0.1209916	0.112061
Henry	4664211	3.67619	69	5	0		Duke Energy Indiana LLC - Henry County	221112	-85.5039	39.9527	0.097979	0.1203427	0.216936
Johnson	4478411	0.1152	25	0	0		ESSEX GROUP INC FRANKLIN	331420	-86.06345	39.522	0.083747	0.117653	0.237017
Martin	8207011	1.41005	44	26	0		UNITED STATES GYPSUM COMPANY	32742	-86.7527	38.6733	0.051821	0.1173517	0.245294
St Joseph	4215811	1.112	35	3	0		Honeywell International Inc	336413	-86.2967	41.683	0.067675	0.1164381	0.068567
Elkhart	7364311	0.61813	19	26	0		Diversified Machine Bristol Incorporate	33633	-85.73485	41.7454	0.052258	0.1159153	0.052258
Sullivan	1.5E+07	0	17	36	32		BRAMPTON BRICK	327120	-87.43028	39.2518	0.044919	0.1127063	0.136249
Cass	8198211	21.729	25	12	0		TYSON FRESH MEATS INC	311611	-86.3915	40.7335	0.040966	0.1105395	0.063205
Vigo	8223711	0	0	54	0		GARTLAND FOUNDRY CO INC	331511	-87.41249	39.443	0.070239	0.1078772	0.193491
Clay	9653011	0	9	42	29		BRICKCRAFT LLC	54184	-87.10973	39.3839	0.054717	0.1065166	0.160252
Vanderb	1.4E+07	0.03918	87	2	0		HOWELL	488210	-87.61292	37.9577	0.093306	0.1027275	0.551297
Allen	4518011	0	30	8	7		Republic Services of IN LP dba National	562212	-85.21733	41.0161	0.05043	0.1003523	0.067643
Jennings	5424711	0	0	17	0		North Vernon Industry Corporation	331511	-85.6242	39.0394	0.077547	0.0990004	0.288211
Wabash	4148611	0.03828	1	49	0		MANCHESTER METALS LLC	331511	-85.7803	40.9975	0.082435	0.0971504	0.112562
La Porte	1.5E+07	12.7583	1	27	0		KINGSBURY CASTINGS DIVISION	331511	-86.64997	41.5084	0.051078	0.0969924	0.05588
Tippecar	8165711	0.3008	18	5	0		Arconic Inc	331318	-86.86252	40.4039	0.061047	0.0969574	0.108922

Hancock	7250711	0.35874	11	1	0		AVERY DENNISON	322220	-85.78389	39.8169	0.078917	0.0962477	0.189185
La Porte	8011411	0.00753	1	33	1		WEIL McLAIN A UNITED DOMINION COMPANY	331511	-86.88819	41.7244	0.063623	0.093486	0.063623
Cass	4729711	0	40	8	2		OAK RIDGE RECYCLING & DISPOSAL FACILITY	562212	-86.34113	40.7235	0.064223	0.0901927	0.099554
Jackson	7972311	0	4	18	0		Valeo North America Incorporated	336320	-85.91092	38.9311	0.061249	0.0881292	0.249132
Allen	7251111	0.3032	15	1	0		Essex Group Incorporated	331491	-85.16021	41.0699	0.061034	0.0880426	0.079872
Dubois	4887911	0	66	1	0		JASPER ENGINE EXCHANGE INC	333618	-86.94291	38.3767	0.074681	0.0878591	0.425507
Jay	7743911	0	30	11	2		Jay County Landfill LLC	562212	-85.08984	40.3798	0.044857	0.0869149	0.079539
Clark	4730011	0.07764	68	3	3		PQ CORP	325998	-85.74993	38.2756	0.076663	0.0844401	0.517912
Lake	4460511	0	1	43	0		USS CENTRAL TEAMING COMPANY INC	331110	-87.31694	41.6144	0.081369	0.0839629	0.084998
Vigo	1.4E+07	0.01959	58	2	0		BAKER	488210	-87.39358	39.4383	0.075599	0.0832253	0.209174
Fulton	5016411	0	26	8	6		COUNTY LINE LANDFILL	54184	-86.22413	41.17	0.045278	0.0825938	0.057431
Lake	5000611	0	30	7	3		Beemsterboer Slag Corp contractor of Ar	327992	-87.44739	41.6541	0.056675	0.0794225	0.058214
Knox	8395411	66.205	0	0	0		Scepter Inc.	331492	-87.3296	38.7713	0.078401	0.0784014	0.315374
Allen	4518411	0.0192	15	11	6		Superior Aluminum Alloys LLC	54184	-84.954	41.0778	0.025513	0.0736288	0.033113
La Porte	4851711	0	33	3	0		VECTOR PIPELINE L P	54184	-86.6782	41.6728	0.064584	0.0721235	0.065805
Miami	4552711	0	14	0	28		PERU UTILITIES POWER PLANT	221112	-86.05755	40.7552	0.045579	0.0701718	0.069604
Marion	5544111	0	32	14	1		Georgetown Substation Generating Plant	221112	-86.2439	39.9022	0.044984	0.0699268	0.103722
Bartholo	7881711	0.00305	44	3	2		Faurecia Emissions Control Technologies	54138	-85.93471	39.1348	0.055823	0.0684774	0.198692
Madison	1.7E+07	1.7488	18	4	1		POET Biorefining- Alexandria LLC	325193	-85.6548	40.2965	0.030166	0.0667594	0.056738
Montgor	7255111	0.32541	14	14	0		Raybestos Powertrain LLC	336211	-86.88583	40.0444	0.02446	0.0650698	0.051747
Howard	7361611	0.8704	27	12	0		FCA US LLC Kokomo Casting Plant	331523	-86.11696	40.4611	0.041918	0.0650674	0.073388
Fountair	4472311	0.2355	9	13	2		Harrison Steel Castings Company	331513	-87.25928	40.2852	0.026447	0.0625783	0.049157
Lake	3985411	0.81346	25	2	0		WOLF LAKE TERMINALS INC	49319	-87.52156	41.6584	0.04791	0.0619818	0.049117
Elkhart	5316811	0	16	4	4		EARTHMOVERS INC	562212	-85.97428	41.6213	0.030889	0.0608732	0.0321
Hancock	7249611	0.35339	11	1	0		Precoat Metals a Division of Sequa Corp	332812	-85.7382	39.7876	0.042493	0.0594867	0.1033
Knox	4479311	2.32036	44	3	0		Duke Energy Indiana Incorporated Wheatl	221112	-87.2931	38.6716	0.051225	0.0589664	0.220381
Delawar	4873211	0.12186	35	2	0		BALL STATE UNIVERSITY	61131	-85.40726	40.2072	0.051588	0.056248	0.100475
Vanderb	4025411	1.20248	38	9	0		AZTECA MILLING LP	311221	-87.56374	38.1182	0.040882	0.0543935	0.226019
Vermillio	8187411	0	11	3	23		Colonial Brick Corporation	327120	-87.47175	39.94	0.032518	0.053231	0.070023
Lake	7973111	0.69334	17	5	0		UNITED STATES GYPSUM COMPANY	32742	-87.47071	41.6496	0.032878	0.0518345	0.033832
Pike	1.6E+07	0	24	2	1		Blackfoot Power Generating Station	54184	-87.20615	38.3301	0.026427	0.0512545	0.144868
Knox	1.4E+07	0.00979	39	1	0		ALICE	488210	-87.52169	38.6613	0.045987	0.0506117	0.18924
Wayne	1.7E+07	36.51	0	0	0		SUNCALL AMERICA INC	332613	-84.82351	39.8203	0.050298	0.0502977	0.113826
Lake	8075211	0.32436	23	1	0		PRAXAIR INC	32512	-87.46378	41.6346	0.043612	0.0493493	0.04516
Vanderb	9667311	0	25	3	4		Evansville Regional	48811	-87.53691	38.0292	0.026498	0.0479388	0.15565
Lake	1.4E+07	0.00979	23	1	0		OSBORN	488210	-87.47325	41.5943	0.043033	0.0476288	0.04531
Porter	4691611	0.6768	21	2	0		PVS Steel Services Inc	325998	-87.17185	41.6201	0.039992	0.0470346	0.041688
Wayne	1.8E+07	0.33722	5	10	0		Sugar Creek Packing Co	54184	-85.15071	39.8413	0.024581	0.0467883	0.05644
Greene	4560311	0.6512	20	7	0		Griffin Industries, LLC - Newberry	311613	-87.02536	38.9153	0.024651	0.046098	0.095571
Lake	9673211	0	13	2	1		Gary/Chicago	48811	-87.41279	41.6163	0.025053	0.045655	0.026144
Bartholo	9660711	0	19	3	2		Columbus Muni	48811	-85.89635	39.2619	0.024631	0.0451903	0.080909
Bartholo	4519711	0.19059	25	3	3		Columbus Engine Plant	333618	-85.90803	39.2106	0.032127	0.0442669	0.108947
Tippecar	1.4E+07	0.00979	25	1	0		LAFAYETTE	488210	-86.88269	40.4392	0.038615	0.0425019	0.067745

Lake	8164611	0.43774	20	1	0		US STEEL EAST CHICAGO	331221	-87.47238	41.6577	0.037302	0.0416657	0.038256
Lawrenc	1.6E+07	0.0688	2	32	0		Recycling Services of Indiana	331314	-86.52034	38.9215	0.038615	0.0414755	0.157113
Bartholo	8016611	0.10847	27	2	1		CUMMINS ENGINE CO MIDRANGE ENGINE PLA	333618	-85.95249	39.1342	0.033779	0.0411877	0.120342
Clark	1.3E+07	2.7108	20	2	2		Clark Floyd Landfill Gas Generating Sta	221112	-85.85026	38.4441	0.023427	0.0408681	0.13785
Jasper	4681611	0	22	0	0		RENSSELAER MUNICIPAL ELECTRIC UTILITY	221122	-87.15441	40.9398	0.036254	0.0400571	0.050544
Vigo	4147911	0	14	14	3		SYCAMORE RIDGE LANDFILL	562212	-87.3442	39.314	0.017675	0.0387938	0.052441
Vanderb	7974011	0.33344	11	17	6		Mead Johnson and Company LLC	311999	-87.60111	37.9769	0.017655	0.0369253	0.103804
Howard	4679111	0.59082	11	10	0		FCA US LLC Kokomo Transmission Plant	336211	-86.1101	40.4587	0.017466	0.0364613	0.030613
Lake	5013011	0	13	4	1		Fritz Enterprises, Inc. - contractor of	42512	-87.44973	41.6522	0.024192	0.0357802	0.024869
Randolp	7744011	0	10	6	2		RANDOLPH FARMS INC	562212	-85.11253	40.081	0.014703	0.035706	0.029992
Lake	1.7E+07	0	16	1	1		Fritz Enterprises Incorporated	331110	-87.33714	41.6078	0.029092	0.0355495	0.030472
Wells	5507411	0	19	1	0		AES Ohio Generation LLC	221112	-85.30789	40.6207	0.029379	0.0320959	0.047072
Lake	1.4E+07	0.00715	15	0	0		HOBART	488210	-87.24364	41.5297	0.028024	0.0310052	0.030343
Vigo	7249011	0.33237	13	10	0		CSN LLC	331221	-87.41996	39.3445	0.016363	0.0308642	0.047362
Lake	3985211	0.28891	12	1	0		Niagara LaSalle Corporation	331221	-87.50192	41.6263	0.021908	0.0279561	0.022761
Dubois	1.4E+07	0.00979	22	1	0		HUNTINGBURG	488210	-86.94122	38.2943	0.02468	0.0273129	0.149975
Spencer	3954411	0.5488	19	3	0		PVS Steel Services Inc	325998	-87.0243	37.9855	0.020925	0.0258147	0.158573
Jennings	8107811	0	20	0	0		Metaldyne LLC	332111	-85.64027	39.0256	0.024713	0.0250608	0.092788
Allen	8223411	0.3488	11	1	0		Dana Light Axle Products LLC	33635	-85.17107	41.0983	0.018754	0.0245042	0.024248
Clark	8192211	0	7	11	1		KOETTER WOODWORKING INC	321918	-85.93095	38.4143	0.012954	0.022835	0.078835
Lawrenc	1.1E+07	1.62617	14	1	0		LAWRENCE GENERATING STATION	221112	-86.45056	38.8008	0.016655	0.0206164	0.074058
Crawford	4747311	0	0	18	0		Mulzer Crushed Stone Inc (Cape Sandy Fa	212312	-86.35537	38.1322	0.019594	0.0195936	0.157741
Vigo	4147211	0.06065	12	2	1		UNITED STATES FEDERAL PENITENTIARY & UN	92214	-87.45136	39.4144	0.015072	0.019333	0.041946
Marion	1.7E+07	0	11	1	1		Citizens Water White River Riverside	22131	-86.17813	39.7887	0.014656	0.0188237	0.035866
Vanderb	4917811	0	15	1	0		SIGECO-Broadway Ave Generating Station	54184	-87.60449	37.9693	0.016345	0.0173323	0.096346

LADCO Emissions Sources for Indiana Q/d Analysis

Year	Source	EIS ID	Facility ID (ORISPL)	2016 LADCO Ranking	NPS Ranking	Facility Name	NAICS Code Description	Latitude	Longitude	Q	Distance to NPS Class I Area	Q/d	NPS Class I Area
2019	CAMD	8017211		2	1	INDIANA MICHIGAN POWER DBA AEP R	Fossil Fuel Electric Power Generation	37.926	-87.037	20,784	116	179.9	MACA
2017	CAMD		6113	3	2	Gibson	Fossil Fuel Electric Power Generation	38.372	-87.766	25,033	196	127.5	MACA
2017	CAMD		994	4	3	IPL - Petersburg Generating Station	Fossil Fuel Electric Power Generation	38.527	-87.253	16,340	177	92.4	MACA
2017	CAMD		983	7	4	Clifty Creek	Fossil Fuel Electric Power Generation	38.738	-85.419	10,622	172	61.9	MACA
2014	NEI	7376511		1	5	ARCELORMITTAL BURNS HARBOR LLC	Iron and Steel Mills and Ferroalloy Man	41.628	-87.144	24,490	494	49.6	MACA
2017	NG only	8225111		36	6	INDIANAPOLIS POWER & LIGHT CO - EAG	Fossil Fuel Electric Power Generation	39.485	-86.418	9,703	249	39.0	MACA
2014	NEI	8181811	6705	9	7	ALCOA - WARRICK OPERATIONS	Alumina Refining and Primary Aluminu	37.918	-87.326	4,685	136	34.5	MACA
2014	NEI	7364611		16	8	SABIC Innovative Plastics Mt Vernon LLC	Plastics Material and Resin Manufactur	37.907	-87.927	6,042	182	33.1	MACA
2017	CAMD	7248511	1001	5	9	Cayuga	Fossil Fuel Electric Power Generation	39.924	-87.427	8,975	319	28.1	MACA
2017	CAMD	8183011	1012	27	10	F B Culley Generating Station	Fossil Fuel Electric Power Generation	37.910	-87.327	3,198	135	23.7	MACA
2014	NEI	8192011		8	11	US STEEL GARY WORKS	All Other Petroleum and Coal Products	41.617	-87.313	11,151	496	22.5	MACA
2017	CAMD	8396211	6213	14	12	Merom	Fossil Fuel Electric Power Generation	39.069	-87.511	4,203	239	17.6	MACA
2014	NEI	8225311		25	13	LEHIGH CEMENT COMPANY LLC	Cement Manufacturing	38.739	-86.457	2,775	168	16.5	MACA
2014	NEI	3986511		6	14	ARCELORMITTAL USA LLC	All Other Petroleum and Coal Products	41.667	-87.442	7,772	504	15.4	MACA
2014	NEI	8198511		44	15	ESSROC CEMENT CORP	Cement Manufacturing	38.413	-85.751	1,561	129	12.1	MACA
2017	CAMD		1008	31	16	R Gallagher	Fossil Fuel Electric Power Generation	38.264	-85.838	1,251	112	11.2	MACA
2014	NEI	3986611		18	17	ARCELORMITTAL INDIANA HARBOR LLC	Iron and Steel Mills and Ferroalloy Man	41.651	-87.459	5,499	503	10.9	MACA
2014	NEI	3988011		10	18	ISPAT INLAND STEEL - COKENERGY LLC	Fossil Fuel Electric Power Generation	41.680	-87.417	5,158	505	10.2	MACA
2014	NEI	4553211			19	INDIANA UNIVERSITY	Colleges, Universities, and Professional	39.174	-86.521	1,996	216	9.2	MACA
2014	NEI	8223611		24	20	ELI LILLY & COMPANY CLINTON LABS	Crop Production	39.734	-87.393	2,583	299	8.6	MACA
2014	NEI	7247711		13	21	BP Products North America Inc Whiting R	Petroleum Refineries	41.663	-87.480	3,607	504	7.2	MACA
2014	NEI	7431611		30	22	LONE STAR INDUSTRIES INC	Cement Manufacturing	39.617	-86.869	1,672	271	6.2	MACA
2014	NEI	4885311		54	23	Citizens Thermal	Steam and Air-Conditioning Supply	39.763	-86.167	1,539	277	5.5	MACA
2014	NEI	8182811		33	24	Indiana Harbor Coke Company LP contral	All Other Petroleum and Coal Products	41.656	-87.451	2,759	503	5.5	MACA
2014	NEI	8202711		20	25	CARMEUSE LIME INC	Lime Manufacturing	41.641	-87.408	2,729	500	5.5	MACA
2014	NEI	7744711		22	26	Logansport Municipal Utilities	Fossil Fuel Electric Power Generation	40.759	-86.360	2,077	389	5.3	MACA
2017	CAMD		1004	43	27	Edwardsport Generating Station	Fossil Fuel Electric Power Generation	38.807	-87.247	1,023	202	5.1	MACA
2014	NEI	7957111			28	ANR PIPELINE COMPANY PORTLAND CO	Pipeline Transportation of Natural Gas	40.445	-85.097	1,811	362	5.0	MACA
2014	NEI	4544011			29	PANHANDLE EASTERN PIPE LINE CO - EDG	Pipeline Transportation of Natural Gas	41.037	-84.810	1,919	432	4.4	MACA
2014	NEI	5506011		29	30	Indiana Municipal Power Agency	Fossil Fuel Electric Power Generation	39.803	-84.895	1,314	298	4.4	MACA
2014	NEI	4912511		49	31	PURDUE UNIVERSITY	Colleges, Universities, and Professional	40.418	-86.910	1,502	358	4.2	MACA
2014	NEI	7744611		40	32	COVANTA INDIANAPOLIS INC	Solid Waste Combustors and Incinerato	39.734	-86.189	1,147	274	4.2	MACA
2014	NEI	8166011			33	Countrymark Refining and Logistics LLC	Petroleum Refineries	37.924	-87.912	720	182	4.0	MACA
2014	NEI	5453011		41	34	Ardagh Glass Inc	Glass Container Manufacturing	40.174	-84.973	1,276	335	3.8	MACA
2014	NEI	8074511		32	35	Tate & Lyle Ingredients Americas LLC (N	Wet Corn Milling	40.440	-86.861	1,296	360	3.6	MACA
2014	NEI	8238711			36	PANHANDLE EASTERN PIPELINE COMPAN	Pipeline Transportation of Natural Gas	39.922	-86.260	1,038	296	3.5	MACA
2014	NEI	8224411		45	37	ESSROC Cement Corp	Cement Manufacturing	40.735	-86.433	1,288	387	3.3	MACA
2014	NEI	7250811			38	Midwestern Gas Transmission Company	Pipeline Transportation of Natural Gas	38.442	-87.175	458	165	2.8	MACA
2014	NEI	8224711			39	Crawfordsville Energy LLC	Electric Power Distribution	40.048	-86.908	842	318	2.6	MACA
2014	NEI	8224911		48	40	Nucor Steel	Iron and Steel Mills and Ferroalloy Man	39.975	-86.830	787	309	2.5	MACA
2014	NEI	8184011		46	41	THERMAFIBER INCORPORATED	Mineral Wool Manufacturing	40.796	-85.859	970	392	2.5	MACA
2014	NEI	8537211		55	42	Waupaca Foundry Inc	Iron Foundries	37.987	-86.770	249	103	2.4	MACA
2014	NEI	7376911		37	43	SDI Steel Dynamics Incorporated	Iron and Steel Mills and Ferroalloy Man	41.370	-84.922	1,106	466	2.4	MACA
2014	NEI	4747911		63	44	Anchor Glass Container Corporation	Glass Container Manufacturing	39.124	-84.847	524	230	2.3	MACA
2014	NEI	4887211			45	ANR PIPELINE CO CELESTINE COMPRESSO	Pipeline Transportation of Natural Gas	38.379	-86.777	318	140	2.3	MACA

Note: NPS Ranking based on LADCO emissions information.

Boling, Jean

From: Wickman, Trent R -FS <trent.wickman@usda.gov>
Sent: Friday, October 02, 2020 12:13 PM
To: Boling, Jean
Cc: Don Shepherd (Don_Shepherd@nps.gov); Tim Allen; Liu.Alisa@epa.gov
Subject: four factor sources in IN

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Hi Jean

In an effort to promote early consultation and to facilitate the expeditious development of your Regional Haze SIP I am providing the results of my preliminary analysis of sources within the State of Indiana which identifies those for which I feel a 4-factor analysis is warranted. Each of these sources has a Q/d of ≥ 4 (as determined by LADCO's Q/d spreadsheet V5.6) and together represent over 80% of the cumulative impact to the closest Forest Service Class I area – either Hercules Glades or Dolly Sods Wildernesses.

NOX	NOx f(202	PM25_PRI	SO2	SO2 f(202	VOC	facility_name	naics
12,891		803	24,341			200 IN MI POWER DBA AEP - ROCKPORT	221112
13,190		2,133	14,963			228 Duke Energy Indiana LLC - Gibson Genera	221112
10,814	7,132	267	12,838	8505		130 Indianapolis Power and Light Petersburg	221112
8,599		3,425	12,831			490 ARCELORMITTAL - BURNS HARBOR LLC	331110
9,356		114	4,561			49 Indiana-Kentucky Electric Corp- Clifty Creek	221112
12,379		810	2,819			83 Duke Energy Indiana LLC - Cayuga Genera	221112
7,080		1,680	3,457			201 ALCOA Warrick Power Plant AGC Div of Al	221112
781		446	6,843			8 Duke Energy Indiana, LLC- Wabash River	221112
1,708		311	3,855			33 AB Brown - Sigeco, South Indiana Gas & Ele	221112
1,784		146	3,469			407 SABIC Innovative Plastics Mt Vernon LLC	325211
4,132		1,387	2,392			1029 ARCELORMITTAL USA LLC	331110
3,143		1,940	2,590			199 US STEEL - GARY WORKS	324199
4,397		661	1,441			80 NIPSCO R M SCHAFER GENERATING STATION	221112
1,945		46	3,144			86 HOOSIER ENERGY REC INC MEROM GENERA	221112
0		128	6,298			0 Cokenergy LLC - contractor of ArcelorMi	221112
1,119		173	1,311			21 SIGECO - FB Culley, Newburgh	221112
817		208	1,901			53 NIPSCO Michigan City	221112
125		93	1,727			1 Indiana MPA ??Whitewater Valley??	221112
893		646	1,387			88 ARCELORMITTAL - INDIANA HARBOR LLC	331110
1,767		131	519			29 LEHIGH CEMENT COMPANY LLC	32731

Please find the list of sources below (the data in this table for EGUs was built from the EPA EGrid database - based on 2016 emissions):

Power Plants:

pname	orisp	unitid	botfirt	fuelu	hrsop	noxan	NOx	so2an	so2	so2otldv	noxotldv
Alcoa Allowance Management Inc	6705	2	WALL	BIT	6055	1234.5	0.339	671	0.184	WL	LNBO
Clifty Creek	983	1	WALL	BIT	6003	1187.8	0.28	751.9	0.180	WL, WLS	OFA, SI

Clifty Creek	983	2	WALL	BIT	7010	1469.8	0.29	863.8	0.172	WL, WLS	OFA, SI
Clifty Creek	983	3	WALL	BIT	6749	1329.5	0.27	863.9	0.176	WL, WLS	OFA, SI
Clifty Creek	983	4	WALL	BIT	6188	1876	0.40	728.9	0.157	WL, WLS	OFA, SI
Clifty Creek	983	5	WALL	BIT	5965	1727.5	0.39	693.9	0.157	WL, WLS	OFA, SI
Clifty Creek	983	6	WALL	BIT	5755	1764.9	0.42	658.4	0.158	WL, WLS	OFA
F B Culley	1012	3	WALL	BIT	5769	744.3	0.12	1165	0.188	WLS	LNB, SI
Gibson	6113	1	WALL	BIT	6186	1886.5	0.141	1807.2	0.135	WLS	LNBO,
Gibson	6113	2	WALL	BIT	8066	2953.1	0.164	2339.9	0.130	WLS	LNBO,
Gibson	6113	3	WALL	BIT	7404	3018.7	0.172	2113.8	0.121	WLS	LNBO,
Gibson	6113	5	WALL	BIT	7581	3272.8	0.201	5494.9	0.337	WLS	LNBO,
IPL - Petersburg	994	3	TANGENTIAL	BIT	7685	3112.9	0.186	5094.2	0.304	WLS	LNC1, S
IPL - Petersburg	994	4	TANGENTIAL	BIT	7283	4019.3	0.28	3410.8	0.234	WLS	LNC1, I
Michigan City	997	12	CYCLONE	SUB	5256	815.4	0.09	1901	0.203	DL	OFA, SI
Michigan City	997	12	CYCLONE	SUB	5256	815.4	0.09	1901	0.203	DL	OFA, SI
Rockport	6166	MB2	WALL	SUB	7389	6845	0.21	12939.6	0.403	SB	LNB
Whitewater Valley	1040	1	WALL	BIT	1435	38.9	0.26	572.5	3.808	NA	LNB, N
Whitewater Valley	1040	2	TANGENTIAL	BIT	1395	85.6	0.29	1154.1	3.950	SD	LNC2, I

- Most of these sources have high SO2 emission rates. Many are well above the presumptive SO2 rates EPA set for BART in 2005 of 0.15 lb/MMBtu. One source has no SO2 controls at all.
- Clifty Creek, Gibson and IPL-Petersburg look like they may have very poorly performing SCR systems for NOx. The mean for all steam boilers with SCR in the EPA EGrid database is 0.11 lb/MMBtu and the median is 0.08 lb/MMBtu.

Other sources:

- Steel Mills and coke ovens – I know the state is looking into these sources
- SABIC Innovative Plastics Mt Vernon LLC – need more information

My analysis assumes the following permanent shutdowns by 2028. These facilities should have some sort of permit/SIP conditions to make these shutdowns enforceable.

Oris ID	BLRID	Shutdown Year	State	Facility Name
6705	4	2023	IN	Alcoa Allowance Mgt
6137	1 & 2	2023	IN	AB Brown
995	7 & 8	2018	IN	Bailly
995	10	2020	IN	Bailly
1011	1	2018	IN	Broadway Ave
1001	1 & 2	2028	IN	Cayuga
1002	1A/B & 2 A/B	2018	IN	Connersville
1012	2	2023	IN	FB Culley
6113	1 & 2	2038	IN	Gibson
6113	3 & 5	2034	IN	Gibson
6113	4	2026	IN	Gibson
991	3, 4, 5, 6	2017	IN	IPL Eagle Valley
994	1	2021	IN	IPL Petersburg
994	2	2023	IN	IPL Petersburg
6213	1SG1 & 2SG1	2023	IN	Merom

997	12	2028	IN	Michigan City
1008	2 & 4	2022	IN	R Gallagher
6085	14, 15, 17, 18	2023	IN	RM Schahfer
6166	MB1	2028	IN	Rockport
1010	6	2017	IN	Wabash River

NOTE: Highlighted shutdown years are beyond 2028, so 4-factor analyses are necessary for these.

I look forward to working with you to review the four factor analyses. Feel free to call me with any questions.

Trent

Trent Wickman, PE
Air Resource Specialist - MN, WI, MI
Eastern Regional Office

USDA - Forest Service

p: 218-626-4372

c: 218-341-8646

f: 218-626-4398

trent.wickman@usda.gov

8901 Grand Ave Place

Duluth, MN 55808

www.fs.fed.us



Caring for the land and serving people

USDA is an equal opportunity provider and employer.

This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

