

## Appendix 9B

### Description of BART Eligible and BART-Subject Facilities

The MDEQ determined that the electric generating units (EGUs) subject to BART are included in the Clean Air Interstate Rule (CAIR) program and therefore do not have to conduct BART control analyses at this time, unless the CAIR vacature mandate is signed. The remainder of this appendix deals with the Non-EGU sources in Michigan that may be subject to BART requirements, using the federal BART guidelines.

To identify BART-subject sources, MDEQ identified 34 non-EGU facilities with a total of 84 emission units within the state that were potentially subject to BART (e.g. BART-Eligible) based on dates of installation and commencement of operations. (See Table AI-1)

Next, using emission inventory data from the years 2002 and 2004, MDEQ evaluated the quantity of emissions from each source in relationship to the distance from known Class 1 areas, i.e. Q/d values. It was assumed that facilities with higher Q/d values have > 0.5 dV impact on more days over a relatively large area, and that a Q/d value of 10 TPY/km is a reasonable threshold. (i.e., facilities with Q/d values on the order of 10 [or less] TPY/km generally have few days over a relatively small area with > 0.5 dV impact). This resulted in fifteen BART eligible sources to be modeled in the next step of the evaluation. (See Table AI-2)

The next step involved individual the source attribution approach (dispersion modeling) using the 0.5 deciview threshold value, and using the CALPUFF model on the facilities that met the Q over D criteria as likely impacting a Class I area.

Finally, MDEQ conducted impact modeling; using the CAMx model for CAMx source apportionment modeling. The CAMx source apportionment and CALPUFF plots show similar spatial patterns, although, as expected, the CAMx source apportionment plots do not show visibility impacts as far downwind as the CALPUFF plots. This final step resulted in 6 non-EGU BART Subject Sources (See Table AI-3).

**Table AI-1: BART-Eligible Sources in Michigan**

Source Name	Unit Desp.	SIC	Category
Cargill Salt	Spreader Stroker Boiler	2899	22
	Pulverized Coal Boiler	2899	22
Chrysler - Trenton Engine	#5	3714	22
Delphi Saginaw Steering	Boiler #5	3714	22
	Boiler #6	3714	22
	Boiler #4	3714	22
Detroit Diesel Corp	B & W	3519	22
Dow Corning Corp	Boiler # 8, 72 mmbtu/hr	2899	22
	Boiler # 6, 84 mmbtu/hr	2899	22
	Boiler #9, 72	2899	22
Eastern Michigan University	Boiler #1	8221	22
	Boiler #2	8221	22
Empire Iron Mining Ptrsrhp	Unit 1 Boilers (1-3)	1011	24
	Unit 2 Boilers (4-5)	1011	24
	Pit Boilers (6-7)	1011	24
	primary ore processing	1011	24
	Furnace Unit #1	1011	24
	Unit #1 scrubbers	1011	24
	Furnace Unit #2	1011	24
	Unit #2 scrubbers	1011	24
	furnace unit #3	1011	24
	Unit #3 scrubbers	1011	24
Escanaba Paper Co	Boiler 8	2611	22
	Boiler 9	2611	22
Ford - Livonia Transmission	Boiler #1	3714	22
	Boiler #3	3714	22
	Boiler #4	3714	22
Ford - Rawsonville	Boiler #1	3714	22
	Boiler #2	3714	22
	Boiler #5	3714	22
Ford - Saline	Boiler 166-77	3714	22
	Boiler 403-74	3714	22
Ford - Utica Trim	GRD Stor Boiler	3714	22
Gm - Pontiac Site Ope	Boiler #6	3714	22
	Boiler #7	3714	22
	Boiler #8	3714	22
	Boiler #9	3714	22
	Boiler #6	3714	22
Gm - Powertrain Div	Boiler #4	3714	22
	Boiler #5	3714	22
	Pouring/casting	33xx	20
Gm - Technical Ctr R	202 Boiler	3711	22
	Boiler #1	3711	22
Gm - Saginaw Metal	Boiler # 3-2	3321	22
	Boiler # 4-2	3321	22
Kalsec Inc Mfg Plant	Cleaver-Brooks	2087	22

Source Name	Unit Desp.	SIC	Category
Lafarge Midwest Inc.	Kilns 19	3241	4
	Kilns 20	3241	4
	Kilns 21	3241	4
	Kilns 22	3241	4
	Kilns 20	3241	4
Louisiana Pacific Corp	Boiler #3	2493	22
Marathon Ashland Petro	Crude Oil heater	2911	11
Marblehead Lime Co	Kiln	3274	12
Merillat Industries Inc	Wood Boiler	2434	22
Michigan State University	Boiler #2	8221	22
	Boiler #3	8221	22
	Boiler #1	8221	22
Michigan Sugar Co Caro	Pkg. Boiler#3	2063	22
Michigan Sugar Co Carrollton	Riley Boiler	2063	22
Michigan Sugar Co Sebewaing	Pkg. boiler	2063	22
National Steel Corp Gld	Coke ovens & operations	3312	6
	O2 furnaces & operations	3312	6
	Boiler #9, 10-100 MMBTU/HR	3312	6
	Boiler #8, 10-100 MMBTU/HR	3312	6
	Reheat furnace & heater	3312	6
Rouge Steel Company	Reheat furnace & heater	3312	6
	Reheat furnace & heater	3312	6
	Blast Furnaces & operations	3312	6
Sappi	Calciner	2621	3
	Boiler #3	2621	3, 22
	Rec. Boiler	2621	3, 22
St. Mary's Cement	Lime kiln with pre-calciner	3241	3
Stone Container Corp	Boiler	2611	22
The Regents Of The U Of M	Boiler #3	8221	22
	Boiler #4	8221	22
Tilden Mining Co Lc	Boiler #1(Pelletizing line #1)	1011	24
	primary crusher	1011	24
	cooler	1011	24
	dryer	1011	24
	Kiln	1011	24
Western Michigan University	Boiler #6	8221	22
William Beaumont Hospital	Boiler #1	8062	22
	Boiler #4	8062	22
	Boiler #5	8062	22

**Table AI-2: Facilities with a Q/d >10 TPY/km**

Facility	County	Sox*	NOx*	Q/d
Cargill Salt	St. Clair	78	179	0.5
Delphi Saginaw Steering	Saginaw	597	128	2.0
Gm Powertrain Group	Saginaw	6	3	0.0
LAFARGE(All Units)	Alpena	20623	10953	127.3
Marathon Ashland	Wayne	18	176	0.4
		353	182	1.1
Marblehead Lime	Wayne	124	366	1.0
MSU	Ingham	3133	1600	11.4
National Steel	Wayne	914	848	3.6
Rouge Steel	Wayne	1	455	0.9
Sappi	Muskegon	960	782	5.1
		3	135	0.4
		337	117	1.3
Smurfit/Stone Container	Ontonagon	1949	1128	23.5
U Of M	Washtenaw	0	67	0
Escanaba Paper Company	Escanaba	193	1,726.6	22
Cleveland Cliffs Corporation				
Tilden Mining Co	Marquette	590	5,314	22
Empire Iron Mining	Marquette	369	2,708	22

\* In Tons

**Table AI-3: Final List of BART Subject Sources in Michigan**

BART Subject Facility Name	City	Category
LaFarge Midwest Inc.	Alpena	4
Saint Mary's Cement	Charlevoix	3
Smurfit/Stone Container Corp	Ontonagon	22
Escanaba Paper Company	Escanaba	22
Cleveland Cliffs Corporation		
Tilden Mining Co	Marquette	24
Empire Iron Mining	Marquette	24

### **Description of BART Subject Facilities**

#### **PORTLAND CEMENT PLANTS**

LaFarge Cement  
Alpena, Michigan

LaFarge, has five BART subject process units including five Portland cement manufacturing horizontal long-dry process kilns, Kiln numbers 19 to 23, with existing low NOx burners.

St. Mary's Cement  
Charlevoix, Michigan

St. Mary's has one BART subject process unit including Portland cement manufacturing horizontal kiln and pre-calciner system with existing low NOx burners.

#### **TACONITE PLANTS**

Empire Mining  
Palmer, Michigan

Cleveland-Cliffs, Empire Mining, has seven BART subject process units including three indurating furnaces (Lines 1- 3 Kilns), Primary Crusher, and three boilers (Process Boilers 1, 2, and 3).

Tilden Mining:  
Palmer, Michigan

Cleveland-Cliffs, Tilden Mining, has six BART subject process units including an indurating furnace (Line 1 Kiln), Primary Crusher 1, Line 1 Pellet Cooler, Line 1 Dryer, and two process boilers (Process Boilers 1 and 2).

### PAPER PRODUCTS PLANTS

New Page Corporation – Escanaba Paper Company  
Escanaba, Michigan

Escanaba Paper, has five BART subject process units including two process boilers (Boilers 8 and 9), one furnace (No. 10 Recovery Furnace), one Smelt Dissolving Tank, and one Lime Kiln.

Smurfit-Stone  
Containerboard Mill Division  
Ontonagon, Michigan

Smurfit-Stone, has one BART subject process unit including one process boiler (Riley Boiler # 1).