St. Marys Cement Inc. (Canada)
St Marys Facility

Annual Compliance Report 2023
(ECA No. 0706-CLVLC2)

Site Location:

585 Water St South
St Marys Ontario
N4X 1B6

Prepared by: Kara Pelissero
Environmental Manager – St Marys Plant
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June 2024

Introduction

This annual compliance report has been prepared by St. Marys Cement Inc. (Canada) (SMC) in accordance with Condition 18.1 of their Environmental Compliance Approval (ECA No. 0706-CLVLC2, dated August 17, 2023) for their cement plant located at 585 Water St in St Marys Ontario (St Marys Facility) for the 2023 calendar year.

Excerpt from the ECA

Condition 18: Compliance Report

"The Company shall prepare and submit by June 30 of each year to the District Manager, an Annual Report summarizing the operation of the Facility, covering the previous calendar year. The Annual Report shall include, as a minimum, the following information:

a) a statement of whether the Facility was in compliance with this Approval, including compliance with the Performance Limits;
b) the Emission Summary Table and Acoustic Assessment Summary Table for the Facility as of December 31 from the previous calendar year;
c) clinker and cement production in tonnes per year;
d) maximum daily feed rate and average daily feed rate of Alternative Low-Carbon Fuels and Conventional Fuels in the Cement Kiln for each month of the preceding calendar year, and the weight percentage of each category of Alternative Low-Carbon Fuels approved under Condition 7 of this Approval, of the total monthly Alternative Low-Carbon Fuel used.
e) maximum and average percent thermal replacement of Conventional Fuels by combined Alternative Low-Carbon Fuels for each month;
f) a summary of data from CEM System, CPM System, Source Testing and Carbon Dioxide Emission Intensity testing described under conditions 10.3(a) and (b), 11 and 12 of this Approval, and a description of the status of compliance with the Performance Limits, Alternative Low-Carbon Fuel definition under this Approval and Alternative Low-Carbon Fuels operational requirements described in Schedule F of this Approval;
g) a summary of dates, duration and reasons for any operational events including but not limited to events described in condition 8.7 of this Approval that may have negatively impacted the quality of the environment and corrective measures taken to address these impacts;
h) details of environmental complaints including a summary of complaints received, causes of complaints and action taken to avoid the recurrence of similar incidents, as described in condition 14 of this Approval."

This report has been divided into eight separate sections (Sections A to H) to address Conditions 18.1 a) through h), respectively, as described above.

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A. Section A – Statement of Compliance

This Section addresses Condition 18.1a) of the ECA described as below:

"Statement of whether the Facility was in compliance with this Approval, including compliance with the Performance Limits."

st marys cement

St Marys Cement
585 Water Street South, PO Box 1000
St Marys, Ontario N4X 1B6
Tel 519 284 1020, Fax 519 284 4104
stmaryscement.com

June 30, 2024

Ministry of the Environment, Conversation and Parks
Director, Client Services and Permissions Branch
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

Re: Statement of Facility Operations within Performance Limits
Environmental Compliance Approval with Limited Operational Flexibility (ECA Number 0706-CLVLC2)

This is to confirm that St. Marys Cement Inc. (Canada)'s (St. Mary's) St. Marys Cement Plant, located at 585 Water Street South, in St Marys, Ontario, during the 2023 Calendar Year, operated in compliance with Section 9 of the Environmental Protection Act, and with the conditions of our Environmental Compliance Approval (ECA) with Limited Operational Flexibility (LOF), including the Performance Limits set forth in Condition 4 of the ECA.

Sincerely,

Kara Pelissero
Environmental Manager – St. Marys Cement Plant

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B. Section B - ESDM and AAR Summary Table

This Section addresses Condition 18.1b) of the ECA described as below:

"The Emission Summary Table and Acoustic Assessment Summary Table for the Facility as of December 31 from the previous calendar year".

Acoustic Assessment Summary Table- HGC Engineering

Table A3.1: Acoustic Assessment Summary Table, Non-Emergency Equipment - Existing

Point of Reception	Point of Reception Description	Sound Level at Point of Reception, L_{EQ} [dBA]		Verified by Acoustic Audit	Performance Limit, L_{EQ} [dBA]		Compliance with Performance Limit	
		Day	Night		Day	Night	Day	Night
R1	Two storey home approx. 825 m NE of cement plant	55	53	Yes	50	45	No	No
R2	Two storey home approx. 590 m NW of cement plant	57	54	Yes	50	45	No	No
R3	Two storey home approx. 540 m NW of cement plant	59	56	Yes	50	45	No	No
R4	Two storey home approx. 670 m WW of cement plant	55	54	Yes	50	45	No	No
VL1	Vacant Lot	58	55	Yes	50	45	No	No

Table A3.2: Acoustic Assessment Summary Table, Emergency Equipment

Point of Reception	Point of Reception Description	Sound Level at Point of Reception, L_{EQ} [dBA]	Verified by Acoustic Audit	Performance Limit, L_{EQ} [dBA]	Compliance with Performance Limit
R1	Two storey home approx. 825 m NE of cement plant	19	No	55	Yes
R2	Two storey home approx. 590 m NW of cement plant	21	No	55	Yes
R3	Two storey home approx. 540 m NW of cement plant	15	No	55	Yes
R4	Two storey home approx. 670 m WW of cement plant	34	No	55	Yes
VL1	Vacant Lot	46	No	55	Yes

Emission Summary Table – Ramboll Engineering

Table 1. Emission Summary Table

Contaminant	CAS Number	Total Facility Emission Rate [g/s]	Air Dispersion Model Used	POI Conc. [µg/m³][1]	MECP Limit						Percentage of MECP POI Limit [%]
				Maximum	Avg. Period Emission Rate	Avg. Period POI Concentration	Value [µg/m³]	Limiting Effect	ACB Source[2]	Category	
Criteria Air Contaminants											
PM	PM	1.29E+01	AERMOD v22112	8.74E+01	24 hr	24 hr	120	Visibility	S	B1	72.8%
RCS	14808-60-7	5.40E-01	AERMOD v22112	4.50E+00	24 hr	24 hr	5	Health	G	B1	89.9%
Nitrogen Oxides	10102-44-0	4.40E+01	AERMOD v22112	2.63E+02	1 hr	1 hr	400	Health	S	B1	65.7%
Nitrogen Oxides	10102-44-0	4.37E+01	AERMOD v22112	2.73E+01	24 hr	24 hr	200	Health	S	B1	13.7%
Sulphur Dioxide	7446-09-5	7.66E+00	AERMOD v22112	5.32E+01	1 hr	1 hr	100	Health & Vegetation	S	B1	53.2%
Sulphur Dioxide	7446-09-5	7.66E+00	AERMOD v22112	8.49E-01	Annual	Annual	10	Health & Vegetation	S	B1	8.5%
Carbon Monoxide	630-08-0	1.01E+02	AERMOD v22112	2.32E+02	1 hr	0.5 hr	6000	Health	S	B1	3.9%
Hydrogen Chloride	7647-01-0	1.09E+00	AERMOD v22112	2.65E-01	24 hr	24 hr	20	Health	S	B1	1.3%
Ammonia	7664-41-7	4.56E-01	AERMOD v22112	1.11E-01	24 hr	24 hr	100	Health	S	B1	0.1%
Metals											
Antimony	7440-36-0	1.80E-05	AERMOD v22112	1.00E-04	24 hr	24 hr	25	Health	S	B1	<0.1%
Arsenic	7440-38-2	1.38E-04	AERMOD v22112	6.80E-04	24 hr	24 hr	0.3	Health	G	B1	0.2%
Barium	7440-39-3	2.35E-03	AERMOD v22112	8.35E-03	24 hr	24 hr	10	Health	G	B1	<0.1%
Beryllium	7440-41-7	1.34E-05	AERMOD v22112	3.00E-05	24 hr	24 hr	0.01	Health	S	B1	0.3%
Cadmium	7440-43-9	5.34E-05	AERMOD v22112	6.00E-05	24 hr	24 hr	0.025	Health	S	B1	0.2%
Chromium	7440-47-3	2.97E-03	AERMOD v22112	1.30E-02	24 hr	24 hr	0.5	Health	S	B1	2.6%
Cobalt	7440-48-4	1.10E-04	AERMOD v22112	3.70E-04	24 hr	24 hr	0.1	Health	G	B1	0.4%
Iron	7439-89-6	1.96E-01	AERMOD v22112	9.90E-01	24 hr	24 hr	4	Health & Soiling	S	B1	24.8%
Lead	7439-92-1	2.34E-03	AERMOD v22112	1.75E-02	24 hr	24 hr	0.5	Health	S	B1	3.5%
Lead	7439-92-1	2.34E-03	AERMOD v22112	6.75E-03	24 hr	30 day	0.2	Health	S	B1	3.4%
Manganese	7439-96-5	1.23E-02	AERMOD v22112	3.05E-02	24 hr	24 hr	0.4	Health	S	B1	7.6%
Mercury	7439-97-6	1.30E-03	AERMOD v22112	3.20E-04	24 hr	24 hr	2	Health	S	B1	<0.1%
Nickel	7440-02-0	1.11E-03	AERMOD v22112	6.70E-04	Annual	Annual	0.04	Health	S	B1	1.7%
Nickel	7440-02-0	1.11E-03	AERMOD v22112	6.70E-04	24 hr	Annual	0.4	Health	MECP bulletin	AAV	0.2%
Nickel	7440-02-0	1.11E-03	AERMOD v22112	5.75E-03	24 hr	24 hr	2	Health	MECP bulletin	URT/DAV	0.3%
Selenium	7782-49-2	3.82E-04	AERMOD v22112	1.00E-04	24 hr	24 hr	10	Health	G	B1	<0.1%
Silver	7440-22-4	2.74E-05	AERMOD v22112	4.00E-05	24 hr	24 hr	1	Health	S	B1	<0.1%
Tin	7440-31-5	1.29E-04	AERMOD v22112	1.44E-03	24 hr	24 hr	10	Health	S	B1	<0.1%
Vanadium	7440-62-2	1.76E-03	AERMOD v22112	8.64E-03	24 hr	24 hr	2	Health	S	B1	0.4%
Volatile Organic Matter											
Benzene	71-43-2	5.50E-01	AERMOD v22112	1.28E-02	Annual	Annual	0.45	Health	S	B1	2.8%
Benzene	71-43-2	5.50E-01	AERMOD v22112	1.28E-02	24 hr	Annual	4.5	Health	MECP bulletin	AAV	0.3%
Benzene	71-43-2	5.50E-01	AERMOD v22112	1.34E-01	24 hr	24 hr	100	Health	MECP bulletin	URT/DAV	0.1%
Carbon tetrachloride	56-23-5	1.20E-02	AERMOD v22112	2.92E-03	24 hr	24 hr	2.4	Health	S	B1	0.1%
Chloroform	67-66-3	8.10E-03	AERMOD v22112	1.97E-03	24 hr	24 hr	1	Health	S	B1	0.2%
Dibromochloromethane	124-48-1	7.10E-03	AERMOD v22112	1.73E-03	24 hr	24 hr	0.2	Health	SL-JSL	B2	0.9%
1,2-Dichloroethane	107-06-2	7.04E-03	AERMOD v22112	1.71E-03	24 hr	24 hr	2	Health	S	B1	<0.1%
Ethylene dibromide	106-93-4	7.40E-03	AERMOD v22112	1.80E-03	24 hr	24 hr	3	Health	G	B1	<0.1%
1,1,1,2-Tetrachloroethane	630-20-6	7.40E-03	AERMOD v22112	1.80E-03	24 hr	24 hr	0.5	Health	SL-JSL	B2	0.4%
1,1,2,2-Tetrachloroethane	79-34-5	1.10E-02	AERMOD v22112	2.68E-03	24 hr	24 hr	0.1	Health	SL-JSL	B2	2.7%
Vinyl chloride	75-01-4	1.40E-02	AERMOD v22112	3.40E-03	24 hr	24 hr	1	Health	S	B1	0.3%
Polycyclic Aromatic Hydrocarbons (PAHs)											
Acenaphthylene	208-96-8	1.80E-03	AERMOD v22112	4.38E-04	24 hr	24 hr	0.1	-	-	De Minimus Table B-2A	0.4%
Acenaphthene	83-32-9	5.20E-04	AERMOD v22112	1.26E-04	24 hr	24 hr	0.1	-	-	De Minimus Table B-2A	0.1%
Anthracene	120-12-7	9.40E-04	AERMOD v22112	2.29E-04	24 hr	24 hr	0.1	-	-	De Minimus Table B-2A	0.2%
Benzo(a)pyrene	50-32-8	3.50E-06	AERMOD v22112	8.16E-08	Annual	Annual	0.00001	Health	S	B1	0.8%
Benzo(a)pyrene	50-32-8	3.50E-06	AERMOD v22112	8.16E-08	24 hr	Annual	0.0001	Health	MECP bulletin	AAV	<0.1%
Benzo(a)pyrene	50-32-8	3.50E-06	AERMOD v22112	8.51E-07	24 hr	24 hr	0.005	Health	MECP bulletin	URT/DAV	<0.1%
Fluorene	86-73-7	9.20E-04	AERMOD v22112	2.24E-04	24 hr	24 hr	0.1	-	-	De Minimus Table B-2A	0.2%
2-Methylnaphthalene	91-57-6	1.50E-02	AERMOD v22112	3.65E-03	24 hr	24 hr	0.1	-	-	De Minimus Table B-2A	3.6%
1-Methylphenanthrene	832-69-9	1.80E-04	AERMOD v22112	4.38E-05	24 hr	24 hr	0.1	-	-	De Minimus Table B-2A	<0.1%
Naphthalene	91-20-3	4.30E-02	AERMOD v22112	1.05E-02	24 hr	24 hr	22.5	Health	G	B1	<0.1%
Naphthalene	91-20-3	4.30E-02	AERMOD v22112	1.13E-01	10 min	10 min	50	Odour	G	B1	0.2%
Phenanthrene	85-01-8	1.30E-03	AERMOD v22112	3.16E-04	24 hr	24 hr	0.1	-	-	De Minimus Table B-2A	0.3%

Notes:

(1) Maximum POI concentrations are reported with meteorological anomalies removed as per MECP Guideline A-10, "Air Dispersion Modelling Guideline for Ontario", Version 3.0, dated January 2016.

(2) ACB Source: "S" - Standard (for Section 20), "G" - Guideline (for Section 20), "SL-JSL" - Screening Level (SL) set by the MECP based on a review of toxicity information and/or other jurisdictional levels (JSL), "SL-PA" - Screening Level - Previously Accepted, "SL-MD" - Screening Level - Ministry Derived.

(3) Category: B1 (Benchmark 1) - Exceedence of a B1 concentration triggers specific actions under O. Reg. 419/05 and is an offence under O. Reg. 1/17.
B2 (Benchmark 2) - Exceedence of a B2 concentration, or if no B2 value exists, triggers a toxicological assessment to determine the likelihood of adverse effect.

DAV and AAV: "DAV" - Daily Assessment Value to be compared against maximum 24-hr POI concentration, "AAV" - Annual Assessment Value to be compared against maximum annual POI concentration but assuming peak 24-hr average emission rate occurs every day in the year, as per MECP technical bulletin: "Using assessment values for contaminants with annual air standards".

URT = Upper Risk Threshold. URTs listed in Schedule 6 of O. Reg. 419/05 are not standards. URTs have separate and distinct regulatory and notification requirements. These requirements are set out in section 30 of O. Reg. 419/05.

(4) MECP's procedure for the removal of meterological anomalies was applied for PM, RCS, NO_x, and SO_2 (1hr) (ADMGO, February 2017).

C. Section C – Clinker and Cement Production

This Section addresses Condition 18.1c) of the ECA described as below:

"Clinker and cement production in tonnes per year".

	2023
Clinker	645,079 tons
Cement	764,163 tons

D. Section D – Fuel Rates

This Section addresses Condition 18.1d) of the ECA described as below:

"Maximum daily feed rate and average daily feed rate of Alternative Low-Carbon Fuels and Conventional Fuels in the Cement Kiln for each month of the preceding calendar year, and the weight percentage of each category of Alternative Low-Carbon Fuels approved under Condition 7 of this Approval, of the total monthly Alternative Low-Carbon Fuel used."

As per the ECA ""Alternative Low-Carbon Fuels" means a fuel as defined in O. Reg. 79/15 and includes the materials approved under Condition 7 of this Approval;

Condition 7. Approved Alternative Low Carbon Fuels

1. The following Alternative Low-Carbon Fuels are approved for use as a fuel in the Cement Kiln at the Facility:

a. *Material that is biomass fuel derived from harvested plant and forest sources, end of life agricultural sources, Woodwaste or Agricultural Waste, and includes but is not limited to sawdust, wood chips, wood, miscanthus grass, millet, sorghum, hemp, switch grass, and maize;*

b. *Material that is comprised of non-recyclable plastics, including but not limited to manufacturing rejects, material resource recovery facility rejects, plastics bags and packaging;*

c. *Material that is comprised of construction, renovation & demolition waste, including but not limited to scrap wood, treated lumber, carpets, textiles, sawdust, floor laminates and asphalt shingles;*

d. *Material that is comprised of non-recyclable paper fiber/wood/plastic composites, including but not limited to single-serve coffee pods, printed papers, paper towels, rejects and trimmings from paper recycling facilities such as ragger tails (residue including plastic trimmings, staples, paper fibre and metal wire), end rolls and cores; and*

e. *Material that is comprised of rubber (non-tire derived), including but not limited to shredded conveyor belt rubber.*

As per the ECA "Conventional Fuels" means solid fuels including petroleum coke and coal for regular firing and also includes diesel, propane and natural gas for preheating during start-up;

It is noted in 2023 there were no Alternative Low Carbon Fuels used at the facility.

Fuel Type	Fuel	Maximum Daily Feed Rate	Average Daily Feed Rate	Weight %
Alternative	a. Biomass derived	X	X	X
Alternative	b. Non-recycleable plastics	X	X	X
Alternative	c. construction, renovation, demolition	X	X	X
Alternative	d. non recycleable paper fiber / wood / plastic composite	X	X	X
Alternative	e. rubber	X	X	X
Conventional	Petroleum Coke	207.88 tpd	172.39 tpd	100
Conventional	Coal	X	X	X
Conventional	Diesel – Preheat	X	X	X
Conventional	Propane – Preheat	X	X	X
Conventional	Natural Gas - Preheat	30167 NCuMTRS	543.9 NCuMTRS	X

E. Section E – Thermal Replacement by ALCF

This Section addresses Condition 18.1e) of the ECA described as below:

"Maximum and average percent thermal replacement of Conventional Fuels by combined Alternative Low-Carbon Fuels for each month."

In 2023 there were no Alternative Low Carbon Fuels used at the facility.

F. Section F – CEM, CPM, Source Testing, and Carbon Dioxide Testing

This Section addresses Condition 18.1f) of the ECA described as below:

"A summary of data from CEM System, CPM System, Source Testing and Carbon Dioxide Emission Intensity testing described under conditions 10.3(a) and (b), 11 and 12 of this Approval, and a description of the status of compliance with the Performance Limits, Alternative Low-Carbon Fuel definition under this Approval and Alternative Low-Carbon Fuels operational requirements described in Schedule E of this Approval."

ECA Condition 10.3. Continuous Monitoring Documentation

- *a. The Company shall prepare and retain on site monthly reports of the data monitored during the preceding month by the CEM System and CPM System, summarizing the following as a minimum:*
- *b. the daily minimum, maximum and average readings for the parameters*
  - *i. specified in condition 10 of this Approval on a monthly basis;*
  - *ii. The percent availability of the CEM System and CPM System for the parameters specified in condition 10 of this Approval on a monthly basis; and*
  - *iii. daily operational status (on/off) of the raw mill and the fuel mill on a monthly basis.*

Continuous Emissions Monitoring Data Summary

Condition 10.1. Continuous Emissions Monitoring in the Kiln Stack

a. The Company shall ensure that the CEM System continuously monitors the following parameters in the exhaust gas stream from the Cement Kiln stack:

i. Nitrogen Oxides
ii. Sulphur Dioxide, and
iii. Opacity

Condition 10.1.a.i NOx

2023	NOx , Daily			
	Avg.	Min.	Max.	Availability
	ppm			Monthly %
January	311	0	1163	100.0
February	234	143	497	99.1
March	186	92	455	98.3
April	148	61	272	99.4
May	131	71	252	99.6
June	272	147	552	97.7
July	200	150	279	100.0
August	158	10	219	96.0
September	180	117	279	94.4
October	158	0	263	95.4
November	192	123	254	97.5
December	172	94	228	98.35

Condition 10.1.a.ii SO2

2023	SO2, Daily			
	Avg.	Min.	Max.	Availability
	ppm			Monthly %
January	42.9	0	101.6	99.8
February	162.4	27.7	330.5	99.1
March	224.3	38.1	500	98.3
April	364.2	21	659.5	99.1
May	370.2	193.2	566.0	99.6
June	103.9	279.7	29.7	97.7
July	121.2	222.3	45.6	100.0
August	136.5	47.5	228.5	95.7
September	81.2	32.6	149.4	99.9

October	84.1	23.5	152.4	99.9
November	61	18	126.9	95.6
December	93.6	34.5	177.3	98.2

Condition 10.1.a.iii Opacity

2023	Opacity, Daily			
	Avg.	Min.	Max.	Availability
	%			Monthly %
January	7.95	3.91	17.38	100
February	11.53	1.86	16.07	99.7
March	2.49	1.69	3.79	99.9
April	3.79	1.92	5.28	99.6
May	7.17	4.80	8.54	95.7
June	1.24	0.06	3.29	100
July	2.54	5.77	1.15	100
August	2.98	1.80	5.36	85.8
September	2.41	1.15	5.35	100
October	2.33	0.90	8.53	100
November	3.78	1.23	10.68	99.6
December	3.39	1.02	10.34	99.7

Continuous Process Monitoring Data Summary

This Section addresses Condition 10.2 of the ECA described as below:

10.2 Continuous Monitoring of Process Conditions

a. The Company shall install, operate, and maintain a CPM System to continuously monitor:

- *i. residual oxygen at locations specified in Schedule F;*
- *ii. carbon monoxide in the preheater tower;*
- *iii. temperature of gases in the preheater tower, as specified in Schedule F and correspond with a retention time of not less than 10 seconds;*
- *iv. pressure at locations specified in Schedule F; and,*
- *v. Total Hydrocarbon (as methane) in the gases leaving the Cement Kiln stack.*

Condition 10.2.ii Stage 1 Oxygen

2023	Stage 1 - O2			
	Avg.	Min.	Max.	Availability

	%		%	
January	3.9	2.4	10.2	100.00
February	3.4	1.9	10.1	100.00
March	3.5	1.8	10.3	100.00
April	3.8	2.3	14.1	100.00
May	3.4	2.3	10.3	100.00
June	4.5	2.9	11.2	100.00
July	4.5	3.0	6.3	100.00
August	4.8	3.4	10.9	81.18
September	5.5	4.3	10.4	58.06
October	5.2	4.0	10.4	100.00
November	5.5	3.6	9.8	100.00
December	4.9	3.3	9.5	100.00

Schedule F of the ECA requires Oxygen to be maintained over 1% in Stage 1 during ALCF introduction.

Condition 10.2.ii Carbon Monoxide in the Preheat Tower

2023	Carbon Monoxide in the Preheat Tower			
	Avg.	Min.	Max.	Availability
	%			%
January	1587.8	377.1	2811.6	100.00
February	1746.2	179.8	3295.7	100.00
March	1927.9	382.3	3300.1	100.00
April	2036.6	75.3	4262.8	100.00
May	2255.1	422.7	4114.0	100.00
June	2840.0	676.3	4735.4	100.00
July	3215.3	905.1	5109.3	100.00
August	3571.0	906.3	7939.4	81.18
September	3037.7	663.8	4212.5	58.06
October	3200.8	1014.5	6917.9	100.00
November	2896.2	1181.2	9170.0	100.00
December	2792.4	933.9	4085.7	100.00

Condition 10.2.iii Temperature of gases in the preheat tower

	Temperature – Riser				Temperature - Burner			
	Avg.	Min.	Max.	Availability	Avg.	Min.	Max.	Availability

	C			%	C			%
January	901.8	616.4	1051.0	100.00	1414.0	905.6	1600.6	100.00
February	946.4	708.4	1082.1	100.00	1378.9	856.8	1549.7	100.00
March	891.2	632.5	1056.2	100.00	1400.2	938.4	1609.9	100.00
April	934.9	569.4	1099.0	100.00	1412.3	1007.1	1621.9	100.00
May	1007.1	623.9	1139.9	100.00	1399.5	991.5	1539.1	100.00
June	969.2	814.0	1174.5	100.00	1361.7	840.3	1586.6	100.00
July	1002.1	827.6	1150.8	100.00	1362.4	968.6	1528.9	100.00
August	908.6	595.2	1141.6	81.18	1363.7	824.4	1503.5	81.18
September	841.5	690.9	958.9	58.06	1343.1	821.2	1564.1	58.06
October	913.4	656.4	1135.6	100.00	1376.3	867.5	1538.7	100.00
November	936.2	802.9	1120.9	100.00	1423.0	923.2	1591.9	100.00
December	886.6	673.9	1152.8	100.00	1421.2	1010.6	1555.1	100.00

Schedule F of the ECA requires Temperature in the riser to be maintained over 750C in Stage 1 during ALCF introduction. ALCF were not used in 2023.

Condition 10.2.iv Pressure at Locations specified

	Pressure – Stage 1				Pressure – Riser			
	Avg.	Min.	Max.	Availability	Avg.	Min.	Max.	Availability
	Psi			%	psi			%
January	-333.7	-379.3	-16.8	100.00	-7.6	-26.5	0.0	100.00
February	-234.0	-303.9	-73.7	100.00	-6.4	-34.6	0.0	100.00
March	-303.3	-339.1	-201.1	100.00	-5.1	-28.8	0.1	100.00
April	-319.1	-365.5	-255.4	100.00	-11.8	-45.2	0.3	100.00
May	-331.4	-372.0	-281.8	100.00	-4.5	-24.8	0.2	100.00
June	-343.3	-374.1	-292.3	100.00	-14.7	-33.5	-0.1	100.00
July	-350.9	-383.6	-192.5	100.00	-15.7	-25.9	0.1	100.00
August	-362.7	-405.6	-311.0	81.18	-13.4	-26.4	0.4	81.18
September	-371.9	-406.8	-249.3	58.06	-11.9	-24.3	0.2	58.06
October	-383.8	-410.3	-325.3	100.00	-12.4	-26.5	0.2	100.00
November	-402.4	-459.1	-252.2	100.00	-12.1	-30.9	0.3	100.00
December	-333.7	-379.3	-16.8	100.00	-7.5	-20.9	0.3	100.00

Schedule F of the ECA requires negative pressure to be maintained over 750C in Stage 1 during ALCF introduction. ALCF were not used in 2023.

Condition 10.2.iv Pressure at Locations specified (continued)

	Pressure – Kiln Hood	Pressure – Raw Mill

	Avg.	Min.	Max.	Availability	Avg.	Min.	Max.	Availability
	Psi			%	psi			%
January	-3.0	-4.1	-2.1	100.00	-10.8	-85.6	47.8	100.00
February	-3.0	-3.9	-2.6	100.00	-8.3	-96.1	44.7	100.00
March	-2.7	-3.5	-1.8	100.00	-6.9	-106.2	44.3	100.00
April	-3.0	-5.2	-2.8	100.00	-12.9	-118.5	34.7	100.00
May	-3.0	-5.2	-2.6	100.00	-25.8	-85.2	27.4	100.00
June	-3.7	-11.6	-2.7	100.00	-11.5	-96.7	49.1	100.00
July	-3.8	-6.8	-2.9	100.00	-19.0	-136.4	43.6	100.00
August	-3.0	-9.0	-2.7	81.18	-18.3	-115.5	31.7	81.18
September	-3.8	-9.6	-3.4	58.06	-19.2	-69.1	19.1	58.06
October	-4.2	-19.1	-3.8	100.00	-11.8	-75.8	36.7	100.00
November	-4.0	-4.9	-3.8	100.00	-22.2	-126.7	32.4	100.00
December	-4.0	-6.5	-3.8	100.00	-45.5	-137.0	29.1	100.00

Schedule F of the ECA requires negative pressure to be maintained in Stage 1 during ALCF introduction. ALCF were not used in 2023.

Condition 10.2.v Total Hydrocarbons

THC Monitoring required when ALCF are in use. Alternative Low Carbon Fuels were not used on site in 2023.

Condition 10.3.a.iii Daily operational status (on/off) of the raw mill and the fuel mill on a monthly basis.

The raw mill, fuel mill – petcoke, and fuel mill – Alternative Low Carbon Fuels operate intermittently throughout the day based on production needs. The following table outlines equipment runtime during the month.

	Equipment Runtime				
	Month Hours	Kiln	Raw Mill	Fuel Mill – Petcoke	Fuel Mill- ALCF
	Hours	Hours	Hours	Hours	Hours
January	744	465.1	381.68	283.8	0
February	672	667.9	582.83	406.4	0
March	744	703.2	607.46	480.8	0
April	720	694.1	595.71	446.7	0
May	744	508.0	458.83	317.7	0
June	720	531.3	409.88	321.1	0
July	744	743.2	601.29	500.4	0
August	744	695.7	551.24	499.4	0
September	720	713.3	562.58	563.2	0

October	744	719.7	587.4	569.1	0
November	720	705.6	596.6	442.9	0
December	744	709.8	659.04	415.8	0

Compliance Source Testing Data Summary

Condition 11.1 of the ECA notes

1. *The Company shall perform Source Testing in accordance with the procedure in Schedule G to determine the rate of emission of the test contaminants from the sources specified in Schedule H. Source Testing shall be conducted not later than twelve (12) months from the date of commencement of operation of the Alternative Low-Carbon Fuels feed equipment which permits the use of Alternative Low-Carbon Fuels up to 175 tonnes per day, or within a time frame as directed or agreed to in writing by the District Manager.*

Alternative Low Carbon Fuels were not used on site in 2023. Source Testing is therefore scheduled for 2024, within 12 months of commencement of operation of the ALCF equipment, as per the ECA.

Carbon Dioxide Intensity Testing Data Summary

Condition 12.1 of the ECA notes

1. *The Company shall perform Carbon-Dioxide Emission Intensity testing of the representative samples of the Alternative Low-Carbon Fuels and Conventional Fuels at all times when Source Testing is carried out under Condition 11 of this Approval. Representative samples of the Alternative Low-Carbon Fuels and Conventional Fuels used during the Source Testing events shall be used for performing Carbon-Dioxide Emission Intensity testing. The Carbon-Dioxide Emission Intensity testing shall be carried out in accordance with the requirements set out in O. Reg. 79/15.*

Alternative Low Carbon Fuels were not used on site in 2023. Source Testing and Carbon Intensity Testing are therefore scheduled for 2024 within 12 months of commencement of operation of the ALCF equipment, as per the ECA.

Statement of Compliance with ALCF requirements

This Section addresses Condition 18.f) of the ECA described as below:

"…a description of the status of compliance with the Performance Limits, Alternative Low-Carbon Fuel definition under this Approval and Alternative Low-Carbon Fuels operational requirements described in Schedule E of this Approval."

Alternative Low Carbon Fuels were not used on site in 2023.

G. Section G – Operational Events

This Section addresses Condition 18.1g) of the ECA described as below:

"A summary of dates, duration and reasons for any operational events including but not limited to events described in condition 8.7 of this Approval that may have negatively impacted the quality of the environment and corrective measures taken to address these impacts,"

Condition 8.7 of the ECA Notes

Condition 8.7. The introduction of Alternative Low-Carbon Fuels in the Cement Kiln shall be stopped (following appropriate procedures) if:

a. *the temperature, residual oxygen or pressure as measured by the CPM System do not meet*
b. *the operational requirements outlined in Schedule F of this Approval for more than four (4) consecutive hours; or*
c. *the CPM System for one or more of the parameters specified in condition 8.7 are down or malfunctioning for more than four (4) consecutive hours.*

Alternative Low Carbon Fuels were not used on site in 2023 so there were no operational events where ALCF was stopped.

The following table outlines operational events that may have negatively impacted the quality of the environment (air).

Date of Reportable Event	MECP ID	Filed To	Details	Investigation	Final Steps
May 29, 2023	1-3HJAJW	Spills Action Center	Dust released from the base of the conditioning towers during shutdown maintenance activities.	Contractor was cleaning the tower and had left the hatch at the base of the tower open for ventilation.	No offsite impact detected. Contractor training on dust control measures and environmental compliance obligations.
November and December		District Officer	Opacity exceedances	Exceedances were attributed to end of life of the main baghouse.	Scheduled replacement of the MBH in 2024.

H. Section H – Complaints

This Section addresses Condition 18.1h) of the ECA described as below:

"Details of environmental complaints including a summary of complaints received, causes of complaints and action taken to avoid the recurrence of similar incidents, as described in condition 14 of this Approval."

Odour Complaints 2023		
Date	Summary of Complaint	Response/ Actions Taken and Conclusions
January 1	The MECP received a complaint from a resident	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling

	who noted odour in North East St Marys at 4:03pm.	showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
January 5	The MECP received a complaint from a resident who noted odour in North East St Marys at 1:20pm.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
January 27	The MECP received a complaint from a resident who noted odour in North East St Marys at 9:57am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
February 2nd	SMC and the MECP received a complaint from 4 residents who noted odour in East St Marys at 7:20am.	SMC modelled the complaints using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed three of the complaints likely originated from St Marys Cement. One complaint could not be modelled as location was not provided. The facility will continue to implement the Odour Abatement Plan.
March 28	SMC received a complaint from a resident who noted odour in East St Marys at 7:11pm.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
April 6	SMC received a complaint from a resident who noted odour in East St Marys in the morning and evening.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
April 12	SMC received a complaint from a resident who noted odour in East St Marys at 10:29am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
April 13	SMC received a complaint from 2 residents who noted odour in East St Marys in the morning and evening.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaints likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
April 20	SMC received a complaint from a resident who noted odour West of St Marys at 7:30pm.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaints likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
April 25	SMC received a complaint from a resident who noted odour in East St Marys at 10:15am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
May 11	SMC received a complaint from a resident who noted odour in East St Marys at 10am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
May 16	SMC received a complaint from a resident who noted	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling

	odour in East St Marys at 10:25am.	showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
June 29	SMC received a complaint from a resident who noted odour in East St Marys at 10:15am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely did not originate from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
June 30	SMC received a complaint from a resident who noted odour in West St Marys at 10:15am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
July 1	SMC received a complaint from a resident who noted odour in East St Marys at 9:47am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely did not originate from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
July 16	SMC received a complaint from a resident who noted odour in East St Marys at 11:10am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
July 17	SMC received a complaint from a resident who noted odour in East St Marys at 10:33am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
July 26	SMC received a complaint from a resident who noted odour in St Marys at 10:24am.	SMC could not model the complaint using the Enviro-Suite software because no location was provided. The facility will continue to implement the Odour Abatement Plan.
July 30	SMC received a complaint from a resident who noted odour in East St Marys at 10:33am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely did not originate from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
August 10	SMC received a complaint from a resident who noted odour in East St Marys at 10:47am.	SMC modelled the complaint using the Enviro-Suite software as part of the Odour Abatement Plan. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.
September 3	SMC received a complaint from a resident who noted odour in East St Marys at 10:14am.	SMC could not model the complaint using the Enviro-Suite software as the software was down. Modeling showed the complaint likely originated from St Marys Cement. The facility will continue to implement the Odour Abatement Plan.

Dust Complaints 2023		
Date	Summary of Complaint	Response/ Actions Taken and Conclusions
July 26	SMC received dust complaints from 9 residents north of the	Analysis indicated cementitious material that could have originated at St Marys Cement. The facility determine

	plant who noted dust had appeared overnight on their vehicles.	that the material originated from a material loadout point. The facility performed maintenance on the equipment and initiated a project for maintenance improvements including full replacement.
August 3	SMC received a complaint from a resident who noted dust had appeared either two or three days prior.	Analysis of the sample taken indicated material that did not originate from the facility. No action was required.
August 27	SMC received dust complaints from 7 residents who noted dust had appeared on their vehicles the night prior.	Analysis indicated cementitious material that could have originated at St Marys Cement. The facility determine that the material originated from a material loadout point. The facility performed maintenance on the equipment and added further enclosures around the equipment for dust containment.
October 13	SMC received a dust complaint from a resident East of the plant. He noted material had appeared over the past few weeks.	Analysis of the sample taken indicated material that did not originate from the facility. No action was required.
November 3	SMC received a call from a resident north of the plant who simply observed there was more dust than previous years.	No action required, no sample requested.
November 6	SMC received a call from a business north of the plant who noted material had appeared throughout the morning period.	Analysis of the sample indicated material that could have originated at St Marys Cement. The facility determine that the material originated from a material loadout point. The facility performed maintenance on the equipment and initiated a project for maintenance improvements including boosting dust control measures already in place.
November 15	SMC received a dust complaint from a resident East of the plant. She noted material had appeared over the past few weeks.	Analysis of the sample indicated material that could have originated at St Marys Cement. As the sample had appeared over a length of time the facility was unable to determine the source but encouraged the resident to continue noting any dust concerns.
November 16	SMC received a dust complaint from a resident north of the plant. He noted material had appeared over the past while and did not wish to have a sample taken.	No action required, no sample requested.
November 20	SMC received 2 dust complaints from residents north of the plant. They noted the material had appeared overnight.	Analysis of the material did not indicate cementitious material. No further action required.

Noise/Blast Complaints 2023		
Date	Summary of Complaint	Response/ Actions Taken and Conclusions
April 11	SMC received a noise complaint from a resident who noted a roaring noise at 9am in East St Marys.	Due to the lack of correlation between higher noise noted and abnormal operation at the plant, SMC was unable to determine whether the source of the noise causing concern originated at SMC.
October 10	SMC received a blast complaint from a resident in	The low ceiling on October 10th might have caused the air vibration to feel stronger to residents however the

	the West End of St Marys.	seismograph readings indicate measurements were within MCP limits as per NPC 119.