



June 16, 2023

St Marys Cement Plant

Community Liaison Committee Meeting





Agenda

- ❑ **Welcome and Introductions**
- ❑ **Complaints 2022 and 2023 Year to Date**
- ❑ **Noise Update**
- ❑ **ALCF Update**
- ❑ **Annual Reporting Requirements**
- ❑ **Terms of Reference Review**
- ❑ **Questions Brought Forward in Advance of Today's Meeting**
- ❑ **Round Table**
- ❑ **Closing Remarks**



Welcome and Introductions



Community Liaison Committee

The next Community Liaison Committee Meeting is going to be held on **Friday June 16th at 10am**. Members of the public who wish to observe as the members of the Committee discuss information with respect to St Marys Cement can watch the live meeting online. Please see the Town of St Marys Events Calendar for the link to the online meeting.

Please submit any questions and concerns for the meeting by June 14th to kara.terpstra@vcimentos.com.

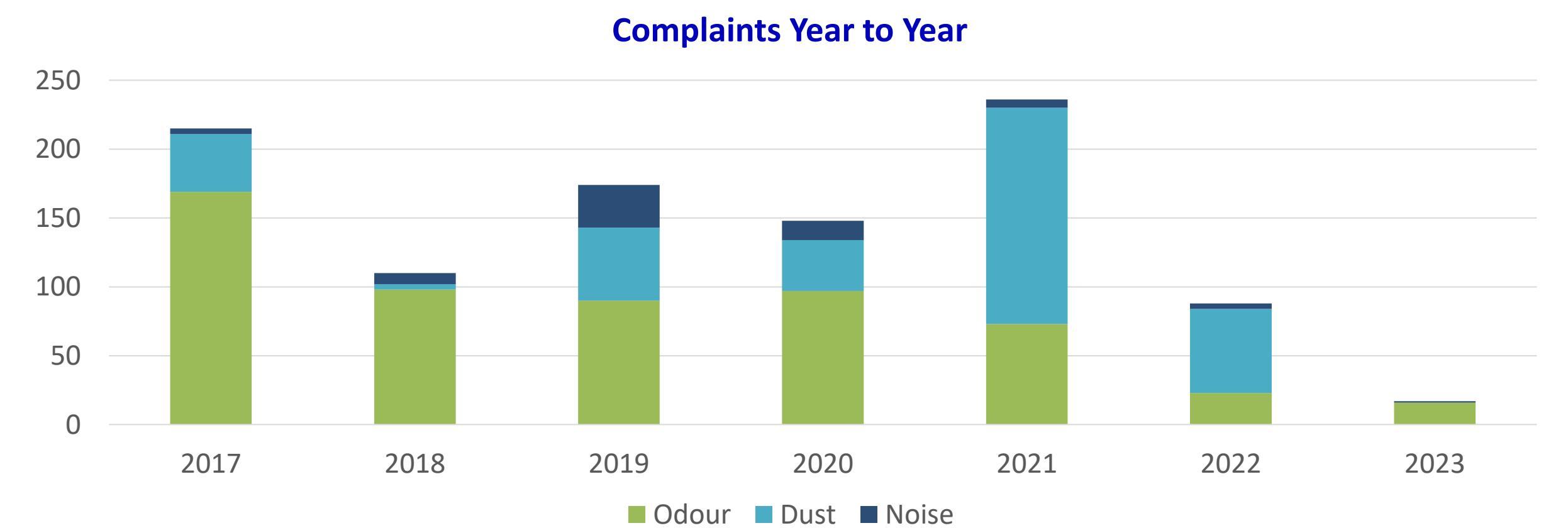
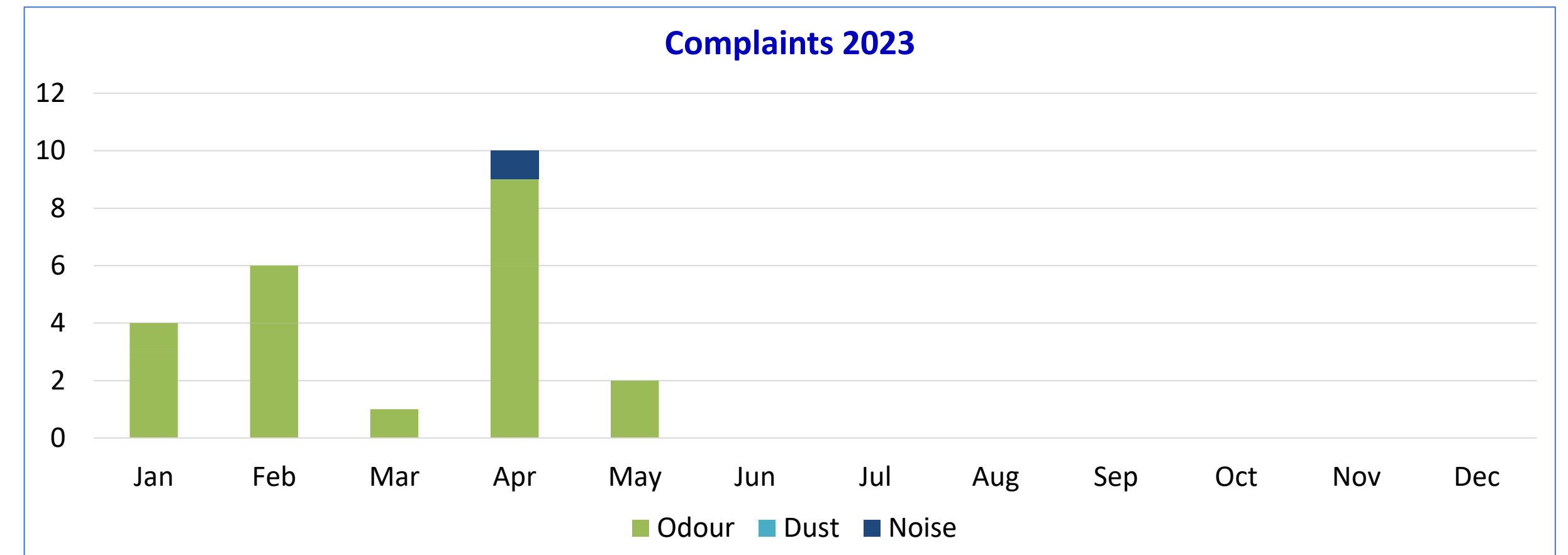
- ❖ Thank you to the Town of St Marys for allowing us to use their Youtube Channel
- ❖ Round Table Introductions
- ❖ Did anyone have questions/concerns about the March 3rd Meeting

Complaints Received 2023 Year To Date

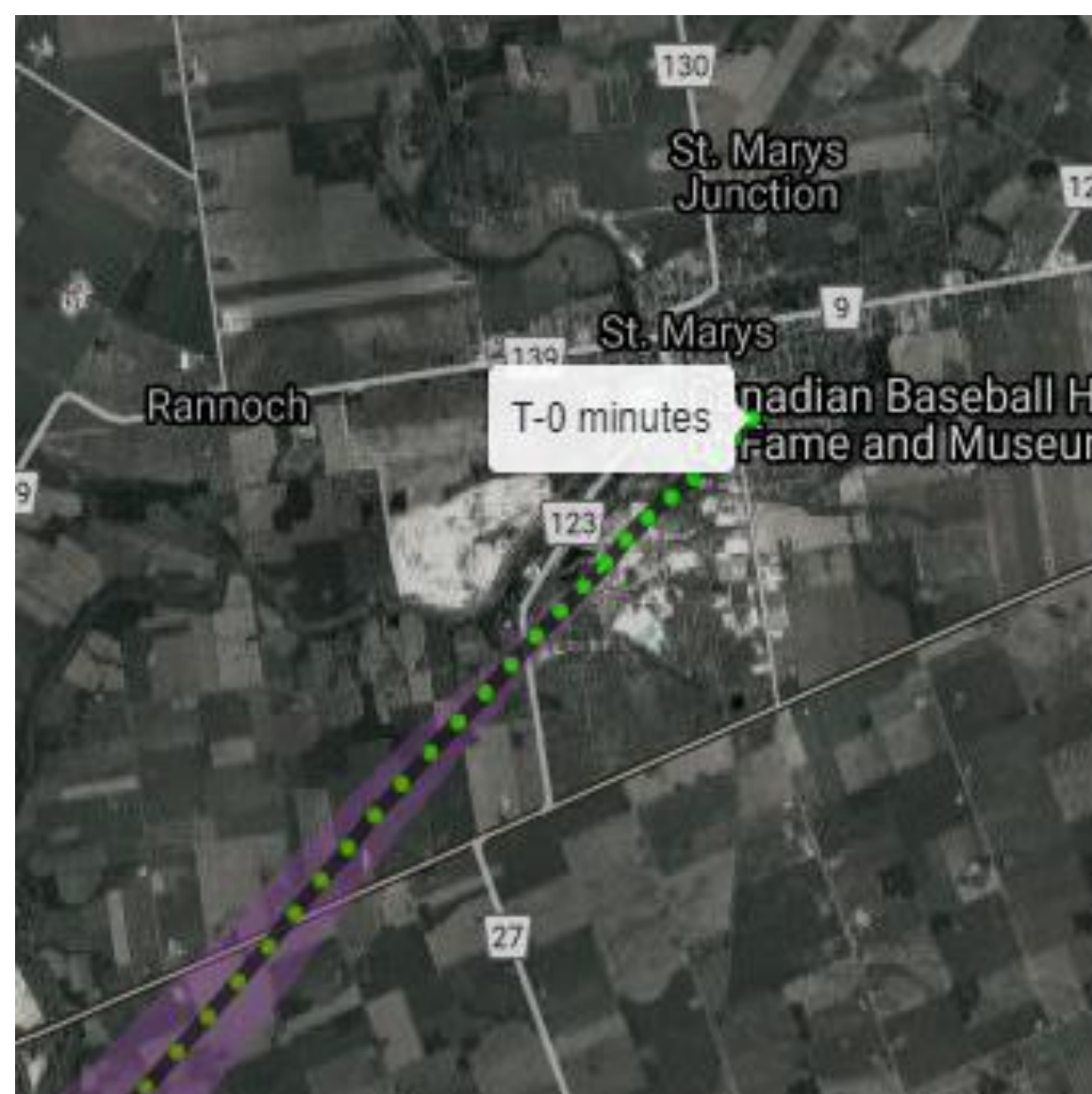
		Odour*	Mention Health**	Dust	Noise
2023	Total	16	3	0	0
	January	3	1	0	0
	February	4	2	0	0
	March	1	0	0	0
	April	6	0	0	1
	May	2	0	0	0
	June				
	July				
	August				
	September				
	October				
	November				
	December				

* Odour complaints reviewed on the next slides

**Complaints which 'Mention Health' are counted when a resident calls with an odour complaint and highlights that they have health concerns. They are not separate complaints received by the plant.



Odour Monitoring using Enviro-Suite Software



Likely Originated from SMC

The trajectory generated by Enviro-Suite aligns with the location of the stack.



Possibly Originated from SMC

The trajectory generated by Enviro-Suite is close to aligning with the location of the stack.



Probably did not Originate from SMC

The trajectory generated by Enviro-Suite is not close to the stack but direction of the trajectory is towards SMC.



Did Not Originate from SMC

The trajectory generated by Enviro-Suite is clearly not in the direction of the stack.



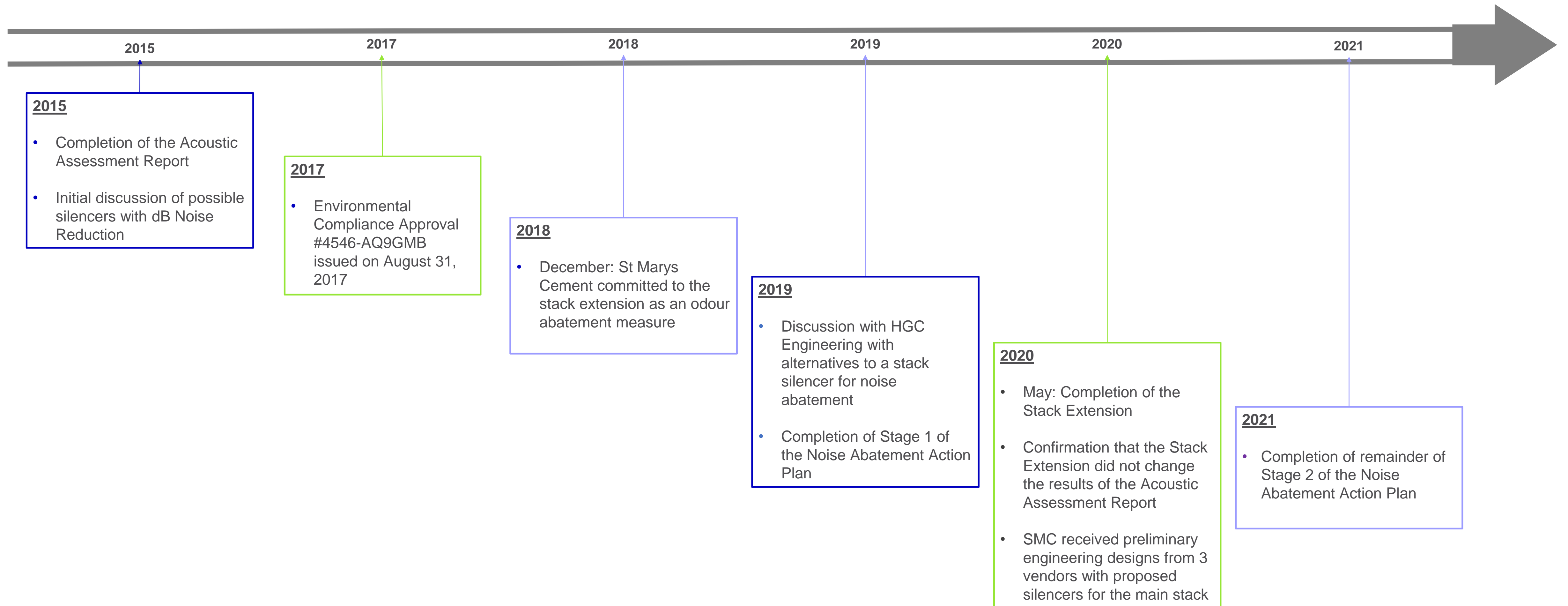
Odour Complaints Received

Date	Enviro-Suite Results
Thursday, April 6, 2023	Likely Originated from SMC
Wednesday, April 12, 2023	Likely Originated from SMC
Thursday, April 13, 2023	Likely Originated from SMC
Thursday, April 13, 2023	Likely Originated from SMC
Thursday, April 20, 2023	Likely Originated from SMC
Tuesday, April 25, 2023	Likely Originated from SMC
Thursday, May 11, 2023	Likely Originated from SMC
Tuesday, May 16, 2023	Likely Originated from SMC

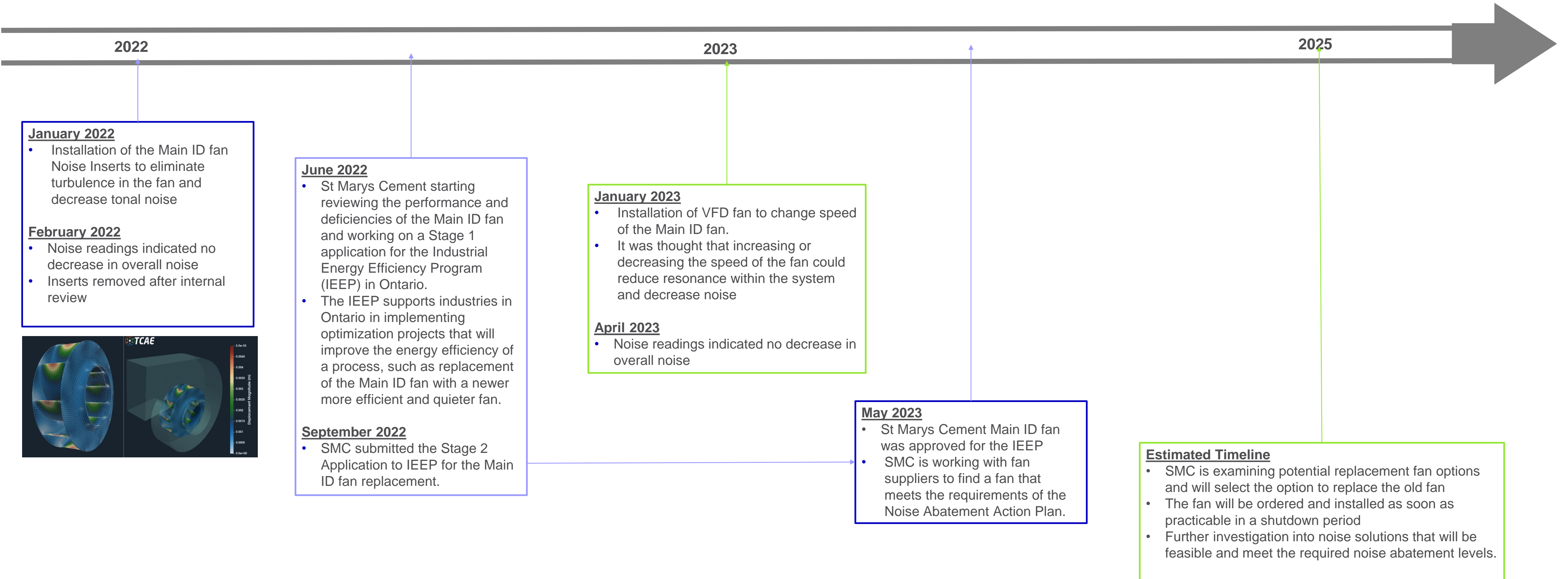
Enviro-Suite Results	
	2023 YTD
Likely Originated from SMC	15
Possibly Originated from SMC	0
Did not Originate from SMC	0
Location not Provided	1

* Out of Enviro-Suite complaints generated using the Enviro-Suite Software

Noise Abatement of Kiln Stack



Noise Abatement of Kiln Stack



Industrial Energy Efficiency Program (IEEP) in Ontario



- The Independent Electricity System Operator is a crown corporation responsible for operating the electricity market in Ontario and ensuring that the energy supply is adequate for demand.
- The IESO developed a IEEP program, which provides funding for projects that reduce a facility's overall energy consumption, thereby reducing the need for future expansion of electricity generation in the province. This is part of the Save on Energy Program.
- The cement industry is a large consumer of energy in Ontario, and St Marys Cement plants (both St Marys and Bowmanville) participate in the IEEP Program.
- St Marys Cement works with Allison Merz who is the Energy Analyst for both the St Marys and Bowmanville Plant working on a wide variety of projects that are focused on reducing the current and future energy consumption of the facilities.

Industrial Energy Efficiency Program (IEEP) in Ontario



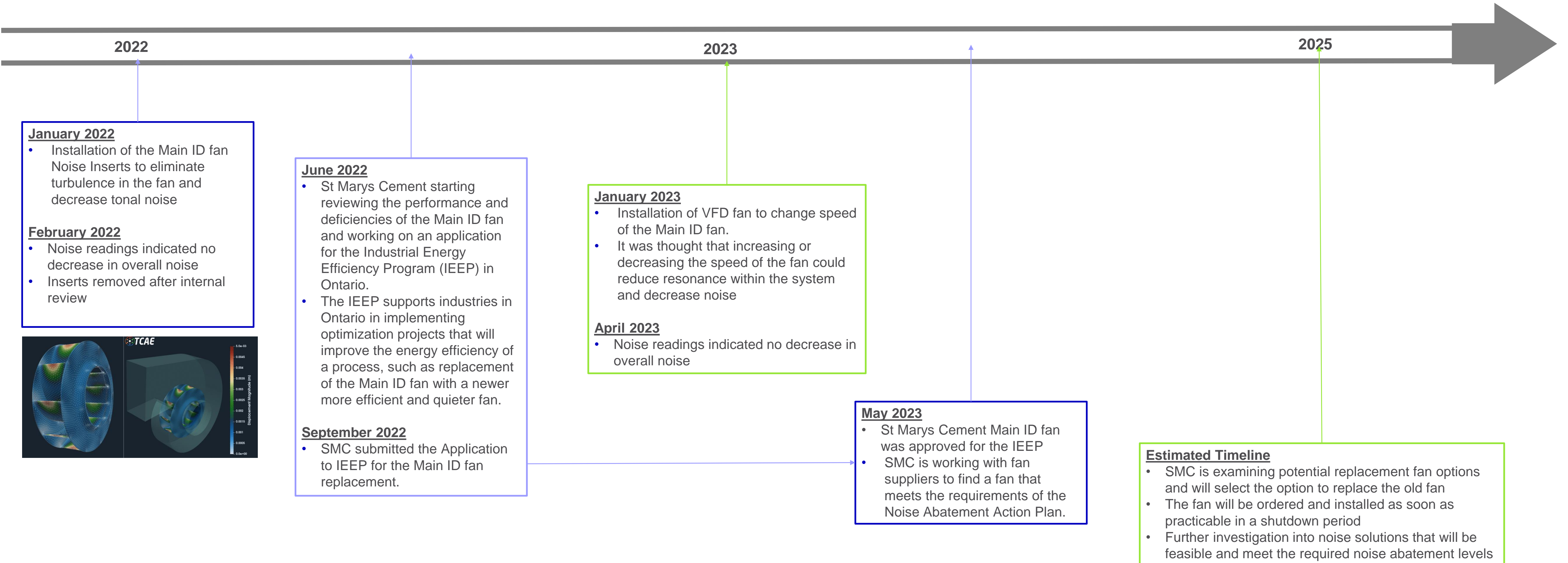
- A facility in Ontario will look at on-site operations to determine the current baseline energy consumption and where energy improvements can be made.
- Once a project has been identified by the facility they start the two-Stage application process for the IEEP program.
- The Stage 1 Application provides basic high-level details of the proposed project including estimated electricity savings and project cost. The IESO will review the application to determine if the proposed project meets the basic program rules (e.g. measure eligibility and minimum savings requirements).
- If the Stage 1 Application is approved then the facility will prepare a Stage 2 Application which is a more detailed application package including proposed measures, project timelines, project budget, and a measurement and verification plan.

Industrial Energy Efficiency Program (IEEP) in Ontario



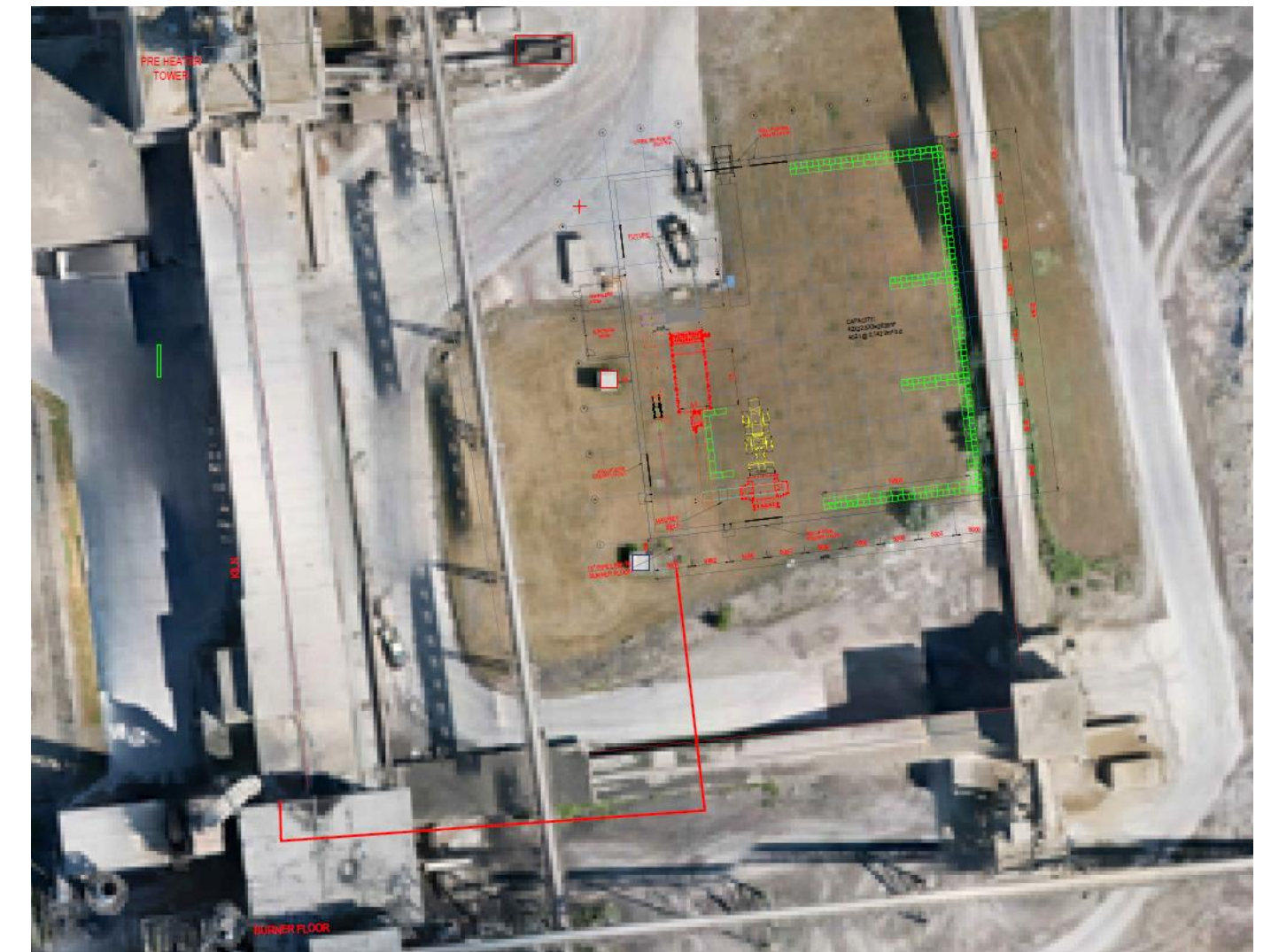
- St Marys Cement determined that the Main ID fan on site would be a potential project for the IEEP
 - The Main ID fan on site has been repaired, modified and retrofitted several times since installation to try and improve its performance.
 - Changes have improved production rates but have not had any energy decrease of the Fan.
 - The changes also did not improve or alter the noise emissions from the Main ID fan.
 - Since the fan was installed there have been numerous technological improvements and innovations such as variable speed control, impeller design, and general configuration that allow new fans to be more energy efficient and quieter.
 - Based off initial calculation St Marys Cement noted an estimated energy savings of 24% from the Main ID Fan.
 - SMC submitted the Stage 1 Application in June 2022, which was approved by the IESO. The Stage 2 application was submitted in September 2022, and approved in May 2023.
-
- SMC is examining potential replacement fan options and will select the option to replace the old fan
 - The fan will be ordered and installed as soon as practicable in a shutdown period
 - Further investigation into noise solutions that will be feasible and meet the required noise abatement levels

Noise Abatement of Kiln Stack



ALCF Updates

- SMC had a meeting with the Ministry of Environment Air Permitting branch in May and submitted comments and supporting information for various aspects of the permit
- The MECP will send back comments and concerns on the application within the next few weeks
- On site modifications have not begun but site surveys have been completed
- Modifications are scheduled to begin by fall 2023



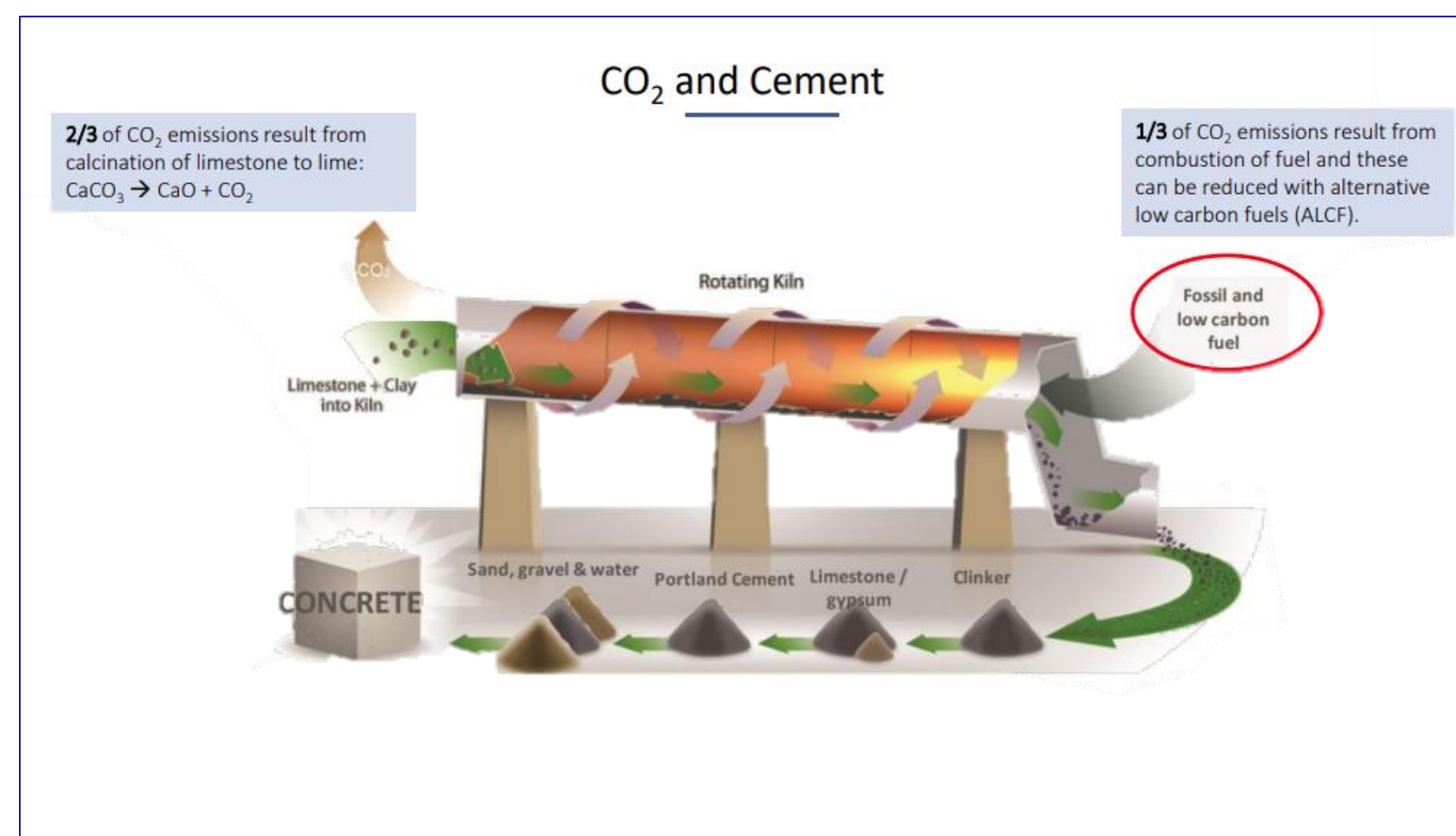
Proposed Alternative Low Carbon Fuels Building Location

ALCF GHG Emissions

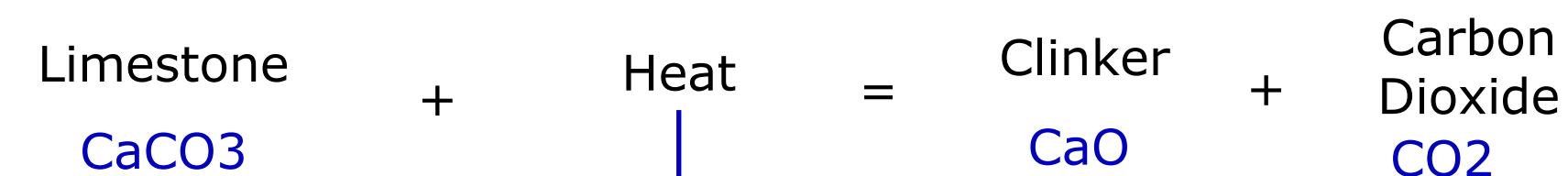
- What are the current GHG Emissions of the Plant and how will Alternative Low Carbon Fuels change the emission profile?

ALCF GHG Emissions

- What are the current GHG Emissions of the Plant and how will Alternative Low Carbon Fuels change the emission profile?
 - The largest GHG emission from cement industry is Carbon Dioxide (CO₂).
 - CO₂ emissions come from two sources; calcination (the reaction where limestone is heated to create Clinker and CO₂), and the fuel used to create that heat.



Calcination



Current Heat sources are Petcoke and Natural Gas

Alternative Low Carbon Fuels will be a new heat source

Reducing CO2 Emissions

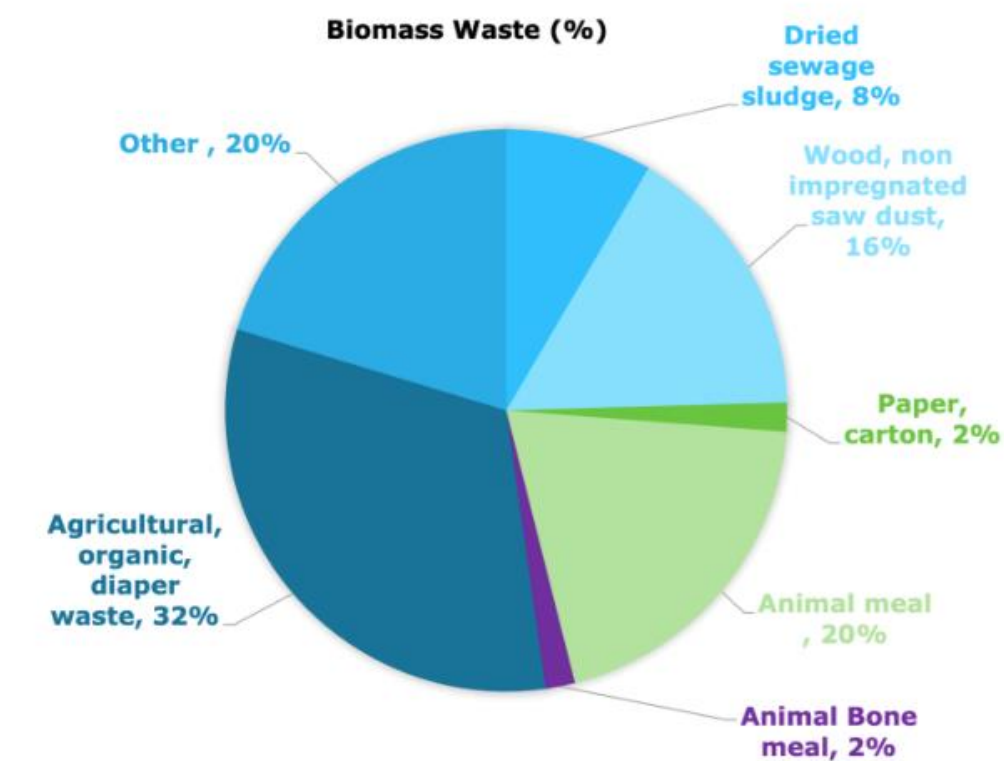
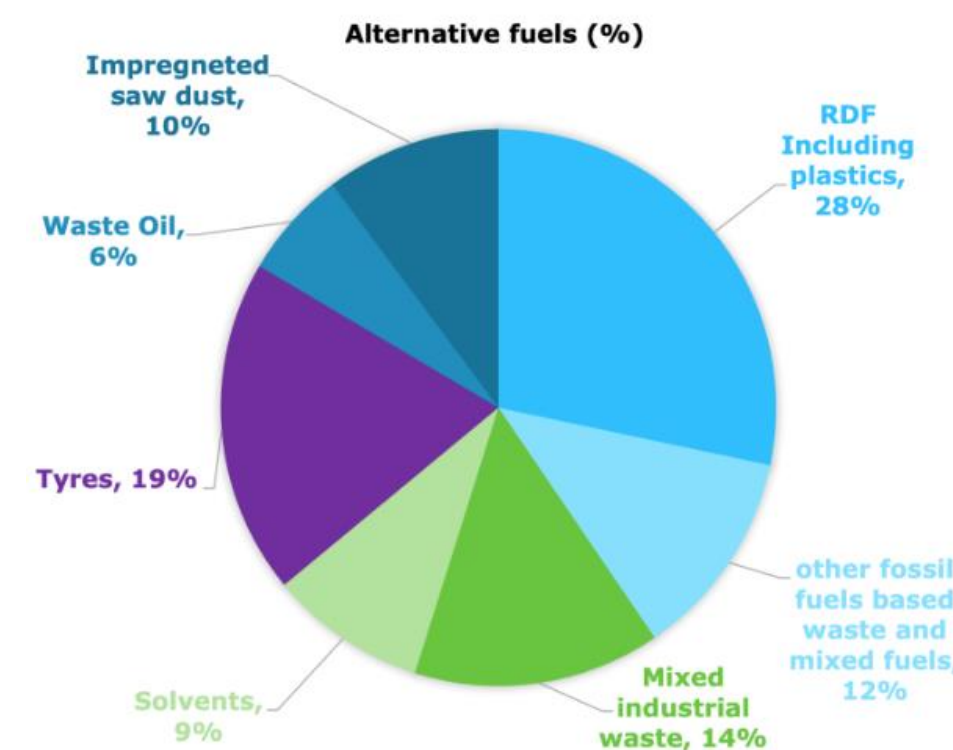
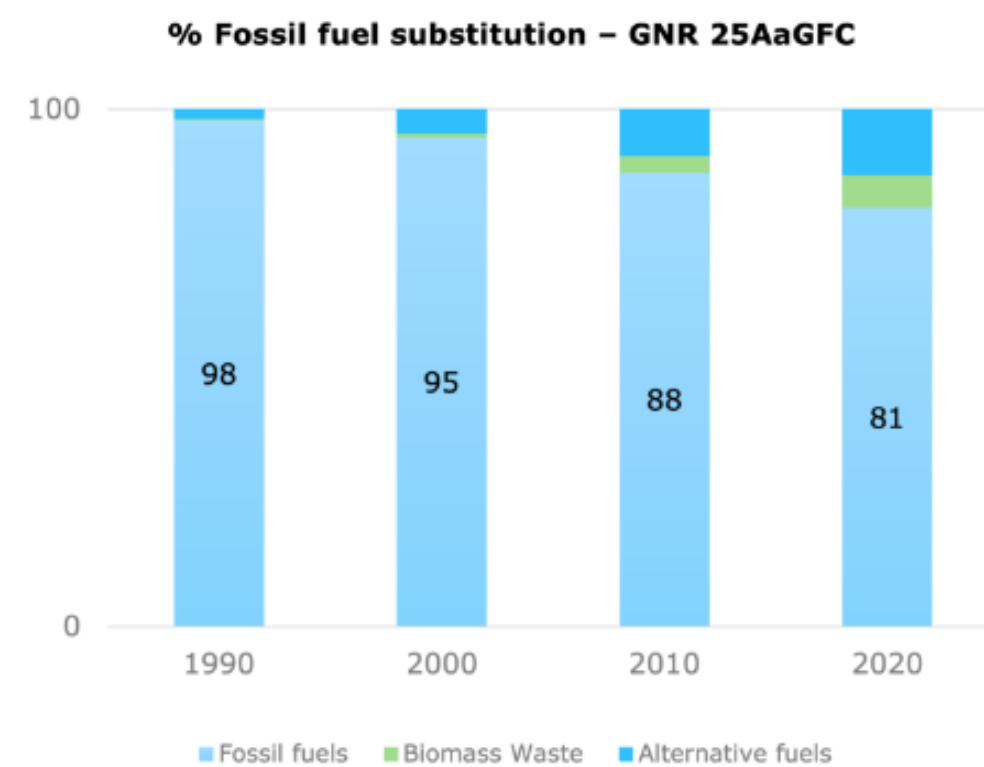
- In 2023 the Cement Association of Canada published their 'Concrete Zero' Plan; Canada's Cement and Concrete industry action plan to net-zero by 2050.
- The plan includes initiatives to reducing CO2 including
 - Reduce the use of coal and petroleum coke as heat sources for clinker production
 - Increasing the use of low carbon and alternative fuels
 - Repurposing waste products as cleaner alternatives compared to virgin fossil fuels
 - Reduce the volume of clinker used to produce cement
 - Increased use and promotion of supplementary cementitious materials as building materials
 - Carbon capture utilization and storage projects
- All of these initiatives combined will contribute to Net Zero.



**Canada's cement and concrete
industry action plan to net-zero**

Alternative Low Carbon Fuels Worldwide

- The industry is moving towards lower-carbon fuel sources, carbon-reduced cements, and clean technologies.
- Reducing CO2 emissions is a priority for the cement industry worldwide, with numerous industrial groups supporting the initiative for reducing CO2 emissions, and achieving Net Zero by 2050.
- The Global Cement and Concrete Association data shows that since the 1990s there has been a decrease in 17% of overall fossil fuel due to the increased use of Alternative Low Carbon Fuels.
- There has been a 22% decrease in CO2 / ton product since 1990.



ALCF GHG Emissions

- Since 2017, 35% of the facility's CO2 comes from Petcoke combustion
- The permit application is for 175 tons per day of Alternative Low Carbon Fuels
 - The proportion of individual ALCF materials will depend on availability of material and will result in different overall CO2 emission intensity of the ALCFs as well as different amount of required petcoke to achieve the required heat input.
 - Petcoke – 33mJ/kg
 - ALCF Plastic – 28mJ/kg
 - ALCF Wood – 15mJ/kg
 - It is anticipated that the ALCFs materials will be blended at the site prior to combustion in the kiln.
- The kiln needs approximately 9500 GJ/day of heat. If the facility uses 175 tpd of a high heat value ALCF ie ALCF Plastic, we still need enough thermal energy in the kiln to power the kiln, so some petcoke will still be used.
- Using this low carbon fuels can potentially result in a 60% overall CO2 reduction from fuels, up to 20% reduction overall for the plant.

Terms of Reference Review

- The Terms of Reference was created in 2017 when the CLC was formed and has been reviewed a few time since then.
- As part of this year's review, we will be going over the Terms of Reference and potential changes that can be made.
- It should be noted that the Terms of Reference is required as part of the facility's Environmental Compliance Approval and is signed by representatives of St Marys Cement Plant and the Ministry of Environment, so any changes will be approved by both parties.

Terms of Reference Review

1. Does the community at large seek more information? Are there constant inquiries to you other than the complaints of odour, dust or noise?
2. Is the current reporting format (video meetings) meeting the needs of the community? How many people are typically watching? Maybe it's time for a live meeting?
3. Are committee members willing to be more in the spotlight? How will their role be explained to the community? I doubt members want to be inferred to as a contact that can do any more than help them voice a concern. Are current members ever been asked to help?
4. Have the town or MECP been approached for more information outside of the CLC?

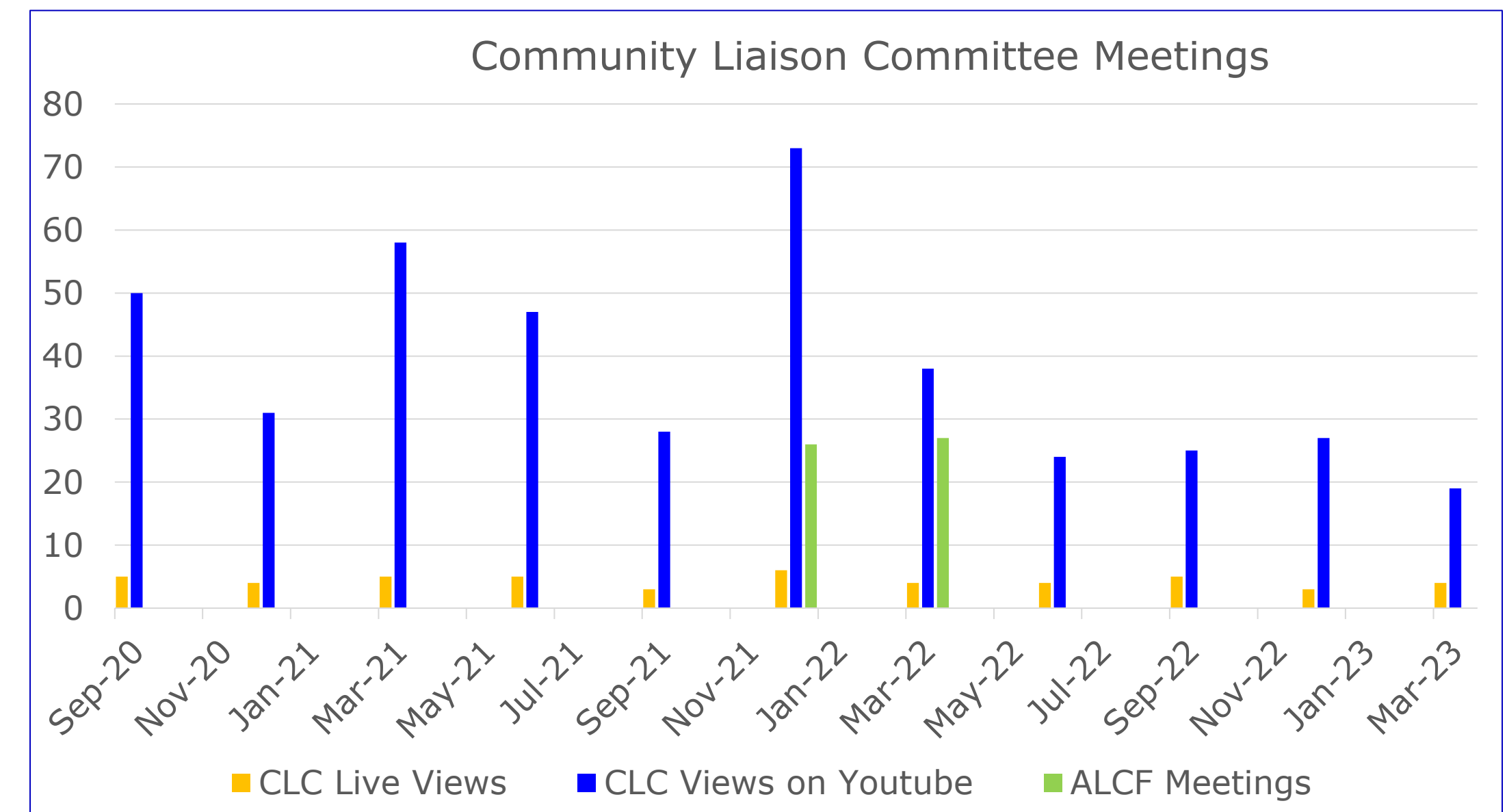
Terms of Reference Review

1. Does the community at large seek more information? Are there constant inquiries to you other than the complaints of odour, dust or noise?
 - St Marys Cement is required to report all concerns to the MECP for odour, dust, noise, and vibration. The Facility's Air permit states ""If at any time, the *Company* receives an environmental complaint from the public regarding the operation of the Equipment approved by this Approval the company shall... Notify the District Manager of the complaint within 2 business days."
 - SMC has received 2 blasting complaints since 2017 and 1 complaint regarding the new lights on the stack extension.
 - SMC receives occasional concerns about fallen trees or traffic control.
 - SMC has provided 13 tours over the last 6 years to residents who have reached out to the plant.

Terms of Reference Review

2. Is the current reporting format (video meetings) meeting the needs of the community? How many people are typically watching? Maybe it's time for a live meeting?

- St Marys Cement has noted that typically 3-5 people live stream the CLC videos while they are being held.
- The in person ALCF meeting had 26 attendees and the virtual meeting had 27.
- CLC Meetings that have been recorded and uploaded to the town website have an average of 38 views on Youtube.
- The committee will look into a combination of in person and live stream videos.



Terms of Reference Review

3. Are committee members willing to be more in the spotlight? How will their role be explained to the community? I doubt members want to be inferred to as a contact that can do any more than help them voice a concern. Are current members ever been asked to help?

Terms of Reference Review

4. Have the town or MECP been approached for more information outside of the CLC?

Barb Reinwald

Questions Brought Forward in Advance

- After the review of the Terms of Reference what role can the CLC play in this situation where the plant has performed studies indicating no correlation between cement plant operations and the concerns?
- Has the committee gone to the community at large to see if others are experiencing ringing in the ear?
 - Do CLC members discuss the cement plant or CLC meetings with other residents?
 - The CLC was formed to address concerns related to operations of the facility however testing indicated the concern did not originate from SMC.
 - St Marys Cement and the Community Liaison Committee have provided methods for contacting the cement plant and the MECP available on the CLC website and in the newspaper posting for the CLC. Residents are encouraged to contact the plant, the MECP, or the health unit about medical concerns.
- Seismic Equipment monitoring vibration
 - These sensors are used to detect vibration that could indicate malfunction of the equipment. These devices are beneficial for onsite monitoring but would not provide any assistance in the circumstances surrounding the resident's health concerns.
- Society Banned smoking
 - Smoking was banned as a result of investigations that concluded it was a cause in health issues.
 - St Marys Cement perform investigations at the residents house and did not find any correlations between operations and the concerns.

Round Table

**For any Questions or Concerns related to St Marys
Cement Plant Operations please contact**

Kara Terpstra – Environmental Manager
at 519-284-1020 x 235
or at
kara.terpstra@vcimentos.com



**STAY SAFE
THIS SUMMER!**



Use
sunscreen

Take a
first aid kit



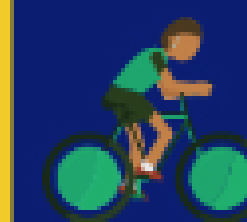
Play in
shaded areas

Wear
lightweight
clothing



Wear a
helmet

Use insect
repellent



Avoid
intense activity
on hot days

Wear
sunglasses



Take breaks

HYDRATE!

