



PORT COLBORNE

**Meeting
Environmental Advisory Committee
January 8, 2020, 6:00 p.m.**

The following were in attendance:

Staff: Darlene Suddard
Janice Peyton

Council: Councillor Mark Bagu
Councillor Harry Wells

Public Members: Beth Palma
Ryan Waines
Jack Hellinga
George McKibbon
Norbert Gieger
Trent Doan
Steven Rivers
Clayton Nadeau

Guest: Mae Lannan, Climate Change Coordinator

1. Call to Order

Chair Beth Palma called the meeting to order at 6:05 p.m.

2. Adoption of the Agenda

Moved by Jack Hellinga
Seconded by Harry Wells

That the agenda dated January 8, 2020 be accepted as circulated.
CARRIED.

3. Disclosures of Interest

Nil.

4. Approval / Review of Previous Meeting Minutes

Moved by Ryan Waines
Seconded by Norbert Gieger

This report is going before Council on January 13, 2020. George advised that he will be in attendance.

d) Site Alteration Permit Review and Costing

This report is going before Council on January 13, 2020.

e) Vale CBRA Community Status Report/Questions & Acquired Responses

George gave a review of the report, which was drafted by Harry, Trent, Jack, Norbert and George. A copy of the report is attached to the minutes.

The purpose of the report is to summarize objectively the status of Vale's Community Based Risk Assessment (CBRA) and Community Based Action Plan (CBAP). It is intended for Port Colborne Council and staff's use. If it is thought to be helpful, the committee recommends that the City make it available to Port Colborne residents.

The report is based on reviews of historical documentation, the current CBRA and Ministry of the Environment, Conservation and Parks (MECP) and Region of Niagara Health comments on the CBRA and CBAP as well as recent correspondence between MECP and the City of Port Colborne. Clarification was sought on selected points with Greg Washuta (MECP), Eric Azzopardi (Vale) and Siobhan Kearns (Public Health, Niagara Region).

Moved by George McKibbon
Seconded by Jack Hellinga

That the Community Status Report: Vale's Community Based Risk Assessment Questions and Acquired Responses be submitted to Council for consideration.

And, that if approved by Council, the report be made available to the public on the City social media, on the City website and at the City Hall information desk.

CARRIED.

7. New/Other Business

a) Tree Planting Rebate Program

Terms and conditions of the tree planting rebate program were discussed regarding the limit of one tree rebate per property.

Moved by Beth Palma
Seconded by Harry Wells

That the terms and conditions of the tree planting rebate program be amended to allow one rebate application *per property per year*.
CARRIED.

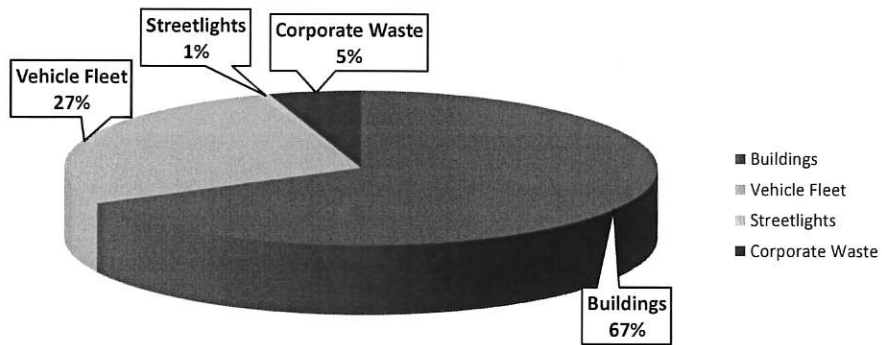
8. Next Meeting/Adjourn

The next EAC meeting will be on March 11, 2020 at 6:00 pm.

With no further business to discuss, the meeting adjourned at 7:45 p.m.

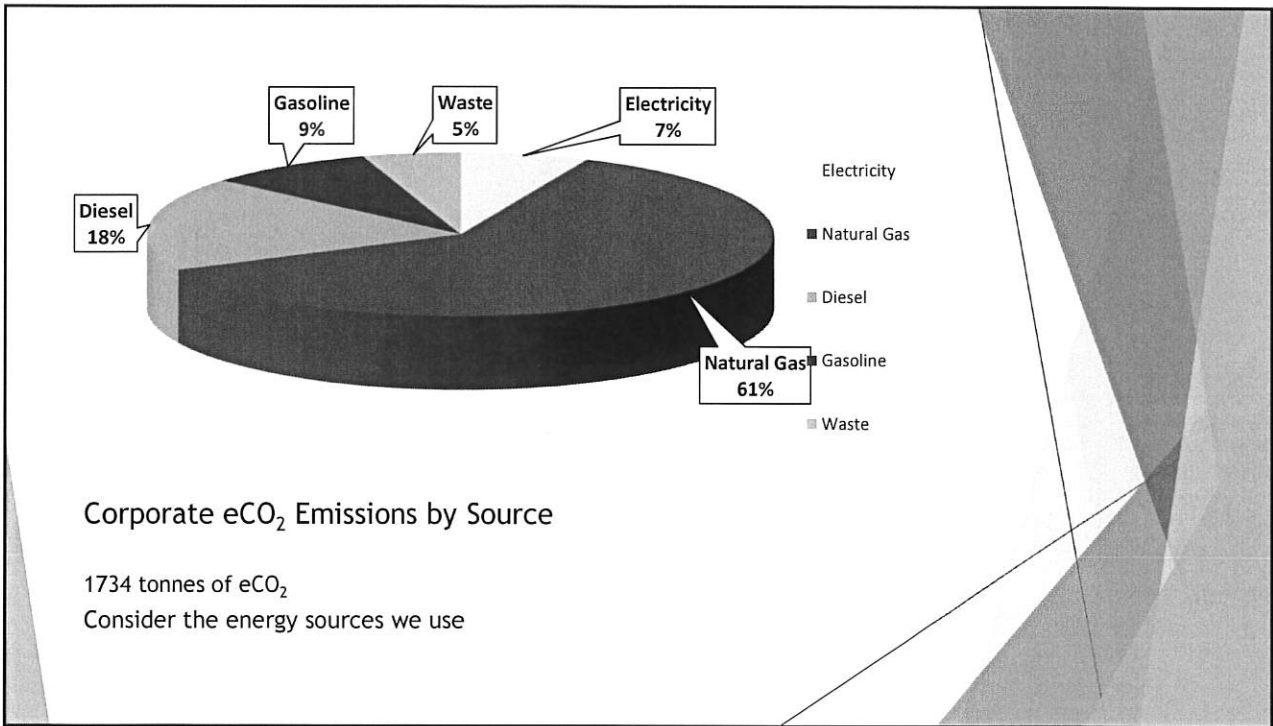
2017* Emissions Inventory

City of Port Colborne Corporate Activity



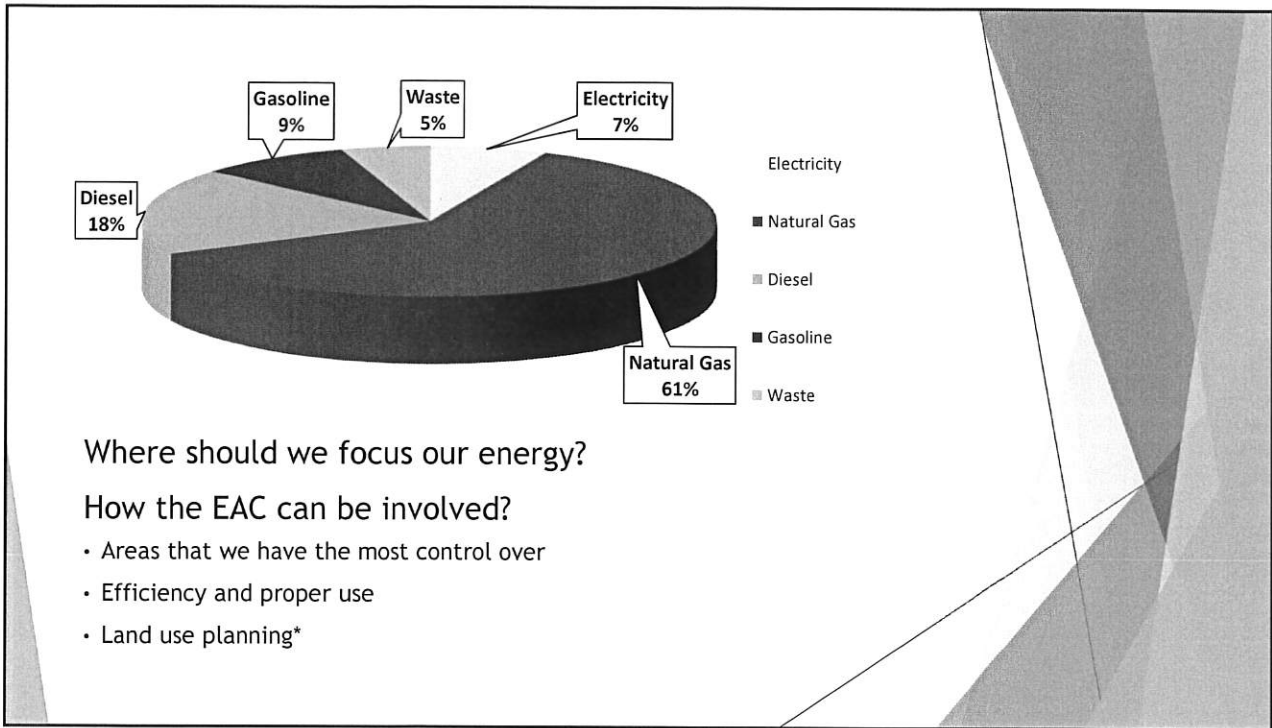
Corporate eCO₂ Emissions Breakdown by Sector

- 1734 tonnes of eCO₂
- eCO₂ is representative of all greenhouse gases - expressed as units of CO₂



Comparative Use, Pricing, and Emissions

Energy Type	Total Use	Energy (GJ)	Total Cost (\$)	Total eCO ₂ (t)
Electricity	5,739,720 kWh	20,663	668,389.04	114.79
Natural Gas	557,380 m ³	21,755	61,459.95	1,058.81
Diesel	116,648 L	4,468	0.00	320.81
Gasoline	60,339 L	2,112	0.00	148.28



Where should we focus our energy?

How the EAC can be involved?

- Areas that we have the most control over
- Efficiency and proper use
- Land use planning*

Community Status Report
Vale's Community Based Risk Assessment

January 8, 2020

Introduction: The purpose of this document is to summarize objectively the status of Vale's Community Based Risk Assessment (CBRA) and Community Based Action Plan (CBAP). This summary is intended for Port Colborne Council and staff's use. If it is thought to be helpful, we recommend the City make it available to Port Colborne residents.

This report is based on reviews of historical documentation, the current CBRA and Ministry of the Environment, Conservation and Parks (MECP) and Region of Niagara Health Department comments on the CBRA and CBAP as well as recent correspondence between MECP and the City of Port Colborne. We sought clarification on selected points with Greg Washuta (MECP), Eric Azzopardi (Vale) and Siobhan Kearns (Public Health, Niagara Region). Each was provided an opportunity to confirm facts contained in this report. To date, Siobhan Kearns confirmed we have accurately reflected Public Health's responses to clarifying questions. Both Eric Azzopardi (Vale) and Greg Washuta (MECP) have provided detailed comments. Where possible many have been incorporated into the report. Further discussions will be required on some comments.

Harry Wells, Trent Doan, Jack Hellinga, Norbert Geiger and George McKibbon met, reviewed documentation and drafted this report. The report was reviewed by the Environmental Advisory Committee on January 8 2020. We thank the staff of the MECP, Vale and Public Health Niagara Region for providing documents and answering questions during the production of this report.

The Community Based Risk Assessment commenced 20 years ago. For the first 10 years, a Public Liaison Committee comprised of Port Colborne community members helped review, comment and make recommendations on the research undertaken in the CBRA. In 2010, the Public Liaison Committee disbanded and filed its final report in July 2010. Since that time, the CBRA and its review has been conducted by Vale, MECP and Public Health Niagara with limited input from the City of Port Colborne and its residents.

Recent reporting from Vale, MECP and Public Health Niagara represent important actions to conclude the CBRA. Some of those actions reported in the following series of questions and answers have material implications for Port Colborne, its property owners and residents. This report can be used to help develop responses where local permissions are required to conclude the actions recommended by MECP and Vale and to address municipal, property owner and resident's concerns.

In order to make recommendations as objective as possible, a statement of where matters sit is crucial. The Environmental Advisory Committee's aim is to provide such a statement for Council's use.

1) Are there a series of maps which describe where each of the tiers in the tiered approach contained in the CBRA is to be applied?

Yes, there appears to be a map that shows where the application of the tiered approach is to be undertaken. It appears to cover the area within the East Village streets bounded by Louis Street to Rodney Street and Fares Street to Davis Street. The boundaries have been delineated using nickel sampling undertaken by both the MECP and Vale. Vale generated a list of properties that are within each tier and where the focus on additional testing and confirmation are occurring. Vale is not releasing the mapping due to privacy concerns.

The area was determined after sampling throughout Port Colborne by MECP and Vale's consultant. MECP has asked Vale to prepare a final CBAP that incorporates MECP, Port Colborne and stakeholder feedback which would also be expected to include a rationale for property selection.

2) What measures are proposed to be implemented on residential lots outside the area bounded by Louis Street to Rodney Street and Fares Street to Davis Street in the East Village?

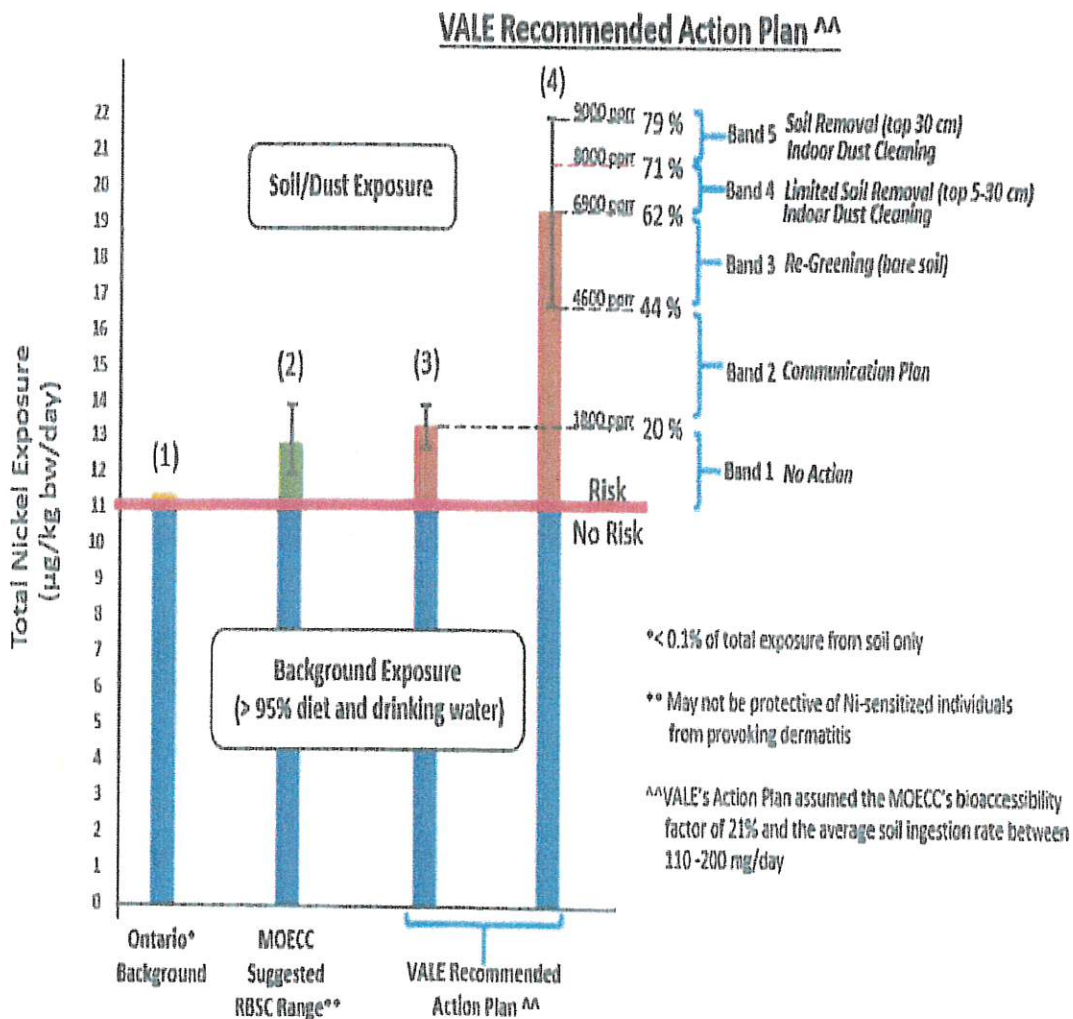
No actions are proposed to be undertaken at this time. There appear to be a few properties that fall within nickel contour concentrations that trigger one or more of the 5 bands and are eligible for actions proposed by Vale's CBAP. The MECP has asked Vale to prepare a final CBAP that incorporates MECP, Port Colborne and stakeholder feedback which may also include actions for additional properties.

3) What are the principle areas of disagreement between Vale and MECP? What are the possible outcomes that are under consideration?

Both MECP and Vale appear to agree with the tiered approach and the use of 8,000 ppm used by MECP in its original order with some reservations. The mapping of houses within the area bounded by Louis Street to Rodney Street and Fares Street to Davis Street is structured around bands established by Vale in its CBAP Table 4: Tiered Remedial Action Plan for Residential Properties - Human Health and further elaborated on in MECP Figure 1 entitled: Total Oral Nickel Exposure: Toddler (e.g., Fill Soil Type).

Total Oral Nickel Exposure: Toddler (e.g. Fill Soil Type)

(% Additional Soil/Dust Exposure, MOECC Assumptions)



The areas of disagreement have to do with which estimated daily nickel intake should be applied where toddlers are concerned. Vale uses a toxicity reference value of 20 micrograms per kilogram of body weight per day to assess risk where toddlers are concerned. Since the CBRA research commenced, MECP has become aware of newer research that sets out 11 micrograms per body weight per day. MECP identified other risk concerns associated with risk calculations associated with nickel and which Vale is being asked to consider in the CBAP.

The other areas of concern include: the agricultural risks and the identification and evaluation of alternatives, and the effectiveness of all these measures and the proposed measures within each of the five bands where nickel exposure to toddlers is concerned. With respect to the municipal drains and the identification and treatment of woodlots, Vale is clarifying a work plan and identifying consultants to do the work. The work plans will be provided to MECP for comment before they are finalized.

4) Given the disagreements over the science and its application, on what basis is the decision being made to implement the CBAP?

There is nothing in the Environmental Protection Act or Ontario Regulation 153/04 that speaks to Community Based Risk Assessments. However, the MECP considers Community Based Risk Assessments (CBRA) a viable option to address risks to human health, ecological health and the natural environment arising from the migration of contaminants from a source site to an entire community. Single affected properties that are to be converted to a more sensitive use under Ontario Regulation 153/04 may have to be cleaned up to MECP site condition standards or be subject to Site Risk Assessment (SRA).

CBRAs are used to:

- Evaluate the soil and groundwater quality over an entire community a ;*
- Assess potential health concerns for people and ecological systems within that community (wildlife and aquatic habitat);*
- Define mitigation objectives, soil and ground water management procedures and long term environmental protection requirements;*
- Are based on well-established processes outlined in guidance from the MECP that consider contaminants, receptors and exposure pathways; and*
- Are a collaborative, iterative and voluntary process.*

The letter from Kim Groombridge states the Niagara Region Public Health Department “has not detected any specific adverse effects to exposure to soils in Port Colborne.” On that basis it was decided that Vale should commence discussions with the community to obtain feedback in order to finalize the CBAP and continue research on further matters to address outstanding MECP and community concerns. MECP has asked Vale to prepare a final CBAP that incorporates MECP, Port Colborne and stakeholder feedback.

A major challenge with studying environmental health contamination is that the diseases they cause are generally diseases that can be caused in many other ways, and so those diseases already exist in the population—the risk to the public is never zero anywhere in the world.

When a physician sees a skin rashes, reproductive issues, cancers, or other illnesses that might be caused by nickel contamination, they are not going to be able to attribute that illness to nickel exposure, versus other causes, versus general unfortunate luck that leads a percentage of our population to suffer from those illnesses. Therefore, it is impossible ever to know definitively if environmental contamination is causing illness or not. All Public Health can do is look for indirect evidence: if there are an unusually high number of illnesses that might be caused by environmental contamination, or if those who have the most exposure (and therefore the most risk) have been affected.

The CHAP studies circa 2004 attempted to look for this sort of evidence, using the best research and evidence available at the time. Fortunately, Public Health did not find evidence that residents of Port Colborne, including those living near the Vale plant were suffering ill health. The depth of this assessment, and that Public Health did four different assessments all of which returned similar results gives us confidence in the conclusion.

Ongoing surveillance has not identified any new evidence of risk to health, which is further reassuring.

The CBRA included a Human Health Risk Assessment which concluded that the nickel contamination has not resulted in unacceptable risks to health in Port Colborne. This is consistent with all the earlier Public Health findings.

Notwithstanding there being no evidence of unacceptable health risks, Vale with the input of MECP and Public Health, are taking precautionary actions within their CBAP (Community-Based Action Plan) to further protect the people of Port Colborne, especially those nearest to the Vale plant, from any risk that may have resulted from nickel contamination.

Public Health believes that given consistent findings of research and health assessments, as well as proactive measures announced by MECP and Vale to protect residents, there is little reason for ongoing concern for the people of Port Colborne, including those living nearest to the Vale plant.

5) How many, if any orders has the MECP Director issued under the Environmental Protection Act to INCO/Vale for cleanups off site?

One order was issued to clean up 25 properties with nickel concentrations in soil at levels greater than 8,000 ppm. Of those 25 properties all but one has been cleaned up. These properties are situated within the area bounded by Louis Street to Rodney Street and Fares Street to Davis Street.

6) Which areas were remediated earlier by INCO/Vale and to which standards? Are those standards the same as those being applied in the tiered CBAP approach?

See the answer to question 5 above. Areas above 8,000 ppm lie within the area presently covered under the CBAP. The same standard appears to be incorporated in the CBAP's fifth tier.

For properties having soils with nickel contamination over 100 ppm, changes in land use to sensitive uses require phase 1 environmental site assessments (ESA) in order to obtain a Record of Site Condition. The owner will have to retain the services of a Qualified Person to conduct the phase 1 assessment. Depending upon the results of the phase 1 ESA, a Phase 2 ESA may be required. The Phase 2 ESA involves soil and groundwater testing. Based on the Phase 2 ESA, the owner may choose to remove the contaminated soils such that the soil contaminants are below the appropriate site condition standards. Subsequently the Qualified Person can proceed to file a Record of Site Condition.

If the Owner chooses not to remediate the property, the Qualified Person can prepare a Site Risk Assessment (SRA). The SRA must consider any contaminants associated with the property which could be more than the four contaminants that Vale identified. The Qualified Person can use the materials in the Vale documents in preparation of the SRA but ultimately the SRA is property specific and developed by that Qualified Person using current MECP legislation and policy to guide him/her.

The SRA will be reviewed in detail by MECP and the MECP will provide feedback. If the MECP's concerns are addressed (see concerns raised by usage of toxicity reference values in the answer to question 4 above) the Ministry will then accept the Risk Assessment.

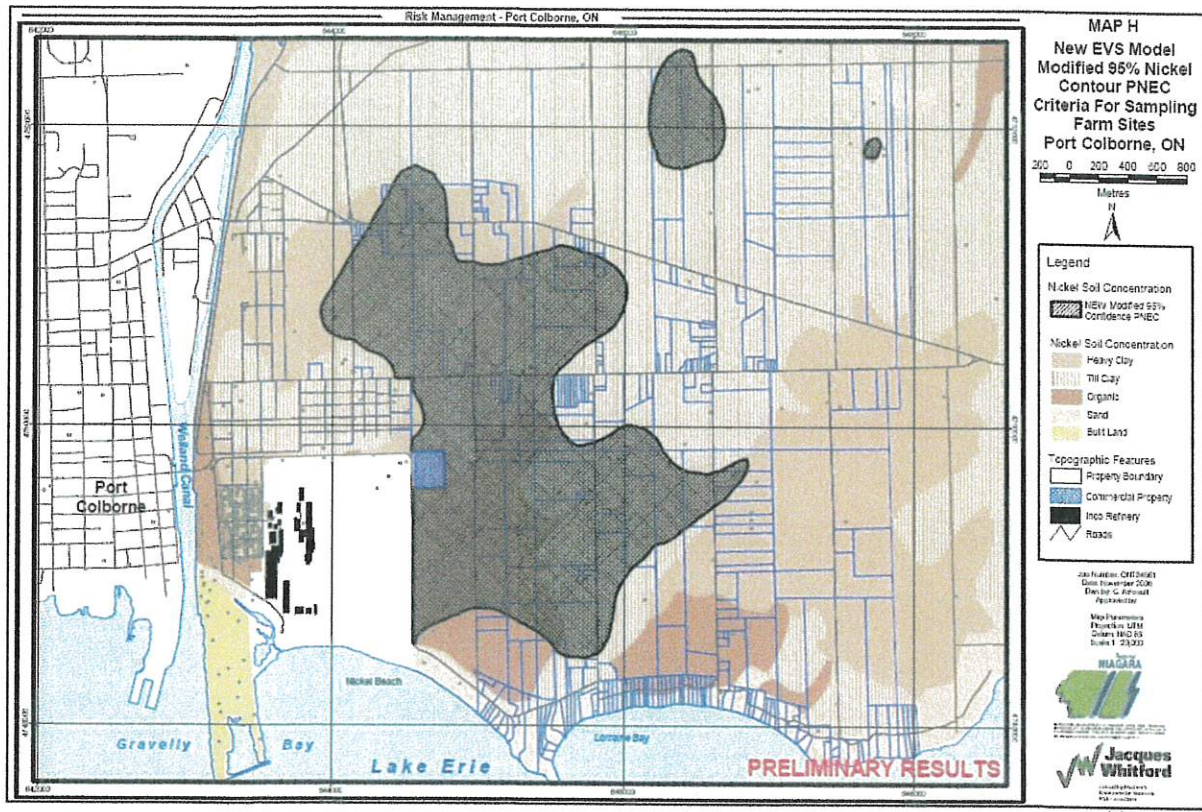
Any SRA management measures identified in the SRA will be detailed in a Certificate of Property Use which will bind current and future owners to follow. The SRA measures will ensure that human health and the environment are protected.

7) What other research is being undertaken: e.g., where rural residences are concerned: where agriculture is concerned: and where the agricultural drains are concerned?

Where rural and urban residences are concerned outside the area bounded by Louis Street to Rodney Street and Fares Street to Davis Street, no action is recommended. There are residences outside the area mentioned previously which fall within Bands 2 of the CBAP's tiered approach to risk assessment (see attached Figure 2-5 of Jacques Whitford's Nickel in Soils the Human Health Assessment. Vale's action plan includes working with farmers to evaluate agricultural practices to reduce risk to crop yields (see Map H attached). However, MECP is seeking the identification and evaluation of agricultural remediation alternatives. Further research is also to be undertaken on the municipal drains and those woodlots, particularly those owned by Vale east of Reuter Road. No mapping is available of the woodlots proposed to be examined.

Where vegetable and flower gardens are concerned and located within the bounded area described above, advice has been provided to gardeners on how to address nickel in the soils.

MECP has asked Vale to prepare a final CBAP that incorporates MECP, Port Colborne and stakeholder feedback, which would be expected to include rationale for selection of properties for action and proposed communication to property owners.



8) What is the status of the research for items listed in #7 above?

Consultants have not been hired for the woodlot and municipal drain studies. The identification of work plans to be reviewed with MECP and the search for consultants is underway.

With respect to the CBAP, Vale's document which we are using for this analysis is dated March 2017. The MECP comments are dated August 10, 2018. There is no subsequent amended Vale CBAP that addresses these MECP comments. That document may be forthcoming as the additional research is undertaken. It appears that this CBAP is incomplete and several further steps may unfold. No contact with municipal staff has been made where the municipal drains and where records of site condition are concerned. Where the mapping of woodlots is concerned, the work will begin with the Reuter Road woodlots but may be extended to other woodlots.

9) What steps are being planned going forward and what are the key decisions to be made and time frames?

This is unknown at this time: the work programs and consultants have not been selected. That appears to be something that will emerge as the research work unfolds. Within the residential area bounded by Louis Street to Rodney Street and Fares Street to Davis Street, that work is unfolding quickly, it seems.

10) What measures will Vale undertake to assist the municipality in implementing the planned uses contained in its Official Plan and Zoning Bylaw when planning approvals are sought for uses which are more sensitive than those presently existing?

A record of site condition or SRA will be required when a land use changes to a more sensitive use where nickel exceeds 100 ppm. There may also be restrictions required depending upon the outcome of the woodlot study.

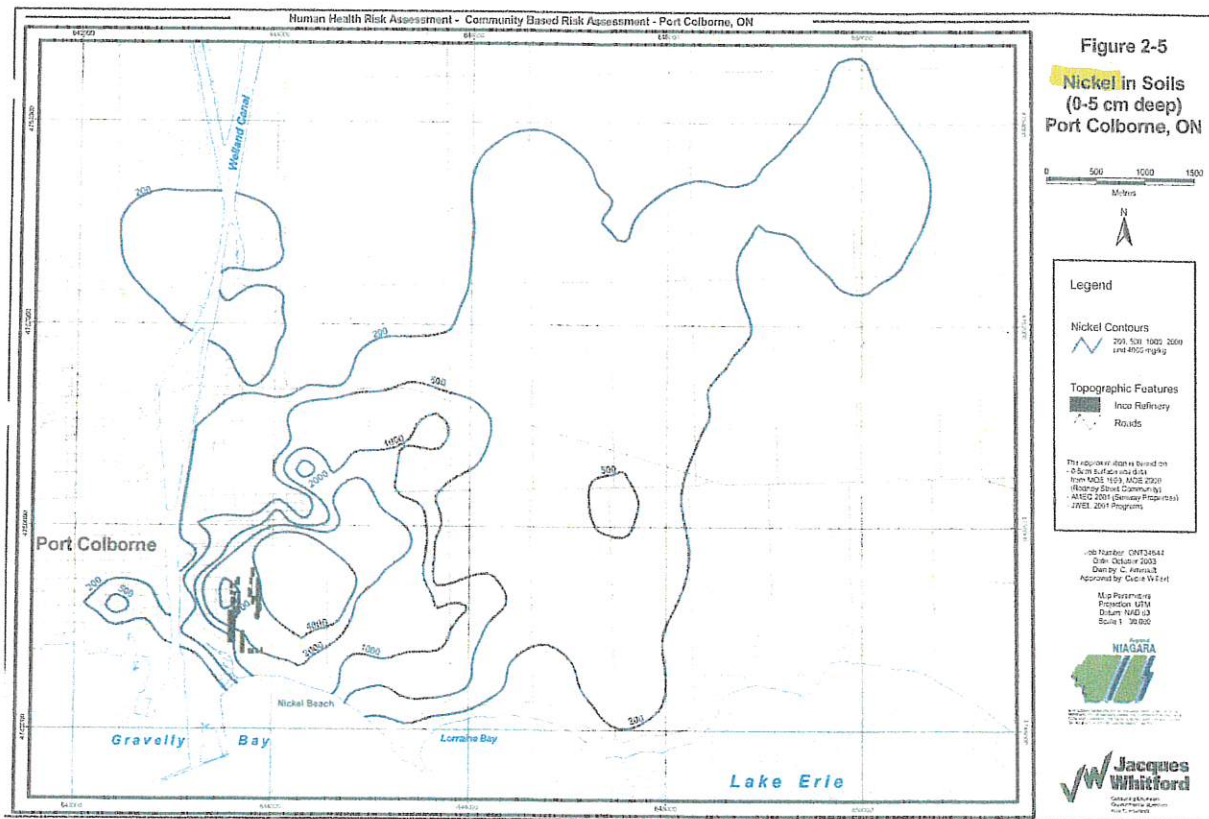
Planning approvals at the municipal and regional levels routinely require phase 1 environmental studies. These studies may trigger requirements for a record of site condition as the levels found in the soils within the plume area are well above the triggers established in Ontario Regulation 153/04.

There is an understanding between Vale and MECP that documents that Vale has made available publicly can be used by a Qualified Person when site specific work is undertaken for the purposes of preparing a SRA. MECP staff have pointed out that the Municipality can assist landowners by offering CIP and/or tax incremental relief for the necessary brownfield remediation or capping where phase 2 studies require these measures. MECP has asked Vale to prepare a final CBAP that incorporates MECP comments, which include a recommendation to consider sites that are subject to the requirements of Ontario Regulation 153/04 with the development community.

But who pays for these measures, the landowner and/or the municipality?

11) What is the best outcome we can reasonably expect when the actions proposed to be undertaken are completed?

It is prudent to minimize exposure to nickel contamination to minimize toddler health risk as these measures should also be preventative of health risk to other age categories. To that extent implementation of the steps agreed to between Vale and MECP appears reasonable. Where there are gaps in the analysis of risk and challenges imposed on landowners and the municipality's ability to plan land uses to provide for its growth and citizen's needs, additional action is needed. One gap that needs to be closed is the treatment of grassed sections of municipal right of ways within bands 4 and 5. If remediation involves soil removal in the adjacent lots, the soil should also be removed within the right of ways where those portions are grassed. Further thought needs to be given to the management of these operations on the right of ways when removal is undertaken.



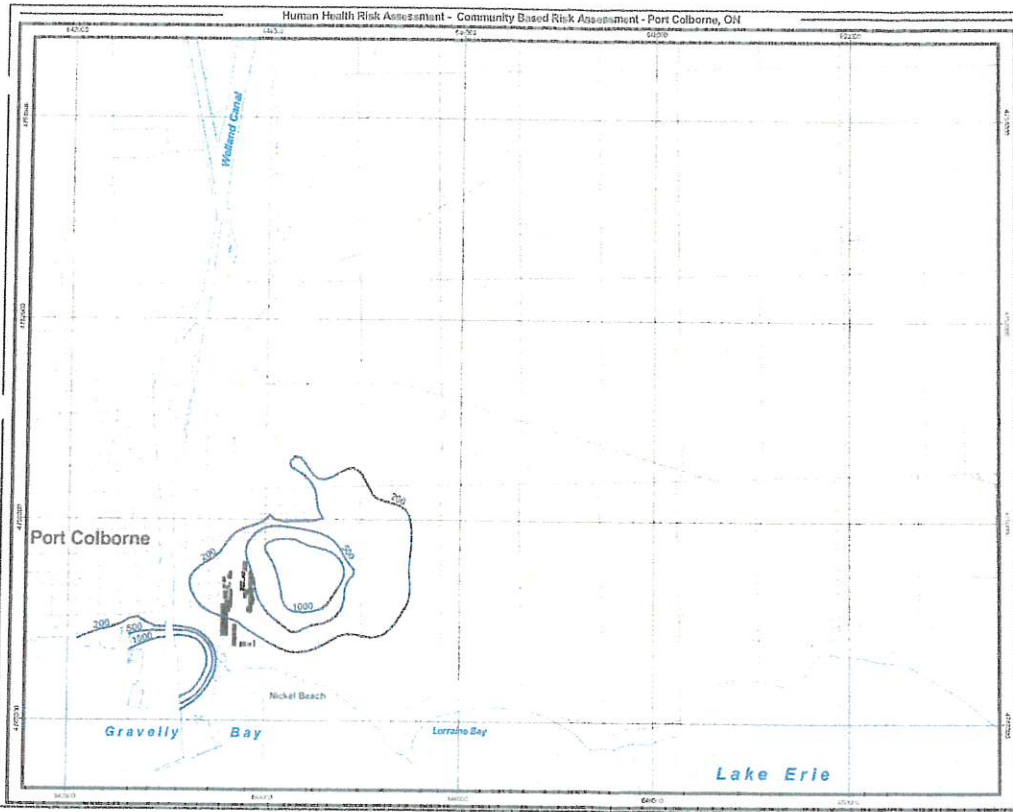


Figure 2-6
Copper in Soils
(0-5 cm deep)
Port Colborne, ON

0 500 1000 1500
 Meters

N

Legend

Copper Contours
 200 500 and 1000 mg/kg

Topographic Features
 Inco Refinery
 Roads

The information is based on:
 - Geochemical Data
 - Soil Sampling Data
 - Data from the 1990s
 - Data from the 2000s
 - Data from the 2010s
 - Data from the 2010s
 - Data from the 2010s

Job Number: ONT31644
 Date: October 2003
 Drawn by: C. Bennett
 Approved by: Craig Whitford

Map Parameters:
 Projection: UTM
 Datum: NAD83
 Scale: 1:50,000

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Jacques Whitford
 Environmental Services
 Inc.

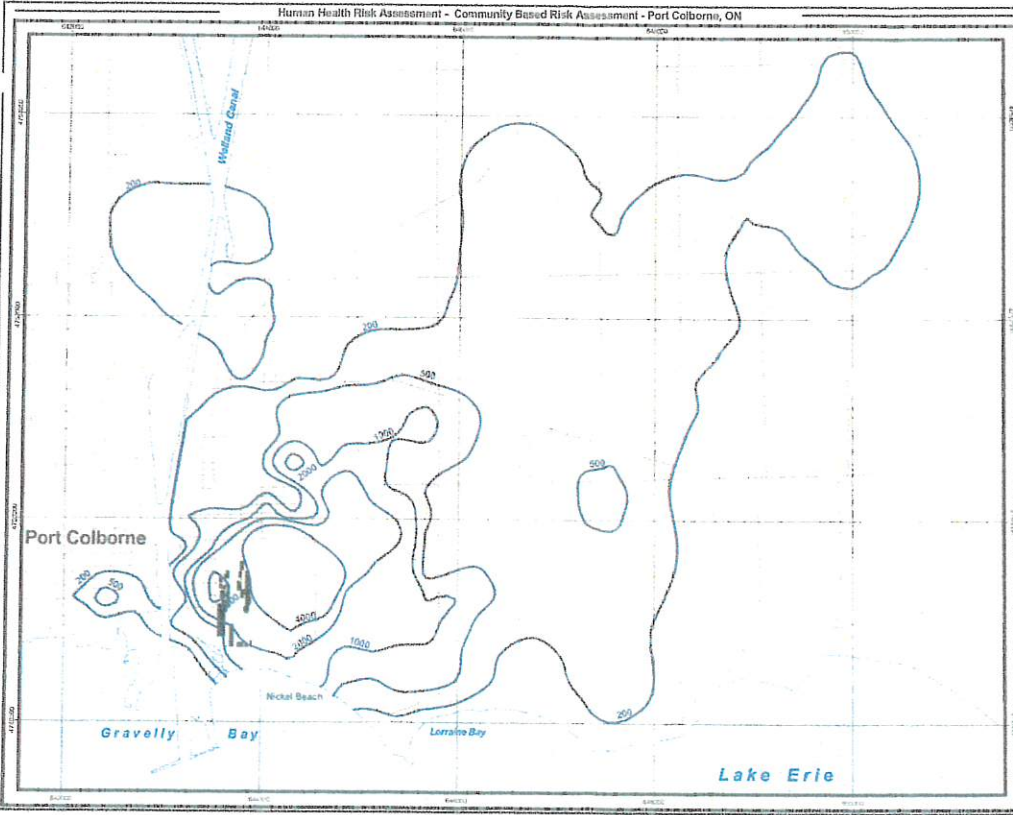


Figure 2-5
Nickel in Soils
(0-5 cm deep)
Port Colborne, ON

0 500 1000 1500
 Meters

N

Legend

Nickel Contours
 200 500 1000 2000 mg/kg

Topographic Features
 Inco Refinery
 Roads

The information is based on:
 - Geochemical Data
 - Soil Sampling Data
 - Data from the 1990s
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