

**Minutes of a Meeting of the Environmental Authority
Held on Wednesday, 24th January 2024
At the Department of Environment and Natural Resources, Botanical Gardens, Paget
and Remotely using Teams Teleconference**

PRESENT: Ms. Davida Morris, Chair (Initially by remote access, then in person)
Mr. Eugene Saunders, Deputy Chair
Mr. Willie Ferguson, Member
Mr. Harry Matthie, Member
Mr. James Morrison, Member
Mr. Jonathan Starling, Member (by remote access)

ADVISORS: Dr. Geoff Smith, Environmental Engineer, DENR
Dr. Shaun Lavis, Hydrogeologist, DENR
Mr. Tarik Christopher, Acting Chief Engineer, Public Works (by remote access)
Mr. Armell Thomas, Acting Chief Environmental Health Officer (by remote access)
Ms. Crystal Baxter, Environmental Health Officer
Ms. Patricia Hollis, Environmental Officer, DENR

BELCO: Mr Mark Pacheco, Director of OHSE and Business Continuity
Ms Kascia DaSilva, OHSE Coordinator
Ms. Hannah Lampit, Environmental Technician
Mr. Matt Thompson, BELCO Consultant
Mr. Barry Kline, TRC Senior Project Engineer (by remote access)
Mr. Sean Lorden, TRC Senior Project Engineer (by remote access)
Ms. Kirsten Myers, TRC Project Manager (by remote access)

ABSENT: Mr. Andrew Barnes, Member
Mr. Paul McDonald, Acting Senior Planner, Dept. of Planning

1. Welcome to New Member: Mr. Harry Matthie

Mr. Harry Matthie was welcomed as a member of the Environmental Authority.

2. Confirmation of Minutes

The Minutes of the meeting no. 387 were signed by the Chair and those of meeting no. 388 were approved and signed by the Chair.

3. BELCO Presentation on their Environmental Remedial Obligation (ERO) Project

BELCO Representatives gave a presentation on their plan to remediate oil contamination below ground near the site of the now demolished Old Power Station (OPS), 27 Serpentine Road, Pembroke. The ERO report was submitted to the Department of Environment and Natural Resources in December 2023 in compliance with their operating licence conditions.

3.1 History

A review of the site's history from marshland to quarry to electrical generation was given. It was acknowledged that the present oil contamination was a result of historic leaks and poor practices.

Between 2001 and 2020, concerted efforts were made to recover the waste oil using an enhanced dual phase vacuum extraction system. About 340,000 litres of oil have been removed, leaving about 34,000 litres of recoverable product in the ground near the old power station. Recovery of waste product was ceased in 2020 due to the demolition of the OPS and loss of recovery wells in this area.

3.2 Determination of Potential Sensitive Receptors to Remaining Hydrocarbons

3.2.1 Impact to Groundwater

Impact to groundwater is not considered to be a concern because:

- Petroleum releases were of non-volatile, longer chain hydrocarbons (HAGO, weathered diesel, and lubricating oils)

- There were minimal volatile organic fractions in the petroleum
- Groundwater sampling in 2021 showed minor detections of petroleum-related compounds and metals in groundwater relative to RBCA guidelines
- The nearest Government supply wells on Berkeley Road are some 500 m away from the plume

The Acting Chief Environmental Health Officer commented that there could be privately owned wells from which members of the public drink untreated ground water. This is contrary to the Public Health Act, and suggested DENR and Dept. of Health convene to determine how best to resend this message out to the public.

3.2.2 Vapour Intrusion

Preliminary receptor information suggests that vapour intrusion from the ground and into overlying buildings is likely not a concern:

- Petroleum releases were of non-volatile, longer chain hydrocarbons (HAGO, weathered diesel, and lubricating oils)
- Most buildings in the plume area have been demolished
- A light non-aqueous phase liquid (LNAPL) is known to extend under remaining buildings 10 and 12.
- Preliminary EPA screening of compounds detected in 2020 groundwater samples shows a low risk of vapour intrusion

3.2.3 Site Worker Direct Exposure

Preliminary receptor information suggests that direct exposure is not a concern:

- Petroleum releases were of non-volatile, longer chain hydrocarbons (HAGO, weathered diesel, and lubricating oils)
- Most buildings, and associated worker areas, in the plume area have been demolished
- Site is covered with several feet of crushed concrete, limiting access to underlying soils
- Health and Safety standard operating procedures and training will be put in place to address work that might disturb impacted soils.

The Acting Chief Environmental Health Officer asked if asbestos was on site. It was reported that there is very little as determined by BELCO using Ministry of Health - Approved asbestos contractors. If any is detected, it will be handled according to accepted protocol.

3.2.4 Pembroke Canal

Ongoing contribution of hydrocarbons to the Pembroke Canal is a concern:

- Historically, LNAPL has been measured in wells immediately adjacent to the Canal
- Historical observations of sheen on the surface of the Canal
- Access for remediation near Canal is limited do to the instability of its banks and building code setback requirements
- Maintenance and remediation activities would need to keep minimum cross-sectional area and slope/grades

Additional investigation and remediation is required to address the risk to Pembroke Canal.

3.3 Supplemental Investigation Paths

3.3.1 Further site investigations will be undertaken to determine:

- Present site topography including elevations of existing monitoring wells
- Conditions and suitability of all remaining monitoring wells
- If any historical monitoring wells adjacent to the Canal can be added to ongoing Quarterly events
- The most current LNAPL gauging data for all monitoring wells with unobstructed screens installed at suitable depth intervals.

3.3.2 Actions to be Taken

- Installation of a number of test pits to determine where LNAPL may be present adjacent to the Canal
- Install step-in and step-out test pits to determine the LNAPL zero thickness contour
- Install several test pits in areas where historical data has shown the greatest thickness of LNAPL onsite
- Collect soil samples from test pits for laboratory analysis for LNAPL saturation and mobility testing.

It is intended to focus work on the north of the former location of the OPS, as other areas are not an imminent threat to the Canal.

3.3.3 Other Associated Actions

- Convert test pits into monitoring/potential LNAPL extraction points
- Ongoing gauging of existing viable monitoring wells for LNAPL
- Provide recoverable LNAPL estimate (34-37 cubic meters from Dillon estimate 2019)
- Install cutoff barrier for LNAPL adjacent to Canal if warranted
- Intercept LNAPL adjacent to Canal and other areas via passive skimming/adsorption, active skimming, periodic well evacuation, etc.
- Potentially use the oily water treatment facility to treat remediation wastes

Constraints to activities include the presence of remaining structures (buildings, foundations, active utilities; operational areas being used by BELCO Bulk Generation; piles of crushed concrete.

3.4 Project Schedule

December 2023 – preparation of Supplemental Remedial Investigation (SRI) and Remedial Alternatives Plan

January 2024 – presentation of the path forward to DENR

First Quarter 2024 – submission of SRI to DENR and agreement of proposed work

Second/Third Quarter 2024 – Implementation of SRI Work Plan

Fourth Quarter 2024 – Evaluation of data from SRI Work Plan

2025 – More detailed design/procurement/implementation of remedial action.

Matt Thompson and representatives from BELCO and TRC were thanked for their presentation.

4 Applications for Construction Permits and Operating Licences (New)

4.1 CP-809, OL-1238 Victor and Adria Richards

The Authority **APPROVED**:

the application for construction permit and operating licence for one 22 kW propane generator at Lot 4, West Estate Road, Warwick, subject to standard conditions.

4.2 CP-810, OL-1239 Blue Investment SPE Ltd

The Authority **DEFERRED**:

the application for a construction permit and operating licence for a 750 kW diesel generator at 91 Front Street, Hamilton, pending submission of additional details.

4.3 CP-812, OL-1243 Paget Health Services

The Authority **APPROVED**:

the application for construction permit and operating licence for a 2500 kW diesel generator at 7 Point Finger Road, Paget, subject to standard conditions and providing no objections are received during the advertised period.

4.4 CP-808, OL-1236 Sinky Bay Ltd

The Authority **APPROVED**:

the application for construction permit and operating licence for a 2000 Igpd waste water treatment plant at 6 Sonesta Drive, Southampton, subject to standard conditions.

4.5 OL-1237 Winchester Global Trust Col Ltd for Nick Trust

The Authority **APPROVED**:

the application for an operating licence for a 500 gpm fire pump at 13 Sharon Lane, Pembroke, subject to standard conditions. The Authority noted that this was previously approved in 2009 (CP-215, OL-563)

4.6 OL-1240-1 to OL-1240-3 Neptune Group “Andromeda J”

The Authority **APPROVED**:

the application for operating licences for a 465 kW auxiliary engine, 42.2 MJ/kg boiler, and 750 gpd WWTP onboard the Andromeda J container ship, subject to standard conditions.

4.7 OL-1241-1 to OL-1241-2 Meyer Agencies “Ile de Molene”

The Authority **APPROVED**:

the application for an operating licences for a 2,320 KW genset and 200 m³/day WWTP on board the Ile de Molene cable ship. subject to standard conditions.

4.8 CP-811, OL-1242 Colvin Manning

The Authority **APPROVED:**

the application for a construction permit and operating licence for a sand sifter at Lot 10, Seamount Lane, Smiths, subject to standard conditions and providing no objections were received during the advertised period.

5 Applications for Construction Permits and Operating Licences (Reissues)

5.1 The Authority **APPROVED:**

the applications for reissue of operating licences listed on the four-page printout, subject to standard conditions, with the exception of: OL-145 (Grotto Bay WWTP), OL-526 (Fuge genset) and OL-114 (BELCO). It is noted that the Annual Report for the Grotto Bay WWTP had been received but there remained some issues with the data presentation that required further clarification and OL-526, which is the replacement of a small generator with a slightly larger one. DENR is still waiting on the noise data for this replacement genset. OL-114 will be subject of discussion at a future meeting.

6 Applications for Import Permit No. 190 Chilltech Ltd

6.1 The Authority **APPROVED:**

the application submitted by the Chilltech Ltd for the importation of forty (40) cylinders each with 25 lbs of R-448A, subject to standard conditions.

7 Applications for Water Rights (New)

7.1 The Authority **APPROVED:**

WR 5803 Warwick Academy, 117 Middle Road, Warwick. Domestic disposal borehole for rainwater, subject to standard conditions.

7.2 The Authority **APPROVED:**

WR-5804 Blue Investment SPE Ltd, 91 Front Street, Hamilton. Domestic disposal borehole for rainwater, subject to standard conditions.

7.3 The Authority **APPROVED:**

WR-5805 Colvin Manning, Lot 10 Seamount Lane, Smith's domestic supply to 11 toilets and 4 taps, subject to standard conditions.

8 Applications for Water Rights (Reissues)

8.1 The Authority **APPROVED:**

the reissuance of Water Rights on the three-page printout, subject to standard conditions, with the exception of five indicated as withdrawn. It was noted that the BELCO water rights for ground water monitoring were issued for a one year period.

9 Date of the Next Meeting

The next meeting of the Environmental Authority was scheduled for 8:30 am, Wednesday 31 January 2024 in the DENR Boardroom.



CHAIRMAN



DATE