

**Minutes of a Meeting of the Environmental Authority
Held on Tuesday, 29 June 2021
At the Department of Environment and Natural Resources, Botanical Gardens, Paget
and Remotely using Webex Teleconference**

PRESENT: Ms. Davida Morris, Chair, (by remote access)
Mr. Eugene Saunders, Member
Mrs. Susan Armstrong, Member, (by remote access)
Mr. Andrew Barnes, Member, (by remote access)
Mr. Willie Ferguson, Member
Mr. Jonathan Starling, Member, (by remote access)

ADVISORS: Dr. Geoff Smith, Environmental Engineer, DENR
Dr. Shaun Lavis, Hydrogeologist, DENR
Mr. Kirk Outerbridge, Chief Engineer, Public Works, remote access
Mr. Tom Crossan, Chief Environmental Health Officer (by remote access)
Ms. Patricia Hollis, Environmental Officer, DENR, Recording Secretary

ABSENT: Mr. James Morrison, Member
Mr. Paul McDonald, Acting Senior Planner, Dept. of Planning
Mr. Armell Thomas, Senior Environmental Health Officer
Mr. Tarik Christopher, Principal Engineer (Water & Sewage), Public Works

IN ATTENDANCE:
Ms. Nephisa Smith, Summer Student, DENR

1. Confirmation of Minutes

Confirmation of the Minutes of the meeting held on 25 May 2021 was deferred. They are to be considered at the next in-person meeting.

2. Corporation of Hamilton—Upgrades to Sewer and Treatment Plant

It was reported by the Chief Engineer, Ministry of Public Works (MPW), that meetings have been held between the Corporation of Hamilton (CoH) and the MPW to discuss proposed improvements to the City of Hamilton waste water treatment plant. It has been agreed in principle that funding will be approved for upgrades if they can be shown to be complementary to the Government's sewage master plan. There has been an exchange of information between the CoH and MPW; the resulting revision will be sent to the Minister of Works for approval. A copy of the agreement will be sent to the Environmental Authority from MPW.

3. Ministry of Public Works—Disposal of Raw Ash at the Airport.

The MPW Chief Engineer confirmed that raw ash should not be disposed of at the Airport Waste Facility as sufficient funding has been secured for the current fiscal year. This item will be removed from future EA Agenda "Matters Arising," as necessary.

4. Elbow Beach Waste Water Treatment Plant - there was nothing to report.

5. Review of BELCO's Reply to EA's Letter Dated 4 March 2021

Prior to BELCO submitting its final reply to the Authority's letter of 4 March 2021, the Authority members and advisors requested that the following statements be addressed:

- a) Consideration of using the term "downdrafting" for the process whereby exhaust emissions are entrained into meteorological downdrafts created as a result of the turbulence when air passes over topographic barriers such as hills. DENR understands that this process is leading to exhaust emissions being drawn down to grade level in the Ocean Lane area. Scientific justification should be provided in the report if BELCO disagrees that downdrafting should be referred to explicitly and/or is a causative process contributing to poor air quality at Ocean Lane.
- b) A brief assessment of the results of the AERMOD modelling undertaken prior to construction of the North Power Station (NPS) and since the air quality complaints started at Ocean Lane. DENR understands that this AERMOD modelling previously over-predicted contaminant concentrations at locations surrounding the NPS, including

- at Ocean Lane. BELCO should confirm whether it assess that the previous AERMOD modelling under-predicted emission concentrations at the Ocean Lane locality.
- c) Acknowledgement of the 41 exceedences of the UK air quality objective for sulphur dioxide since November 2020. Noted that the current tally of exceedances has risen recently to 44.
 - d) The expected increase in retail cost of electricity due to the change from HFO to more refined fuels that would address, at least, the exceedance of the UK air quality objective for sulphur dioxide.
 - e) A summary of the cost benefit analyses undertaken to date to assess secondary abatement options.

The Authority **AGREED:**

that DENR shall provide a draft letter which shall be circulated to them via email for their consideration.

6. Review of BELCO's Response to EA Letter of 26 May 2020

In its letter to BELCO on 26 May 2020, the Authority requested 6 actions that are now largely complete. As the required monthly reporting is repetitive with little new information provided, BELCO is asking for the Authority to consider their requests as having been fulfilled:

- a) Deploy air quality monitoring equipment to Ocean Lane (BDA 4). Complete, monitoring results being supplied regularly.
- b) Provide for remote analysis of data from BDA 4. Complete.
- c) Determine source of pollutants. East Power Station and North Power Station are both contributors. This will be provided in a final monthly report.
- d) Sample water tanks for sediment and water quality. Complete and reported to the public.
- e) Consider additional mitigation measures to address strong odours of exhaust fumes at Ocean Lane. Not complete. BELCO is waiting to have sufficient air quality and meteorological data to complete this assessment.
- f) Provide monthly progress reports to DENR on a) to e) above. Completed (on going) to January 2021.

The Authority **AGREED:**

that DENR shall provide a draft letter to BELCO via email to request:

- 1) Provision of a monthly summary of monitoring results (air quality at BDA 4; soot fallout events, fuel tank odours) in a format that can be released to the public.
- 2) Additional modelling to show what exhaust velocity is required to create sufficient 'lofting' of the exhaust for given wind speeds in order to avoid 'downrafting' of fumes to Ocean Lane. BELCO shall provide details of options for increasing the 'lofting' and exhaust velocity.
- 3) Consider additional mitigation measures to address strong odours of exhaust fumes at Ocean Lane where it is recognised in the most recent monthly report that BELCO is waiting to have sufficient air quality and meteorological data to complete this assessment.

7. BELCO Water Quality Monitoring –update

It was reported that in 2020 DENR had sampled the water tanks of ten properties. The results, which were shared with the public, were compliant to Bermuda, UK and US drinking water standards and to World Health Organisation guidelines for combustion-related pollutants. In June 2021, 5 additional properties were sampled as part of the revised conditions to BELCO's operating licence OL-114. Also in June 2021, additional water tank analyses were being undertaken by DENR to sample much larger volumes of drinking water and to determine what levels of filtration are necessary to address these low levels of pollutants detected. All samples to date show the major contributing source of pollutants to be of vehicle origin.

8. Applications for Construction Permits and Operating Licences (New)

8.1 OL-1123 to OL-1131 MV Viking Orion

The Authority **APPROVED:**

the application for nine controlled plant on board the MV Viking Orion, namely two 5040 kW MGO auxiliary engines, one dry cleaning unit, one Scanship 600 m³/day waste water treatment plant; one 36 m³/hr air compressor, one 1390 kW emergency diesel generator, one 5 m³/hr oily water separator and two 6000 kg/hr MGO boilers, subject to standard conditions.

8.2 CP-698, OL-1102 K. Tomlinson

The Authority **APPROVED:**

the application for a 80 kW diesel genset at 1 Sandymount Lane, Warwick subject to standard conditions, providing a highly efficient muffler is installed. It was noted that the applicant had taken effort to site the generator in the location to minimise noise to the neighbours.

8.3 CP-717, OL-1133 Robertson's Drug Store

The Authority **APPROVED:**

the application for a 30 kW diesel genset at 24 York Street, St. George's subject to standard conditions.

8.4 CP-718, OL-1134 Skyport, LF Wade International Airport

The Authority **APPROVED:**

the application for a 60 kW diesel genset at LF Wade International Airport, St. George's subject to standard conditions.

8.5 CP-719, OL-1135 Miskiewicz

The Authority **APPROVED:**

the application for a 48 kW propane genset at 9 Jackson Drive, Devonshire subject to standard conditions and the installation of a barrier wall as per the application.

8.6 CP-720, OL-1136 Nicholas Ball

The Authority **APPROVED:**

the application for a 22 kW propane genset at 10 Jennings Road, Smith's subject to standard conditions.

8.7 CP-721, OL-1137 Horizon Communications Ltd.

The Authority **APPROVED:**

the application for a 56 kW diesel genset at 41 Cedar Avenue, Hamilton subject to standard conditions and providing no objections are received during the advertised period.

8.8 CP-722, OL-1138 Bermuda Government

The Authority **APPROVED:**

the application for a 60 kW diesel genset at 8 Middle Rd, Devonshire subject to standard conditions and providing no objections are received during the advertised period.

8.9 CP-723, OL-1139 Bermuda Government, Hamilton Health Centre

The Authority **APPROVED:**

the application for a 29 kW diesel genset at 67 Victoria Street, subject to standard conditions.

8.10 CP-724, OL-1140 Clare Russell

The Authority **APPROVED:**

the application for a 22 kW propane genset at 24 North Shore Road, Smith's subject to standard conditions.

8.11 CP-725, OL-1141 Eve Akle

The Authority **APPROVED:**

the application for a 20 kW propane genset at 49 Harbour Road, Paget, subject to standard conditions.

8.12 CP-726, OL-1142 James Jardine

The Authority **APPROVED:**

the application for a 22 kW propane genset at 24 North Shore Road, Smith's subject to standard conditions and providing no objections are received during the advertised period.

8.13 CP-604, OL-974 Bermuda Security Group

The Authority **APPROVED:**

the application for a 125 kW diesel genset at 1 Woodbourne Avenue, subject to standard conditions and providing sound attenuating blankets are used. The applicant shall enquire with the manufacturer to see if additional sound attenuating equipment can be added to the generator.

9. Applications for Operating Licences (Reissue)

The Authority **APPROVED**:

the reissue of operating licences on the three-page printout, subject to standard conditions, with the exception of OL-358 Belmont Hills WWTP and OL-1074 Skyport WWTP for which annual reports are due. The Authority noted that the annual report submitted for the Bermuda Hospitals Board steam sterilizer macerators (OL-229-6, OL-229-7) was technically insufficient and without some of the required data. The Authority asked that a letter be sent with the reissued licences, reminding the BHB of the need for full compliance with the operating licence conditions.

10. Applications for Chemical Import Permit

10.1 C-172 The Authority **TOOK NOTE** of Airpro’s application to import refrigerants listed below:

- 30 cylinders each with 24 lbs R 404A
- 40 cylinders each with 25 lbs R 410A
- 10 cylinders each with 25 lbs R 422D

10.2 C-173 The Authority **DEFERRED** Airpro’s application to import 10 cylinders each with 30 lbs R22. Information on the identification of the end users was requested.

10.3 C-174 The Authority **TOOK NOTE** of Cool Zone’s application to import 6 cylinders each with 420 g of R600.

11. Applications for Water Rights (New)

11.1 The Authority **APPROVED**:

WR 5699 Willowbank, 126 Somerset Road, Sandys for the disposal of rain water.

12. Applications for Water Rights (Reissue)

12.1 Public Works Port Royal Lens for public supply

The Authority **APPROVED** the reissuance of Water Rights subject to standard conditions:

WR-2901 – 2908 Pompano, 8 wells, 5000 Igpd each

WR 2910 – 2913 Port Royal Golf Course, 4 wells, 5,000 Igpd each

WR 2914 – 2910 Lemon Hill, 7 wells, 5000 Igpd each.

12.2 Water Right Reissues - Other

The Authority **APPROVED** the reissuance of Water Rights on the three-page printout, subject to standard conditions, except the five indicated as withdrawn.

13. Tobacco Bay Bathing Water Quality

The Authority **TOOK NOTE**:

of a recent exceedance of the bathing water standards at Tobacco Bay, St. George’s. A high *Enterococci sp.* bacteria count was recorded by the Department of Health. An investigation is underway to determine the cause. One potential source could be the temporary use of the outfall for the disposal of primary treated sewage from the new St. Regis Hotel. It was reported that the hotel’s connection to the new Southside waste water treatment plant is underway, but in the meantime, the effluent is being discharged to the Tobacco Bay outfall via a septic tank located at the St. George’s Club. Maintenance of the septic tank has been undertaken. The water quality in Tobacco Bay is known to be affected by the outfall during north-westerly winds. It was noted that the wind veered from north-westerly to easterly shortly after the water quality exceedance was detected and subsequent analyses demonstrated compliance to the bathing water standards. It is noted that once the new sewer mains are completed from St George’s to a new wastewater treatment plant at St David’s in January 2022, then the outfall at Tobacco Bay can then be decommissioned.

14. Date of the Next Meeting

The date of the next meeting was set for 8:30 am, Tuesday, 27 July 2021.



CHAIRMAN

26/10/2021

DATE