

**Minutes of a Meeting of the Environmental Authority
Held on Tuesday, 27 September 2022
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, Deputy Chair
Mrs. Susan Armstrong, Member (by remote access)
Mr. Andrew Barnes, Member (by remote access)
Mr. Willie Ferguson, Member (by remote access)
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 (by remote access)
Ms. Crystal Baxter, Acting Chief Environmental Health Officer
Ms. Patricia Hollis, Environmental Officer, DENR, Recording Secretary

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

1. Questions submitted via Government Website

In a recent Royal Gazette newspaper article about the ongoing environmental complaints caused by BELCO emissions, it was stated that the reporter reached out to the Environmental Authority but that no reply was received by press time. At the meeting of 30 August 2022, all Members confirmed that they had not been approached by the press. At the request of the Authority, DENR has determined that the online gov.bm website contact page contained an error such that any inquiries would not be forwarded to the Department of Environment and Natural Resources (*i.e.* pollutioncontrol@gov.bm). It was understood from IDT that the technical glitch would soon be rectified.

2. BELCO Air Quality Updates

2.1 The Authority TOOK NOTE:

- 2.1.1** There have been no update letters received from BELCO since June 2022. It is in these letters that the number of complaints, air quality monitoring results, and other operational challenges are reported. In light of the landowners request to have the Ocean Lane monitoring station removed, BELCO asked the question whether the monthly reporting was still necessary in light of much of the information presented now not being available. The Authority had not responded to BELCO's question as to whether or not to continue to submit monthly updates as conditioned in the two letters sent by the Authority to BELCO in July 2021. Refer to what the Authority has 'Agreed' to below.
- 2.1.2** There were two articles in the Royal Gazette on 26th September 2022 regarding complaints by residential neighbours of soot, downdrafting of exhaust fumes, odours from oil fumes near the service tank farm, and the withdrawal of funding for the Bermuda Government to provide oversight using BIOS of the Bermuda 4 (BDA4) monitoring station. It was noted that this factual information was taken from the published minutes of the Authority and from the BELCO annual financial report.
- 2.1.3** One potential site for BDA4 monitoring station that was adjacent to the original site had been identified and discussions with the landowner had progressed. However, the homeowner has unfortunately decided against having a monitoring station in his back garden due to privacy concerns. DENR and BELCO are working to identify another potential site in the Ocean Lane, Whitney Avenue and Hallett Crescent area, where the downdrafting of fumes is most prevalent. These considerations will be progressed following a site visit when the winds are 15 knots from the SW/SSW.

- 2.1.4** Government is no longer funding monitoring of the ambient air at sites including Prospect, East Broadway and BIOS, St George's in addition to providing for some technical oversight for the BDA4 BELCO monitoring station. The Chair confirmed that she will write to the Minister asking for this to be reconsidered.

2.2 BELCO Standard Operating Procedure No. 11

There was much discussion on BELCO's proposed standard operating procedure (ENV. SOP No. 11) for partial primary abatement when the risk of downdrafting at Ocean Lane, Pembroke is high (*i.e.* winds from the SSW/SW and greater than 15kts).

The ENV. SOP No. 11 states:

- *1.2. Engine run-ins requiring low loads (<80%) shall not be conducted when wind conditions are out of the SW/SSW (210-225°) at >15 knots.*
- *2.2. If adverse conditions considered to continue (Windguru) then Belco Air Quality Decision Matrix shall be used to switch EPS to LFO until wind conditions no longer meet above wind direction/speed.*

2.3 BELCO's Operating Licence Reissue & Conditions

There was much discussion on proposed changes to BELCO's operating licence conditions, but with the time constraints, the Authority **AGREED**:

that DENR will circulate draft conditions highlighting the latest amendments that were approved in December 2021 in addition to areas where new conditions may be necessary to address their current concerns. These will be considered further at the next meeting.

2.4 The Authority AGREED:

that DENR will withdraw the two letters written to BELCO in July 2021 and replace them with a new letter for the Authority to review that addressed the following:

- a) Request clarity on and implications of ENV. SOP No. 11 to include the definition of "adverse"; whether the switch to Light Fuel Oil (Diesel) would occur based on predicted weather reports or only after receipt of a complaint. It is noted that the Bermuda Weather Centre has identified that in 2019 there were 34 periods of winds at >15 knots from the SW/SSW. For a 15-minute limit level for sulphur dioxide this could potentially lead to more than the maximum number of 35 exceedances per year being exceeded. A question was also raised as to whether the ENV SOP No.11 would apply to switching the North Power Station engines to Light Fuel Oil (*i.e.* road Diesel) in addition to the engines of the East Power Station which are currently specified in the SOP.
- b) Discuss other solutions to help mitigate the downdrafting phenomenon, such as increasing the height of the flues (only) beyond the height of the existing concrete stack. Details that prevent the height of the concrete stack or replacing the NPS stack with a higher one should also be provided;
- c) Request continuation of monthly update letters to notify the Authority of complaints related to soot, downdrafting and odours from the fuel tank farm in addition to any operational challenges.
- d) Report on the development of all other methods being investigated by BELCO, BWSC and MAN to help mitigate soot emissions. This would include, but not be limited to, the installation of electrostatic precipitators and would also include any operational changes such as changes to the fuel/air combustion mixtures, potential changes to the inside surfaces of the flues, changes to the water/steam and walnut shell addition processes, etc.
- e) Report on the effectiveness of the activated carbon filters to address odours from hot oils located in the service tank farm area along St John's Road and to investigate for other potential sources of fumes from this area that cannot be readily mitigated using activated carbon filters (*i.e.* uncontained activities).

3. Elbow Beach Waste Water Treatment Plant

The Authority **TOOK NOTE**:

that there is nothing new to report: the main hotel is closed, wastewater is received only from one restaurant and some of the apartments of Fritholme Gardens. The effluent quality shows low biological oxygen demand with little settling (*i.e.* high suspended solids reading),

reflective of a low organic load system. The wastewater effluent quality will continue to be monitored.

4. Ministry of Public Works Tynes Bay August 2022 Operation Update

The Authority **TOOK NOTE:**

- 4.1 Stream #1 was available for 28 days in August and ran for 21 days (67%) and was off-line due to a clinker chute blockage on 16 August and planned maintenance from 28 August. Stream #2 was available for 31 days and ran for 29 days (93%). It was offline on 16 August for clinker chute blockage and on 28 Aug for an under-grate fire.
- 4.2 The turbine was available for 31 days and ran for 29 days at 47% efficiency. It was offline for 2 days due to the clinker/grate issue.
- 4.3 Total waste incinerated (excluding metal) was estimated at 4,316 tonnes. Total cooking oil was estimated at 50.9 tonnes.
- 4.4 15 loads of ash cement (equivalent to 70 tonnes of ash) were disposed of at the Airport Site as blocks or pours of ash-cement away from the revetment. The amount of unconsolidated ash removed was 17.4 tonnes.
- 4.5 1,535 MWh sent to BELCO 19 July through 17 August. Total MWh generated 1-31 August was 2,490 MWh.
- 4.6. The necessary repair to the foundation structure of one of the garbage hopper loading cranes was also discussed in addition to implications in the event of an additional failure to the backup loading crane that remains.

5. Changes to Standard Operating Licence Conditions – White Oils Storage

The Authority **AGREED:**

to amend the standard conditions to require the licensee to report spills occurring during offsite refuelling and bunkering processes.

6. Changes to Standard Operating Licence Conditions – Retail fuel Stations

6.1 The Authority **AGREED:**

to amend the standard conditions for retail service stations to require pipes associated with double walled tanks and below ground fuel delivery infrastructure to be double walled.

6.2 The Authority **AGREED:**

to amend the standard conditions for retail service stations to state that oily water separators are not required for service stations that serve marinas and boating traffic only.

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

7.1 CP-756, 757, 758, OL-1192, 1193, 1194 Bermuda Housing Corporation

The Authority **DEFERRED:**

the construction permit and operating licence applications for a waste water treatment plant and two generators at Bermudiana Beach Resort, 60 South Road, Warwick, pending submission of additional details.

7.2 OL-983-7 Meyer Agencies, Disney Magic

The Authority **APPROVED:**

The application for a 14m³/day waste water treatment plant aboard the Disney Magic, subject to standard conditions.

7.3 OL-1197 ACS Bermuda Trenching & Excavation

The Authority **APPROVED:**

the application for a portable sand sifter for use at sites with valid Department of Planning permits, subject to standard conditions.

7.4 OL-1198 Tower Contracting Ltd.

The Authority **APPROVED:**

the application for a portable sand sifter for use at sites with valid Department of Planning permits, subject to standard conditions

7.5 CP-781, OL-1199 Menzies Aviation

The Authority **APPROVED:**

the retroactive application for a construction permit and operating licence for a spray paint facility for their own vehicles and equipment to support operations at LF Wade Airport that is located at Menzies Aviation, 14A Kindley Field Road, St. George's, subject to standard conditions and providing no objections are received during the advertised period.

7.6 CP-759, OL-1196 Lou Maroun

The Authority **APPROVED:**

the retroactive application for a construction permit and operating licence for a 250 kW diesel generator at 20 South Road, Warwick, subject to standard conditions.

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

8.1 The Authority APPROVED:

The applications for reissue of operating licences listed on the two page printout, subject to standard conditions, with the exception of OL-142 (Corp of Hamilton WWTP) and OL-145 (Grotto Bay WWTP) which were deferred pending receipt of the annual report. The approved included the application for OL-390 Belmont Hills Golf Villas WWTP. Their annual report showing satisfactory maintenance and effluent quality had been submitted.

9. Applications for Import Permits

9.1 Apex Mechanical Permit 183

The Authority **APPROVED:**

the importation of 6 canisters, each with about 225 g C290 (propane) for use as a refrigerant, subject to standard conditions

10. Applications for Water Rights (New)

10.1 The Authority APPROVED:

WR-5765 Marico Thomas (Food Hub), Commercial Water Right at 95 Middle Road, Devonshire for the disposal of treated sewage effluent, subject to standard conditions and providing the borehole is sealed at least 40 feet below sea level.

10.2 The Authority APPROVED:

WR-5766 and 5767 Watlington Waterworks. Two Water Right application for two domestic rainwater disposal boreholes at Lot 6B Luke's Pond Drive, Southampton subject to standard conditions.

10.3 The Authority APPROVED:

WR-5768 Ms. Brangman and Ms Minks. Domestic Water Right at 17 Euclid Drive, Pembroke for the disposal of treated sewage effluent, subject to standard conditions and providing the borehole is sealed at least 40 feet below sea level.


11. Applications for Water Rights (Reissue)

The Authority **APPROVED:**

the reissuance of Water Rights on the one-page printout, subject to standard conditions

12. Date of the Next Meeting

The date of the next meeting was set for Tuesday, 25 October 2022.



CHAIRMAN

25 Oct. 2022

DATE