

**Minutes of a Meeting of the Environmental Authority
Held on Tuesday, 26 July 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
Mr. Willie Ferguson, Member (by remote access)
Mr. James Morrison, 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)
Mr. Tarik Christopher, Principal Engineer (Water & Sewage), Public Works (by remote access)
Mr. Paul McDonald, Acting Senior Planner, Dept. of Planning (by remote access)
Ms. Patricia Hollis, Environmental Officer, DENR, Recording Secretary

ABSENT: Mrs. Susan Armstrong, Member
Mr. Andrew Barnes, Member
Mr. Tom Crossan, Chief Environmental Health Officer
Mr. Armell Thomas, Senior Environmental Health Officer

1. Confirmation of Minutes

The Minutes of the meeting held on 28 Jun 2022 were approved and then signed by the Deputy Chair.

2. BELCO Air Quality Updates

The Authority TOOK NOTE:

- 2.1 BELCO's June 2022 update letter reporting complaints and progress to addressing the soot emissions, exhaust downdrafting, and fuel odours on St. John's Road had not been received before this meeting.
- 2.2 Two potential sites for BDA4 monitoring station have been identified. DENR and BELCO are working with the landowners to secure permission to site the monitoring station.
- 2.3 Government is no longer funding monitoring of the ambient air. The Chair confirmed that she will draft a letter to the Minister, asking for this to be reconsidered. Jonathan Starling agreed to assist drafting the letter.
- 2.3 Potential causes of soot emissions were discussed. The soot particles being ejected at too high a speed to be detected by the opacity meters, even when examining readings down to a frequency of milliseconds. There appear to be several causes of soot emissions including:
 - a) Operating the engines at low efficiencies (i.e. ~62%);
 - b) Bringing engines back on line after being offline for a period of weeks; and potentially
 - d) The water washing and nut-shelling operations to remove soot settled in the exhaust pipes and flues.It appears therefore that a simpler solution to the soot emissions may be the use of a cleaner, more-refined fuel, although this would result in a significant increase in the cost of electricity.
- 2.4 Possible solutions to the downdrafting of emissions to the Ocean Lane / Whitney Avenue area were outlined:
 - a) BELCO has proposed implementing a partial primary abatement standard operating procedure (SOP) for use when the winds are from the SW/SSW and above 15 knots (i.e. better quality fuel used during these weather conditions). DENR is in the process of commenting on the SOP and is waiting on further comment from the Bermuda Weather Centre.

- b) Use of scrubbers to clean the exhaust is not practical considering scrubber size and available space on the BELCO site;
- c) Use of a better quality (lower sulphur) fuel. This will result in a measurable increase in the cost of electricity.
- d) Extending the flues located within the stacks. It is acknowledged that the stacks themselves cannot be raised because the foundations cannot support the extra weight. It may be possible to extend the flues higher and so prevent the downdrafting of emissions or to perhaps increase the lower wind threshold of 15 knots.

The Members discussed whether the proposed amendments to the Clean Air Regulations will require BELCO to take prompt action to ensure its compliance. There was also discussion on the potential health effects of emissions on the population near BELCO. Dr. Smith said he had referred the matter to the Ethics Board of KEMH. Unfortunately, health data is not currently broken down into different geographic areas of the island. It is reported for the island as a whole. Comparing health data, including cardiovascular diseases or cancers, with proximity to BELCO and other pollution emitters on the island will therefore take some time to address.

3. Elbow Beach Waste Water Treatment Plant

The Authority **TOOK NOTE:**

that the main hotel is closed, wastewater is received only from 1 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.

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

The Authority **TOOK NOTE:**

- 4.1 Stream #1 was available for 30 days in June and ran for 22 days (73%) and was off-line due to a lack of garbage and water in the bunker (from firefighting events) and crane 'A' inspection/repair. Stream #2 was available for 30 days and ran for 28 days (93%). It was offline due to Crane 'A' inspection/repair.
- 4.2 The turbine was available for 30 days and ran for 28 days at 63% efficiency. It was offline for 2 days due to Crane 'A' being out of service.
- 4.3 Total waste incinerated (excluding metal) was estimated at 4,014 tonnes. Total cooking oil was estimated at 48.8 tonnes.
- 4.4 1,283 MWh sent to BELCO 19th May through 17th June. Total MWh generated 1-30 June was 2,676 MWh.
- 4.5 15 loads of ash cement were disposed of at the Airport Site as blocks or pours of ash-cement away from the revetment. The amount of unconsolidated ash removed has yet to be determined.
- 4.6 Mr. Outerbridge noted that a request for \$22 million was to be discussed by Cabinet today. This funding, if approved, would cover the cost to repair critical functions, such as crane, air conditioning and electrical systems, and replace the flues within the chimney
- 4.7 Mr. Outerbridge informed the Members that one of the cement trucks is back into service after being rebuilt. Acquiring the parts was very challenging.

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

5.1 CP-755, OL-1191 Piranha Paintworks

The Authority **APPROVED:**

The retroactive construction permit and operating licence application for a spray paint facility at 27A Wellbottom, Warwick, subject to standard conditions.

5.2 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.

5.3 Standard Conditions for Pet Crematorium

The Authority **APPROVED**

the draft conditions proposed for Mediawaste and Amis Memorial pet crematorium operating licences. It was noted that approval in principle was granted to Mediawaste pet crematorium at Meeting No. 366 on 31st May 22. Approval in principle was granted to Amis Memorial Pet Crematorium at Meeting No. 367 on 28th Jun 22. Mr. Starling declared an interest and stood aside during consideration of this matter.

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

6.1 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-145 (Grotto Bay WWTP) and OL-521 (WEDCo WWTP) which were deferred pending receipt of the annual report. Those approved included the applications for OL-454 Loughlands WWTP. The Loughlands annual report showing satisfactory maintenance and effluent quality had been submitted.

7. Applications for Water Rights (New)

7.1 The Authority APPROVED:

WR-5760, 5761 John & Judy Collis. Water Right application for RO supply and disposal at Parcel 44654 Riddell's Bay Gardens, Warwick, subject to standard conditions, and providing the disposal borehole is sealed at least 40 feet below sea level.

7.2 The Authority APPROVED:

WR-5758 The Nissi Trust. Water Right application for a domestic rainwater disposal borehole at 6 Hidden Cove Lane, Hamilton CR04 subject to standard conditions.

7.3 The Authority APPROVED:

WR-5759 Calvin & Joan Bean. Water Right application for a domestic supply well at 10 Clarkes Lane, Pembroke subject to standard conditions

7.4 The Authority APPROVED:

WR 5739 BELCO adjustment to conditions. Upon using the ground water for dust suppression during the demolition of buildings on Serpentine Road, the presence of *E. coli* was detected. The Authority approved the amendment of conditions to permit the monthly testing to be undertaken on treated/disinfected ground water.

8. Applications for Water Rights (Reissue)

The Authority **APPROVED:**

the reissuance of Water Rights on the two-page printout, subject to standard conditions, except four indicated as withdrawn.

9. Any Other Business: Update of EA Policy 1: Granting of Water Rights.

There has been a request for determination of status of a water right for supply and disposal from a reverse osmosis plant supplying a private home. As a result, the Members are being asked to clarify the definition of "commercial" vs "domestic" water rights.

After much discussion, it was agreed that input of the Attorney General's Chamber would be sought before further consideration.

10. Update to Policy No. 6 Sale or Transfer of Water Rights for Public Supply

The Authority **TOOK NOTE:**


that the Ministry of Public Works has no future planned use of many of its water rights for public supply. The present Policy No. 6 on the Sale or Transfer of Water Rights for Public Supply does not provide a process for offering withdrawn Water Rights to other water producers.

Mr. Christopher of the Ministry of Public Works said that they are in the process of creating a water utility and therefore a preference was to not progress this matter until it is established. This delay is contrary to the mandate of the Water Authority (*i.e.* Environmental Authority), which is to ensure that water rights are issued so the ground water resource may be utilized.

Due to lack of time, further consideration of this matter was deferred.

11. Date of the Next Meeting

The date of the next meeting was set for Tuesday, 30 August 2022.


CHAIRMAN

30 August 2022
DATE