

**Minutes of a Meeting of the Environmental Authority**  
**Held on Tuesday, 26<sup>th</sup> April 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)  
Mr. Tarik Christopher, Principal Engineer (Water & Sewage), Public Works (by remote access)  
Ms. Patricia Hollis, Environmental Officer, DENR, Recording Secretary

**ABSENT:** Mr. James Morrison, Member  
Mr. Tom Crossan, Chief Environmental Health Officer  
Mr. Armell Thomas, Senior Environmental Health Officer  
Mr. Paul McDonald, Acting Senior Planner, Dept. of Planning

**1. Confirmation of Minutes**

The Minutes of the meeting held on 29 March 2022 were approved and signed by the Deputy Chair.

**2. BELCO Air Quality Updates**

- 2.1 It was reported that updates to the public have resumed.
- 2.2 A total of three odour surveys of volatile organic compounds (VOCs) have been completed by BELCO to address fumes of unburnt hydrocarbons from recently installed fuel tanks along St John's Road following the installation of carbon filters. The data has shown a slight (~30% at best) reduction in VOCs but the continued complaints of fumes from unburned hydrocarbons suggests that more could be done. Some activities previously located in these tanks/bunds have been relocated to a more central area on the BELCO site and further review is underway. DENR has asked BELCO to determine whether the measured changes in VOC's are in line with what the designer of the activated carbon filters considered to be achievable or expected. BELCO will continue to undertake more surveys and monitoring of this odour issue.
- 2.3 Only one odour complaint of fumes from unburnt oils was received in March 2022.
- 2.4 No exceedances of the UK/EU Air Quality objective for 15-minute sulphur dioxide were reported for the month of March 2022.
- 2.5 No soot complaints were reported for March. However it was noted that there have been a few for April 2022.

**3. Elbow Beach Waste Water Treatment Plant**

Data received for March 2022 showed that the effluent had a low biochemical oxygen demand (BOD), and high total suspended solids (TSS). These indicate a low flow rate and lack of organic matter to essentially feed the activated sludge in the bioreactor as a result of the hotel accommodation being closed.

**4. Ministry of Public Works Tynes Bay March 2022 Operation Update**

The Authority **TOOK NOTE:**

- 4.1 A bunker fire on 12 April 2022 damaged the wood shear. This was repaired by 19 April.
- 4.2 Stream #1 was off-line for 9 days in March due to a BELCO switch gear issue which impacted some of the electronic components at Tynes Bay. Stream #2 was offline all of March for the planned boiler improvements. (Note that Stream #1 is due to have the same boiler improvements completed in spring 2023).

- 4.3 The 476 garbage bales created when the streams were off-line are being returned to the facility for incineration.
- 4.4 The turbine was available for 31 days in March, but ran for 22 days at 44% efficiency
- 4.5 1,245.1 MWh sent to BELCO 17 Feb through 18 March. Total MWh generated 1-31 March is 1,348.7
- 4.6 Total waste incinerated in March was estimated at 3,381 tonnes (excluding metals)
- 4.7 26 loads of ash cement were disposed of at the Airport Site as blocks or pours of ash-cement away from the revetment. 154.4 tonnes of unconsolidated ash were disposed of at the Airport Site. The issue with the newly supplied clinker crane is preventing the full length of ash from being processed to ash-cement. Furthermore only one ash-cement truck is on the road due to pending repairs.
- 4.8 The ash plant was out of operation for the last 2 weeks of March due to a malfunctioning crane. The clinker crane project is still on hold as a result of incorrectly-supplied (by the manufacturer) equipment, with the festoon cabling due on island in May.
- 4.9 One of the two refuse cranes has a structural issue and needs to be repaired quickly. The plant cannot function if both refuse cranes fail.

#### **5. Ministry of Public Works Airport Waste Management Operating Licence**

There was much discussion on the presentation on the operations of the Airport Waste Management Facility given in February. Members expressed dissatisfaction at the lack of data presented on the wastes on the “approved for short term list.” They requested that periodically, say every 5 years, MPW present a report on the state of recycling and disposal options and stating the shipping costs vs environmental costs of landfilling in Bermuda.

The Authority **APPROVED:**

the issuance of the annual Airport Waste Management Facility operating licence on condition that Ministry of Public Works and DENR develop terms of reference and timelines for periodic reporting on the options for disposal of wastes on the short term list. It is noted that the 5-year state-of-recycling report be prepared using cost data etc. that is provided by the US importers of Bermuda’s wastes.

#### **6. Marsh Folly Compost Facility Operating Licence**

After discussion on the future of the Marsh Folly Compost Facility (unknown at this point), the Authority **APPROVED:**  
the issuance of the annual Marsh Folly Compost Facility operating licence.

#### **7. Fresh Water Lens Update**

The Authority **TOOK NOTE:**

- 7.1 Of an update on any changes to abstraction limits (there were none), and of developments concerning the withdrawal and reallocation of some MPW water rights.
- 7.2 Of an update on lens volume calculation differences over the years and the new software-based method of calculating lens volumes.
- 7.3 State of the Central & Port Royal Lenses during 2021. There is a currently unexplained thinning of the central lens in the area south of Glebe Road.
- 7.4. Port Royal lens has recently been over abstracted from. Although lens volume appears to be “healthy” the balance between abstraction and recharge is concerning; additional supply from the proposed (and postponed) deep saline abstraction well is required if demand remains high.
- 7.5 EA to write letter to MPW notifying them of the risk to lenses should deep abstraction well at Port Royal RO Plant not be installed.
- 7.6 Request for MPW to bring Water Rights up to date.

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

**8.1 The Authority APPROVED:**

OL-1172-1 to OL-1172-9 Meyer Agencies. Nine controlled plant on board “Enchantment of the Seas” cruise ship, subject to standard conditions.

**8.2 The Authority APPROVED:**

OL-1175-1 to OL-1175-14 Meyer Agencies. Fourteen controlled plant on board “Norwegian Joy” cruise ship, subject to standard conditions.

**8.3 The Authority APPROVED:**

OL-1176-1 to OL-1176-14 Meyer Agencies. Fourteen controlled plant on board “Mariner of the Seas” cruise ship, subject to standard conditions.

**8.4 The Authority APPROVED:**

CP-742, OL-1173 Solace Aquamation application for the alkaline hydrolysis of animal carcasses at Sallyport Lane, Sandys, subject to the amended presented conditions and providing no objections are received during the advertised period. It was noted that neutralised liquid effluent will be transferred for treatment at the WEDCO waste water treatment plant and that this process has been reviewed and accepted by WIG Ltd who manage the WEDCO WWTP.

The Authority requested that conditions be added to require the submission of a decommissioning plan, the maximum weight limit of the carcasses, a disposal plan for unclaimed bones, and confirmation that chemicals will be stored safely.

**8.5 The Authority APPROVED:**

CP-744, OL-1177 JDJ Marion Trust application for a 20 kW propane generator at 16B Green Bay Road, Hamilton Parish, subject to it being housed in a purpose-built enclosure (as per the application) and to standard conditions.

**8.6 The Authority APPROVED:**

CP-743, OL-1174 BLDC 250 kW diesel generator at 125 Orange Hole Road, St. George’s, subject to standard conditions. It was noted that the generator will provide back-up power to the planned waste water treatment facility.

**8.7 The Authority APPROVED:**

CP-745, OL-1178 Nelson Bascome Treatment Centre, 306 kW diesel generator at 3 Cockburn Lane, Sandys, subject to standard conditions.

**9. Applications for Construction Permits and Operating Licences (Reissues)**

**The Authority APPROVED:**

The applications for reissue of operating licences listed on the two page printout, subject to standard conditions. Included in the list were applications for four waste water treatment plants (OL-851 BHB MAWI, OL-857 BLDC, OL-887 Sardis at the Loren, and OL-992 Greybar Holdings). All had submitted satisfactory annual reports showing satisfactory maintenance and effluent quality.

**10. Applications for Water Rights (New)**

**The Authority APPROVED:**

WR-5744 Mr. S. Storey. Water Right application for a domestic rain water disposal borehole at 13 Inglewood Lane, Paget, subject to standard conditions.

**11. Applications for Water Rights (Reissue)**

**The Authority APPROVED:**

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

**12. Wastewater Training Certificate - Requirements for Southampton Princess Hotel**

**The Authority APPROVED:**

the Southampton Princess Waste Water Treatment Facility employing a Bermudian with partial qualifications to run the plant on condition that the operator achieve the ‘Operation of Wastewater Treatment Plants (Level II)’ certification in 2 years’ time and that he is overseen by H2O Flow Inc., a qualified overseas contractor. It was acknowledged that the trainee has achieved the above Level I certification of this California State qualification but that the contents covered for Level II are more appropriate for the type of wastewater treatment provided at this site.

**13. Any Other Business: Clinical Waste Incineration Operating Licence Conditions**

Discussion of the operating licence conditions for the clinical waste incinerator presently under construction was deferred until the next meeting due to time constraints.

It was noted that all conditions of the Construction Permit issued for CP-677 (*i.e.* Medi-Waste Ltd, Issued Nov 2020) have yet to be satisfied and that an application for an Operating Licence has yet to be received.

**14. Any Other Business: DENR Budget Cuts**

The Authority **EXPRESSED CONCERN:**

That the Ministry of Home Affairs budget has been cut and that the Department is no longer able to fund the BIOS monitoring of Bermuda's ambient air quality in Prospect, East Broadway, St George's and the oversight of BELCO monitoring at Ocean Lane. The Authority requested a letter of concern be sent to the Minister of Home Affairs. The Chair agreed to provide a draft.

**15. Date of the Next Meeting**

The date of the next meeting was set for Tuesday, 31 May 2022.



CHAIRMAN

31/5/2022

DATE