

**Minutes of a Meeting of the Environmental Authority  
Held on Wednesday 4 November 2020  
At the Department of Environment and Natural Resources, Botanical Gardens, Paget  
and Remotely using Zoom Teleconference**

**PRESENT:** Mr. Eugene Saunders, Chair  
Mrs. Susan Armstrong, Member, remote access  
Mr. Andrew Barnes, Member, remote access  
Mr. Willie Ferguson, Member, remote access  
Mr. James Morrison, Member, remote access  
Mr. Jonathan Starling, Member, remote access

**ADVISORS:** Dr. Geoff Smith, Environmental Engineer, DENR  
Dr. Shaun Lavis, Hydrogeologist, DENR  
Mr. Kirk Outerbridge, Chief Engineer, Public Works, remote access  
Mr. Armell Thomas, Senior Environmental Health Officer, remote access  
Ms. Patricia Hollis, Environmental Officer, DENR, Recording Secretary

**ABSENT:** Mr. Paul McDonald, Acting Senior Planner, Dept of Planning  
Mr. Tom Crossan, Chief Environmental Health Officer  
Mr. Tarik Christopher, Principal Engineer (Water & Sewage), Public Works,

**1. Change in Chair**

It was announced that the Chair, Tinee Furbert, had been appointed as Government Minister and so she had resigned her position on the Environmental Authority. Mr Eugene Saunders agreed to be Chair for this meeting.

**2. Confirmation of Minutes**

The Minutes of the meetings held on 30 September 2020 and 7 October 2020 were approved and signed by the Chair.

**3. BELCO Update on Remedial Actions to address Soot and Exhaust Emissions Complaints  
2.1 Poor Air Quality Complaints**

It was confirmed that Belco is submitting monthly progress reports to the Authority and DENR on their efforts to address the complaints of poor air quality in the Ocean Lane area against the requirements of the Authority letter to Belco in May 2020. These reports are shared with residents in the affected area. Complaints from about 50 residences have been received by DENR to date.

The new portable air quality monitoring station, called Bermuda Four (BDA#4), has been operating since 2 October 2020 with the full suite of sensors operating from 15 October 2020. Issues with the networking of the data are being progressed and when complete all of the data back to 2 October will be accessible for analysis against the appropriate standards.

Analysis of tank water in nearby residences shows that the water met international drinking water quality standards and guidelines. It is possible that pollutants were not detected in the water because they have a very low solubility in water and have a high tendency to adhere to tank sediment. Further analysis of tank sediment chemistry is on-going including scenarios that could lead to mixing of sediment within water tanks. Previous studies indicate that tank water sediments from around the Belco area show a dioxin/furan signature consistent with vehicle sources, rather than combustion of heavy fuel oil in the Belco engines. These water and sediment results are consistent with previous studies undertaken by BIOS on behalf of DENR.

**2.2 Soot from New Engines**

Analysis of the soot from the North Power Station engines shows that the organic pollutants within the soot have very low solubility in water.

Belco has undertaken modifications to their new engines and also the start-up/shut-down procedure in an initial attempt to limit soot being formed. Light fuel oil, a cleaner-burning

fuel than heavy fuel oil, is used when the engines are being started or shut-down. Shims are also in the process of being installed into each of the four engine cylinder to increase compression for a longer, more complete burn. However, when engine N4 was started up after the recent modifications, soot was emitted. It has to be determined if the soot was residual in the stack and silencer or was newly formed following the above modifications. It was reported that the Regulatory Authority (RA) will contract a power engineer to be involved in the current discussions between Belco and the engine manufacturer, MAN. The goal will be for the RA to understand that all engineering solutions are being considered to address the soot nuisance.

Subject to further data being received, the analyses to date indicate that the soot is an aesthetic problem and a nuisance rather than a hazard to health or the environment.

#### 4. BELCO Annual Operating Licence Reissue Application

Further to the amendments discussed at their last meeting, the Members considered more proposed changes to the Belco annual operating licence conditions (OL-114). These proposed amendments include:

- a) The addition of Bermuda 4 monitoring station information and updates to the engine asset list;
- b) Addressing odours from venting fuel and lubricating oil tanks. Since their recent construction, strong odours of fuel vapours have been noticed around the site. These appear to be coming from newly constructed fuel handling facilities and tanks that outgas near St. John's Road;
- c) To require that water tank water quality testing to be conducted on three (3) properties per year for each licence period. Analyses to include dioxins and furans and PAH's.
- d) Consideration to tighten the 30-min engine start-up and shut-down concession with respect to maintaining 20% opacity of the exhaust gases. Consideration will also be made to tightening the 20% opacity limit. These decisions will need to be informed from data that DENR has requested from Belco;
- e) Consideration for engines to be operated at 80% of their nameplate load or higher. This was a stated requirement in the EA letter to Belco in May 2020 after some engines were operated at 50% load during the NPS commissioning.
- f) Consideration to not require Belco personnel to maintain their US EPA visual emission course certification every 6 months unless Belco's risk assessment will allow the sending of personnel overseas for training under Covid-19. It is noted that condition 5.3.5. requires third party stack exhaust assessment by camera which is carried out remotely.
- g) DENR has enquired with AG's Chambers whether a condition to address statutory nuisance (i.e. odour and soot) under the Public Health Act 1949 can be included in a licence under the Clean Air Act 1991.
- h) Removal of the need to consider requiring an additional noise survey from the NPS engines until 2022.
- i) [Addition of a new condition under the Oily Waste Management Programme to include: 'The remaining oil plume that exists beneath the Old Power Station (OPS) shall be excavated and treated under a new remediation strategy to the requirements of the RBCA Guidelines in order to strive to meet the Risk based Screening Levels (RBSL's). This strategy will be expected within a reasonable timeframe once the OPS buildings and engine contents have been removed.]

The Authority **REQUESTED**:

that the draft conditions be circulated to Members and Advisors for further comment.

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

##### 5.1 CP-692, OL-1096 Mr. Akbar Lightbourne

The Authority **APPROVED** the application for a 40 kW diesel generator at 2A Bellevue Lane, Paget, subject to standard conditions.

##### 5.2 CP-693, OL-1097 Ms. M. Sheppard-Lightbourne

The Authority **DEFERRED** the application for a 20 kW propane generator at 16 Pearman's Hill, Warwick pending submission of further information.

**7.4 CP-686, OL-1090 Paul Leseur**

The Authority **APPROVED** the application for a 22 kVA generator at 19 Wreck Road, Sandys subject to standard conditions.

**7.5 CP-684, OL-1088 Annette Budge**

The Authority **APPROVED** the application for a 24 kW generator at 2 Warwickshire Drive, Warwick subject to standard conditions and providing 1.5 m or higher sound absorbing blankets are installed.

**7.6 CP-637, CP-638, OL-1028, OL-1029 Aecon/Skyport**

The Authority **APPROVED** the applications for two 1500 kW diesel generators at LF Wade Airport, St. George's subject to standard conditions and providing sound absorbing blankets are installed over the air intakes during genset operations that are outside of the regular monthly testing in the day.

**8. Applications for Operating Licences (Reissue)**

**8.1 The Authority APPROVED:**

the reissue of operating licences on the one-page printout, subject to standard conditions.

**9. Applications for Chemical Import Permit**

**9.1 ChillTech.**

The Authority **APPROVED** the application submitted by ChillTech. for the import of 40 cylinders each containing 25 lbs of R438A and 40 cylinders each containing 25 lbs of R407C, subject to standard conditions.

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

The Authority **APPROVED** the application listed below:

**10.1 WR 5674 Mallory**, domestic supply well at 108 South Road, Paget, subject to standard conditions.

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

The Authority **APPROVED:**

the issue of water rights as listed on the two-page printout, subject to standard conditions, with the exception of six indicated as withdrawn.

**12. Proposed Modifications to EA Policy No. 9, Noise from Emergency Generators**

The Authority **TOOK NOTE:**

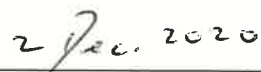
of the technical and administrative challenges faced during the processing of construction permit applications for emergency generators, especially regarding the assessment of noise.

The Authority **AGREED** to discuss this matter at a later meeting

**13. Date of the Next Meeting**

The date of the next meeting was set for 8:30 am, Wednesday, 4 November 2020.

  
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CHAIRMAN

  
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DATE

