

**Minutes of a Meeting of the Environmental Authority
Held on Wednesday, 27 March 2024
At the Department of Environment and Natural Resources, Botanical Gardens, Paget
and Remotely using Teams Teleconference**

PRESENT: Ms. Davida Morris, Chair (by remote access)
Mr. Eugene Saunders, Deputy Chair
Mr. Willie Ferguson, Member
Mr. Harry Matthie, Member
Mr. Jonathan Starling, Member (by remote access)

ADVISORS: Dr. Geoff Smith, Environmental Engineer, DENR
Dr. Shaun Lavis, Hydrogeologist, DENR
Ms. Patricia Hollis, Environmental Officer, DENR
Mr. Tarik Christopher, Acting Chief Engineer, Public Works (by remote access)
Ms. Crystal Baxter, Environmental Health Officer

IN ATTENDANCE:

Mr. Mark Husdan, Solid Waste Manager, MPW Waste Management
Ms. Vanese Flood Gordon, Waste, Education & Enforcement Officer, MPW

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

1. Confirmation of Minutes

Confirmation of the Minutes of the meetings no. 388 held on 6 December 2023 and no. 391 held on 28 February 2024 were approved and signed by the Deputy Chair.

2. BELCO Operating Licence OL-114 Application for Reissue

The Authority **APPROVED:**

proposed changes to the BELCO operating licence OL-114 conditions. It was agreed that the conditions would be circulated to BELCO for their comment before being issued. If BELCO expressed concern over any proposed change, the matter was to be brought back to the Authority for consideration.

3. BELCO Complaints—February

It was reported that the February complaint data showed that 4 soot complaints were received for events occurring on 2nd, 7th and 11th February. There were no odour/fumes complaints.

4. Tynes Bay Waste Facility February Update

4.1 The Authority **TOOK NOTE:**

- Stream #1 was available for 29 days and ran for 27 days. 2 days of down time was due to grab failure and bunker fire.
- Stream #2 was available for 5 days, ran for 5 days. It was shut down for planned maintenance and cleaning.
- The turbine was available for 29 days and ran for 28 days at 39% efficiency.
- Total waste processed (less metal) was 3692 tonnes. Cooking oil processed was 40.8 tonnes
- Total electricity sent to BELCO 16 Jan to 16 Feb: 920 MWh. Total electricity produced for February was 1763 MWh.
- Sixty two (62) loads of ash-cement and eight (8) loads of unconsolidated ash were disposed of at the Airport Waste Management Facility (AWMF).

5. Mediwaste Clinical Waste Facility

5.1 Ash Disposal Options

The Members were reminded that there is presently no accepted means of disposal of ash generated at the Mediwaste Facility, Southside, St. George's. Ash is being stored in plastic bags until a disposal option is approved. The four disposal options were discussed.

Option 1 Send bags of Mediwaste Ash to Tynes Bay for Incineration

The Authority **DECLINED** this option as incineration at Tynes Bay could potentially liberate significant amounts of additional dioxins/furans into the environment.

Option 2 Send the bagged Mediwaste Ash to Tynes Bay for incorporation into the ash hopper, commingled with Tynes Bay ash, and made into ash cement.

The Authority **DECLINED** this option as it presents unacceptable occupational risk of ash becoming airborne when bags are opened.

Option 3 Disposal of bags overseas.

The Authority **DECLINED** this option because of its high estimated cost, and it creates environmental issues/liabilities at the overseas disposal sites.

Option 4 Disposal of bags of Mediwaste ash within a cell of Tynes Bay ash concrete at the Airport Waste Management Facility.

It was proposed that the site would be above the water table, away from revetments and capped with ash cement. The Authority **AGREED** that this is the preferred disposal option, subject to the Ministry of Public Works establishing appropriate protocols for its reception and disposal. Until the disposal procedures are agreed by DENR and MPW, Mediwaste shall store the bags of ash in secure containers at their Southside site.

5.2 Mediwaste Hours of Operation

The Authority were reminded that the present approved hours of operation are from 6 am to 5 pm Monday through Friday. This provides for the ash from the previous day to be removed between 6 am to 8:30 am, then for the plant to treat clinical wastes from 9 am to 4 pm, followed by cooling down period between 4 pm and 6 pm. This time frame is satisfactory to keep up with clinical waste generation, however, it is insufficient to permit the treatment of nineteen 20-foot containers in storage at the Airport Waste Facility and seven 20-foot containers that have recently been delivered by Bermuda Hospitals Board. The seven containers unknown to Mediwaste were reportedly stored at Marsh Lane, Devonshire since the decommissioning of the BHB Steam Sterilizers and Macerators.

The Authority **APPROVED:**

the extension of operating hours to 6 am to 5 pm Monday to Sunday, but excluding public holidays, until 5 August 2024 when their present operating licences OL-1186 and OL-1187 expire. It was noted that no complaints about the plant had been received.

The Authority REQUESTED:

that the Department of Health investigate and determine if there is any more clinical waste in storage other than that already delivered to Mediwaste.

6. Disposal of Asbestos

The Authority were reminded that there are 750 shipping containers of asbestos for which disposal options are required. About 200 of these containers were filled with cement and as such cannot be repackaged for export to the USA for disposal in a landfill. The Authority was further reminded that many of the containers are in poor condition, having been exposed to the elements for up to several decades.

The Authority **TOOK NOTE:**

that the potential to dispose of the asbestos with the Mediwaste Ash at the Airport Waste Management Facility is being explored.

7. Presentation by Ministry of Public Works on Materials Recovery Facility 2019-2023 (OL-452)

The Solid Waste Section, Ministry of Public Works, representatives gave a presentation on the operation of the Materials Recovery Facility (MRF) for calendar years 2019 through 2023.

7.1 Materials Processed:

Blue bag recyclables (tin, aluminium, glass), small air conditioning units, cable boxes, CPUs, laptop computers, cell phones, cell phone batteries, and large back-up batteries are received at the facility located at the Government Quarry, Hamilton Parish. All but glass is prepared for overseas shipment. Glass is reused on island, mostly as aggregate material.

The choice of materials sent overseas for recycling is dependent on the market. At times when the market price is low, materials are stored at the MRF until a reasonable price may be obtained for them. Generally, the funds generated by the sale of recyclables only covers their shipping costs, and not collection or processing costs.

Disposal of electric vehicle batteries was discussed. At present, they are unable to be recycled. Until a market opens for them, electric vehicle batteries are being stored in containers at the Airport Waste Facility.

7.2 Challenges at the Plant

It was reported that the advanced age of the plant presents difficulties in acquiring spare parts, for ongoing maintenance, and for machinery replacement.

7.3 Should Recycling be Mandatory?

The question of whether recycling should be mandatory was discussed. MPW representatives said that it is a future option, but a step by step approach is needed. Appropriate bins/boxes for households and commercial establishments are needed, as are collection vehicles. An assessment of the present, aging plant will be needed to ensure it could cope with the increased input. The cost of export and disposal of the recyclables will need to be assessed and weighed against the benefit to the Tynes Bay Waste to Energy Facility. Overall, the MPW representatives advocated that an educational approach to recycling would result in better participation than mandating it.

7.4 Weights of Recyclables Collected and Shipped

There has been an increase in tin, aluminium, glass recyclables received at the MRF from 982 tonnes in 2019 up to 1,450 tonnes in 2023.

The volume of wastes sent overseas for recycling has varied from thirty two 20ft shipping containers in 2019 to twenty five 20ft shipping containers in 2023. Some of the variation is due to the wastes being stored in Bermuda until a more favourable price can be realised.

The Solid Waste Representatives were thanked for their presentation.

The Authority **AGREED:**

to consider the operating licence reissue application and conditions at their next meeting.

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

8.1. CP-814, OL-1256 Asphalt Plant, CP-814, OL-1257 Sifter, Ministry of Public Works

The Members considered MPW's application for a 165 tonnes/hour asphalt plant and 750 tonnes/hour screening plant. It was noted that a 5-year maintenance and service contract is being entered into with the supplier (Astec). The lifespan is expected to be 20 to 25 years if the appropriate maintenance is undertaken.

Any objectionable odours from the plant are able to be addressed retroactively by passive vent control, extension of the 23 m high stack; an exhaust particle monitor, and asphalt silo smoke control.

The Authority **APPROVED:**

the applications for the construction permit and operating licence for the asphalt plant subject to:

- standard conditions;
- there being no objections received during the advertised period;
- an appropriate area is constructed and maintained for truck cleanout;
- all piping and tanks are double walled;
- a facility for the application of an environmentally acceptable release agent into trucks before loading. The use of diesel as a cleanout solution is to be discouraged as its disposal is challenging.

The Authority **APPROVED:**

The applications for the construction permit and operating licence for the screening machine (sifter), subject to standard conditions and providing no objections are received during the advertised period.

8.2 OL-1255, OL-1256 Sail GP/F50 League Bermuda Ltd, 1 Constitution Road, Sandys

The Authority **APPROVED:**

the Operating Licence applications for two 186 kW moveable diesel generators, subject to standard conditions, that will be brought to Bermuda for the next SAIL GP event scheduled for May 2024. The generators will be exported after the event.

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

9.1 The Authority **APPROVED:**

the applications for reissue of operating licences listed on the two-page printout, subject to standard conditions, with the exception of five applications: OL-114 BELCO controlled plant was deferred pending the Authority considering any changes to operating licence conditions, OL-881 Amis Memorial Chapel crematorium was deferred pending submission of the annual report, and OL-004 Tynes Bay Waste To Energy Facility was deferred pending presentation of their annual report. Two applications for white oils storage OL-417, OL-418, submitted by Rubis Energy Bermuda, were deferred pending consideration of proposed changes to standard conditions. The operating licences for OL-992 Greybar Holding waste water treatment plant and OL-1210 Ariel Sands waste water treatment plant (still under construction) were approved subject to standard conditions.

10. Applications for Water Rights (New)

10.1 The Authority **APPROVED:**

eleven domestic water rights WR 5808 to WR-5818 for BELCO Monitoring/Hydrocarbon Recovery Wells at Serpentine Road, Pembroke, for one year, to complement the existing monitoring/hydrocarbon recovery wells, subject to standard conditions.

11. Applications for Water Rights (Reissues)

11.1 The Authority **APPROVED:**

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

11.2 The Authority **APPROVED:**

BELCO's WR 5625 change of use and reissuance. The borehole is to be used for the disposal of reject water generated by the RO treatment of rainwater for use in the power plant subject to standard conditions and providing that only rainwater is used as the feedstock and that the borehole is sealed at least 30 feet below sea level. It was noted that the reject would be of lower salinity than that of the receiving ground water.

12. Date of the Next Meeting

The next meeting was scheduled for 8:30 am, Wednesday, 24 April 2024 in the DENR Boardroom, Botanical Gardens, Paget



CHAIRMAN

24 APRIL 2024

DATE