DRAFT MINUTES Waste-to-Energy Facility Monitoring Group MEETING

August 13, 2025 Reworld Alexandria/Arlington Waste-to-Energy Facility – Eisenhower Avenue 9:30 a.m. – 11:00 a.m. Virtual

The Facility Monitoring Group, City and County Staff, and HDR representatives present for the meeting included Flavio Goncalves, Morgan Routt, Khalid Payenda, Howard Lee, Shani Kruljac, Emily Hughes, Alaeedin Mohamed, Dan Domato, Kyle Perrin, and Abby Fleming. Don Cammarata, Thomas DeMaio, Jacklyn Hooey, Greg Gromer, and Peter Mayer attended the meeting from Reworld. This FMG Meeting was held as a virtual meeting.

I. Comments on Agenda

No comments were added to the agenda.

II. Approval of Draft Minutes from the May 14th, 2025, Facility Monitoring Group Meeting.

There were no comments or changes to the last meeting minutes. Goncalves motioned to approve the draft minutes. Routt seconded. All in favor of approval.

III. Requisitions for Payment

The requisitions for payment that were submitted for approval totaled \$11,637.74. The sole invoice was the invoice for HDR Engineering, Inc. for the period May 4, 2025, to July 26, 2025, for \$11,637.74. Goncalves motioned to approve payment. Hughes seconded. All in favor of approval.

IV. Operations and Facility Status

A. Summary of Plant Operations (by Reworld)

Mayer introduced the additional Reworld staff on the call in lieu of Cammarata's departure from Reworld. Cammarata stated there is not a designated Reworld contact yet that will take his place. Mayer provided an update on the Facility Quarterly performance and safety. There have been zero recordable OSHA accidents and one first aid accident. Due to the hot summer, an employee was overcome due to the heat. Reworld has been taking extra precautions with heat and trying to ensure employees stay hydrated and taking the necessary breaks. Safety topics covered over the quarter include hazards associated with the metals in the ash, lock out tag out, and hearing conservation. Reworld staff completed OSHA-10 and OSHA-30 training and is proud to state 100% of their employees are OSHA certified.

Mayer discussed the environmental updates. There were no Notice of Violations in the quarter, but there was an event where there was an issue with one of the transformers and it shut the Facility down. Normally, there is a backup system that keeps the carbon flowing for 15-20 minutes after the shut down on temporary power. On two of the units, the system worked according to design, but on the last unit it did not. There was emissions excursion which was attributed to a mechanical failure, Reworld sent the notice to Virginia DEQ promptly and it was resolved as not a violation. Stack testing was completed in March; results showed that the Facility was in good standing and are able to reduce carbon usage by 1.0 lb./ton (reduce to 10.0 lbs./ton from 11.0 lbs./ton) while still meeting performance requirements. The VWEA (Virginia Water Environment Association) presented Reworld Alexandria/Arlington with the platinum award for 8-years of good standing with no permit violations with water.

Mayer discussed current staffing positions and announced Cammarata's upcoming retirement. A maintenance manager has transferred to the Fairfax facility, and a new maintenance manager started last week. There was about a 10% turnover for this year due to normal activity.

Mayer discussed the Facility quarterly operations. There was no downtime in April. In May, the Facility started to experience issues with the refuse crane and a cleaning outage. In June, there was a trip associated with Dominion. Mayer stated their Island Mode operations is working, when the Facility experiences a trip from outside of the plant, the Facility drops to "house power" keeping one turbine operating and drop load on the other turbine. Reworld completed the stack lining repairs and completed the installation of access doors on all three flue ducts. Access doors have been monitored regularly, checking for any moisture or water which was found when the ducts were first opened. Mayer reported that no moisture has been identified. Currently they are performing some engineering tasks to reinforce that the structural integrity was maintained. Reworld is currently finishing that process. For the period, electric generation is currently on plan, the Facility started to see reductions in June due to the excessive heat and rain. The BTU value of the fuel reduced due to higher moisture, from the rain, which was difficult to manage. Mayer stated boiler availability was 93.7%, turbines were 99.2%, and ferrous recovery system was 100% available. On site, there is a spare transformer in the front parking lot and one in the back near the switch yard. There has now been a third transformer that has failed, as they are reaching their life expectancy. A third spare transformer is expected in the near future. Once the new transformers are installed, they should be good for another 30 years.

Mayer discussed the upcoming major/minor outages, there are three majors and two minors for the Facility each year. There will be a minor outage on Unit 3 in September and a major outage on Unit 1 in October. The minor will be a typical cleaning outage with no scheduled capital projects planned. On Unit 1, there will be a bag change in the baghouse and the feedchute will be replaced.

Mayer stated that in 2026, the Facility will be completing a crane replacement, a \$2.5 million project. It was decided in July that Reworld will be pushing the Turbine-Generator No. 2 minor outage from this year to 2026 (typically every 3-5 years). It was recommended by their subject matter experts that there was no need to complete this year.

B. <u>Discussion of Quarterly Report and Facility Performance to Date (by HDR)</u>

Fleming discussed the Quarterly Report and Performance Trends for quarter four and the fiscal year total; she made an edit to the reagent page in the draft report highlighted in yellow to call out during this meeting. Fleming reviewed the downtime over the quarter previously mentioned by Mayer. For the quarter, boiler availability was 98% and turbine availability was 100%. Annually, boiler availability was 94% and turbine availability being 98%. There was a total of 15 outages, with the majority due to electrical concerns: the external circuit trip and the inhouse transformer. These outages affected all three units at the same time, which makes the number of outages seem more than typical. There were 170 total hours of downtime, where 60% (102 hours) was scheduled with the cleaning outages on Boiler Nos. 2 and 3. There were 67 hours of unscheduled downtime for approximately 40% of the total downtime. During the Boiler No. 2 scheduled cleaning, Mayer stated an external leak was repaired. The unscheduled outages included an ID fan bearing failure on Boiler No. 3, all boilers tripped on May 17th due to the external circuit trip. On May 18th, both refuse cranes lost service, forcing Boiler Nos. 1 and 3 offline, Boiler No. 2 was kept operating on natural gas, under the reagent table there is a noticeable increase in fuel usage for this reason. On May 19th, there was the inhouse transformer failure that affected all boilers for a short period of time. Boiler No. 1 required feed table repairs in June. Mayer stated that when they do a cleaning outage they take a turbine down as well, that turbine downtime is labeled as standby, they have found it more efficient to generate electricity with one operating turbine when one boiler is offline. The turbines had 100 hours of downtime across seven outages in the quarter. Three outages were considered standby time, accounting for 82 hours. There were 18 hours of unscheduled downtime from the transformer failure and two occasions of 1-hour storms.

In FY25, total waste deliveries were at 353,837 tons which is slightly more compared to the previous two fiscal years, 50 hours of less downtime compared to FY24. See in Chart 1, the monthly MSW processing rate was nearly identical compared to the corresponding quarter in FY24, there were 87 less hours of downtime in Q4FY25 but resulted in a similar processing rate. For FY25, the ash generation increased by 0.5 percentage points compared to FY24. This generation rate can correlate to the declining metals recovery rate (0.3 percentage points). Chart 3 shows metal recovery, overall, tonnage for metal recovery continues to trend down. Overall, less is being recovered. Fleming mentioned Reworld Montgomery's facility, which is also showing a decline in

ferrous metals being recovered which may indicate a regional trend. Mayer stated that it may be social changes, last meeting Reworld stated the magnet was tested for the strength of the magnetic field. For the next quarter's reporting, Reworld replaced the tip of the pan which allows the pan to be closer to the magnet; there may be an increase in the forthcoming quarter in metals recovery as a result, but it is too early to confirm. DeMaio stated that Reworld has been seeing a downward trend across the company, and more specifically the three regional facilities.

In Q4FY25, there was an increase in steam production (Chart 4) of about 2.8% compared to Q4FY24 correlated with the 3.0% higher HHV for the quarter. For FY25, steam production was 2.6% higher than FY24 with a 1.7% increase in HHV offset by 50 more hours of downtime. Net electric recovery (Chart 13) was higher (5.6% higher) at 426 kWh per ton, there was less downtime on the turbine generator. For FY25, the net electric recovery rate was 416 kWh per ton which is 2.9% higher than FY24. Chart 14 shows turbine performance has slightly improved with a lower conversion rate (1.9% lower than Q4FY24). There were higher steam temperatures this quarter compared to Q4FY24, which is contributable. Overall, for FY25, the turbine steaming rate was nearly identical to FY24 with less than a 1% difference.

On Table 4, the utilities and reagent consumption show fuel oil usage is 33.4% higher than Q4FY24, this is due to the cranes downtime and Boiler No. 2 operating solely off fuel oil. Mayer stated with the significant rain experienced over the quarter, there were periods of wet waste that needed to be supplemented with gas to maintain stable conditions.

Fleming discussed their site visit in June and the deficiency table. Domato stated he will contact Gromer and Mayer to set up a meeting to discuss the deficiency table. There were four items added to the deficiency table on this visit:

- The external tube leak that was repaired during the cleaning outage and will be taken off for the next meeting (Photo #25).
- The entrance signage was knocked down and covered with residential waste (Photo #4). Fleming asked Reworld if there have been any issues or incidents with residential drop offs. Cammarata stated he is not aware of any recent incidents, Gromer agreed.
- Boiler No. 2 had air leaking from the hydraulics on the superheater double dump valve (Photo #15). The valve was still operating.
- Insulation damage from a hanger on an external steam line (Photo #23). Separated from the other line item highlighting insulation/lagging damage throughout the Facility.

Fleming mentioned the seal air lines disconnected from several sootblowers from the previous meeting. Gromer requested that Fleming provide the list of disconnected air lines observed while

onsite and will connect with the new maintenance manager on this item. During the May FMG Meeting, Reworld stated the backside of the Facility would be power washed in June, Gromer stated that it was completed after HDR's site visit. Photo #16 shows significant damage on Boiler No. 1 feed chute. Fleming observed red tape around the Forced Draft Fan Duct warning falling debris. Gromer reiterated the feedchute is being replaced and the slope that comes down from the feedchute is being replated in October.

Perrin brought up the T-G No. 2 overhaul in 2013 where Reworld found cracking on the stage 9 blades on the rotor. They were removed and blanked off as a precautionary measure. The report, two years later, stated Reworld was supposed to have the blades manufactured and installed in 2016. At that time, it was delayed and Reworld did not provide a date for repair. In 2023, there was an overhaul where HDR is uncertain if the blades were repaired. Perrin asked what Reworld's plan is moving forward to replace the stage 9 blades in the next overhaul. Gromer stated that there was only one blade on the 9th stage and per his knowledge there has not been conversation of replacing the blade because they do not lose anything. Reworld completed a test on this turbine with the blade out and they did not lose any performance. Cammarata stated that is his understanding as well, it is not economically reasonable to spend the capital with no benefit on the other side.

V. Reworld Items

A. Supplemental Waste

There have been no major changes, and operations have continued as expected. Governmental deliveries continue and supplemental waste is as expected.

VI. Old Business

A. <u>Virginia Clean Economy Act</u>

Cammarata stated there is discussion about trying to address this in the next legislative session, early 2026. No other significant changes or updates.

B. AlexRenew Biomass Material

Goncalves stated the AlexRenew team is still working through their internal plans. There was discussion about a City wastewater observant joining this call to better understand what the group discusses. There is no official update on moving forward because AlexRenew has not completed their internal assessment. Cammarata stated he has not had any recent conversations, however, the two items on Reworld's side with this project include:

• The internal concern with respect to PFAS contents and the impacts of PFAS in

the combustion process. It is not a good idea to take up the management chain until there are better EPA established rules, and the destruction efficiency is better understood. AlexRenew provided data showing very low PFAS levels which is encouraging, yet it is still an area of sensitivity.

• A permit change to increase the MSW processing limit in order to take the waste in. From a process perspective, Reworld should be able to take the waste without the need for additional storage/processing equipment.

C. Orange Notification Sheet Update

Domato received updates from the County and the City. Cammarata suggested to be replaced by DeMaio or Harlacker. Reworld requested the updated version to be sent out as soon as possible.

VII. New Business

D. Public Initiatives

Cammarata stated they continue to work with Alexandria Alive, one of the food bank services in the city. From a school supporting perspective, Reworld recently participated in the Alexandria City Public School backpack stuffing event and bought backpacks and supplies. Another ongoing support item includes supporting the city police department on some of their cook out events. Goncalves stated he will work with Mayer on scheduling a tour for this year for internal staff to wear awareness to compliance items and give the opportunity to interns and new staff to better understand operations. Hooey stated Goncalves can reach out to her as well for scheduling tours.

Reworld's Public Outreach Initiatives:

Tours

4/22/2025	Georgetown Environment & Sustainability Management Master's Program
6/23/2025	70+ and doing stuff- Seniors Group
6/24/2025	70+ and doing stuff- Seniors Group
Community Service and Sponsorships	
4/22/2025	John Adams Elementary Native Roots Project
4/1/2025	Alive Alexandria- Monthly Support

4/1/2025	Alive Alexandria- Monthly Support
4/23/2025	Alive Alexandria - Materials donation
5/5/2025	2025 Master of Science in Environment and Sustainability Management (MS-ESM)
	Poster Session
5/14/2025	Alive Alexandria- Monthly Support
5/15/2025	Bike To Work Event
6/11/2025	Alive Alexandria- Monthly Support

E. Open Discussion

Domato stated the next FMG meeting is currently Wednesday, November 12, 2025. No issues were brought up around that date. There should be no concern on Reworld's side about the meeting being in person, concerning outages/expected work. Domato will send out an email a month before including a poll to confirm the next meeting location.

On a motion by Routt, seconded by Kruljac the meeting adjourned at 9:55 a.m. The next Facility Monitoring Group Meeting is scheduled for Wednesday, November 12, 2025.