FINAL MINUTES Waste-to-Energy Facility Monitoring Group MEETING

February 12, 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 William Skrabak, Erik Grabowsky, Alaeedin Mohamed, Vijetha Huffman, Morgan Routt, Emily Hughes, Shani Kruljac, Tarrence Moorer, Flavio Goncalves, Dan Domato, Kyle Perrin, and Abby Fleming. Don Cammarata and Peter Mayer attended the meeting from Reworld. This FMG Meeting was held as a virtual meeting.

I. Comments on Agenda

Domato stated during the premeeting, two items were added to the agenda, both old business items that require attention: the tipping floor exit door operation and the AlexRenew Biomass material. Skrabek requested if Cammarata could update the group on the legislation in Richmond; Domato to add under "Proposed New MACT Rules" item.

II. Approval of Draft Minutes from the November 6th, 2024, Facility Monitoring Group Meeting.

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

III. Requisitions for Payment

The requisitions for payment that were submitted for approval totaled \$13,019.92. The sole invoice was the invoice for HDR Engineering, Inc. for the period November 2, 2024, to January 25, 2025, for \$13,019.92. Grabowsky motioned to approve payment. Routt seconded. All in favor of approval.

IV. Operations and Facility Status

A. Summary of Plant Operations (by Reworld)

Mayer provided year end metrics, from a safety perspective. There were two OSHA recordable incidents and five first aid incidents (mostly slips and trips) in Calendar Year 2024. The two OSHA accidents have resulted in positive actions around the facility; adding more signage around the entrance and introducing new safeguards around machinery. Regarding environmental items, there was one exceedance for the calendar year. Carbon injection threshold not in compliance due to a programming error on one of the units (in a previous quarter), the corrective action was

shared with Reworld as a company to ensure the error does not occur elsewhere. All environmental inspections passed. Reworld Alexandria was notified from Virginia Wastewater Environment that the facility received a platinum award for 2024, which correlates to seven years of being in good standing. For processing, the limit is currently 350,400 tons in which the Facility remains below with a target of 350,200 tons. In Calendar Year 2024, the Facility processed 350,257 tons, with a 93.8% availability, slightly lower than the planned 94.8%. The Turbine-Generator availability in Calendar Year 2024 was 94.7% available, slightly lower than the planned 95.5% planned. The ferrous recovery was better than expected at 3.0% recovered versus the expected 2.3%. With continued efforts to maintain the operation of the Facility in good condition, the CapEx spent was \$2.62 million and the expense spent was \$2.98 million.

Mayer discussed monthly operations. The three safety topics over the quarter included portable fire extinguishers, heavy metal safety, and hazard communication. Proactively have installed additional guarding around double dump valves throughout the Facility. In 2024, there was a major focus on lighting upgrades, improving the lighting requirements and replacing the mercury/non-LED lightbulbs. In Q2FY25, there were no environmental exceedances. Mayer stated they hosted a tour for The EPA which had positive feedback.

Mayer discussed operations for Q2FY25. There was a planned major outage on Boiler No. 1, a planned minor outage on Turbine No. 2, and a cooling tower fan replacement. There were two transformer failures in Calendar Year 2024, with the second being in Q2FY25. The failure is due to the circulating water pump. There are two temporary transformers onsite. The Facility is looking into replacing the transformers due to their age (30+ years). There is one transformer that has been specified and will likely be installed during in the first half of Calendar Year 2025. There were several unplanned events due to tube leaks and minor grate work. There was a propane tank that exploded and damaged several grate bars. There was a pan feeder problem due to springs breaking. There was a minor issue with the turbine governor which caused unplanned downtime. Skrabek asked what type of propane tank caused the damage. Mayer stated it was likely a smaller residential propane tank for a grill (eg. a 20lb tank).

B. Discussion of Quarterly Report and Facility Performance to Date (by HDR)

Fleming discussed the Quarterly Report and Performance Trends. Fleming reviewed the downtime over the quarter previously mentioned by Mayer. There was a total of ten outages for a total of 434 hours, 46% of it was scheduled with the major outage on Boiler No. 1. There was 163 hours of unscheduled downtime for approximately 38% of the downtime for six outages due to tube leaks and grate repairs. There were 74 hours of standby, about 17% of the total downtime, due to the utility ordered outage in December. Mayer stated that the Facility was tripped by Dominion Energy, the intent of the design is to shift the Facility into "Island Mode" to be self-

sustaining in a controlled way. The response has not been working for several instances in the past year. They have performed a simulation event in the plant where it does work, but from an external event the program does not work. The trip results in the requirement to purchase power from Dominion, but more problematically it affects the demand rate. Fleming continued to describe the turbine outages; six total outages, for 289 hours. Four outages were for standby time due to lack of steam and the Utility ordered outage for a total of 105 hours. There was one scheduled minor outage in October for 116 hours. Mayer stated it was an opportunity to test the controls, inspect internal operations, and perform some cleaning. There was one unscheduled outage for 68 hours due to the turbine governor control sticking. Mayer stated a result was changing the grease that was being used to a higher temperature grease.

In Q2FY25, waste deliveries year-to-date were at 175,526 tons which is nearly identical compared to the previous two fiscal years. See in Chart 1, the monthly MSW processing rate was slightly higher compared to the corresponding quarter in fiscal year 2024, despite 80 more hours of downtime. The increase is likely due to the increase in the boiler steam capacity and how the boiler was operating. In Q2FY25, the ash generation rate and ferrous recovery rate were both comparable to the previous fiscal year's second quarter. Ash generation increased by 0.4 percentage points. Overall, tonnage for metal recovery continues to trend down, but as a rate per processed ton, it is comparable with only a 0.4 percentage points difference. Fleming asked Mayer if this is a trend in the area with less metals being recovered or if there is an issue with the recovery system. Mayer stated there are inspections and maintenance on the magnet and variations in the distance of the magnet from the conveyor. From inspections it seems there is nothing impacting the recovery of the metals other than less metals in the feedstock. Domato stated that while analyzing the trends between ferrous and ash on the same per ton basis, this quarter there was an increase in about 0.4 percentage points in ash and a decrease in 0.4 percentage points in ferrous recovery. Grabowsky asked if there is a test to test the polarity of the magnetic field. Mayer stated there is a test that has been completed recently and degradation over time is minimal.

In Q2FY25, there was an increase in steam production (Chart 4 Page 11) about 2.6% compared to Q2FY24, the HHV and boiler steaming rate were consistent with last year as well, but a 5% higher BCU resulting in the increased steam production. Domato discussed the Boiler Capacity Utilization (Chart 7 Page 14), the Facility is seeing an increase in the steam production with steady waste characteristics (HHV). Net electric recovery (Chart 13 Page 18) was slightly higher (1.2% higher) at 384 kWh per ton. On Table 4, the utilities and reagent consumption show fuel oil usage is 71% higher than Q2FY24, due to a significant increase in number of outages (10 outages versus 4 outages in Q2FY24). Domato stated that as a rule of thumb is the heat input should

not be 0.25% of your waste processed. The largest driver for fuel oil consumption is the number of startups and shutdowns. Grabowsky asked about the cooling tower make up water, there were issues in the past with leaks, so when comparing to previous quarters, is the amount shown a normal amount to be expected or are there still leaking issues in the facility. Mayer stated they are not aware of any leaks. Consumption is based on the ambient temperature and how much work the cooling tower is doing. In terms of operations, last year Reworld replaced half the cooling tower bank media. During the major outage, there were inspections for uneven flows or leaks and there did not appear to be any from the inspection report.

Fleming discussed their site visit earlier in December, they noticed the backup transformer on site in the front parking lot. Mayer stated the transformer in the parking lot is a backup and is not currently being used; the transformer in the back for the circulating pump is currently being operated. Fleming mentioned the safety cages around the dump valved were installed. There is new fencing installed on the entrance gate. Fleming saw new spare ID fan rotors on site; Mayer stated there are two backups and would prefer not to store them onsite but there is currently no other option. Unit 3 had a full grate bar replacement during its recent Major outage. Paint was added in the SDA penthouse. Referring to the deficiency list, the fan above the deaerator has been out of service and Mayer stated it is mainly for operator safety and will be addressed. Lights above Boiler No. 1 were still out of service. Mayer stated they are working through the lights in a priority order and not many people go up to the top floor, but they will get to them eventually. Fleming asked about the Boiler No. 1 feed chute replacement – Mayer stated that it will be replaced in the major outage in October. Over the past year Reword has been slowly trying to repair and maintain past neglected items to maintain a safe and operating environment. Domato stated that he would like to set up quarterly meetings that are offset with the FMG meeting to talk about the deficiency list and steps on how items could be addressed. Mayer agreed, and the majority of the deficiency list is maintenance items.

V. Reworld Items

A. Supplemental Waste

There have been no major changes, and operations have continued as expected. Cammarata stated they are continually looking for opportunities, their overall business is increasing.

VI. Old Business

A. Proposed MACT Rules

Cammarata stated the rules are delayed, the respective parties agreed to a one-year extension. There is no change in operations.

Cammarata discussed the Virginia Clean Economy Act. There was a court ruling on RGGI (Regional Greenhouse Gas Initiative) that has caused a pause on the Economy Act. From Reworld's perspective, there are issues with respect to Waste to Energy being included in the carbon dioxide reduction. Skrabek stated that the possible legislative corrections were done for the year of 2024, but no further updates. From a City perspective, they were happy with the outcome of the lawsuit. Now that the FMG knows the Facility will be affected by the Act, if there are proposed changes, the City wants to participate in the discussions in future efforts. Grabowski stated that their legislative liaison, has left, but was following the Act closely while working with Alexandria and Falls Church to support the effort to input language supporting waste to energy facilities. This role has not been passed to someone new as of yet.

B. Tipping Floor Exit Door Operation

Skrabek stated that while passing the Facility, it is noticed to continuously not closing as vehicles leave. Skrabek asked Reworld to provide the same attention to the tipping floor door as they are to other maintenance items, as there is a possibility of complaints from local residents. The FMG is hoping to see the door operate as it has historically, with the door closing as soon as a truck leaves. Mayer stated that it is working according to the requirements; the high volume of traffic can lead to the door remaining open. The constant opening/closing does impede the traffic flow, so there may be a reason for the certain sensor angle to help the flow of traffic. Skrabek stated that it currently is different than how it operated in the past, so if there is a suggested change in operations, it needs to be discussed with the FMG. From a community impact, it creates the risk of odors escaping, people walking by are going to notice it more; from the FMG perspective, it would be advantageous to return the previous door operations, where the door was closed unless a truck was leaving the Facility. If this is a challenge, there needs to be further discussion. Mayer stated he will perform an assessment on the door and provide an assessment/update by the end of February.

C. AlexRenew Biomass Material

Skrabek stated that there was a meeting with AlexRenew and it appears there are some environmental benefits to the Facility/Region for having a close disposal site for the biosolids. Both parties are going to assess what other concerns/changes that need to be addressed prior to accepting the additional waste stream. Skrabek asked Cammarata if he thinks they are ready for a follow-up meeting; has he looked into permits and what may need to change? Cammarata stated that they have done some research, the initial belief is that it may fit under the profiled waste program. If it does, there does not need to be a detailed re-permitting. However, equally

as important, Cammarata stated they have to assess the impact of accepting the material on the ability to process MSW. Items Cammarata wanted to confirm with Skrabek included: the confusion of the HHV of the waste, as well as the concern over odors from other facilities that have accepted this type of waste; is it odorous in pellet form or does it become odorous if it becomes wet? Skrabek does not see an issue in the waste becoming wet during transportation, as the trucks can be enclosed. There could potentially be a way to mix the waste with particularly wet loads as the waste has a high BTU value to help offset the HHV drops. Cammarata stated there was an additional question over the quantity; it was previously stated for 25 tons per day and was uncertain if that is an average or what the number of deliveries per week would be expected. Skrabek stated he will relay the questions to AlexRenew, it may be one semi-truck per day, but it may be easier to offload three smaller trucks, these questions would be beneficial during the meetings together.

VII. New Business

A. Public Initiatives

Skrabek stated that the City used to have an Earth Day event sponsored by Reworld. This year their Office of Climate Change is likely to have "Earth Month" but the climate office will be hosting an event in Brenman Park on May 10th. The City should reach out to either Cammarata or Carolyn Cruz, Reworld's Community Outreach Representative.

Cammarata sent the list of initiatives for this past quarter. Skrabek stated that the City may reach out about a future shredding event. The previous lack of participation was likely due to advertisement, in which the City could assist with.

Reworld's Public Outreach Initiatives:

Tours

11/12/2024 Full Circle Montessori School

Community Service and Sponsorships

| 10/10/2024 | Alive Alexandria |
|------------|---|
| 10/26/2024 | Hispanic Heritage Festival |
| 11/9/2024 | Alive- Alexandria (Food Hub) |
| 10/26/2024 | Friendsgiving with Alexandria Law Enforcement |
| 12/4/2024 | Alive- Alexandria (Food Hub) |
| 11/13/2024 | Alive- Alexandria (Food Hub) |
| 11/28/2024 | Friendsgiving- Alexandria |
| 12/4/2024 | Alive- Alexandria |
| 12/3/2024 | Toys for Angel Tree |
| 12/3/2024 | Gifts |
| 12/14/2024 | Wreaths for Wreaths Placement Ceremony |

B. FY25 and FY26 Budgets

For the official FY25 budget, Skrabek stated that the FMG would have a vote that the FY25 budget would be the same as the FY24 budget. On a motion by Grabowsky, the FMG would adopt the FY25 budget at the same numbers for each jurisdiction as the FY24 adopted budget, Hughes seconded. All in favor of approval. Skrabek requested to make a second motion to approve the FY26 budget as the same numbers as FY25 and FY24. Grabowsky motioned to approve the FY26 budget to be the same as FY24 and FY25 budgeted numbers, Hughes seconded. All in favor of approval.

C. Open Discussion

Skrabek shared with the Arlington and Alexandria team, this is likely his last meeting with the FMG as the lead. Flavio Goncalves from Resource Recovery team will likely take Skrabek's place. Effective May 1, 2025, Skrabek will be retiring from the City. Grabowsky stated this will also be his last meeting and will be retiring April 18, 2025. Shani Kruljac will be taking the place for Grabowsky, she is the operations manager at the Solid Waste Bureau in Arlington. They are not going to recruit another person to replace Grabowsky's position. Shani will be an acting capacity member for the FMG, according to the FMG rules, there needs to be one budget related person and one operational related person appointed by the County manager. Shani will be the new appointment, Huffman will be the alternate.

On a motion by Grabowsky, seconded by Hughes the meeting adjourned at 10:05 a.m. The next Facility Monitoring Group Meeting is scheduled for Wednesday, May 14, 2025, and will be held as a virtual meeting.