KURARAY CO., LTD., Summary of Q&A session for June 2024 Management Briefing

[Time & Date] From 10:00 to 11:40, June 21, 2024

[Place] Kuraray Head Office *Hybrid conference

[Speakers]

Hitoshi Kawahara	President and Representative Director
Nobuhiko Takai	Director and Managing Executive Officer, President, Functional Materials Company
Stevan R. Schott	Executive Officer, General Manager of Environmental Solutions Division, Calgon Carbon Corporation President
Jenalle Brewer	Senior Vice President, Calgon Carbon Corporation
Shinichi Takizawa	Senior Manager, Corporate Communications Department

Q&As

Q1 Regarding the frequency of activated carbon exchange at water utilities and the penetration rate PFAS removal equipment.

A1 The frequency of exchanging activated carbon varies depending on the concentration of PFAS and the organic matter contained in the water. In reality, it varies from case to case, but for typical drinking water application, it is replaced every 36 months on average, while for PFAS removal, it is replaced every 18 months for groundwater and about 9 months for surface water. The quality of the activated carbon also affects its performance and effective life. Our Filtrasorb™ products have shown very good results for PFAS treatment.

The penetration rate of PFAS removal equipment is expected to be somewhere between the upper and lower limits shown. At this time, only 15% of drinking water suppliers have been tested, and it is difficult to make accurate predictions until more water facilities and drinking water test results are reported.

Q2 Regarding the composition ratio of virgin carbon and reactivated carbon in 2030.

A2 We believe one third of water will be treated with virgin carbon, and remaining two-third will be treated with reactivated carbon. Both will be reactivated by us.

Q3 Regarding revenue growth in the Environmental Solutions Division.

A3 There are two drivers for increasing the profitability of the Environmental Solutions Division. The first is price. As demand grows, it is expected that market prices will rise in the future. The second is sales mix. Our company targets the high-end market, and as that proportion increases, we can expect high profitability. Ultimately, we believe that ROIC will also increase.

Q4 About the activated carbon business model.

A4 We are the only company in the United States that can provide all the virgin carbon, equipment, reactivation, and services that our customers need. Many customers use all four of these products and services. We have the technical capabilities, research and development capabilities, and application development capabilities to provide all of these, and our ability to provide them as a total solution gives us an advantage over our competitors. However, although we provide solutions, it is not a subscription-based business.

In the case of municipal drinking water, bidding is held. Especially when combined with reclamation, some customers have been doing business with us for as long as 50 years. We also have long-term contracts of 5 or 10 years with many municipalities. We hope those types of arrangements as we treat for PFAS as well.

Q5 Regarding pricing policy, supply and demand and profitability.

A5 We expect that pricing will improve in this market over time. We acknowledge that there is a need for additional supply, particularly in activated carbon and reactivation, and we are fully prepared to increase our capacities. In the latter half of last year, we acquired an equipment manufacturing company on the West Coast of the United States, and a new production line for virgin carbon began operation in the first quarter of this year. We will continue to work on strengthening our production capacity to meet future needs. We believe that we can aim for an operating profit margin of 10% or more, but prices and profitability will depend in part on the market. We are, by far, the biggest in this market. We believe we’re the best, and we fully intend to capitalize on this opportunity.

Q6 Regarding CO2 emissions from the activated carbon business and measures to reduce them.

A6 In the production of activated carbon, one of our challenges is to reduce GHG emissions, such as CO2. Generally, virgin carbon emits more, and reactivated carbon emits about one-fifth of virgin carbon.

The GHG emissions will be processed using CCUS (Carbon Dioxide Capture, Utilization and Storage). First of all, there are established methods for capture, and we are considering when to introduce them. Also, although it is different from capture, it is important to consider how to save energy or reduce GHG in the manufacturing process,

and we are also working on this in our corporate research.
The captured GHG will be utilized or stored, but at bases with large GHG emissions and located near oil industrial areas, methods such as EOR (Enhanced Oil Recovery), which returns the GHG to oil and makes it easier to extract it, are also candidates for utilization. Other ideas include burying it underground through storage, or converting GHG to other products. We have not yet decided which method to proceed with, but we are considering a wide range of options.

Q7 Regarding risk factors for achieving business growth in 2030.

A7 There is a risk that subsidies and funds for PFAS regulation will not be provided as scheduled, but the US government has set aside a considerable amount of funds, and we are aware through conversations with customers that water utilities are also making thorough preparations. In addition, there are other technologies for PFAS treatment, such as ion exchange resins and reverse osmosis, but granular activated carbon has an advantage over those technologies in terms of total cost, including equipment and operation. These estimates are based on figures released by the EPA and we believe they are fairly accurate forecasts.
The future penetration rate of activated carbon is also a risk, but we have indicated an expansion range of 15 to 30%. Looking at other forecasts, there are higher figures such as 45% expansion, so we believe our forecast is reasonable.

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