

9 November 2021

Susie McBurney  
General Manager NSW/ACT

REMONDIS Australia Pty Ltd  
32 - 36 Christie Street, St Marys  
NSW 2760, Australia  
Susie.McBurney@remondis.com.au//  
remondis.com

Dear Ms Fishburn,

### **SSD-10447 Tomago Resource Recovery Facility, Condition B32 for your approval**

REMONDIS' Development Consent (SSD-10447) Condition B32 requires the following:

B32. Prior to the commencement of construction of the food de-packaging plant, the Applicant must provide a detailed design of the odour control unit on the food de-packaging plant, to the satisfaction of the Planning Secretary. The design must include:

- (a) details of the treatment method;
- (b) size and capacity of the unit;
- (c) details of the control efficiencies that the unit would achieve; and
- (d) performance monitoring maintenance procedures.

### **Assessed potential air quality impact**

REMONDIS assessed the potential air quality impact of the planned operations at the Tomago site as part of the Environmental Impact Assessment. The air quality assessment report titled, "Air Quality Assessment - Proposed Resource Recovery Facility & Truck Parking Depot" in Appendix F of the EIS used computational air dispersion modelling (CALPUFF) and found, "The results of the modelling demonstrate compliance with the air quality criteria for the proposed development for VOC and odour at the property boundary and nearby sensitive receptors by a significant margin."

Of significance is the qualification, "It is noted that highly conservative modelling assumptions have been made, such as emission factors not accounting for activities occurring within buildings. The emissions factors which have been adopted are also based on material handling and processing from the mining industry. It is therefore noted that pollution concentrations from the development are likely to be lower in practice."

Notwithstanding the above, the purpose of this letter is to provide the detailed design of the odour control unit for the food de-packaging plant.

### **Details of the Treatment Method**

REMONDIS is proposing to install an odour control system to extract fugitive gases from specific locations along the process. This would specifically include the waste receipt containers, which will be connected to the odour control unit with rigid/flexible ducting. The odour control unit extracts air using fan forced ventilation with a pre-treatment step to remove aerosols, followed by treatment through a virgin activated carbon filter used to treat the received air. The treated air is to be released into the building air (above head height) which will facilitate incident

monitoring, whereby operational staff will smell where there is any carbon breakthrough (i.e., the filter medium has ceased to work).

The full details of the proposed odour control system are set out in the proposal from Bioaction Pty Ltd to REMONDIS dated 11 October 2021 and attached at, "42191 - PROJECT - Quote Proposal RV1".

### **Size and Capacity of the Unit**

The system has been sized allowing for a compact odour control unit to be installed at the food de-packaging plant. The intention is to create a seal around the processed food containers using either of rigid or flexible ducting as is most appropriate. Noting that each container has an assumed volume of 3 m<sup>3</sup> and allowing for 6 air changes per hour, the calculated flow rate for connection to a single container is 18 m<sup>3</sup>/hr or 5 L/second.

REMONDIS expects that in normal operations the unit would ordinarily be connected to two 3 m<sup>3</sup> containers, as depicted in the Wastech Turbo Separator Set Up as supplied in drawing, "32.39.07 - Rev03\_With deodourising equipment – 191021" which includes depiction of the odour control unit with two activated carbon filters.

REMONDIS is proposing to install the FiltaCarb FC75 with two activated carbon filters sized for a treatment flow of 150 L/second flowrate, or 30, 3 m<sup>3</sup> containers. This has been oversized deliberately to ensure that REMONDIS has allowed for any potential process upsets (including emergency repair requirements), future growth scenarios and to account for the decline in performance of the filter over its operational life.

The pre-filter includes fats and greases screens sized for a face velocity of 2.5 m/s, again oversized for the expected flowrate and consequential velocity at the point of the screen.

### **Details of the control efficiencies that the unit would achieve**

Bioaction Pty Ltd provides in their proposal that, "The activated carbon system anticipated odour control efficiency 99% that the unit would achieve".

### **Performance monitoring maintenance procedures**

The pre-filter screens are expected to require cleaning once monthly, REMONDIS will include this as a task in our routine maintenance for the operational site.

The carbon filter cannister drums will require replacement when they reach their end of life. The system has been designed with flexible couplings to facilitate this replacement and REMONDIS has included the on-going maintenance costs in our operational budgets.

REMONDIS understands the concerns regarding the potential for offensive odour and food de-packaging. With the initial air quality modelling not predicting any potential for offensive odour, REMONDIS is proposing to install an odour control unit, collecting any potential odorous air and treating this for aerosols and through a carbon filter medium prior to release into the Tomago Resource Recovery Facility. The additional treatment provides surety that REMONDIS has effective odour management for the food de-packaging plant and we look forward to receiving your feedback on this proposed solution.

Yours faithfully

**REMONDIS Australia Pty Ltd**



**Susie McBurney**  
General Manager NSW/ACT



WORKING FOR THE FUTURE

Encl: 42191 - PROJECT - Quote Proposal RV1  
32.39.07 - Rev03\_With deodourising equipment – 191021  
FCA75x2 - GA - No Control Panel