

## **Annex 1-4 Odour Sampling Results**

<b>Plant A in Singapore (capacity 4,000 chickens/hour)</b>					
<b>Area</b>	<b>Number of Samples</b>	<b>Temperature, °C</b>	<b>Humidity, %</b>	<b>Wind Speed during Sampling, m/s</b>	<b>Average Odour Concentration<sup>1</sup>, OU/m<sup>3</sup></b>
Live poultry unloading area and holding area (semi-enclosed area)	3 samples at two locations where the strongest smells were identified. Two samples are in same location but in different heights. There were about 3,000 chickens in the holding area during the sampling.	31.3 – 31.8	59 – 60	ND	397
Slaughtering area (enclosed area)	4 samples at four locations (near bleeding, scalding, de-feathering) where strongest smell were identified.	28.3 – 30.7	78 – 93	ND	519
Evisceration area (enclosed area)	2 samples at two locations where the strongest smell were identified.	28.3 – 29.0	93	ND	537
Offal and feather disposal (open area)	1 sample at the location where strongest smell was identified.	31.9	55	ND	604
Chilling area (enclosed area)	2 samples at two locations near the chilling immersion line and packing point where strongest smell was identified.	18.4 – 22.9	61 – 81	ND	53
Packing area (enclosed area)	1 sample collected at the packing area outside cold storage	27.4	40	ND	51
<b>Plant B in Singapore (capacity 4,000 chickens/hour)</b>					
Live poultry unloading area and holding area (semi-enclosed area)	2 samples at one location at two heights where the strongest smells were identified. There were about 17,000 chickens in the holding area during the sampling.	31.5 – 32.3	70 – 76	ND	481
Slaughtering area (enclosed area)	3 samples at three locations (near bleeding and de-feathering) where strongest smell were identified.	27.1 – 28.7	87 – 91	ND	541 <sup>2</sup>
Evisceration area (enclosed area)	2 samples at two locations where the strongest smell were identified.	27.4 – 27.7	80 – 90	ND	730 <sup>3</sup>
Offal and feather disposal (open area)	1 sample at the location above a waste skip where feather and offal were temporarily disposed of.	25.6	90	2	150

Packing area <sup>4</sup> (enclosed area)	2 samples at two locations beside cutting and tagging processes where strongest smell was identified.	22.3 – 22.8	85	ND	44
Chiller room (cold storage) (enclosed area)	1 sample collected at the center of empty area	17.7	89	ND	376
<b>Cheung Sha Wan Poultry Wholesale Market</b>					
Shed A (3,200 chickens in the shed during sampling)	4 samples from two locations at two different heights	19.4 – 19.8	80.7 – 85.5	ND	161
Shed B (8,600 chickens in the shed during sampling)	4 samples from two locations at two different heights	19.3 – 19.7	81.4 – 87.2	ND to 1.2	371

Sources:

Odour samplings measured by Singapore Aromatrix Consulting Engineers Pty Ltd and the Hong Kong Polytechnic University.

1. Odour Sampling and Measurement for a Poultry Slaughtering and Processing Plant, Odour Research Laboratory, Department of Civil and Structural Engineering, the Hong Kong Polytechnic University, Hong Kong, February 2007.
2. Report for Odour Sampling and Assessment: Poultry Processing and Slaughtering Plants, Aromatrix Consulting Engineers Pty Ltd, Singapore, February 2007.

Notes:

1. Arithmetic mean of the odour concentrations from the samples collected within the area.
2. As there was no chicken on conveyor during the collection of one of the odour samples, the concentration of this sample has been excluded from the calculation of the mean odour concentration levels.
3. As cleaning was in progress during the collection of one of the odour samples, the odour concentration of this sample was discarded and the average odour concentration is from one odour sample only.
4. Cut-up, de-boning and packaging processes are located within the same area on 1/F of Plant B.