

APPENDIX C

Details of Depot Emission Rates Calculation

Calculation of Total Emission Rate From the Depot

Job Title.: New World First Bus Permanent Depot at Chai Wan
 Job No.: 21270
 Date: 01-12-99

Air Emission Rate
 Calculation for Single Floor

| Floors | Mean Travel Distance (m) | Maximum no. of Buses (Veh/hr) | CO (g/hr) | NO ₂ (g/hr) | RSP (g/hr) | SO ₂ (g/hr) | |
|-----------------|-----------------------------|-------------------------------------|--------------|---------------------------|---------------|---------------------------|-------------------|
| G/F (Main.area) | 80 | 33 | 56 | 13 | 4 | 3.59 | G/F (Main.area) ↓ |
| G/F (Entrance) | 85 | 143 | 251 | 57 | 20 | 16.53 | |
| 1/F (Ramp Area) | 90 | 98 | 176 | 40 | 14 | 12.00 | |
| 1/F (Main Area) | 80 | 29 | 50 | 11 | 4 | 3.16 | |
| 2/F (Ramp Area) | 83 | 88 | 153 | 35 | 12 | 9.93 | |
| 4/F (Ramp Area) | 83 | 68 | 118 | 27 | 9 | 7.68 | |
| 6/F (Ramp Area) | 83 | 48 | 83 | 19 | 7 | 5.42 | |
| R/F | 160 | 38 | 92 | 22 | 9 | 8.27 | |
| <End of NSR> | | | | | | | |
| Total : | | | 980 | 224 | 79 | 67 | |
| | | | (g/s) | 0.2723 | 0.0621 | 0.0219 | 0.0185 |

Calculation of Total Emission Rate From the Depot

Project: New World First Bus Permanent Depot at Chai Wan
 Title : Emission Rate at Peak Hour
 Date : 01-12-99
 Floor : G/F (Main.area)

Pollutant : **NO_x**

| | Idling (g/min/veh) | Travelling ^[1] (g/km/veh) |
|--|-----------------------|---|
| NO _x Emission Factor | 2 | 11.71 |
| Mean Distance Travel (m) | † | 80 |
| Mean Travel Time (s) | 30 | ‡ |
| NO _x Emission Rate (g/vehicle) | 1.00 | 0.94 |

Total Emission Rate 1.94 g/vehicle

Pollutant : **CO**

| | Idling (g/min/veh) | Travelling ^[1] (g/km/veh) |
|---------------------------------|-----------------------|---|
| CO Emission Factor | 2 | 8.89 |
| Mean Distance Travel (m) | † | 80 |
| Mean Travel Time (s) | 30 | ‡ |
| CO Emission Rate (g/vehicle) | 1.00 | 0.71 |

Total Emission Rate 1.71 g/vehicle

Pollutant : **RSP**

| | Idling (g/min/veh) | Travelling ^[1] (g/km/veh) |
|----------------------------------|-----------------------|---|
| RSP Emission Factor | 0.042 | 1.38 |
| Mean Distance Travel (m) | † | 80 |
| Mean Travel Time (s) | 30 | ‡ |
| RSP Emission Rate (g/vehicle) | 0.02 | 0.11 |

Total Emission Rate 0.13 g/vehicle

Pollutant : **SO₂**

| | Travelling ^[2] (g/km/veh) |
|--|---|
| SO ₂ Emission Factor | 1.36 |
| Mean Distance Travel (m) | 80 |
| SO ₂ Emission Rate (g/vehicle) | 1.09E-01 |

† not applicable for idling mode with vehicle stationary

‡ not applicable for travelling mode

* Source of data / Ref : [1] FAEF in 1998 Model

[2] EPD fax ref.: EP11/V1/52 Pt IV dated 21 April 1998

Calculation of Total Emission Rate From the Depot

Job Title.: New World First Bus Permanent Depot at Chai Wan
 Job No.: 21270
 Date: 01-12-99

**Air Emission Rate
 Calculation for Single Floor**

| Floors | Mean Travel Distance (m) | Maximum no. of Buses (Veh/hr) | CO (g/hr) | NO ₂ (g/hr) | RSP (g/hr) | SO ₂ (g/hr) | |
|-----------------|-----------------------------|-------------------------------------|--------------|---------------------------|---------------|---------------------------|------------------|
| G/F (Main.area) | 80 | 33 | 56 | 13 | 4 | 3.59 | G/F (Entrance) ↓ |
| G/F (Entrance) | 85 | 143 | 251 | 57 | 20 | 16.53 | |
| 1/F (Ramp Area) | 90 | 98 | 176 | 40 | 14 | 12.00 | |
| 1/F (Main Area) | 80 | 29 | 50 | 11 | 4 | 3.16 | |
| 2/F (Ramp Area) | 83 | 88 | 153 | 35 | 12 | 9.93 | |
| 4/F (Ramp Area) | 83 | 68 | 118 | 27 | 9 | 7.68 | |
| 6/F (Ramp Area) | 83 | 48 | 83 | 19 | 7 | 5.42 | |
| R/F | 160 | 38 | 92 | 22 | 9 | 8.27 | |
| <End of NSR> | | | | | | | |
| Total : | | | 980 | 224 | 79 | 67 | |
| | | | (g/s) | 0.2723 | 0.0621 | 0.0219 | 0.0185 |

Calculation of Total Emission Rate From the Depot

Project: New World First Bus Permanent Depot at Chai Wan
 Title : Emission Rate at Peak Hour
 Date : 01-12-99
 Floor : G/F (Entrance)

Pollutant : **NO_x**

| | Idling (g/min/veh) | Travelling ^[1] (g/km/veh) |
|--|-----------------------|---|
| NO _x Emission Factor | 2 | 11.71 |
| Mean Distance Travel (m) | † | 85 |
| Mean Travel Time (s) | 30 | ‡ |
| NO _x Emission Rate (g/vehicle) | 1.00 | 1.00 |

Total Emission Rate 2.00 g/vehicle

Pollutant : **CO**

| | Idling (g/min/veh) | Travelling ^[1] (g/km/veh) |
|---------------------------------|-----------------------|---|
| CO Emission Factor | 2 | 8.89 |
| Mean Distance Travel (m) | † | 85 |
| Mean Travel Time (s) | 30 | ‡ |
| CO Emission Rate (g/vehicle) | 1.00 | 0.76 |

Total Emission Rate 1.76 g/vehicle

Pollutant : **RSP**

| | Idling (g/min/veh) | Travelling ^[1] (g/km/veh) |
|----------------------------------|-----------------------|---|
| RSP Emission Factor | 0.042 | 1.38 |
| Mean Distance Travel (m) | † | 85 |
| Mean Travel Time (s) | 30 | ‡ |
| RSP Emission Rate (g/vehicle) | 0.02 | 0.12 |

Total Emission Rate 0.14 g/vehicle

Pollutant : **SO₂**

| | Travelling ^[2] (g/km/veh) |
|--|---|
| SO ₂ Emission Factor | 1.36 |
| Mean Distance Travel (m) | 85 |
| SO ₂ Emission Rate (g/vehicle) | 1.16E-01 |

† not applicable for idling mode with vehicle stationary

‡ not applicable for travelling mode

* Source of data / Ref : [1] FAEF in 1998 Model
 [2] EPD fax ref.: EP11/V1/52 Pt IV dated 21 April 1998