

**Emissions from Specified Process**

| Company                            | Source ID | Type  | Point Source |        |                |                  |               | Area Source       |                  |                  |       |          | Emission Rate (g/s) or (g/m <sup>2</sup> /s) |          |                                                                  | Remark / Reference                | Operation Hour |
|------------------------------------|-----------|-------|--------------|--------|----------------|------------------|---------------|-------------------|------------------|------------------|-------|----------|----------------------------------------------|----------|------------------------------------------------------------------|-----------------------------------|----------------|
|                                    |           |       | X            | Y      | Release Height | Exit Temperature | Exit velocity | Internal diameter | Length of X side | Length of Y side | Angle | TSP      | RSP                                          | FSP      |                                                                  |                                   |                |
|                                    |           |       | (m)          | (m)    | (m)            | (K)              | (m/s)         | (m)               | (m)              | (°)              |       |          |                                              |          |                                                                  |                                   |                |
| Hong Kong Concrete Company Ltd     | HKCC_EP1A | POINT | 819002       | 833315 | 14             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 | Specified Process Licence                                        | 12 hours a day<br>(07:00 - 19:00) |                |
|                                    | HKCC_EP1B | POINT | 819006       | 833315 | 14             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | HKCC_EP2A | POINT | 819011       | 833315 | 10             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | HKCC_EP2B | POINT | 819007       | 833310 | 10             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | HKCC_EP4  | AREA  | 819016       | 833307 | 0.5            | -                | -             | -                 | 3.8              | 6.0              | 0.0   | 0.004288 | 2.19E-03                                     | 6.43E-04 |                                                                  |                                   |                |
|                                    | HKCC_EP9  | AREA  | 819011       | 833308 | 0.5            | -                | -             | -                 | 3.0              | 78.0             | 29.0  | 0.000212 | 1.08E-04                                     | 3.18E-05 |                                                                  |                                   |                |
|                                    | HKCC_EP1  | POINT | 819013       | 833319 | 1.5            | Ambient          | 15.5          | 0.2               | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
| Redland Concrete Company Limited   | RED_EP1   | AREA  | 818849       | 832911 | 0.5            | -                | -             | -                 | 2.25             | 4.00             | 0.00  | 0.002657 | 1.36E-03                                     | 3.99E-04 | Specified Process Licence<br>(Will be removed after<br>Jul/2025) | 18 hours a day<br>(06:00 - 24:00) |                |
|                                    | RED_EP2   | POINT | 818838       | 832866 | 6              | 843              | 18.3          | 0.24              | -                | -                | -     | 0.013000 | 6.63E-03                                     | 1.95E-03 |                                                                  |                                   |                |
|                                    | RED_EP3   | AREA  | 818852       | 832905 | 0.5            | -                | -             | -                 | 2.00             | 39.00            | 40.80 | 0.000825 | 4.21E-04                                     | 1.24E-04 |                                                                  |                                   |                |
|                                    | RED_EP4   | POINT | 818856       | 832881 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP5   | POINT | 818856       | 832879 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP6   | POINT | 818852       | 832881 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP7   | POINT | 818852       | 832879 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP8   | POINT | 818847       | 832889 | 10             | Ambient          | 15.6          | 0.28              | -                | -                | -     | 0.009722 | 4.96E-03                                     | 1.46E-03 |                                                                  |                                   |                |
|                                    | RED_EP9   | POINT | 818840       | 832884 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP10  | POINT | 818839       | 832882 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP11  | POINT | 818844       | 832884 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP12  | POINT | 818843       | 832882 | 25             | Ambient          | 15.6          | 0.20              | -                | -                | -     | 0.004861 | 2.48E-03                                     | 7.29E-04 |                                                                  |                                   |                |
|                                    | RED_EP13  | POINT | 818851       | 832888 | 10             | Ambient          | 15.6          | 0.28              | -                | -                | -     | 0.009722 | 4.96E-03                                     | 1.46E-03 |                                                                  |                                   |                |
|                                    | RED_EP14  | POINT | 818847       | 832874 | 10.5           | Ambient          | 8.9           | 0.20              | -                | -                | -     | 0.002778 | 1.42E-03                                     | 4.17E-04 |                                                                  |                                   |                |
| Goluk Concrete Company Limited [1] | GOL_EP1   | POINT | 818915       | 832870 | 9.5            | Ambient          | 0.72          | 0.78              | -                | -                | -     | 0.003403 | 1.74E-03                                     | 5.10E-04 | Specified Process Licence<br>(Will be removed after<br>Jul/2025) | 10 hours a day<br>(08:00 - 18:00) |                |
|                                    | GOL_EP2   | POINT | 818920       | 832870 | 9.5            | Ambient          | 0.72          | 0.78              | -                | -                | -     | 0.003403 | 1.74E-03                                     | 5.10E-04 |                                                                  |                                   |                |
|                                    | GOL_EP3   | POINT | 818910       | 832874 | 22             | Ambient          | 0.84          | 0.96              | -                | -                | -     | 0.006086 | 3.10E-03                                     | 9.13E-04 |                                                                  |                                   |                |
|                                    | GOL_EP4   | POINT | 818908       | 832874 | 22             | Ambient          | 0.84          | 0.96              | -                | -                | -     | 0.006086 | 3.10E-03                                     | 9.13E-04 |                                                                  |                                   |                |
|                                    | GOL_EP5   | POINT | 818909       | 832871 | 14.2           | Ambient          | 0.84          | 0.96              | -                | -                | -     | 0.006086 | 3.10E-03                                     | 9.13E-04 |                                                                  |                                   |                |
|                                    | GOL_EP6   | POINT | 818918       | 832866 | 14.2           | Ambient          | 0.84          | 0.96              | -                | -                | -     | 0.006086 | 3.10E-03                                     | 9.13E-04 |                                                                  |                                   |                |
|                                    | GOL_EP7   | POINT | 818923       | 832873 | 22             | Ambient          | 0.84          | 0.96              | -                | -                | -     | 0.006086 | 3.10E-03                                     | 9.13E-04 |                                                                  |                                   |                |
|                                    | GOL_EP8   | POINT | 818926       | 832874 | 22             | Ambient          | 0.84          | 0.96              | -                | -                | -     | 0.006086 | 3.10E-03                                     | 9.13E-04 |                                                                  |                                   |                |
|                                    | GOL_EP9   | POINT | 818925       | 832870 | 14.2           | Ambient          | 0.84          | 0.96              | -                | -                | -     | 0.006086 | 3.10E-03                                     | 9.13E-04 |                                                                  |                                   |                |
|                                    | GOL_EP10  | AREA  | 818893       | 832891 | 0.5            | -                | -             | -                 | 25.0             | 2.0              | 33.6  | 0.000017 | 8.15E-06                                     | 1.24E-06 |                                                                  |                                   |                |
|                                    | GOL_EP11  | AREA  | 818915       | 832873 | 0.5            | -                | -             | -                 | 4.0              | 4.0              | 0.0   | 0.000017 | 8.15E-06                                     | 1.24E-06 |                                                                  |                                   |                |

Note :

[1] No emission rates fro GOL\_EP10 and GOL\_EP11 are available from the SP Licence. Based on the size of source and the provision of control equipments (i.e. GOL\_EP10 : water spray; GOL\_EP11: 3-side enclosure with top cover, front curtain and water spray), GOL\_EP10 would likely be a haul road within the site while GOL\_EP11 would likely be a loading / unloading area. Hence, emission factor of Heavy Construction as per USEPA AP-42 Section 13.2.3.3 (see Appendix 4.1) is therefore adopted as a reasonable assumption.

**Emission factor for Industrial Chimneys**

With reference to the USEPA AP-42 Section 1.3, Table 1.3-1 & Table 1.3-6 (Distillate Oil Fired):

|                       |      |             |
|-----------------------|------|-------------|
| NOx emission factor = | 20   | lb/1000 gal |
| RSP emission factor = | 1    | lb/1000 gal |
| FSP emission factor = | 0.25 | lb/1000 gal |

**Summary of Emission Factors**

| Emission Factor (g/L) <sup>[1]</sup> |      |      |
|--------------------------------------|------|------|
| NO <sub>x</sub>                      | RSP  | FSP  |
| 2.4                                  | 0.12 | 0.03 |

Note :

[1] Conversion factor of 0.12 is adopted to convert from lb/1000 gal to g/L.

**Summary of Emission Rate**

| Company                                           | Source ID | Type  | X      | Y      | Release Height | Exit Temperature | Exit velocity | Internal diameter | Fuel Consumption Rate (L/hour) | Emission Rate (g/s) |          |          | Operation Hour                |
|---------------------------------------------------|-----------|-------|--------|--------|----------------|------------------|---------------|-------------------|--------------------------------|---------------------|----------|----------|-------------------------------|
|                                                   |           |       | (m)    | (m)    | (m)            | (K)              | (m/s)         | (m)               | NO <sub>x</sub>                | RSP                 | FSP      |          |                               |
| Pun Chun Sauce & Preserved Fruit Factory Ltd. [1] | PC_CH01   | POINT | 818033 | 832299 | 20.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 | 8 hours a day (09:00 - 17:00) |
|                                                   | PC_CH02   | POINT | 818044 | 832299 | 15.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH03   | POINT | 818047 | 832303 | 13.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH04   | POINT | 818049 | 832307 | 15.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH05   | POINT | 818038 | 832307 | 15.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH06   | POINT | 818045 | 832319 | 15.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH07   | POINT | 818050 | 832329 | 20.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH08   | POINT | 818062 | 832343 | 15.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH09   | POINT | 818089 | 832326 | 15.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
|                                                   | PC_CH10   | POINT | 818096 | 832322 | 15.0           | 373              | 6.00          | 0.50              | 52.0                           | 3.47E-02            | 0.001733 | 4.33E-04 |                               |
| Hang Sun Chemical Mfg. Ltd. [2]                   | HSCM_CH12 | POINT | 818177 | 832382 | 20.0           | 513              | 9.08          | 0.50              | 276.4                          | 1.84E-01            | 0.009213 | 2.30E-03 | 8 hours a day (09:00 - 17:00) |
| Wing Kai Destruction & Recycle Co. [2]            | WKDR_CH13 | POINT | 819122 | 833456 | 33.8           | 533              | 1.00          | 0.65              | 360.0                          | 2.40E-01            | 0.012000 | 3.00E-03 | 24 hours a day                |
| Hop Hing Oil Factory Ltd. [2]                     | HHOF_CH14 | POINT | 819123 | 833208 | 25.0           | 488              | 5.00          | 0.50              | 130.5                          | 8.70E-02            | 0.004350 | 1.09E-03 | 24 hours a day                |

Note:

[1] Fuel consumption rates, exit temperature and exit velocity for each chimney are provided by the operator, and release height internal diameter are estimated by site observation via chimney surveys conducted in December 2012, January 2013, March 2013, October 2014, September 2015 and December 2016.

[2] Release height, chimney diameter, exit temperature, exit velocity and fuel consumption rate are provided by the operator via chimney surveys conducted in December 2012, January 2013, March 2013, October 2014, September 2015 and December 2016.

**Emission from Pok Oi Hospital**

**Towngas Combustion**

Emission factor based on Section 1.4 of AP-42, USEPA

NOx Emission Factor = 220 mg / kWh [ref. (AEIAR 142/2009) Provision of a Poultry Slaughtering Centre in Sheung Shui]

Towngas Consumption for each stack 346 m<sup>3</sup> per hour [provided by Hospital Authority, 2016]  
 346 Unit  
 16,608 MJ per hour [1 unit = 48 MJ]  
 4,617 kWh per hour [1 MJ = 0.278 kWh]  
 1.3 kWh per second  
 0.282 g / s

| Source          | Source ID | Type  | X<br>(m) | Y<br>(m) | Release Height<br>(m) | Exit Temperature<br>(K) | Exit velocity<br>(m/s) | Internal diameter<br>(m) | Emission Rate (g/s) |     |     | Operation Hour | Remark / Reference                                                                                                                                                                                                                    |
|-----------------|-----------|-------|----------|----------|-----------------------|-------------------------|------------------------|--------------------------|---------------------|-----|-----|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |           |       |          |          |                       |                         |                        |                          | NOx                 | RSP | FSP |                |                                                                                                                                                                                                                                       |
| Pok Oi Hospital | POH_EP1   | POINT | 822311   | 833983   | 80.2                  | 506                     | 6                      | 0.35                     | 2.82E-01            | -   | -   | 24 hours a day | Fuel type, fuel consumption rate, height, diameter and operation period are provided by HA. Exit velocity and exit temperature is referred to approved EIA study on North East New Territories New Development Areas (AEIAR-175/2013) |
|                 | POH_EP2   | POINT | 822335   | 833978   | 80.2                  | 506                     | 6                      | 0.35                     | 2.82E-01            | -   | -   |                |                                                                                                                                                                                                                                       |
|                 | POH_EP3   | POINT | 822324   | 833980   | 80.2                  | 506                     | 6                      | 0.40                     | 2.82E-01            | -   | -   |                |                                                                                                                                                                                                                                       |
|                 | POH_EP4   | POINT | 822318   | 833982   | 80.2                  | 506                     | 6                      | 0.40                     | 2.82E-01            | -   | -   |                |                                                                                                                                                                                                                                       |
|                 | POH_EP5   | POINT | 822330   | 833979   | 80.2                  | 506                     | 6                      | 0.40                     | 2.82E-01            | -   | -   |                |                                                                                                                                                                                                                                       |

**Emission factor for Hong Kong Concrete Company Limited**

With reference to the current Specified Process (SP) Licence [L-3-209(2)]:

**Emission Details**

| Source ID | Dust Emission Rate<br>[from SP Licence] | Gas Flow Rate          | Dust Conc. Limit [1] | Estimated Dust<br>Emission Rate<br>[from BPM 3/2(16)] | Emission Rate (g/s) |                    |                    | Control Equipment |
|-----------|-----------------------------------------|------------------------|----------------------|-------------------------------------------------------|---------------------|--------------------|--------------------|-------------------|
|           | (kg/hour)                               | (m <sup>3</sup> /hour) | (mg/m <sup>3</sup> ) | (kg/hour)                                             | TSP <sup>[1]</sup>  | RSP <sup>[2]</sup> | FSP <sup>[2]</sup> |                   |
| EP1A      | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025             | 0.00073            | Bag filter        |
| EP1B      | 0.2124                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025             | 0.00073            | Bag filter        |
| EP2A      | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025             | 0.00073            | Bag filter        |
| EP2B      | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025             | 0.00073            | Bag filter        |
| EP4       | 0.3520                                  | -                      | -                    | -                                                     | 0.0978              | 0.0499             | 0.01467            | Bag filter        |
| EP9       | 0.1785                                  | -                      | -                    | -                                                     | 0.0496              | 0.0253             | 0.00744            | Bag filter        |
| EP1       | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025             | 0.00073            | Bag filter        |

Note:

[1] According to the "A Guidance Note on Technical, Management and Monitoring Requirements for Specified Process - Cement Works (Concrete Batching Plant)" (BPM 3/2 (16)) published by EPD, the concentration limit for particulate matter of 10mg/m<sup>3</sup> shall be met by 1 January 2018. Hence, the estimated dust emission rates from the BPM 3/2 (16) is adopted.

[2] Emission rates of RSP / FSP are not provided in the SP Licence. With reference to the Category 3, Appendix B.2 (Generalized Particle Size Distributions) of USEPA AP42, conversion factors of 0.51 and 0.15 are adopted to estimate the emissions of RSP and FSP from TSP (as given in the SP License) respectively.

**Dimensions**

| Source ID | Gas Flow Rate          | Temperature | Exit Velocity | Width | Length | Diameter <sup>[3]</sup> | Chimney Height above<br>Ground |
|-----------|------------------------|-------------|---------------|-------|--------|-------------------------|--------------------------------|
|           | (m <sup>3</sup> /hour) | (K)         | (m/s)         | (m)   | (m)    | (m)                     | (m)                            |
| EP1A      | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.2                     | 14                             |
| EP1B      | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.2                     | 14                             |
| EP2A      | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.2                     | 10                             |
| EP2B      | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.2                     | 10                             |
| EP4       | -                      | Ambient     | -             | 3.80  | 6.00   | -                       | 0.5                            |
| EP9       | -                      | Ambient     | -             | 3.00  | 78.00  | -                       | 0.5                            |
| EP1       | 1750                   | Ambient     | 15.5          | -     | -      | 0.2                     | 1.5                            |

Note:

[3] Diameters for EP1A, EP1B, EP2A, and EP2B are calculated from the the area of the source:

$$\text{Width} \times \text{Length} = r^2 \times \pi$$

$$\text{Diameter} = r \times 2$$

**Emission factor for Redland Concrete Limited**

With reference to the current Specified Process (SP) Licence [L-3-199(1)]:

**Emission Details**

| Source ID | Dust Emission Rate<br>[from SP Licence] | Gas Flow Rate          | Dust Conc. Limit [1] | Estimated Dust<br>Emission Rate<br>[from BPM 3/2(16)] | Emission Rate (g/s) |         |         | Control Equipment                                              |
|-----------|-----------------------------------------|------------------------|----------------------|-------------------------------------------------------|---------------------|---------|---------|----------------------------------------------------------------|
|           | (kg/hour)                               | (m <sup>3</sup> /hour) | (mg/m <sup>3</sup> ) | (kg/hour)                                             | TSP [1]             | RSP [2] | FSP [2] |                                                                |
| EP1       | 0.0861                                  | -                      | -                    | -                                                     | 0.0239              | 0.0122  | 0.00359 | 3-side enclosure with top cover, front curtain and water spray |
| EP2       | 0.0468                                  | -                      | -                    | -                                                     | 0.0130              | 0.0066  | 0.00195 | -                                                              |
| EP3       | 0.2318                                  | -                      | -                    | -                                                     | 0.0644              | 0.0328  | 0.00966 | Water Spray                                                    |
| EP4       | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP5       | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP6       | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP7       | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP8       | 0.175                                   | 3500                   | 10                   | 0.0350                                                | 0.0097              | 0.0050  | 0.00146 | Dust collector and water spray                                 |
| EP9       | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP10      | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP11      | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP12      | 0.0875                                  | 1750                   | 10                   | 0.0175                                                | 0.0049              | 0.0025  | 0.00073 | Dust collector                                                 |
| EP13      | 0.175                                   | 3500                   | 10                   | 0.0350                                                | 0.0097              | 0.0050  | 0.00146 | Dust collector and water spray                                 |
| EP14      | 0.050                                   | 1000                   | 10                   | 0.0100                                                | 0.0028              | 0.0014  | 0.00042 | Dust collector                                                 |

Note:

[1] According to the "A Guidance Note on Technical, Management and Monitoring Requirements for Specified Process - Cement Works (Concrete Batching Plant)" (BPM 3/2 (16)) published by EPD, the concentration limit for particulate matter of 10mg/m<sup>3</sup> shall be met by 1 January 2018. Hence, the estimated dust emission rates from the BPM 3/2 (16) is adopted.

[2] Emission rates of RSP / FSP are not provided in the SP Licence. With reference to the Category 3, Appendix B.2 (Generalized Particle Size Distributions) of USEPA AP42, conversion factors of 0.51 and 0.15 are adopted to estimate the emissions of RSP and FSP from TSP (as given in the SP License) respectively.

**Dimensions**

| Source ID | Gas Flow Rate          | Temperature | Exit Velocity | Width | Length | Diameter <sup>[3]</sup> | Chimney Height above<br>Ground |
|-----------|------------------------|-------------|---------------|-------|--------|-------------------------|--------------------------------|
|           | (m <sup>3</sup> /hour) | (K)         | (m/s)         | (m)   | (m)    | (m)                     | (m)                            |
| EP1       | -                      | Ambient     | -             | 2.25  | 4      | -                       | 0.5                            |
| EP2       | 2850                   | 843         | 18.3          | -     | -      | 0.235                   | 6.00                           |
| EP3       | -                      | Ambient     | -             | 2     | 39     | -                       | 0.5                            |
| EP4       | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP5       | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP6       | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP7       | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP8       | 3500                   | Ambient     | 15.6          | 0.25  | 0.25   | 0.28                    | 10                             |
| EP9       | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP10      | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP11      | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP12      | 1750                   | Ambient     | 15.6          | 0.125 | 0.25   | 0.20                    | 25                             |
| EP13      | 3500                   | Ambient     | 15.6          | 0.25  | 0.25   | 0.28                    | 10                             |
| EP14      | 1000                   | Ambient     | 8.9           | 0.125 | 0.25   | 0.20                    | 10.5                           |

Note:

[2] Diameters are calculated from the the area of the source:

$$\text{Width} \times \text{Length} = r^2 \times \pi$$

$$\text{Diameter} = r \times 2$$

**Emission factor for Golik Concrete Limited**

With reference to the current Specified Process (SP) Licence [L-3-229(2)]:

**Emission Details**

| Source ID | Dust Emission Rate<br>[from SP Licence] | Gas Flow Rate          | Dust Conc. Limit [1] | Estimated Dust<br>Emission Rate<br>[from BPM 3/2(16)] | Emission Rate (g/s) |         |         | Control Equipment                                              |
|-----------|-----------------------------------------|------------------------|----------------------|-------------------------------------------------------|---------------------|---------|---------|----------------------------------------------------------------|
|           | (kg/hour)                               | (m <sup>3</sup> /hour) | (mg/m <sup>3</sup> ) | (kg/hour)                                             | Dust (TSP)          | RSP [2] | FSP [2] |                                                                |
| EP1       | 0.017                                   | 1225                   | 10                   | 0.012                                                 | 0.0034              | 0.0017  | 0.00051 | Bag filter                                                     |
| EP2       | 0.017                                   | 1225                   | 10                   | 0.012                                                 | 0.0034              | 0.0017  | 0.00051 | Bag filter                                                     |
| EP3       | 0.030                                   | 2191                   | 10                   | 0.022                                                 | 0.0061              | 0.0031  | 0.00091 | Bag filter                                                     |
| EP4       | 0.030                                   | 2191                   | 10                   | 0.022                                                 | 0.0061              | 0.0031  | 0.00091 | Bag filter                                                     |
| EP5       | 0.030                                   | 2191                   | 10                   | 0.022                                                 | 0.0061              | 0.0031  | 0.00091 | Bag filter                                                     |
| EP6       | 0.030                                   | 2191                   | 10                   | 0.022                                                 | 0.0061              | 0.0031  | 0.00091 | Bag filter                                                     |
| EP7       | 0.030                                   | 2191                   | 10                   | 0.022                                                 | 0.0061              | 0.0031  | 0.00091 | Bag filter                                                     |
| EP8       | 0.030                                   | 2191                   | 10                   | 0.022                                                 | 0.0061              | 0.0031  | 0.00091 | Bag filter                                                     |
| EP9       | 0.030                                   | 2191                   | 10                   | 0.022                                                 | 0.0061              | 0.0031  | 0.00091 | Bag filter                                                     |
| EP10      | -                                       | -                      | -                    | -                                                     | -                   | -       | -       | Water Spray                                                    |
| EP11      | -                                       | -                      | -                    | -                                                     | -                   | -       | -       | 3-side enclosure with top cover, front curtain and water spray |

Note:

[1] According to the "A Guidance Note on Technical, Management and Monitoring Requirements for Specified Process - Cement Works (Concrete Batching Plant)" (BPM 3/2 (16)) published by EPD, the concentration limit for particulate matter of 10mg/m<sup>3</sup> shall be met by 1 January 2018. Hence, the estimated dust emission rates from the BPM 3/2 (16) is adopted.

[2] Emission rates of RSP / FSP are not provided in the SP Licence. With reference to the Category 3, Appendix B.2 (Generalized Particle Size Distributions) of USEPA AP42, conversion factors of 0.51 and 0.15 are adopted to estimate the emissions of RSP and FSP from TSP (as given in the SP License) respectively.

**Dimensions**

| Source ID | Gas Flow Rate          | Temperature | Exit Velocity | Width | Length | Diameter | Chimney Height above<br>Ground |
|-----------|------------------------|-------------|---------------|-------|--------|----------|--------------------------------|
|           | (m <sup>3</sup> /hour) | (K)         | (m/s)         | (m)   | (m)    | (m)      | (m)                            |
| EP1       | 1225                   | Ambient     | 0.72          | -     | -      | 0.775    | 9.5                            |
| EP2       | 1225                   | Ambient     | 0.72          | -     | -      | 0.775    | 9.5                            |
| EP3       | 2191                   | Ambient     | 0.84          | -     | -      | 0.96     | 22                             |
| EP4       | 2191                   | Ambient     | 0.84          | -     | -      | 0.96     | 22                             |
| EP5       | 2191                   | Ambient     | 0.84          | -     | -      | 0.96     | 14.2                           |
| EP6       | 2191                   | Ambient     | 0.84          | -     | -      | 0.96     | 14.2                           |
| EP7       | 2191                   | Ambient     | 0.84          | -     | -      | 0.96     | 22                             |
| EP8       | 2191                   | Ambient     | 0.84          | -     | -      | 0.96     | 22                             |
| EP9       | 2191                   | Ambient     | 0.84          | -     | -      | 0.96     | 14.2                           |
| EP10      | -                      | Ambient     | -             | -     | -      | -        | 0.5                            |
| EP11      | -                      | Ambient     | -             | 4     | 4      | -        | 0.5                            |