

Environmental Protection Department



環境保護署



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Total no. of pages including this page: 3

Director of Environmental
FROM: Protection

OUR REF.: (22) in EP 11/V1/52 V

TEL NO.: 2594 6382

DATE: 10 Aug 1999

OUR FAX NO.: 2827 8256

TO: Enviros Hong Kong Limited
(Attn: Miss Wing Wong)

YOUR REF.: () in

YOUR FAX NO.: 2815-3377

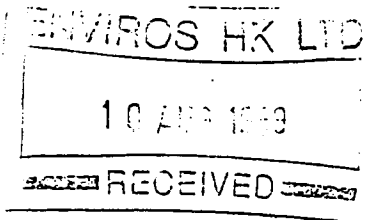
Dear Miss Wong,

Emission Factors

I refer to your fax dated 10 August 1999 requesting the vehicular emission factors.

Attached please find the most updated version of vehicular fleet average emission factors of oxides of nitrogen and particulate matter. Please note that vehicle types are classified according to Transport Department.

If you have any queries, please feel free to contact me.



Yours faithfully,

(Danny Yau, Dr.)

Environmental Protection Officer
for Director of Environmental Protection

ENVIROS HK LTD				
Name	PL note	PL discuss	PL action	Date
NW				10/8
Copy				
CAN/File	MM0101A/99-0342			

Fleet Average Emission Factors - NOx (gm/km)

1 2 3 4 5 6 7 8 9 10

Year	MC	P/C	Taxi	PV	PLB	LGV	HGV	NFB	FBSD	FBDD
1995	0.55	1.94	1.73	2.38	2.55	1.97	8.17	12.37	12.87	12.67
1996	0.55	1.83	1.58	2.27	2.34	1.84	7.99	12.01	12.20	12.20
1997	0.55	1.75	1.55	2.37	2.27	1.78	7.76	12.66	12.06	12.06
1998	0.55	1.63	1.52	2.31	2.21	1.74	7.53	12.14	11.71	11.71
1999	0.55	1.50	1.49	2.26	2.16	1.70	7.27	11.67	11.31	11.31
2000	0.55	1.36	1.47	2.21	2.10	1.68	7.01	11.19	11.03	11.03
2001	0.55	1.22	1.51	2.17	2.05	1.62	6.74	10.72	10.73	10.73
2002	0.55	1.06	1.39	1.96	1.99	1.58	6.52	9.57	10.95	10.95
2003	0.54	0.90	1.27	1.91	1.91	1.53	6.21	9.08	10.53	10.53
2004	0.52	0.88	1.11	1.83	1.82	1.48	5.83	8.44	10.11	10.11
2005	0.50	0.85	0.97	1.75	1.73	1.44	5.45	7.79	9.69	9.69
2006	0.48	0.83	0.84	1.67	1.70	1.39	5.07	7.15	9.26	9.26
2007	0.46	0.80	0.79	1.64	1.67	1.35	4.87	6.73	8.44	8.44
2008	0.44	0.78	0.73	1.62	1.84	1.32	4.42	6.31	8.03	8.03
2009	0.41	0.75	0.73	1.58	1.60	1.29	4.18	5.89	7.63	7.63
2010	0.39	0.73	0.73	1.56	1.57	1.26	3.94	5.72	7.21	7.21
2011	0.37	0.71	0.73	1.53	1.54	1.23	3.84	5.54	6.80	6.80

LPG taxi start from 2001, 100% by end of 2005.
Euro 3 start from 2003

Abbreviation:

- M/C Motor Cycle
- P/C Private Car
- PV Passenger Van
- PLB Public Light Bus
- LGV Light Goods Vehicle
- HGV Heavy Goods Vehicle
- NFB Non-franchised Bus
- FBSD Franchised Bus (Single Deck)
- FBDD Franchised Bus (Double Deck)

Fleet Average Emission Factors - PM (gm/km)

1 2 3 4 5 6 7 8 9 10

Year	MC	P/C	Taxi	PV	PLB	LGV	HGV	NFB	FBSD	FBDD
1995	0.03	0.04	0.75	0.77	0.80	0.61	1.48	1.48	1.48	1.48
1996	0.03	0.04	0.70	0.74	0.76	0.58	1.46	1.46	1.47	1.47
1997	0.03	0.04	0.65	0.74	0.72	0.54	1.42	1.58	1.49	1.49
1998	0.03	0.04	0.52	0.65	0.59	0.46	1.37	1.44	1.38	1.38
1999	0.03	0.04	0.48	0.59	0.53	0.42	1.29	1.35	1.32	1.32
2000	0.03	0.04	0.41	0.54	0.47	0.38	1.22	1.27	1.26	1.26
2001	0.03	0.04	0.15	0.49	0.42	0.34	1.16	1.20	1.22	1.22
2002	0.03	0.03	0.12	0.42	0.37	0.31	1.11	1.06	1.23	1.23
2003	0.03	0.03	0.10	0.38	0.31	0.27	1.05	0.99	1.17	1.17
2004	0.03	0.03	0.07	0.33	0.25	0.23	0.97	0.91	1.12	1.12
2005	0.03	0.03	0.04	0.27	0.19	0.19	0.89	0.82	1.06	1.06
2006	0.03	0.03	0.01	0.22	0.18	0.15	0.81	0.74	1.01	1.01
2007	0.03	0.03	0.01	0.21	0.16	0.14	0.73	0.67	0.91	0.91
2008	0.03	0.03	0.01	0.19	0.14	0.13	0.67	0.60	0.85	0.85
2009	0.03	0.03	0.01	0.17	0.13	0.12	0.61	0.53	0.80	0.80
2010	0.03	0.03	0.01	0.17	0.13	0.12	0.55	0.52	0.74	0.74
2011	0.03	0.03	0.01	0.16	0.12	0.11	0.53	0.50	0.69	0.69

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Agreement No CE 73958 Investigation Assignment for Widening of Tolo Highway / Fanning Highway between Island House Interchange and Fanning CALINE4 Emission Factors

Subject: Vehicle Emissions Air Quality Modeling (CALINE4) Design Year: 2020 Peak Traffic Flow: All (provided by MVA H.K. Ltd)

Table with 10 columns: Flow No, Flow, Veh, Veh/Min, Veh/Sec, Veh/Min, Veh/Sec, Veh/Min, Veh/Sec, Veh/Min, Veh/Sec

Modeling Parameter: It using MO, with Ozone Limiting Effect (MO emission factors have been used) (Emission Factors revised by EPA, last dated 10 Aug 1999)

Main data table with 100 columns: Flow No, Flow, Veh, Veh/Min, Veh/Sec, Veh/Min, Veh/Sec, Veh/Min, Veh/Sec, Veh/Min, Veh/Sec, MO2 Emission Factor, MO2, CO, CO2, HC, NMHC, VOC, PM, and various pollutant emission rates.