

Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

TECHNICAL AMENDMENT A
TO
INDUSTRIAL EMISSIONS LICENCE

Licence Register Number:	P0207-04
Licensee:	Intel Ireland Limited
Location of Installation:	Collinstown Industrial Park, Leixlip, County Kildare



Reasons for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of licence Reg. No. P0207-04 granted on the 20/12/2013 as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Act 1992 as amended.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity/proposed activity, individually or in combination with other plans or projects is likely to have a significant effect on a European Sites. In this context, particular attention was paid to the European sites at Rye Water Valley/Carton Special Area of Conservation (site code: 001398) and the Agency considered, for the reasons set out below, that the activity is not directly connected with or necessary to the management of the site as a European Site and that it can be excluded on the basis of objective scientific information, that the activity, individually or in combination with other plans or projects, will have a significant effect on a European site, and accordingly the Agency determined that an Appropriate Assessment of the activity is not required. This determination has been made on the basis that there will be no increase in emissions to air and air dispersion modelling has demonstrated that there will be no deterioration in ambient air quality.

Technical Amendment

In pursuance of the powers conferred on it by Section 96(1)(c) of the Environmental Protection Agency Act 1992 as amended, the Agency amends the licence, granted to Intel Ireland Limited, Collinstown Industrial Park, Leixlip, County Kildare for an installation located at Collinstown Industrial Park, Leixlip, County Kildare.

Henceforth, the licence shall be read in conjunction with a Section 82A(11) Amendment issued on 23/12/2013, and the amendments set out below.

This technical amendment is limited to the following Schedules:



Amendments

New Schedules or Amended Schedules

SCHEDULE B: Emission Limits

B.1 Emissions to Air

Replace Schedule B.1.3 RCTOs of the existing licence with the following:

Schedule B.1.3 Rotary Concentrator Thermal Oxidisers (RCTO's)

Emission Point Reference No's.: A61, A141, A142, A143, A144, A217, A260, A261, A262, A270, A263, A264, A265 and A266.

Location: RCTO Concentrator exhausts.

Emission Point Reference	Location	Volume to be emitted-maximum rate per hour (Nm ³)	Minimum discharge)	Emission Limit Values ^{Note 1} (mg/m ³)		
				Organics Class I ^{Note 2}	Organics Class II ^{Note 2}	Total Organic Carbon (as C) ^{Note 3}
A61	FAB 10	120,000	34 m above ground	5	20	50
A141 ^{Note 4}	FAB 14	34,700	77 m O.D.	5	20	50
A142 ^{Note 4}	FAB 14	34,700	77 m O.D.	5	20	50
A143 ^{Note 4}	FAB 14	34,700	77 m O.D.	5	20	50
A144 ^{Note 4}	FAB 14	34,700	77 m O.D.	5	20	50
A260 ^{Note 5}	FAB 24	48,000	77 m O.D.	5	20	50
A261 ^{Note 5}	FAB 24	48,000	77 m O.D.	5	20	50
A262 ^{Note 5}	FAB 24	48,000	77 m O.D.	5	20	50
A270 ^{Note 5}	FAB 24	48,000	77 m O.D.	5	20	50
A217 ^{Note 7}	FAB 24	120,000	29.1 m above ground	5	20	50
A263 ^{Note 6}	FAB 24-2	34,700	82 m O.D.	5	20	50
A264 ^{Note 6}	FAB 24-2	34,700	82 m O.D.	5	20	50

A265 ^{Note 6}	FAB 24-2	34,700	82 m O.D.	5	20	50
A266 ^{Note 6}	FAB 24-2	34,700	82 m O.D.	5	20	50

- Note 1: Where substances of more than one class are present, in addition to the above limit, the sum of Classes I & II shall not exceed the Class II limit.
- Note 2: Organics Class I and Class II as defined in the Agency's guidance note on Best Available Techniques for the Manufacture of Integrated Circuits.
- Note 3: Total organic carbon not including Class I and Class II organics.
- Note 4: Where all four Fab 14 RCTO exhausts are in operation the combined volume shall not exceed 104,100Nm³/hr.
- Note 5: Where all four Fab 24 RCTO exhausts are in operation the combined volume shall not exceed 144,000Nm³/hr.
- Note 6: Where all four Fab 24-2 RCTO exhausts are in operation the combined volume shall not exceed 104,100Nm³/hr.
- Note 7: Emission point A217 shall cease operation on commencement of operation of any one of emission points A260, A261, A262 and A270, unless otherwise agreed by the Agency.

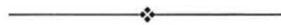


Emission Point Reference Nos.:	Location:	Minimum discharge height:	Volume to be emitted- maximum rate per hour (Nm ³)
A65, A66, A67	RCTO oxidiser exhausts in FAB 10	82 m O.D.	5,100 (each)
A155, A156, A157	RCTO oxidiser exhausts in FAB 14	77 m O.D.	4,000 (each)
A214, A215, A216, A287 ^{Note 1}	RCTO oxidiser exhausts in FAB 24	77 m O.D.	4,000 (each)
A267, A268, A269	RCTO oxidiser exhausts in FAB 24-2	82 m O.D.	4,000 (each)

For the Emission Point Reference Nos. above, the following Emission Limit Values apply.

Parameter	Emission Limit Value
Organics Class I ^{Note 2}	5 mg/m ³
Total Organic Carbon (as C) ^{Note 3}	50 mg/m ³
Carbon monoxide	600 mg/m ³
Nitrogen oxides (as NO ₂)	200 mg/m ³

- Note 1: Where all four Fab 24 RCTO exhausts are in operation the combined volume shall not exceed 12,000Nm³/hr.
- Note 2: Organics Class I and Class II as defined in the Agency's guidance note on Best Available Techniques for the Manufacture of Integrated Circuits.
- Note 3: Total organic carbon not including Class I and Class II organics.



Replace Schedule B.1.5 Ammonia Exhausts of the existing licence with the following:

B.1.5 Ammonia Exhausts

Emission Point Reference No.	Location:	Minimum discharge height:	Maximum Volume to be emitted (Nm ³ /hr)
A158, A159, A160, A161	FAB 14 Ammonia Exhausts	77 m O.D.	41,000 (each) ^{Note 1}
A257, A258, A259, A273	FAB 24-2 Ammonia Exhausts	82 m O.D.	56,000 (each) ^{Note 2}

Note 1: Where all four Fab 14 ammonia exhausts are in operation the combined volume shall not exceed 123,000Nm³/hr.

Note 2: Where all four Fab 24-2 ammonia exhausts are in operation the combined volume shall not exceed 168,000Nm³/hr.

For the Emission Point Reference Nos. above, the following Emission Limit Values apply.

Parameter	Emission Limit Value ^{Note 3}	
Ammonia	3.5 mg/m ³ ^{Note 1}	5 mg/m ³ ^{Note 2}

Note 1: Where all four ammonia exhausts are in operation at Fab 14 or Fab 24-2 an emission limit of 3.5 mg/m³ shall apply.

Note 2: Where less than four ammonia exhausts are in operation at Fab 14 or Fab 24-2 an emission limit of 5 mg/m³ shall apply.

Note 3: For the purposes of determining compliance with the emission limit values, emission concentrations across the active emission points for Fab 14 and the active emission points for FAB 24-2 may be averaged. No one emission point shall have an ammonia concentration greater than 14 mg/m³.



Replace Schedule B.1.7 Trimix Waste Treatment System Exhausts of the existing licence with the following:

B.1.7 Trimix Waste Treatment System Exhausts

Only one of the two configurations for the Trimix waste treatment system, detailed below, is permitted. The licensee shall notify the Agency which configuration has been installed, three months before being put into operation.

Configuration 1

Emission Point Reference No.: A256A ^{Note 1}
Location: FAB 24
Volume to be emitted: Maximum rate per hour: 14,000 Nm³
Minimum discharge height: 82 m O.D.

Parameter	Emission Limit Value
Ammonia	80 mg/m ³
Oxides of nitrogen (as NO ₂)	140 mg/m ³
Carbon Monoxide	600 mg/m ³

Note 1: Start-up and shut-down events shall be logged including the maximum duration of start-up and shut-down events.

Configuration 2

Emission Point Reference No.: A256A and A256B ^{Note 2}
Location: FAB 24
Volume to be emitted: Maximum rate per hour: 7,000 Nm³ (each)
Minimum discharge height: 82 m O.D.

Parameter	Emission Limit Value
Ammonia	60 mg/m ³
Oxides of nitrogen (as NO ₂)	140 mg/m ³
Carbon Monoxide	600 mg/m ³

Note 2: Start-up and shut-down events shall be logged including the maximum duration of start-up and shut-down events.

SCHEDULE C: Control & Monitoring

C.1.1. Control of Emissions to Air

Replace Schedule C.1.1.3 Ammonia Exhausts of the existing licence with the following:

C.1.1.3 Ammonia Exhausts

Emission Point Reference No.'s: Fab 14:- A158, A159, A160, A161
 Fab 24-2:- A257, A258, A259, A273

Description of Treatment: Ammonia scrubbers.

Control Parameter	Monitoring	Key Equipment ^{Note 1}
pH	Continuous	pH sensor and transmitter
Conductivity	Continuous	Conductivity sensor and transmitter

Note 1: The licensee shall maintain appropriate access to standby and/or spares to ensure the operation of the abatement system.



C.1.2. Monitoring of Emissions to Air

Replace Schedule C.1.2.4 Ammonia Scrubber Exhausts of the existing licence with the following:

C.1.2.4 Ammonia Scrubber Exhausts

Emission Point Reference No.'s: Fab 14:- A158, A159, A160, A161 ^{Note 1}
 Fab 24-2:- A257, A258, A259, A273 ^{Note 1}

Parameter	Monitoring Frequency	Analysis Method/Technique
Ammonia	Bi-annually	Colorimetry

Note 1: Monitoring of stack emissions across the same header shall be carried out simultaneously.

This technical amendment shall be cited as Amendment A to the licence.

Sealed by the Seal of the Agency on this the 21st day of July, 2014

PRESENT when the seal of the Agency was affixed hereto

Marie O'Connor

Marie O'Connor,

Authorised Person

Handwritten signature/initials
A circular stamp is partially visible in the bottom right corner, containing some illegible text and a date.