



Ministry
of the
Environment

Ministère
de
l'Environnement

AMENDED CERTIFICATE OF APPROVAL
AIR
NUMBER 1730-6PHL8V
Issue Date: May 17, 2006

Ontario

Nylene Canada Inc.
2300 Yonge Street, Suite 2901
Toronto, Ontario
M4P 1E4

Site Location: 200 McNab Street
Arnprior Town, County Of Renfrew, Ontario
L7S 3P2

You have applied in accordance with Section 9 of the Environmental Protection Act for approval of:

A Nylon 6 manufacturing facility, operating at a maximum production rate of 92 tonnes per day, consisting of the following processes and support units:

Boiler Room :

- one (1) cooling tower, designated as BR-01, having a maximum water flow rate of 36.3 litres per second, discharging into the atmosphere through a fan, as outlined in Schedule "A";
- one (1) cooling tower, designated as BR-02, having a maximum water flow rate of 60.6 litres per second, discharging into the atmosphere through a fan, as outlined in Schedule "A";
- one (1) cooling tower, designated as BR-03, having a maximum water flow rate of 60.8 litres per second, discharging into the atmosphere through a fan, as outlined in Schedule "A";
- one (1) cooling tower, designated as BR-04, having a maximum water flow rate of 113.6 litres per second, discharging into the atmosphere through a fan, as outlined in Schedule "A";
- two (2) cooling towers, designated as BR-05 and BR-07, each having a maximum water flow rate of 22.1 litres per second, discharging into the atmosphere through two (2) fans, as outlined in Schedule "A";
- one (1) cooling tower, designated as BR-06A and BR-06B, having a maximum water flow rate of 44.2 litres per second, discharging into the atmosphere through two (2) fans, as outlined in Schedule "A";
- three (3) natural gas fired or No. 2 Oil fired boilers, designated as BR-08, BR-09 and BR-10, having maximum heat inputs of 17,692,000 kilojoules per hour, 18,172,000 kilojoules per hour and 13,926,000 kilojoules per hour respectively, discharging into the atmosphere through three (3) stacks, as outlined in Schedule "A";
- two (2) natural gas fired or No. 2 Oil fired heaters, designated as BR-11 and BR-12, having maximum heat inputs of 7,597,000 kilojoules per hour and 5,276,000 kilojoules per hour, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";
- one (1) exhaust system serving the Dowtherm Room, designated as BR-29, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- one (1) standby diesel generator set, designated as BR-39, having a rating of 1100 kilowatts, to provide power to the facility during emergency situations, exhausting to the atmosphere through a stack, as outlined in Schedule "A";

Front Office :

- natural gas fired comfort heating equipment, designated as FO-01, FO-02A, FO-02B, FO-03A and FO-03B, having an aggregate heat input of 1,345,200 kilojoules per hour, discharging into the atmosphere through five (5) stacks, as outlined in Schedule "A";

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- four (4) exhaust systems serving the R&D Laboratory, designated as FO-10, FO-12, FO-13 and FO-14, discharging into the atmosphere through four (4) stacks, as outlined in Schedule "A";

Maintenance Shop :

- natural gas fired comfort heating equipment, designated as MS-01A, MS-02A, MS-03A, MS-04A and MS-05A, having an aggregate heat input of 872,000 kilojoules per hour, discharging into the atmosphere through five (5) stacks, as outlined in Schedule "A";

- three (3) exhaust systems serving the welding operations and the plasma cutter in the Maintenance Shop, designated as MS-10, MS-11 and MS-12, discharging into the atmosphere through three (3) stacks, as outlined in Schedule "A";

P&R :

- two (2) exhaust system serving the area around the Wet Chip Hopper, designated as PR-01 and PR-02, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";

- two (2) cooling towers, designated as PR-03 and PR-04, each having a maximum water flow rate of 31.6 litres per second, discharging into the atmosphere through two (2) fans, as outlined in Schedule "A";

- one (1) exhaust system serving seven (7) storage tanks containing molten caprolactam, designated as PR-08, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- one (1) direct contact condenser (DCC-2269), designated as PR-13, used to control emissions from two (2) depolymerization reactors each equipped with a knife gate valve during the loading of waste nylon, or to control the fugitive emissions during draining the bottom remains of the Batch Still into drums, having a maximum recirculated water flow rate of 2.5 litres per second, with a maximum caprolactam concentration of 30 per cent by weight, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- two (2) exhaust systems serving the fifth floor, designated as PR-14 and PR-65, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- one (1) exhaust system serving the area around the fifth floor baths, designated as PR-20, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- one (1) exhaust system serving the extractor (#1605), designated as PR-21, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- one (1) exhaust system serving the chemical tower, designated as PR-23, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- one (1) silencer for the chemical tower exhaust fan (PR-23), capable of providing the following values of Insertion-Loss in 1/1 octave frequency bands:

Centre Frequency (Hertz)	63	125	250	500	1000	2000	4000	8000
Insertion-Loss (decibel)	3	6	14	20	23	17	11	7

- two (2) exhaust systems serving two (2) autoclaves, designated as PR-27 and PR-55, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";

- one (1) exhaust system serving the fifth floor baths, designated as PR-29, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- one (1) exhaust system serving the third floor spin finish room, designated as PR-34, discharging into the atmosphere through a stack, as outlined in Schedule "A";

- one (1) exhaust system serving the fourth floor spin finish room, designated as PR-40, discharging into the atmosphere through a stack, as outlined in Schedule "A";

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- one (1) exhaust system serving the spinning extruders, designated as PR-41, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- three (3) exhaust systems serving AC#1, AC#2 and AC#3, designated as PR-42, PR-43 and PR-44, discharging into the atmosphere through three (3) stacks, as outlined in Schedule "A";
- two (2) exhaust systems serving the chemical laboratory, designated as PR-50 and PR-56, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";
- one (1) exhaust system for the lactam tank in the MLT room, designated as PR-67, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- two (2) exhaust systems for the air cooling of hot Nylon 6 chips, designated as PR-71A and PR-71B, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";
- one (1) heat cleaning oven, designated as PR-72, equipped with one (1) thermocouple in the primary chamber, one (1) thermocouple in the secondary chamber, one (1) electrical burner in the primary chamber having a maximum heat input of 7,070 kilojoules per hour, and one (1) natural gas-fired burner in the secondary chamber having a maximum heat input of 2,530 kilojoules per hour, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- one (1) exhaust system serving the chip comp. baths, designated as PR-79, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- one (1) exhaust system serving the cationic chip cooler, designated as PR-81, equipped with a cyclone having a body diameter of 0.8 metre, overall body length of 1.1 metres and a design pressure drop of 1000 Pascals, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- one (1) exhaust system serving the second floor baths, designated as PR-82, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- one (1) exhaust system serving the Dowtherm Boiler room, designated as PR-83, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- one (1) exhaust system serving the Dowtherm receiver tank, designated as PR-85, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- natural gas fired comfort heating equipment, designated as PR-88 and PR-94, having an aggregate heat input of 211,000 kilojoules per hour, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";
- one (1) standby diesel generator set, designated as PR-90, having a rating of 45 kilowatts, to provide power during emergency situations, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- one (1) spray type monomer scrubber used to control emissions from five (5) extrusion heads, seven (7) strand dryers and two (2) drying hoppers, designated as PR-93, complete with a mist eliminator, having a maximum recirculated water flow rate of 1.0 litre per second, with a maximum caprolactam concentration of 4.631 grams per cubic metre, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- two (2) exhaust systems serving the Chip Cooler A Line and B Line, designated as PR-100 and PR-103, equipped with two (2) cyclones each having an inlet vent diameter of 0.3 metre, an outlet vent diameter of 0.35 metres, a body diameter of 0.8 metres and a body height of 1.12 metres, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";

SDT HVAC Room :

- one (1) water scrubber used to control emissions from two (2) SDT Machines and one (1) Two Step Spinning operation, designated as SD-01, with recirculating scrubber liquid flow rate of 15.37 litres per second, discharging into the atmosphere through a stack, as outlined in Schedule "A";

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- one (1) exhaust system serving as the SDT second floor monomer back-up, designated as SD-07, discharging into the atmosphere through a stack, as outlined in Schedule "A";
- two (2) oil mist collectors used to control emissions from two (2) SDT Machines, designated as SD-10, with glass fibre final filter and polyester fibre media pad prefilter, filtering velocity of 2.73 centimetres per second, discharging into the atmosphere through a single stack, as outlined in Schedule "A";
- one (1) exhaust system serving the Dye Beck process, designated as ZX-02, discharging into the atmosphere through a stack, as outlined in Schedule "A";

Superba :

- comfort and ventilating equipment, designated as SU-02 and SU-03, discharging into the atmosphere through two (2) stacks, as outlined in Schedule "A";

Zeftex Area :

- one (1) exhaust system serving the Zeftex Oil process, designated as ZX-01, discharging into the atmosphere through a stack, as outlined in Schedule "A";

Spinnerette Room :

- one (1) heat cleaning oven, designated as COO-01, equipped with one (1) thermocouple in the primary chamber, one (1) thermocouple complete with a continuous temperature recorder in the secondary chamber, one (1) natural gas-fired burner in the primary chamber having a maximum heat input of 163,600 kilojoules per hour, and one (1) natural gas-fired burner in the secondary chamber having a maximum heat input of 253,300 kilojoules per hour, discharging into the atmosphere through a stack, as outlined in Schedule "A";

Acoustic Barriers :

- one (1) 5.22 metres high, C-shaped acoustic barrier located on the roof section of the plant building at 21 meters elevation, positioned 1.5 meters in front of Cooling Towers "A" and "B" (PR-03 and PR-04) with open section facing north-east direction;
- one (1) 5.68 metres high, C-shaped acoustic barrier located on the roof section of the plant building at 7.92 meters elevation, positioned 2.4 meters in front of the Cooling Tower # 4 (BR-04) with open section facing north-east direction;
- one (1) 5.83 metres high and at least 6 meters long acoustic barrier located on the roof section of the plant building at 7.92 meters elevation, centered 1.5 meters in front of the Compressed Air Cooling Towers # 5 and # 7 (BR-05 and BR-07);

All the above three barriers to be continuous without holes, gaps and other penetrations, having surface mass at least 20 kilograms per square metre, and positioned as per drawings in the Addendum to the acoustic report prepared by EarthTech (Canada) Inc. consultants, dated May 14, 2004.

All in accordance with the documents set out in Schedule "B" attached to this Certificate.

SCHEDULE "A"

Item #	Source ID	Description	Exhaust Conditions		Stack Parameters		
			Volumetric Flow Rate (cubic metre per second)	Temperature (degrees Celsius)	Exit Diameter (metre)	Height Above Roof (metre)	Height At Grade (m)
Boiler Room							
BR-01	10	Cooling Tower #1	30.8	32	2.44	4.57	12.75
BR-02	10	Cooling Tower #2	30.8	32	2.44	5.18	13.36
BR-03	10	Cooling Tower #3	30.8	32	2.44	4.57	12.75
BR-04	6	Cooling Tower #4	30.8	32	3.35	5.18	13.36

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BR-05	13	Compressed Air Cooling Tower #5	25.2	32	1.83	5.03	13.21
BR-06A	1	Compressed Air Cooling Tower #6 - Main	25.2	32	0.61 x 2.69	4.37	8.48
BR-06B	-	Compressed Air Cooling Tower #6 - Secondary	25.2	32	0.76 (x3)	1.65	5.76
BR-07	76	Compressed Air Cooling Tower #7	25.2	25.6	1.52	5.33	13.51
BR-08	7	Boiler #1 Stack	1.29	148	0.71	7.93	16.11
BR-09	8	Boiler #2 Stack	1.29	148	0.71	7.93	16.11
BR-10	54	Boiler #3 Stack	1.29	275	0.61	2.59	10.77
BR-11	2	Dowtherm Heater "A"	-	-	0.41	7.62	12.62
BR-12	32	Dowtherm Heater "B"	-	-	0.41	5.79	10.79
BR-29	-	Dowtherm Room Exhaust	-	ambient	1.22	0.91	5.91
BR-39	-	Diesel Generator	4.05	585	0.3	4.55	7.25

Front Office

FO-01	-	HVAC Unit #AC-12 Exhaust	-	-	0.36 x 0.51	0.33	4.48
FO-02A	9	AC Unit #AC-9 Exhaust	-	-	0.29 x 0.46	0.38	8.46
FO-02B	70	AC Unit #AC-9 Duct Heater Exhaust	-	-	0.03	0.33	8.41
FO-03A	12	AC Unit #AC-8 Exhaust	-	-	0.29 x 0.46	0.38	8.46
FO-03B	70	AC Unit #AC-8 Duct Heater Exhaust	-	-	0.03	0.33	8.41
FO-10	-	R&D Lab Exhaust Fan #EF-21	-	-	1.22	0.51	8.59
FO-12	-	R&D Lab Exhaust Fan #EF-31	-	-	0.31	0.76	8.84
FO-13	-	R&D Lab Exhaust Fan #EF-32	-	-	0.31	0.76	8.84
FO-14	-	R&D Lab Exhaust Fan #EF-33	-	-	0.10	1.37	9.45

Maintenance Shop

MS-01A	14	HVAC Unit #AC-19 Exhaust	-	-	0.1 x 0.61	0.8	5.4
MS-02A	15	HV Unit #HV-8 Exhaust	-	-	0.05 x 0.48 (x2)	0.84	5.44
MS-03A	16	Space Heater #1 Exhaust	-	-	0.076	0.74	5.34
MS-04A	-	Space Heater #2 Exhaust	-	-	0.076	0.76	5.36

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MS-05A	-	Space Heater #3 Exhaust	-	-	0.076	0.76	5.36
MS-10	-	Maintenance Shop Ventilation #EF-44	0.24	ambient	0.3	0.3	4.9
MS-11	-	Maintenance Shop Ventilation #EF-45	0.02	ambient	0.3	0.3	4.9
MS-12	-	Maintenance Shop Plasma Cutter Vent	0.28	ambient	0.15	-	3.7

SCHEDULE "A" (Continued)

Item #	Source ID	Description	Exhaust Conditions		Stack Parameters		
			Volumetric Flow Rate (cubic metre per second)	Temperature (degrees Celsius)	Exit Diameter (metre)	Height Above Roof (metre)	Height Above Grade (metre)
P&R							
PR-01	-	Roof Vent Above Wet Chip Hopper - West Side	-	-	1.12	1.17	22.2
PR-02	-	Roof Vent Above Wet Chip Hopper - East Side	-	-	0.31 x 1.83 (x2)	0.10	21.13
PR-03	43	Process Cooling Tower "A"	30.8	22.4	1.83	4.72	25.75
PR-04	77	Process Cooling Tower "B"	30.8	22.4	2.13	4.57	25.60
PR-08	78	Caprolactam Storage Tanks Nitrogen Vent	<1.0	100	0.76	0.71	21.74
PR-13	33	Direct Contact Condenser (DCC-2269) Exhaust	0.127	72	0.31	1.00	26.6
PR-14	-	5th Floor Exhaust	3.78	ambient	0.91 x 1.42	1.32	22.35
PR-20	46	5th Floor Baths Roof Vent	2.12	ambient	1.02	1.27	22.3
PR-21	49	Extractor #1605 Vent Line	1.00	100	0.15	1.35	22.38
PR-23	-	Chemical Tower Exhaust	3.78	ambient	1.22	2.13	14.17
PR-27	19	Autoclave Exhaust	0.05	150	0.10	6.4	18.44
PR-29	-	5th Floor Baths Exhaust	0.944	ambient	0.61	7.67	19.71
PR-34	-	3rd Floor Spin Finish Room Exhaust #EF-6	-	ambient	0.81	0.25	12.29
PR-40	-	4th Floor Spin Finish Room Exhaust #EF-43	0.71	ambient	0.51	2.03	14.07
PR-41	-	Spinning Extruders Exhaust #EF-69A	1.13	ambient	0.61 x 0.46	0.76	12.8
PR-42	40	Air Exhaust AC#1	25.02	ambient	1.22 x 2.64	0.61	12.65
PR-43	40	Air Exhaust AC#2	31.15	ambient	1.22 x 2.64	0.61	12.65

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PR-44	40	Air Exhaust AC#3	36.82	ambient	2.13 x 4.57	1.37	8.86
PR-50	34	Chemical Lab Exhaust #EF-1	-	-	1.22	0.50	5.12
PR-55	36	Autoclave Exhaust	0.19	150	0.28	1.02	5.64
PR-56	35	Chemical Lab Exhaust #EF-30	-	-	0.31	1.27	5.89
PR-65	-	5th Floor Exhaust #EF-35	0.94	ambient	0.61	12.06	18.59
PR-67	-	MLT Room Lactam Tank Vent	-	-	0.05	1.12	5.27
PR-71A	-	Chip Cooler "A" Exhaust	2.74	29	0.36 x 0.41	0.53	7.06
PR-71B	-	Chip Cooler "B" Exhaust	2.74	29	0.36 x 0.41	0.53	7.06
PR-72	80	Mini Clean Oven	0.0028	350	0.10	1.70	8.23
PR-79	-	Chip Comp. Baths Monomer Fume Exhaust	0.94	ambient	0.10	-	14.55
PR-81	68	Cationic Chip Cooler Exhaust	1.08	41	0.254	-	10.16
PR-82	-	2nd Floor Baths Monomer Fume Exhaust	1.89	ambient	0.61	-	6.27
PR-83	-	Dowtherm Boiler Room Exhaust - #1504 Vapourizer	0.47	ambient	0.41	-	6.45
PR-85	44	Dowtherm Receiver Tank Vent	0.0071	100	0.10	-	1.00
PR-88	71	Raw Material Warehouse Space Heater #1 Exhaust	-	-	0.15	1.02	7.55
PR-90	-	Standby Diesel Generator Exhaust	-	-	0.08	-	2.5
PR-92	-	Cationic Hot Well #EF-68 Exhaust	0.33	ambient	0.46	-	1.93
PR-93	67	Recovery Monomer Scrubber Exhaust	0.43	ambient	0.25	-	3.35
PR-94	72	Raw Material Warehouse Space Heater #2 Exhaust	-	-	0.15	1.02	7.55
PR-100	-	Chip Cooler Exhaust - C.C. "A" Line	1.6	41	0.31	-	10.47
PR-103	-	Chip Cooler Exhaust - C.C. "B" Line	1.6	41	0.31 x 0.41	-	19.66

SCHEDULE "A" (Continued)

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Item #	Source ID	Description	Exhaust Conditions		Stack Parameters		
			Volumetric Flow Rate (cubic metre per second)	Temperature (degrees Celsius)	Exit Diameter (metre)	Height Above Roof (metre)	Height Above Ground (metre)
SDT HVAC Room							
SD-01	50	SDT/Spinning Monomer/Caprolactam Vapour Exhaust	0.950	20	0.40	5.5	13.00
SD-07	-	SDT 2nd Floor Monomer Back-up Exhaust	2.36	ambient	0.41	-	7.16
SD-10	52	Oil Mistlers #1 & #2 Exhaust	7.08	49	0.61 x 1.22	-	6.4
ZX-02	37	Dye Beck Exhaust #EF-25	1.89	ambient	0.25 x 0.30	0.7	8.2
Superba							
SU-02	27	AC Unit #AC-18 Exhaust	-	-	2.2 x 6.3	1.2	8.7
SU-03	28	AC Unit #AC-15 Exhaust	-	-	2.2 x 6.3	1.2	8.7
Zeftex Area							
ZX-01	17	Zeftex Oil Fume Exhaust	-	-	0.76 x 1.48	0.8	8.3
Spinnerette Room							
COO-01		Steelman Clean-off Oven	0.2	980	0.254	4.5	16.6

**SCHEDULE "B"
Supporting Documents**

All in accordance with the following:

- 1) Application for Approval (Air & Noise) dated March 16, 2006, signed by John Featherston (Manager HS & E), Nylene Canada Inc and all supporting documentation and information provided by Kristine Tracey, Jacques Whitford; and
- 2) Application for a Consolidated Certificate of Approval (Air) dated September 9, 2002 and signed by Tanya Hickey, Safety and Ecology Supervisor, BASF Canada Inc., and all supporting information associated with the application including :
 - i. A revised Emission Summary and Dispersion Modelling Report prepared by Earth Tech (Canada) Inc. on behalf of BASF Canada Inc., dated March 17, 2003 and signed by Anthony D. Ciccone, P.Eng., Director, Air Quality and Energy;
 - ii. Additional information provided by Earth Tech (Canada) Inc. on behalf of Honeywell Nylon Canada Inc., dated August 7, 2003 and signed by Anthony D. Ciccone, P.Eng., Director, Air Quality and Energy;
 - iii. Additional information regarding revisions to the Emission Summary and Dispersion Modelling Report provided by Earth Tech (Canada) Inc. on behalf of Honeywell Nylon Canada Inc., dated September 24, 2003, October 2, 2003, October 16, 2003 and October 17, 2003 and signed by Ciara De Jong;
 - iv. "Noise Impact Assessment for Honeywell Nylon Canada Inc." report, dated November 2003, prepared by EarthTech (Canada) Inc. consultants;
 - v. Additional information/clarification regarding the caprolactam and peanut oil emissions provided by Earth Tech (Canada) Inc. on behalf of Honeywell Nylon Canada Inc., dated January 28, 2004 and March 22, 2004 and signed by Jeffrey Reitsma;
 - vi. A revised Emission Summary and Dispersion Modelling Report to include the new heat cleaning oven prepared by Earth Tech (Canada) Inc. on behalf of Honeywell Nylon Canada Inc., dated February 17, 2004 and signed by Jeffrey Reitsma;
 - vii. "Acoustic Assessment and Noise Control Plan for Honeywell Nylon Canada Inc." report, dated March 18, 2004, prepared by EarthTech (Canada) Inc. consultants;
 - viii. Correspondence from Honeywell Nylon Canada Inc. requesting approval of the proposed burnout oven, dated May 12, 2004 and signed by Jeff Featherston, Facilities Manager;
 - ix. An Addendum to the acoustic report: "Acoustic Assessment and Noise Control Plan for Honeywell Nylon Canada Inc.", dated May 14, 2004, prepared by EarthTech (Canada) Inc. consultants;
 - x. A facsimile from Honeywell Nylon Canada Inc. regarding the DRAFT Certificate of Approval (Air) for the new heat cleaning oven, dated July 22, 2004 and signed by Terry Lampole.
 - xi. Correspondence from Honeywell Nylon Canada Inc. with regard to the proposed Point of Impingement Limit for Caprolactam including Volume 1 of the petition to remove caprolactam from the USEPA's list of hazardous air pollutants (HAPs), dated March 24, 2005 and signed by Don Nicholas, Site Manager;
 - xii. An e-mail with the article "Subchronic Inhalation Toxicity Study of Captolactam (with a 4-week Recovery) in the Rat via

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- Whole-Body Exposures", dated May 26, 2005 and signed by Deborah Young;
- xiii. Three e-mails with additional information/updates to the Emission Summary and Dispersion Modelling Report provided by Earth Tech (Canada) Inc. on behalf of Honeywell Nylon Canada Inc., dated April 19, 2005 (2 e-mails) and May 31, 2005 and signed by Jeffrey Reitsma;
 - xiv. Additional information from Honeywell to address action items from June 2, 2005 meeting, dated June 21, 2005 and signed by Deborah B. Young, Director, Nylon Health, Safety & Environmental;
 - xv. Two e-mails responding to the draft Certificate of Approval including an update to the site wide emission estimates and POI concentrations provided by Earth Tech (Canada) Inc. on behalf of Honeywell Nylon Canada Inc., dated July 26, 2005 and October 19, 2005 and signed by Jeffrey Reitsma; and
 - xvi. An e-mail from Honeywell Nylon Canada Inc. regarding the flow rate for the burn off oven dated October 20, 2005 and signed by Terry Lampole, Safety & Ecology Supervisor.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

- (1) "Act" means the Environmental Protection Act;
- (2) "Certificate" means this Certificate of Approval, including Schedules "A", "B" and "C", issued in accordance with Section 9 of the Act;
- (3) "Company" means Nylene Canada Inc.;
- (4) "Director" means any Ministry employee appointed by the Minister pursuant to Section 5 of the Act;
- (5) "District Manager" means the District Manager, Ottawa District Office, Eastern Region of the Ministry;
- (6) "Equipment" means the cooling towers, the boilers, the direct contact condenser, the scrubbers, the cyclones, the oil mist collectors, the generator sets, the autoclaves, the exhaust systems, and the heat cleaning ovens including the thermocouples and continuous temperature recorder described in the Company's application, this Certificate and in the supporting documentation submitted with the application, to the extent approved by this Certificate;
- (7) "Facility" means the entire operation located on the property where the Equipment is located;
- (8) "Independent Acoustical Consultant" means an Acoustical Consultant not representing the Company, and not involved in the noise impact assessment or the design/implementation of noise control measures for the Facility/Equipment. The Independent Acoustical Consultant shall not be retained by the consultant involved in the noise/vibration impact assessment or the design/implementation of noise/vibration control measures for the Facility/Equipment;
- (9) "Manager" means the Manager, Technology Standards Section, Standards Development Branch of the Ministry, or any other person who represents and carries out the duties of the Manager as those duties relate to the conditions of this Certificate;
- (10) "Manual" means a document or a set of documents that provide written instructions to staff of the Company;
- (11) "Ministry" means the Ontario Ministry of the Environment;
- (12) "Point of Impingement" means any point in the natural environment. The point of impingement for the purposes of verifying compliance with the Act shall be chosen as the point located outside the company's property boundaries at which the highest concentration is expected to occur, when that concentration is calculated in accordance with the Appendix to Regulation 346 written under the Act, or any other method accepted by the Director;
- (13) "Pre-Test Information" means the information outlined in Section 1 of the Source Testing Code;
- (14) "Publication NPC-103" means Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report, August, 1978, as amended;

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(15) "Publication NPC-205" means Publication NPC-205, Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban), October, 1995;

(16) "Publication NPC-233" means Publication NPC-233, Information to be Submitted for Approval of Stationary Sources of Sound, October 1995;

(17) "Source Testing" means sampling and testing to measure emissions resulting from operating the Equipment at a level of typical maximum production within the approved operating range of the Equipment; and

(18) "Source Testing Code" means the Source Testing Code, Version 2, Report No. ARB-66-80, dated November 1980, prepared by the Ministry, as amended.

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

OPERATION AND MAINTENANCE

1. The Company shall ensure that the Equipment is properly operated and maintained at all times. The Company shall:

(1) prepare, not later than three (3) months after the date of this Certificate, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment, including:

- (a) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
- (b) emergency procedures;
- (c) frequency of inspection of the scrubbers and the filter material in the Equipment;
- (d) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and
- (e) all appropriate measures to minimize noise and odorous emissions from all potential sources;

(2) implement the recommendations of the Manual.

2. The Company shall operate the heat cleaning ovens in such a manner that:

(1) The burner flame in the secondary chamber is established before the primary chamber is fired;

(2) The temperature in the secondary chamber, as measured by the thermocouple, is maintained at a minimum of 760 degrees Celsius at all times when the primary chamber is loaded and heat cleaning is in progress;

(3) The burner in the primary chamber is automatically turned off, if the secondary burner fails; and

(4) No substances containing chlorinated and/or fluorinated compounds, including polyvinyl chloride and Teflon, are loaded into the heat cleaning ovens.

MONITORING

3. The Company shall continuously monitor and record the temperature in the secondary chamber of the heat cleaning ovens, when the heat cleaning ovens are in operation. The continuous temperature monitoring and recording system shall comply with the requirements outlined in the attached Schedule "C".

SCHEDULE "C"

Continuous Temperature Monitoring and Recording System Requirements

PARAMETER: Temperature

LOCATION: The sample point for the continuous temperature monitoring and recording systems shall be located at a location where the measurements are representative of the minimum temperature of the gases leaving the secondary chamber of the heat cleaning ovens.

PERFORMANCE: The continuous temperature monitoring and recording systems shall meet the following minimum performance specifications for the following parameters.

PARAMETERS SPECIFICATION

Type: shielded "K" type thermocouple, or equivalent.

Accuracy: ± 1.5 percent of the minimum gas temperature.

DATA RECORDER: The Company shall record the actual operating temperatures in the secondary chamber of the P&R heat cleaning oven (PR-72) once every half hour.

The data recorder for the Spinerette Room heat cleaning oven (COO-01) must be capable of registering continuously the measurement of the monitoring system without a significant loss of accuracy and with a time resolution of 1 minute or better.

RELIABILITY: The monitoring system shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

RECORD RETENTION

4. The Company shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this Certificate, and make these records available for review by staff of the Ministry upon request. The Company shall retain:

- (1) all records on the maintenance, repair and inspection of the Equipment; and
- (2) daily records of the actual operating temperature in the secondary chamber of the heat cleaning ovens;
- (3) daily records of materials loaded into the heat cleaning ovens; and
- (4) all records of any environmental complaints; including:
 - (a) a description, time and date of each incident to which the complaint relates;
 - (b) wind direction at the time of the incident to which the complaint relates; and
 - (c) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

NOTIFICATION OF COMPLAINTS

5. The Company shall notify the District Manager, in writing, of each environmental complaint within two (2) business days of the complaint. The notification shall include:

- (1) a description of the nature of the complaint; and
- (2) the time and date of the incident to which the complaint relates;

NOISE

6. The Company shall ensure that the noise emissions from the Facility comply with the limits set in Publication NPC-205.
7. (1) The Company shall carry out acoustic audit measurements on the actual noise emissions due to the operation of the Facility, in accordance with the procedures in Publication NPC-103.

(2) The Company shall submit a report on the results of the acoustic audit, prepared by an Independent Acoustic Consultant, in accordance with Publication NPC-233, to the District Manager and the Director not later than seven (7) months after the date of this Certificate.

8. The Director may not accept the results of the acoustic audit and may require the Company to repeat the acoustic audit if:

(1) the requirements of Publication NPC-233 were not followed and/or

(2) the results of the acoustic audit have not verified compliance with Condition No. 4.

9. The Company shall submit an application for an amendment for any additional noise control measures recommended in the acoustic audit report designed to ensure that the noise emissions from the Facility comply with the limits set in Publication NPC-205 to the Director and the District Manager not later than one (1) month after the acoustic audit report has been submitted.

SOURCE TESTING

10. The Company shall perform Source Testing to determine the rate of emission of caprolactam from the direct contact condenser (DCC-2269), designated as PR-13, in accordance with the procedure in Schedule "D".

SCHEDULE "D"

Procedure for Source Testing

1. The Company shall submit, not later than three (3) months after the date of this Certificate, to the Manager a test protocol, including the Pre-Test Information for the Source Testing required by the Source Testing Code. The Company shall finalize the test protocol in consultation with the Manager.
2. The Company shall not commence the Source Testing until the Manager has accepted the test protocol.
3. The Company shall complete the Source Testing not later than three (3) months after the Manager has accepted the test protocol.
4. The Company shall notify the District Manager and the Manager in writing of the location, date and time of any impending Source Testing required by this Certificate, at least fifteen (15) days prior to the Source Testing.
5. The Company shall submit a report on the Source Testing to the District Manager and the Manager not later than two (2) months after completing the Source Testing. The report shall be in the format described in the Source Testing Code, and shall also include, but not be limited to:
 - (1) an executive summary;
 - (2) records of operating conditions; and
 - (3) results of dispersion calculations in accordance with Regulation 346 indicating the maximum concentration of caprolactam at the Point of Impingement.
6. The Director may not accept the results of the Source Testing if:
 - (1) the Source Testing Code or the requirements of the Manager were not followed;
 - (2) the Company did not notify the District Manager and the Manager of the Source Testing; or
 - (3) the Company failed to provide a complete report on the Source Testing.
7. If the Director does not accept the results of the Source Testing, the Director may require re-testing.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition Nos. 1 and 2 are included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Certificate.
2. Condition No. 3 is included to require the Company to gather accurate information on a continuous basis so that compliance with the Act, regulations, and this Certificate can be verified.
3. Condition No. 4 is included to require the Company to keep records and to provide information to staff of the Ministry so that compliance with the Act, the Regulations and this Certificate can be verified.
4. Condition No. 5 is included to require the Company to notify staff of the Ministry so as to assist the Ministry with the review of the site's compliance.
5. Conditions No. 6 and 9 are included to provide minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Facility.
6. Condition No.7 is included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the Act, the regulations and this Certificate can be verified.
7. Condition No.8 is included to ensure that the acoustic audit is carried out in accordance with procedures set in the Ministry's Noise Guidelines.
8. Condition No. 10 is included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the Act, the regulations and this Certificate can be verified.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 4918-6EJBBD issued on October 29, 2005

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
2300 Yonge St., Suite 1700
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

The Director
Section 9, *Environmental Protection Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

CONTENT COPY OF ORIGINAL

* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca

The above noted works are approved under Section 9 of the Environmental Protection Act.

DATED AT TORONTO this 17th day of May, 2006

Sarah Paul, P.Eng.
Director
Section 9, *Environmental Protection Act*

AA/
c: District Manager, MOE Ottawa
Kristine Tracey, Jacques Whitford