

APPENDIX C: EMISSION SUMMARY TABLE

ESDM - Naico Burlington
Emission Summary Table

Contaminant	CAS	Total Emission Rate (g/s)	Averaging Period (hours)	Applicable POI Criteria (µg/m ³)	Limiting Effect	Regulation Schedule ¹	Category ²	Model Used	Total POI Concentration ³ (µg/m ³)	% of Criteria
NOx	10102-44-0	2.94E-01	24	200	Health	Standard	B1	AERMOD	75.5	38%
		2.94E-01	1	400	Health	Standard	B1		229.3	57%
PM	N/A	3.34E-02	24	120	Visibility	Standard	B1	Tier 1 assessment	68.94	57%
		4.63E-05	24	25	Health & Soiling	Standard	B1		0.19	1%
Iron oxide	1309-37-1	3.5E-03	24	120	Particulate	Guideline	B1	Tier 1 assessment	6.24	5%
Propylene Glycol	57-55-6	2.3E-03	1	19,000	Odour	Guideline	B1	Tier 1 assessment	14.35	0%
Ethanol	64-17-5	1.2E-04	24	2,500	Odour	Guideline	B1	Tier 1 assessment	0.30	0%
Acetic Acid	64-19-7	2.3E-04	24	4,000	Health	Standard	B1	Tier 1 assessment	0.60	0%
Methanol	67-56-1	5.4E-02	24	7,300	Health	Standard	B1	Tier 1 assessment	94.56	1%
Isopropanol	67-63-0	4.4E-04	24	11,880	Health	Standard	B1	Tier 1 assessment	1.15	0%
Acetone	67-64-1	2.7E-03	24	70	Health	Standard	B1	Tier 1 assessment	7.00	10%
Acetonitrile	75-05-8	3.6E-03	24	15	Health	Standard	B1	Tier 1 assessment	5.08	34%
Acrylamide	79-06-1	9.2E-04	24	12	Health	SL-PA	B2	Tier 1 assessment	1.29	11%
Acrylic Acid	79-10-7	1.6E-03	24	23	Health/Odour	Guideline	B1	Tier 1 assessment	2.80	12%
Naphthalene	91-20-3	9.8E-03	10-min	50	Odour	Guideline	B1	AERMOD	15.84	32%
Benzotriazole	95-14-7	2.3E-03	24	6	Health	SL-JSL	B2	Tier 1 assessment	4.02	67%
1,2,4-Trimethylbenzene	95-63-6	7.5E-03	24	220	Health	Standard	B1	Tier 1 assessment	13.27	6%
Diethylethanolamine	100-37-8	3.5E-02	24	115	Health	SL-JSL	B2	Tier 1 assessment	60.97	53%
Ethylbenzene	100-41-4	4.1E-06	10-min	1,900	Odour	Guideline	B1	Tier 1 assessment	0.03	0%
Acrylonitrile	107-13-1	6.4E-05	24	0.6	Health	Standard	B1	Tier 1 assessment	0.12	19%
Ethylene Glycol	107-21-1	1.2E-03	24	12,700	Health	Guideline	B1	Tier 1 assessment	2.09	0%
Glyoxal	107-22-2	5.4E-07	24	2	Health	SL-MD	B2	Tier 1 assessment	0.00	0%
1-Methoxy-2-Propanol	107-98-2	1.3E+00	10-min	121,000	Odour	Guideline	B1	Tier 1 assessment	8.935	7%
Cyclohexylamine	108-91-8	9.7E-03	24	48	Health	SL-PA	B2	Tier 1 assessment	17.14	36%
Morpholine (NAM; SYN)	110-91-8	1.6E-01	24	200	Health	SL-JSL	B2	AERMOD	58.40	29%
Diethanolamine	111-42-2	5.6E-04	24	15	Health	SL-JSL	B2	Tier 1 assessment	1.10	7%
2-Butoxyethanol	111-76-2	4.5E-02	24	2,400	Health	Guideline	B1	Tier 1 assessment	78.99	3%
1-Octanol	111-76-2	2.7E-01	10-min	500	Odour	Guideline	B1	AERMOD	469.10	94%
Dibutylamine	111-87-5	7.4E-02	24	135	Health	SL-JSL	B2	Tier 1 assessment	129.5	96%
1-Decanol	111-92-2	2.3E-04	1	2,645	Health	Guideline	B1	Tier 1 assessment	1.44	0%
Dimethylamine	112-30-1	4.2E-02	24	75	Health	SL-JSL	B2	Tier 1 assessment	73.42	98%
Monoethanolamine	124-40-3	6.7E-04	1	1,840	Health & Odour	Guideline	B1	Tier 1 assessment	2.93	0%
Sorbitan Monooleate	141-43-5	6.7E-03	24	35	Health	SL-JSL	B2	Tier 1 assessment	12.25	35%
Dimethylaminoethyl Acrylate	1338-43-8	3.1E-04	24	50	Health	SL-JSL	B2	Tier 1 assessment	0.50	1%
Diethyl-Hydroxyl-Amine	2439-35-2	1.9E-04	24	0.2	N/A	Maximum GLC	N/A	AERMOD	0.05	24%
Methoxypropylamine	3710-84-7	6.4E-02	24	87	Health	SL-JSL	B2	AERMOD	23.20	27%
Limonene	5332-73-0	1.9E-02	24	99	Health	SL-PA	B2	Tier 1 assessment	32.89	33%
Hydrochloric acid	5989-27-5	5.5E-02	24	550	Health	SL-JSL	B2	Tier 1 assessment	96.0	17%
Phosphoric Acid	7647-01-0	1.0E-03	24	20	Health	Standard	B1	Tier 1 assessment	1.83	9%
Ammonium Hydroxide	7664-38-2	1.5E-02	24	7	Health	Standard	B1	AERMOD	3.79	54%
Sulfuric Acid	7664-41-7	6.1E-05	24	100	Health	Standard	B1	Tier 1 assessment	0.16	0%
	7664-93-9	4.1E-05	24	5	Health	Standard	B1	Tier 1 assessment	0.08	2%

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Nitric Acid	7697-37-2	1.0E-04	24	35	Corrosion	Standard	B1	Tier 1 assessment	0.27	1%
Hydrogen Peroxide	7722-84-1	7.6E-06	24	30	Health	Guideline	B1	Tier 1 assessment	0.02	0%
Citric Acid	77-92-9	1.7E-05	24	120	Particulate	Guideline	B1	Tier 1 assessment	0.03	0%
	77-92-9	1.0E-04	1	300	Health	Guideline	B1	Tier 1 assessment	0.44	0%
Isobutanol	78-83-1	5.1E-03	10-min	2,340	Odour	Guideline	B1	Tier 1 assessment	35	2%
Ethoxylated Alcohol	78330-21-9	9.0E-04	24	40	Health	SL-JSL	B2	Tier 1 assessment	1.59	4%
White Mineral Oil	8042-47-5	3.7E-02	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	69.65	58%
Ethoxylated Sorbitan Monostearate	9005-67-8	6.6E-03	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	9.30	8%
Ethoxylated Nonylphenol	9016-45-9	1.3E-03	24	90	Health	SL-JSL	B2	Tier 1 assessment	2.29	3%
Hydroxyphosphonoacetic Acid	23783-26-8	1.6E-03	24	3	Health	SL-PA	B2	Tier 1 assessment	2.82	94%
Polypropylene Glycol	25322-69-4	1.4E-03	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	2.81	2%
Dodecylbenzenesulphonic Acid	27176-87-0	6.7E-06	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	0.01	0%
2-Phosphono-1,2,4-Butanetricarboxylic Ac	37971-36-1	6.3E-02	24	112	Health	SL-PA	B2	Tier 1 assessment	111.09	99%
Tall Oil Fatty Acid	61790-12-3	1.9E-04	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	0.36	0%
Ethoxylated N-Tallow Alkyl-1,3-Propylenediamine	61790-85-0	4.0E-02	24	70	Health	SL-PA	B2	Tier 1 assessment	68.94	98%
Ethoxylated Tall Oil	61791-00-2	1.0E-02	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	17.81	15%
Straight Run Middle Distillate	64741-44-2	2.4E-01	24	120	Health & Particulate	SL-MD	B2	AERMOD	87.00	73%
Hydrotreated Middle Distillate	64742-46-7	2.9E-02	24	1,750	Health	SL-JSL	B2	Tier 1 assessment	50.46	3%
Hydrotreated Light Distillate	64742-47-8	5.1E-02	24	1,750	Health	SL-JSL	B2	Tier 1 assessment	84.70	5%
Hydrotreated Heavy Naphtha	64742-48-9	4.3E-02	24	2,600	Health	Schedule 3	B1	Tier 1 assessment	75.30	3%
Severely Hydrotreated Heavy Naphthenic Distillate	64742-52-5	8.3E-02	24	120	Health & Particulate	SL-MD	B2	AERMOD	23.30	19%
Hydrotreated Light Naphthenic Distillate	64742-53-6	8.2E-03	24	500	Health	SL-JSL	B2	Tier 1 assessment	14.57	3%
Solvent Dewaxed Light Paraffinic Distill	64742-56-9	6.0E-05	24	50	Health	SL-JSL	B2	Tier 1 assessment	0.10	0%
Medium Aliphatic Solvent Naphtha	64742-88-7	1.3E-01	24	219	N/A	Maximum GLC	N/A	Tier 1 assessment	219.1	100%
Heavy Aromatic Naphtha	64742-94-5	1.5E-02	24	500	Health	SL-JSL	B2	Tier 1 assessment	27.58	6%
Ethoxylated C10-16 Alcohols	68002-97-1	1.6E-02	24	102	Health	SL-PA	B2	Tier 1 assessment	26.16	26%
Ethoxylated Alcohol (C12-15)	68131-39-5	9.5E-03	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	16.83	14%
Alcohols, C12-18, ethoxylated propoxylated	69227-21-0	4.4E-02	24	34	Health	SL-PA	B2	AERMOD	11.50	34%
2-Ethylhexanol	104-76-7	3.3E-02	1	600	Odour	Guideline	B1	Tier 1 assessment	9.58	2%
Diethylene Glycol Monobutyl Ether	112-34-5	1.0E-03	24	65	Health	Guideline	B1	Tier 1 assessment	2.05	3%
Stearyl Alcohol	112-92-5	2.8E-04	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	0.54	0%
1-EICOSANOL	629-96-9	1.7E-03	24	15	Health & Particulate	SL-JSL	B2	Tier 1 assessment	3.05	20%
Hydroxyethyldenediphosphonic Acid	2809-21-4	6.0E-03	24	15	Health & Particulate	SL-JSL	B2	Tier 1 assessment	10.63	71%
2-CYCLOHEXENE-1-OC-TANIC ACID, 5(OR 6)-	53980-88-4	6.6E-03	24	120	Health & Particulate	SL-MD	B2	Tier 1 assessment	11.49	10%
Alcohols, C12-14-secondary, ethoxylated	84133-50-6	1.5E-03	24	86	Health	SL-PA	B2	Tier 1 assessment	2.70	3%

ESDM - Nalco Burlington
Emission Summary Table

Contaminant	CAS	Total Emission Rate (g/s)	Averaging Period (hours)	Applicable POI Criteria ($\mu\text{g}/\text{m}^3$)	Limiting Effect	Regulation Schedule ¹	Category ²	Model Used	Total POI Concentration ³ ($\mu\text{g}/\text{m}^3$)	% of Criteria
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Notes:

- The MECP Schedule 3 limits and screening levels in "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants" and site-specific standards approved by the MECP during the ECA review were used for the assessment criteria. If there are no related MECP standards for contaminants, a de-minimus evaluation approach was used to assess the significance of these contaminants. Based on Table B-2A in Appendix B of the MECP ESDM Procedure Document, a substance that does not have a MECP POI limit and is not listed in Table B-2B, it can be considered insignificant if its predicted impact is below $0.1 \mu\text{g}/\text{m}^3$ (for a 24-hour average period).
 SL-JSL: Jurisdictional Screening Levels
 SL-MD: Ministry-derived (MD) Screening Levels
 SL-PA: Previously Accepted (PA) Screening Levels
 Maximum GLC –Maximum ground level concentration approved by the MECP during ECA application
- Benchmark 1 (B1) values and Benchmark 2 (B2)
- For Tier 1 assessment, the total POI concentration for each contaminant was calculated by adding the concentration from each individual source that could emit the common contaminant. For Tier 2 assessment (AERMOD), the results were obtained from the modelling output with anomalies removed.

APPENDIX D: ACOUSTIC ASSESSMENT SUMMARY TABLE

Nalco Canada 1055 Truman Street, Burlington, ON
Acoustic Assessment Summary Table

POR ID	POR Description	SPL ⁽¹⁾ at Point of Reception (Leq) dBA		Verified by Acoustical Audit ⁽²⁾	Performance Limit ⁽³⁾ (dBA)		Compliance with Performance Limit?	
		Day	Night		Day	Night	Day	Night
POR01	2077 Churchill Ave., Burlington	47	46	Y	54	51	Y	Y
POR02	2075 Churchill Ave., Burlington	50	49	Y	54	51	Y	Y
POR03	2073 Churchill Ave., Burlington	48	48	Y	54	51	Y	Y
POR04	2076 Churchill Ave., Burlington	48	48	Y	54	51	Y	Y
POR05	2074 Churchill Ave., Burlington	47	47	Y	54	51	Y	Y
POR06	2072 Churchill Ave., Burlington	47	47	Y	54	51	Y	Y
POR07	2081 Leighland Rd, Burlington	50	50	Y	54	51	Y	Y
POR08	2079 Leighland Rd, Burlington	49	49	Y	54	51	Y	Y
POR09	2077 Leighland Rd, Burlington	49	48	Y	54	51	Y	Y

Notes:

- (1) SPL - sound power level.
- (2) Verified under typical operating conditions of the Facility
- (3) Background sound levels are measured in the previous environmental assessment in June 2004. The current ambient could be higher due to traffic increase on QEW and other local roads. However for the purpose of the assessment, the same 2004 performance limits were considered.