



May 4, 2022

Via Electronic

Thomas Rhodes (thomas.rhodes@deq.oregon.gov)
Source Test Coordinator
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Re: Categorically Exempt Toxics Emissions Units

Dear Mr. Rhodes:

Hydro Extrusion Portland, Inc. (Hydro) submitted the most recent revision of the Cleaner Air Oregon (CAO) Toxic Air Contaminant (TAC) emissions inventory (the emissions inventory) to the Oregon Department of Environmental Quality (DEQ) on February 10, 2022. The DEQ provided draft guidance and thresholds titled Reporting Updates for Categorically Exempt Toxic Emission Units (TEUs) via email on March 1, 2022 and requested the completion of Form AQ523 Categorically Exempt TEUs (CETEUs) to satisfy requirements for reporting Exempt TEUs. Hydro submitted Form AQ523 to the DEQ on March 22, 2022, using the draft guidance and definitions included in Oregon Administrative Rule (OAR) 340-245-0060(3)(b). On April 15, 2022, the DEQ requested additional background information and/or calculations for the following activities:

- Maintenance and repair shop
- Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment
- Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking.

By email dated April 20, 2022, the DEQ stated that to comply with exempt TEU reporting under OAR 340-245-0040(4)(a)(A), Hydro can provide a revised AQ520 Emissions Inventory which includes only the names of the Exempt TEUs (no activities or emissions are required), or alternatively Hydro can provide a document specifying the Exempt TEUs that includes the substantiation for determining they are Exempt TEUs for the DEQ to review and approve.

This letter responds to the DEQ's April 20, 2022 email and addresses the categorically insignificant activities no longer considered categorically exempt under CAO that could potentially apply to the Hydro facility.



Maintenance shop and repair shops & automotive repair shops or storage garages. Hydro operates a maintenance shop that uses small amounts of oils and industrial cleaners in accordance with manufacturer instructions. Maul Foster & Alongi, Inc. (MFA) prepared usage rates for TACs in materials used in the maintenance shop and compared them to the reporting threshold levels in the Exempt TEU Reporting Guidance (the Guidance) dated March 21, 2022. MFA assumed 100 percent volatilization and zero transfer efficiency for spray-applied materials as noted in Appendix C of the Guidance. MFA conservatively estimated annual usage by dividing the total purchases for each material in the last three years by a factor of two.

The prepared usage analysis showed that two TACs from material usage in the maintenance shop exceeded the reporting thresholds. MFA completed a Level 1 risk assessment (L1RA) for the TACs that exceeded the reporting thresholds using the same assumptions listed in Appendix C: Threshold Development Methodologies in the Guidance. The results of the L1RA were well below the Target Risks of 0.25 excess cancer risk and 0.05 chronic non-cancer hazard index listed in the Guidance. As noted by the DEQ in the CAO Facility Call-in Prioritization Protocol document, Level 1 risk screens do not represent actual risk, and in most cases actual risk will be tens or hundreds of times lower than what is estimated by a Level 1 screening. The results from the L1RA show that TAC emissions from the maintenance shop do not materially contribute to potential health risks to the community, and the maintenance shop should be considered an exempt TEU. The maintenance shop material usage and threshold analysis is included as an attachment to this letter.

Air cooling and ventilating equipment not designed to remove air contaminants generated by or released from associated equipment. Hydro has properly accounted for all fugitive emissions in the emissions inventory. Hydro will allocate these emissions to the appropriate emission points in the Modeling Protocol to be prepared and submitted in the next step of the CAO program.

Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking. Hydro has accounted for routine maintenance, repair, and replacement activities as Paint Line Cleaning in the emissions inventory. Emissions from Paint Line Cleaning were included in the emissions inventory and will be included in the risk assessment.

Natural gas, propane, and liquefied petroleum gas storage tanks and transfer equipment. Hydro has a propane tank on property with a 500-gallon capacity that stores fuel for forklifts used in warehouse activities. Fuel for warehouse forklift activity is not considered “extensive use” of this fuel, and this tank should be considered an Exempt TEU.



Thank you,

A handwritten signature in blue ink, appearing to be "Jennifer Garcia", written in a cursive style.

Jennifer Garcia
Sr. Environmental Engineer
Hydro Extrusion Portland, Inc.

cc: Jeremy Basler (Hydro)
Leslie Riley (MFA)
Kenzie Billings (DEQ)
J.R. Giska (DEQ)
Matthew Davis (DEQ)
Weston Li (DEQ)

List of Attachments:
Mass Balance Categorically Exempt Analysis

Table 1
Mass Balance
Categorically Exempt Analysis

TAC Summary	CAS	Toxic Air Contaminant ⁽¹⁾	Total Annual Usage Estimate (lb/yr)
Summary	80-15-9	Cumene hydroperoxide	0.019
	98-82-8	Cumene	16.2
	80-62-6	Methyl methacrylate	1.6E-03
	95-50-1	o-Dichlorobenzene	0.011
	106-46-7	p-Dichlorobenzene	1.4E-04
	112-34-5	Diethylene Glycol Monobutyl Ether	0.29
	95-63-6	1,2,4-Trimethylbenzene	77.5
	100-41-4	Ethylbenzene	2.82
	1330-20-7	Xylenes	5.09
	489	Ethene, tetrafluoro-, homopolymer	0.019
	107-21-1	Ethylene glycol	1.4E-03
	67-63-0	Isopropyl alcohol	0.26
75-37-6	1,1 Difluoroethane	0.88	

Product ⁽²⁾	CAS	Toxic Air Contaminant ⁽²⁾	Weight Percentage (%) ⁽³⁾	Specific Gravity ⁽²⁾	Product Density ^(e) (lb/gal)	Solid?	Average Annual Product Usage ⁽⁵⁾	Annual Emissions/Usage Estimate (lb/yr)
242 Blue Loctite	9004-96-0	Oleic acid 5.5EO	25.0	1.10	9.18	--	0.033 (gal)	0.076 ^(b)
	81-07-2	Saccharin	3.00			--		9.1E-03 ^(b)
	112945-52-5	Silica, amorphous, fumed, crystal-free	3.00			--		9.1E-03 ^(b)
	80-15-9	Cumene hydroperoxide	3.00			--		9.1E-03 ^(b)
	57-55-6	Propane-1,2-diol	3.00			--		9.1E-03 ^(b)
	98-82-8	Cumene	0.55			--		1.7E-03 ^(b)
	13463-67-7	Titanium dioxide	0.55			Solid		-- ^(a)
262 Red Loctite	81-07-2	Saccharin	3.00	1.05	8.76	--	0.033 (gal)	8.7E-03 ^(b)
	9002-88-4	Ethene, homopolymer	3.00			--		8.7E-03 ^(b)
	80-15-9	Cumene hydroperoxide	3.00			--		8.7E-03 ^(b)
	98-82-8	Cumene	0.55			--		1.6E-03 ^(b)
	80-62-6	Methyl methacrylate	0.55			--		1.6E-03 ^(b)
Aerokroil (XHRI)	64742-47-8	Petroleum Distillates	16.7	0.86	7.17	--	0.16 (gal)	0.19 ^(b)
	64742-96-7	Petroleum Distillates	16.7			--		0.19 ^(b)
	64742-95-6	Petroleum Distillates	16.7			--		0.19 ^(b)
	64742-52-5	Severely Hydrotreated Petroleum Distillates	40.0			--		0.45 ^(b)
	Proprietary	Proprietary Ingredients	5.50			--		0.062 ^(b)
	29911-27-1	Dipropylene Glycol Monopropyl Ether	3.00			--		0.034 ^(b)
	108-83-8	Diisobutyl Ketone	7.50			--		0.084 ^(b)
	95-63-3	1,2,4-trimethylbenzene	7.50			--		0.084 ^(b)
	88917-22-0	Dipropylene Glycol Methyl Ether	2.50			--		0.028 ^(b)
	123-42-2	Aliphatic Alcohol #1	1.50			--		0.017 ^(b)
	78-83-1	Aliphatic Alcohol #2	1.50			--		0.017 ^(b)
	124-38-9	Carbon Dioxide Propellant	8.00			--		0.090 ^(b)
Loctite 8150 (Anti-Seize Lubric)	64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic	45.0	1.25	10.4	--	0.50 (lb)	0.23 ^(c)
	7782-42-5	Graphite	20.0			Solid		-- ^(a)
	1305-78-8	Calcium oxide	20.0			Solid		-- ^(a)
	64742-53-6	Petroleum distillates, hydrotreated, light naphthenic	20.0			--		0.10 ^(c)
	7429-90-5	Aluminum not powder, dust or fume	7.50			Solid		-- ^(a)
	8042-47-5	White mineral oil (petroleum) (not cmr)	3.00			--		0.015 ^(c)
	14808-60-7	Quartz (SiO2) respirable particulates (RCS) >=10%	0.55			Solid		-- ^(a)
Loctite SI 596 (Cartridge Red RT)	7631-86-9	Silicon dioxide	7.50	1.01	8.43	Solid	0.16 (gal)	-- ^(a)
	1309-37-1	Diiron trioxide	3.00			Solid		-- ^(a)
Jet-Lube AP-1	64742-01-4	Residual oils (petroleum), solvent refined	42.5	0.90	7.51	--	1.64 (gal)	5.24 ^(b)
	64742-62-7	Residual oils (petroleum), solvent dewaxed	42.5			--		5.24 ^(b)
	64742-52-5	Petroleum distillates, hydrotreated, light naphthenic	9.50			--		1.17 ^(b)
Lubriplate 1200-2	64742-52-5	Distillates (petroleum), hydrotreated heavy naphthenic	45.0	0.94	7.84	--	1.09 (gal)	3.83 ^(b)
	15874-48-3	Antimony tris[O,O-dipropyl] tris(dithiophosphate)	1.00			Solid		-- ^(a)
	1314-13-2	zinc oxide	3.00			Solid		-- ^(a)
Marvel Mystery Oil	64742-47-8	Petroleum distillates, hydrotreated light	20.0	0.88	7.31	--	9.06 (lb)	1.81 ^(c)
	1330-78-5	Phosphoric acid, tris(methylphenyl) esters	0.55			--		0.050 ^(c)
	95-50-1	o-Dichlorobenzene	0.13			--		0.011 ^(c)
	106-46-7	p-Dichlorobenzene	1.6E-03			--		1.4E-04 ^(c)
Mean Green Industrial Strength Cleaner	112-34-5	Diethylene Glycol Monobutyl Ether	0.50	1.00	8.37	--	7.00 (gal)	0.29 ^(b)
	64-02-8	EDTA tetra sodium salt	3.00			Solid		-- ^(a)
	160875-66-1	Ethoxylated Alcohol	4.00			--		2.34 ^(b)

Table 1
Mass Balance
Categorically Exempt Analysis

Product ⁽²⁾	CAS	Toxic Air Contaminant ⁽²⁾	Weight Percentage ⁽³⁾ (%)	Specific Gravity ⁽²⁾	Product Density ^(a) (lb/gal)	Solid?	Average Annual Product Usage ⁽⁵⁾	Annual Emissions/Usage Estimate (lb/yr)
Mighty Lube Type ML Lubricant	8052-41-3	Mineral Spirit Solvent	87.0	0.79	6.59	--	428 (gal)	2,452 ^(b)
	68130-55-2	Polyol Ester	9.00			--		254 ^(b)
	Proprietary	Complex inhibitors provide anti-wear, oxidative stability, moisture displacement	1.50			--		42.3 ^(b)
	1317-33-5	Molybdenum Disulfide	0.25			--		7.05 ^(b)
	95-63-6	1,2,4-Trimethylbenzene	2.75			--		77.5 ^(b)
	100-41-4	Ethylbenzene	0.10			--		2.82 ^(b)
	1330-20-7	Xylenes	0.18			--		5.09 ^(b)
	98-82-8	Cumene	0.58			--		16.2 ^(b)
8002-05-9	Petroleum Oil	0.25	--	7.05 ^(b)				
Mobil Grease XHP 222	68411-46-1	nzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpente	3.00	0.88	7.34	--	2.68 (gal)	0.59 ^(b)
	12001-85-3	Naphthenic acids, zinc salts	0.55			Solid		-- ⁽⁶⁾
	68457-79-4	Zinc Diakyl Dithiophosphate	1.75			--		0.34 ^(b)
Never-Seez regular Grade	7782-42-5	Graphite	20.0	--	9.93	Solid	64.0 (lb)	-- ⁽⁶⁾
	7440-50-8	Copper	7.50			Solid		-- ⁽⁶⁾
	1314-13-2	Zinc Oxide	3.00			Solid		-- ⁽⁶⁾
	7429-90-5	Aluminum	3.00			Solid		-- ⁽⁶⁾
Tap Magic Protap Liquid	112-80-1	oleic acid, pure	55.0	0.89	7.43	--	0.13 (gal)	0.51 ^(b)
	373-49-9	[Z]-hexadec-9-enoic acid	5.00			--		0.046 ^(b)
Loctite 567 Thread Sealant (Tube Pipe Sealant)	489	Ethene, tetrafluoro-, homopolymer	7.50	1.14	9.51	--	0.026 (gal)	0.019 ^(b)
	9002-88-4	Ethene, homopolymer	7.50			--		0.019 ^(b)
	13463-67-7	Titanium dioxide	3.00			Solid		-- ⁽⁶⁾
	112945-52-5	Silica, amorphous, fumed, crystal-free	3.00			--		7.5E-03 ^(b)
	81-07-2	Saccharin	3.00			--		7.5E-03 ^(b)
	61788-47-4	Fatty acids, coco	3.00			--		7.5E-03 ^(b)
	25068-38-6	Epichlorohydrin-4,4'-isopropylidene diphenol resin	0.55			--		1.4E-03 ^(b)
	80-15-9	Cumene hydroperoxide	0.55			--		1.4E-03 ^(b)
	107-21-1	Ethylene glycol	0.55			--		1.4E-03 ^(b)
98-82-8	Cumene	0.55	--	1.4E-03 ^(b)				
WD-40 Specialist Silicone	64742-47-8	LVP Petroleum Solvent	70.0	--	6.84	--	0.21 (gal)	1.03 ^(b)
	74-98-6	Propane	10.0			--		0.15 ^(b)
	106-97-8	n-butane	10.0			--		0.15 ^(b)
	63148-62-9	Poly(dimethylsiloxane)	3.00			--		0.044 ^(b)
WD-40 Multi-Use Bulk Liquid	64742-47-8	LVP Aliphatic Hydrocarbon	47.5	0.82	6.84	--	1.00 (gal)	3.25 ^(b)
	64742-56-9	Petroleum Base Oil	7.00			--		0.48 ^(b)
	64742-65-0	Petroleum Base Oil	7.00			--		0.48 ^(b)
	64742-53-6	Petroleum Base Oil	7.00			--		0.48 ^(b)
	64742-54-7	Petroleum Base Oil	7.00			--		0.48 ^(b)
	64742-71-8	Petroleum Base Oil	7.00			--		0.48 ^(b)
	64742-47-8	Aliphatic Hydrocarbon	12.5			--		0.86 ^(b)
WD-40 Multi-use Aerosol	64742-47-8	LVP Aliphatic Hydrocarbon	47.5	0.82	6.84	--	0.94 (gal)	3.05 ^(b)
	64742-56-9	Petroleum Base Oil	7.00			--		0.45 ^(b)
	64742-65-0	Petroleum Base Oil	7.00			--		0.45 ^(b)
	64742-53-6	Petroleum Base Oil	7.00			--		0.45 ^(b)
	64742-54-7	Petroleum Base Oil	7.00			--		0.45 ^(b)
	64742-71-8	Petroleum Base Oil	7.00			--		0.45 ^(b)
	64742-47-8	Aliphatic Hydrocarbon	12.5			--		0.80 ^(b)
124-38-9	Carbon dioxide	2.50	--	0.16 ^(b)				
WD-40 Specialist Electrical Contact Cleaner	64742-49-0	Heptane	12.5	--	6.84	--	0.26 (gal)	0.22 ^(b)
	142-82-5	Heptane	12.5			--		0.22 ^(b)
	67-63-0	Isopropyl alcohol	15.0			--		0.26 ^(b)
	75-37-6	1,1 Difluoroethane	50.0			--		0.88 ^(b)
WD-40 Specialist White Lithium Grease (Low VOC)	64742-47-8	LVP Aliphatic Hydrocarbon	30.0	0.87	7.26	--	0.39 (gal)	0.85 ^(b)
	64742-88-7	LVP Aliphatic Hydrocarbon	30.0			--		0.85 ^(b)
	74-98-6	Propane	12.5			--		0.35 ^(b)
	64742-52-5	Hydrotreated Heavy Naphthenic Distillate	3.00			--		0.085 ^(b)
	64741-88-4	Solvent-refined Heavy Paraffinic Petroleum Distillates	3.00			--		0.085 ^(b)
	Proprietary	Calcium Sulfonate	3.00			--		0.085 ^(b)
	13463-67-7	Titanium Dioxide	1.50			Solid		0.043 ^(b)
Blasocut BC 35 NF	64742-52-5	Mineral oil, severely hydrotreated, naphthenic	65.0	0.95	7.93	--	3.00 (gal)	15.5 ^(b)
	68608-26-4	Sodium petroleum sulfonate	7.45			--		1.77 ^(b)
	770-35-4	1-Phenoxypropan-2-ol	3.95			--		0.94 ^(b)
	No Data	Carboxylic acids, alkali salts	1.95			--		0.46 ^(b)
Motor Oil 10W40	64742-54-7	Petroleum distillates, hydrotreated heavy paraffinic	85.0	0.86	7.18	--	0.50 (gal)	303 ^(b)
	2215-35-2	Zinc alkyl dithiophosphate	No Data			--		-- ^(b)
Shell Tellus S2 MX	No Data	Interchangeable low viscosity base oil	45.0	0.85	7.13	--	50.0 (gal)	160 ^(b)

**Table 1
Mass Balance
Categorically Exempt Analysis**

Product ⁽²⁾	CAS	Toxic Air Contaminant ⁽²⁾	Weight Percentage ⁽³⁾ (%)	Specific Gravity ⁽²⁾	Product Density ^(a) (lb/gal)	Solid?	Average Annual Product Usage ⁽⁵⁾	Annual Emissions/Usage Estimate (lb/yr)
Shell Gadus S3 V220C 2 (Boot Grease)	12007-60-2	dilithium tetra-borate	1.95	1.00	8.35	--	90.0 (gal)	14.6 ^(b)
	12001-85-3	Naphthenic acids, zinc salts	1.25			Solid		-- ⁽⁶⁾
	13539-13-4	2,5-bis(octylidithio)-1,3,4-thiadiazole	0.045			--		0.34 ^(b)

NOTES:

HAP = Hazardous Air Pollutant

TAC = Toxic Air Contaminant

(a) Product density (lb/gal) = (specific gravity) x (density of water [lb/gal])

Density of water (lb/gal) = 8.345 (4)

(b) Annual emissions estimate (lb/yr) = (weight percentage [%]/100) x (product density [lb/gal]) x (maximum annual product usage [gal/yr])

(c) Annual emissions estimate (lb/yr) = (weight percentage [%]/100) x (maximum annual product usage [lb/yr])

REFERENCES:

(1) Summary only includes reportable TACs.

(2) Information from product SDS.

(3) Information from product SDS. Value represents average of the range.

(4) Density of water at 4 degrees Celsius.

(5) Information provided by Hydro. Value represents total purchases for each material in the last three years divided by two.

(6) Product is not spray-applied. Solids will not volatilize or emit to atmosphere.