Air Quality Operating Permit Application Form

Lincoln-Lancaster County Health Department
Environmental Public Health Division - Air Quality Program
Lincoln, NE 68510
ph: (402) 441-8040 fax: (402) 441-3890
http://www.lincoln.ne.gov/city/health/environ/air.htm

Purpose of Application:
- ☐ Initial Operating Permit
- ☐ Operating Permit Renewal
- ☑ Operating Permit Modification
- ☐ Revise Previously Submitted Application

SECTION 1: ADMINISTRATIVE INFORMATION AND RESPONSIBLE OFFICIAL CERTIFICATION

Part A: Company Information

Company Name:	Molex LLC				
Company Address:	2222 Wellington Court				
Company City:	Lisle	**Company State:**	Illinois	**Company ZIP:**	60532
Is the business incorporated?	☐ Yes ☑ No				

Part B: General Facility Information

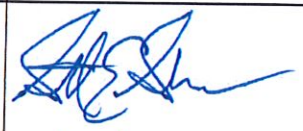
Facility Name:	Molex LLC				
LLCHD Facility ID #:	00182				
Facility Physical Address:	700 Kingbird Road				
Facility City:	Lincoln	**Facility State:**	Nebraska	**Facility ZIP:**	68521
Facility NAICS Code(s):	334417	Electronic Connector Manufacturing			
Is the facility located within 50 miles of another state?	☑ Yes ☐ No	**If so, which state(s)?**	☑ Iowa ☐ Kansas ☐ Missouri		
Is the facility located on leased property?	☐ Yes ☑ No				

Part C: Contact Information

Facility Contact Person:	Scott Hajek		
Facility Contact Person Title or Responsibility:	EHS Manager		
Phone Number:	402-458-8739	**E-Mail:**	scott.hajek@molex.com
Alternate Phone Number: *(optional)*	402-560-0883	**Fax Number:** *(optional)*	
Who is the primary contact for questions regarding this application?	☑ Facility Contact Person ☐ Other		

SECTION 1: ADMINISTRATIVE INFORMATION AND RESPONSIBLE OFFICIAL CERTIFICATION

Part D: Permit Information			
Does this facility currently hold an operating permit issued by the LLCHD?	☑ Yes	☐ No	
If so, what type of operating permit does the facility hold?	☐ Class I (Title V) - Major Source	☐ Class II - Minor Source	
	☑ Class II - Synthetic Minor Source		
What is the expiration date of the operating permit you currently hold?	9/1/2022		
Does this facility currently hold one or more construction permits issued by the LLCHD?	☑ Yes	☐ No	
If so, list the numbers for all currently effective construction permits. Do not include superceded permits.	124D		
	211A		
If you know what type of permit you are applying for, check the appropriate box:	☑ Class I (Title V) - Major Source	☐ Class II - Minor Source	
	☐ Class II - Synthetic Minor Source	☐ I do not know permit type.	

Part E: Responsible Official Certification	
Compliance Certification ☑ Agree ☐ Disagree	I hereby certify that, based on information and belief formed after reasonable inquiry, the facility that emits air pollutants, which is identified in this application and that is subject to the applicable requirements identified in Section 9: 1. Is in compliance with all applicable requirements, except as described in Section 9; 2. Will continue to comply with all applicable requirements for which compliance has been achieved; and, 3. Will comply with all applicable requirements for which compliance is not currently achieved
Truth and Accuracy Certification ☑ Agree ☐ Disagree	I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this Air Quality Operating Permit application are true, complete, and accurate. I certify that all hard copies of this application are identical in content.
Electronic Copy Certification ☑ Agree ☐ Disagree ☐ Not Applicable	I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in the electronic copy of the Air Quality Operating Permit application are identical in content to the hard copy submittal.
Citizenship Attestation ☑ Agree ☐ Disagree	For the purpose of complying with Neb. Rev. Stat. §§4-108 through 4-114, I attest as follows (*check one*): ☑ **I am a citizen of the United States.** OR ☐ **I am a qualified alien under the federal Immigration and Nationality Act, and will provide my immigration status, alien number, and USCIS documentation upon request.** I hereby attest that my responses and the information provided on this form and any related application for public benefits are true, complete, and accurate, and I understand that this information may be used to verify my lawful presence in the United States.
Responsible Official Name: (printed or typed)	Scott Shaw
Responsible Official Title:	Director of Operations
Responsible Official Signature:	
Date:	4/15/2022

SECTION 2: DETAILED SOURCE INFORMATION

Part A: Operating Schedule

Is this source operated seasonally, or year-round?	☐ Seasonal ☑ Year-Round	
Provide the normal operating schedule:	**Hours per Day:**	24
	Days per Week:	7
	Weeks per Year:	52
Does the source operate under an alternative schedule on a regular basis?	☐ Yes ☑ No	

Part B: New Process Description

On separate sheet(s) of paper, provide a detailed narrative description of the process or equipmen you are planning to construct/reconstruct/modify. Explain the stages in each process that may result in the discharge of an air pollutant. Include all emission points, emission units, pollution control equipment, and identification numbers. The narrative should complement the facility layout and process flow diagrams.

Is a New Process Description attached to your application?	☑ Yes ☐ No	

Part C: Process Layout Diagram

On a separate sheet(s) of paper, provide a detailed diagram or drawing that includes all processes and/or equipment identified in this application. Make sure all elements in the drawing are properly identified, drawn to scale, and consistent with other sections of this application. The diagram should show the location of all new/modified buildings, structures, stacks, and property boundaries. Fences or other public access restrictions should be shown or identified and described. Be sure to identify adjacent roads and include a north arrow. Include an effective date for the diagram.

Is a Process Layout Diagram included with your application?	☑ Yes ☐ No	

Part D: Facility Description

On separate sheet(s) of paper, provide a brief narrative description of the facility. Explain the stages in each process that may result in the discharge of an air pollutant. Include all emission points, emission units, pollution control equipment, and identification numbers. The narrative should complement the facility layout and process flow diagrams.

Is a Facility Description included with your application?	☑ Yes ☐ No	

SECTION 2: DETAILED SOURCE INFORMATION

Part E: Emission Calculations

Indicate which method(s) will be used to calculate emissions: (check all that apply)

☑ **AP-42 or WebFIRE Emission Factors**	
☐ **Emission Factors from Stack Testing** *	
☑ **Material Mass-Balance Calculations** *	
☐ **Other** (specify >>>>) *	
☐ **Other** (specify >>>>) *	
☐ **Other** (specify >>>>) *	

If using emission factors or calculation methods other than those provided in AP-42 or WebFIRE, attach a copy of any alternate emission factors (including stack test results) and/or emission calculations as an attachment to this application.

Indicate how material and/or fuel use will be substantiated:

☑ **Material / Fuel Supplier Record(s)**	
☐ **Material / Fuel Use Logbook(s)**	
☐ **Receiving / Load-Out Scale Tickets**	
☐ **Other** (specify >>>>)	
☐ **Other** (specify >>>>)	
☐ **Other** (specify >>>>)	

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Part B: Facility Description

Molex owns and operates a facility located at 700 Kingbird Road, Lincoln, Nebraska that manufactures electrical connectors. The manufacturing of the facility is separated into 4 distinct areas of operation: molding, stamping, plating, and assembly.

- Molding converts plastic resin beads into connector housings through injection molding.

-Stamping receives metal coil stock from third-party vendors, or some pre-plated stock from the Plating operations at Molex Lincoln, and stamps small connectors from it.

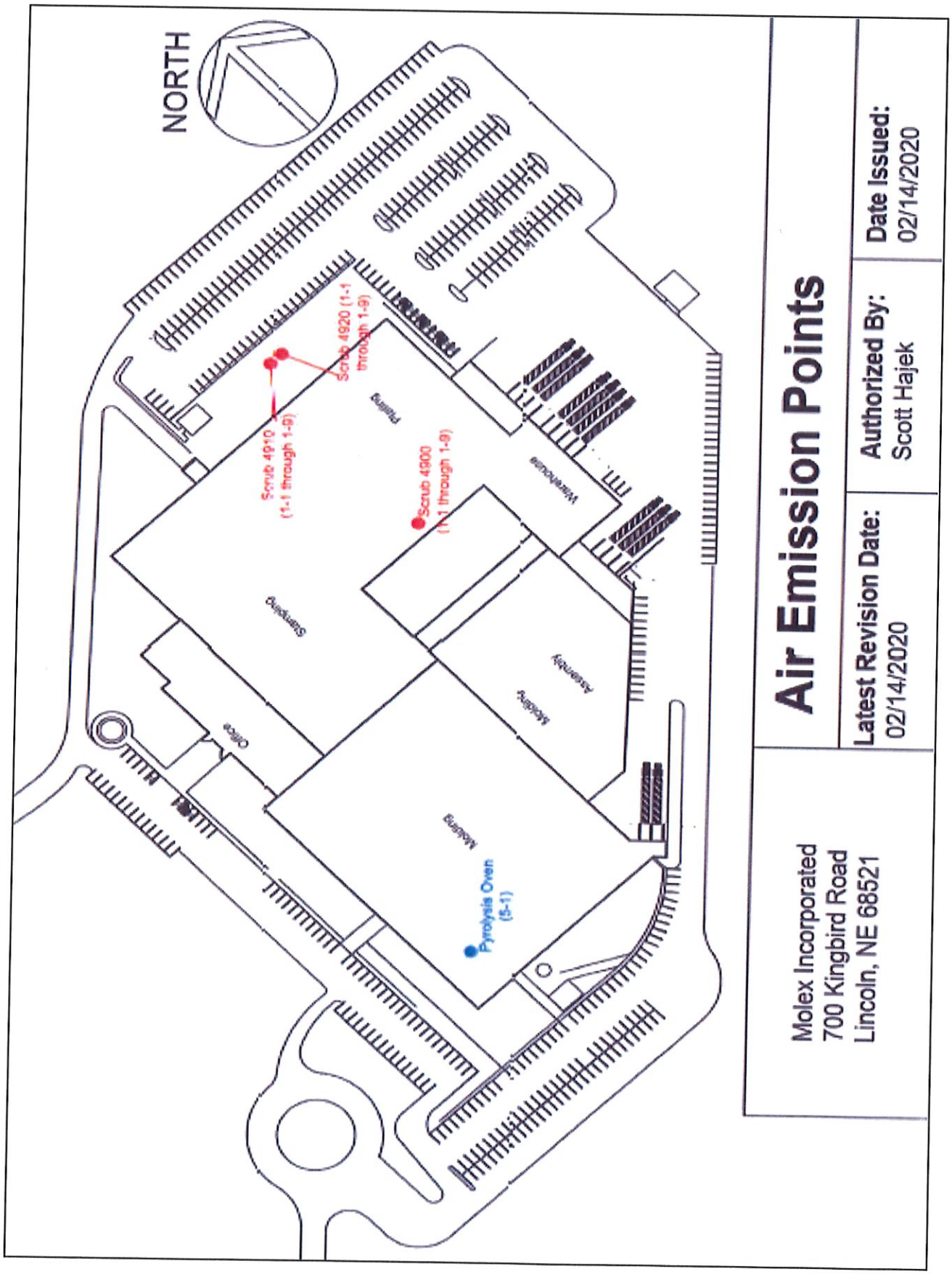
-Plating receives metal coil stock from third-party vendors, or stamped connectors from Stamping, which are then run through the plating process. Molex is capable of plating copper, nickel, tin, silver, gold, palladium, or indium onto the incoming material.

Parts from any of these departments can be shipped off-site to a third party for further processing, or can be sent to the Assembly operations at the Molex Lincoln facility

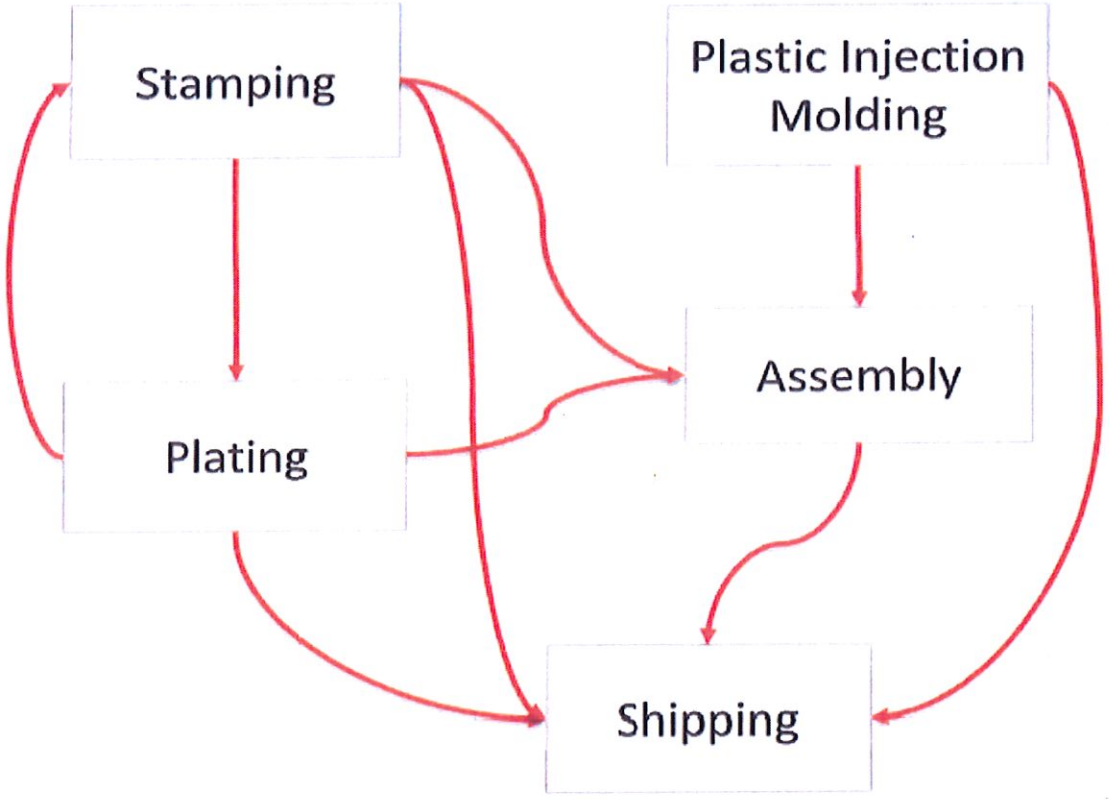
-Assembly inserts the stamped and plated pins and connectors into the plastic molded housings to create a finished product that is ready for distribution to customers.

Section 2 Part C: Facility Layout Diagram

Site Diagram for Molex Lincoln



Section 2 Part D: Process Flow Diagram
Process Flow Diagram for Molex Lincoln



SECTION 3 – EMISSION POINT SUMMARY

Table 3-A: Emission Unit Identification

Emission Unit #		Source Classification Code # (SCC)	Emission Point Description	Emission Segment Description
Point #	Segment #			
1	1	3-09-010-68	Nickel Plating	Fugitive PM10 / PM2.5 / HAP
1	2	3-09-010-98	Caustic Soda Cleaning	Fugitive PM10 / PM2.5
1	3	3-09-010-98	Acid Cleaning	Fugitive PM10 / PM2.5
1	4	3-09-010-45	Copper Plating	Fugitive PM10 / PM2.5
1	5	3-09-010-98	Tin Plating	Fugitive PM10 / PM2.5
1	6	3-09-010-98	Silver Plating	Fugitive PM10 / PM2.5
1	7	3-09-010-98	Gold Plating	Fugitive PM10 / PM2.5
1	8	3-09-010-98	Palladium Plating	Fugitive PM10 / PM2.5
1	9	3-09-010-98	Indium Plating	Fugitive PM10 / PM2.5
2	1	3-09-888-01	Stamping Operation	Fugitive VOC
3	1	3-08-010-07	Molding Operation	Fugitive VOC
4	1	A24-15-000-000	Parts Washer	Fugitive VOC
5	1	---	Pyrolysis Oven	Natural Gas Combustion
6	1	---	Environmental Barrier Application	Fugitive VOC
7	1	---	Isopropanol Lubrication	Fugitive VOC

SECTION 3 – EMISSION POINT SUMMARY

Table 3-B: Stack / Release Point Information

** Stack information not required for fugitive sources.*

Emission Unit #	Associated Emission Unit	Latitude (decimal deg.)	Longitude (decimal deg.)	Elevation (feet a.s.l.)	Stack Height (feet)	Stack Inside Diameter (feet)	Exhaust Temp. (°F)	Exhaust Exit Velocity (feet/sec)	Exhaust Flow Rate (cu. feet/sec)	Vertical, Horizontal, or Fugitive	Raincap Present?
1-1	Nickel Plating	40.851011	-96.729942	1,255.00	30.00	1.46	70.00	99.60	166.75	Vertical	Yes
1-2	Caustic Soda Cleaning	40.851686	-96.730084	1,255.00	3.67	3.13	70.00	21.60	166.20	Vertical	Yes
1-3	Acid Cleaning	40.851693	-96.730027	1,255.00	3.67	3.13	70.00	21.60	166.20	Vertical	Yes
1-4	Copper Plating									Fugitive	
1-5	Tin Plating									Fugitive	
1-6	Silver Plating									Fugitive	
1-7	Gold Plating									Fugitive	
1-8	Palladium Plating									Fugitive	
1-9	Indium Plating									Fugitive	
2-1	Stamping Operation									Fugitive	
3-1	Molding Operation									Fugitive	
4-1	Parts Washer									Fugitive	
5-1	Pyrolysis Oven	40.849794	-96.730896	1,255.00	29.33	0.83	1,500.00	11.81	6.39	Vertical	Yes
6-1	Environmental Barrier App...									Fugitive	
7-1	Isopropanol Lubrication									Fugitive	

The stacks identified as Emission Units 1-1, 1-2, and 1-3 actual act as an exhaust for all emission units 1-1 through 1-9. Emissions from the plating lines could contain some or all of the emission units identified as 1-1 through 1-9, which are routed to one of the following three (3) wet fume scrubbers:
- EU 1-1: Fume Scrubber 4900 (#1)
- EU 1-2: Fume Scrubber 4910 (#2)
- EU 1-3: Fume Scrubber 4920 (#3)

The stacks identified as EU 1-1 (Fume Scrubber) and EU 5-1 (Pyrolysis Oven Vent) are located on the roof of the building. The stack heights provided for these emission units reflect the stack being located on the roof of the building by adding 25 feet (approximate height of the building) to the height of the stack above the roof.

SECTION 4 – INSIGNIFICANT ACTIVITIES

Table 4-A: Insignificant Activities List

Ver. 06/2018

Insignificant Activity Type	Description of Insignificant Activity
Housekeeping / Cleaning Activities	General housekeeping and maintenance purposes.
Maintenance Spray Booth	Booth used during fabrication and maintenance activities. Not used for production.
4 MMBtu/hr Boiler #1000a	Natural Gas-fired Boiler <10 MMBtu/hr, no MACT or NSPS are applicable
4 MMBtu/hr Boiler #2000a	Natural Gas-fired Boiler <10 MMBtu/hr, no MACT or NSPS are applicable
2 MMBtu/hr Boiler #3000a	Natural Gas-fired Boiler <10 MMBtu/hr, no MACT or NSPS are applicable
1.438 MMBtu/hr Boiler #4012	Natural Gas-fired Boiler <10 MMBtu/hr, no MACT or NSPS are applicable
1.438 MMBtu/hr Boiler #4013	Natural Gas-fired Boiler <10 MMBtu/hr, no MACT or NSPS are applicable

SECTION 4 – INSIGNIFICANT ACTIVITIES

Table 4-C: Insignificant Cooling Towers

Ver. 06/2018

Cooling Tower ID	Installation Date	Induced Draft or Natural Draft?	Maximum Circulating H_2O Flow Rate (gpm)	Total Dissolved Solids Conc. (ppmv)	Estimated Drift Loss (%)	Average Days in Service / Year
Phase 1 #1	N/A	N/A	<2000	N/A	N/A	365
Phase 1 #2	N/A	N/A	<2000	N/A	N/A	365
Phase 1 #3	N/A	N/A	<2000	N/A	N/A	365
Phase 1 #4	N/A	N/A	<2000	N/A	N/A	365
Phase 2 #1	N/A	N/A	<2000	N/A	N/A	365
Phase 2 #2	N/A	N/A	<2000	N/A	N/A	365
Phase 2 #4	N/A	N/A	<2000	N/A	N/A	365
Phase 3 #3	N/A	N/A	<2000	N/A	N/A	365
Phase 3 #5	N/A	N/A	<2000	N/A	N/A	365
Phase 3 #6	N/A	N/A	<2000	N/A	N/A	365
Phase 4 #4017	N/A	N/A	<2000	N/A	N/A	365
Phase 4 #4018	N/A	N/A	<2000	N/A	N/A	365

SECTION 5 – MAXIMUM POTENTIAL TO EMIT (MPTE)

Table 5-A: MPTE – Regulated Air Pollutant Emissions from Physical Plants and Other Equipment

Please list maximum potential emissions of all pollutants for each emission unit in pounds per year.

Ver. 06/2018

Emission Unit #	SCC Code	Hourly Process Rate	Process Rate Units	Max Annual Throughput	Emission Factor Source	PM_{10}	$PM_{2.5}$	NOx	SOx	VOC	CO	GHGs (CO_2e)	LEAD	Total HAP
1-1	3-09-010-68	8.46	M-A-hrs	74,101	AP-42	6,669	6,669	-	-	-	-	-	-	
1-2	3-09-010-98													
1-3	3-09-010-98													
1-4	3-09-010-45													
1-5	3-09-010-98	1.80	MMcf	15,768	AP-42	1,825	1,825	-	-	-	-	-	-	
1-6	3-09-010-98													
1-7	3-09-010-98													
1-8	3-09-010-98													
1-9	3-09-010-98													49,000
2-1	3-09-888-01	3.95	gallons	34,609	Mass Balance	-	-	-	-	185,366	-	-	-	
3-1	3-08-010-07	2,626	pounds	2.30E+07	Mass Balance	-	-	-	-	11,500	-	-	-	
4-1	A24-15-000-000	0.0514	gallons	450.00	Mass Balance	-	-	-	-	153.00	-	-	-	
5-1	---	1.00	hours	8,760	Other	117.00	117.00	237.00	16.00	152.00	438.00	309,002	-	
6-1	---	19.41	pounds	170,000	Mass Balance	-	-	-	-	170,000	-	-	-	
7-1	---	0.1712	gallons	1,500	Mass Balance	-	-	-	-	9,810	-	-	-	

Emission Factor for Emission Unit 1-1 (Nickel Plating) is from AP-42 Table 12.20-4 (July, 1996).

While not reflected in this table, HAP emissions from Emission Unit 1-1 are equal to PM10 emissions for this emission unit.

The PM Emission Factor for Emission Units 1-2 through 1-9 is derived from using the factor of 0.000081 grains/dscf from AP-42 Table 12.20-4 (July, 1996), then multiplying it by 10 because this factor assumes the use of a wet scrubber. Molex's proposed control efficiency is 90%.

While not reflected in this table, total HAP emissions from Emission Units 1-2 through 1-9 are equal to Cyanide, Methanol, and Catechol HAPs represented in Table 5-C of this application.

VOC emissions from Emission Unit 2-1 are based on the maximum allowable emissions in Construction Permit #124C.

SECTION 5 – MAXIMUM POTENTIAL TO EMIT (MPTE)

Table 5-B: Facility-Wide MPTE – VOC Emissions from VOC-Containing Materials

Please list the maximum throughput of all materials used that contain Volatile Organic Compounds, and show amount of VOC emitted.

Ver. 06/2018

Material Name	Manufacturer	Emission Unit #(s)	Material Purpose	Material Throughput (gallons)	Product Density (lbs/gallon)	VOC Content (select one) (weight %)	VOC Content (select one) (lbs/gallon)	Total VOC (pounds)	Release Factor (% release)	Total VOC Emissions (pounds)
Transdraw B-19 or Equivalent	Various	2-1	Stamping Lubricants	34,609	6.51	96.75%		218,077.6	85.00%	185,366.0
Thermoplastic Resin	Various	3-1	Plastic Molding	23,000,000	1.00	0.05%		11,500.0	100.00%	11,500.0
Parts Washer	Various	4-1	Parts Degreaser	450	6.80	100.00%		3,060.0	5.00%	153.0
Environmental Barrier	Various	6-1	Tarnish Inhibitor/ Part Protection	170,000	1.00	100.00%		170,000.0	100.00%	170,000.0
Isopropanol	Various	7-1	Production Lubricant	1,500	6.54	100.00%		9,810.0	100.00%	9,810.0

Transdraw B-19 or Equivalent (EU 2-1): Molex assumes 5% of the lubricant remains on the product, which is referred to as drag out. Molex also assumes that 10% of the lubricant is absorbed into absorbent rags and debris and is disposed of at a licensed municipal solid waste landfill. The VOC losses are not emitted to the atmosphere at the Molex Lincoln facility. VOC emissions from Emission Unit 2-1 are based on the maximum allowable emissions in Construction Permit #124C.

Plastic Molding Resin material (EU 3-1) throughput volume is represented in units of 'pounds'.

Environmental Barrier material (EU 6-1) throughput volume is represented in units of 'pounds' due to the fact that Molex uses various chemicals with different densities, and in order to account for VOC emissions relative to the VOC limit, throughput is tracked in terms of pounds of VOC. VOC emissions from Emission Unit 6-1 are based on the maximum allowable emissions in Construction Permit #211.

SECTION 5 – MAXIMUM POTENTIAL TO EMIT (MPTE)

For a complete list of EPA regulated Hazardous Air Pollutants, including CAS Numbers, click here.

Table 5-C: Facility-Wide MPTE - HAP Emissions from HAP-Containing Materials

Please list the maximum throughput of all materials used that contain Hazardous Air Pollutants (HAP) and show amount of HAP emitted.

Ver. 06/2018

Material Name	HAP Name	HAP CAS #	Emission Unit #(s)	Material Throughput	Throughput Units	Individual HAP Content	HAP Content Units	Product Density (lbs/gallon)	Individual HAP Throughput (pounds)	Release Factor (% release)	Total HAP Emissions (pounds)
Various	Cyanide Compounds	57-12-5	N/A	5,000	pounds	100.00	weight %		5,000.0	3.00%	150.0
Various	Nickel Compounds	7440-02-0	1-1	74,101	M-A-hrs	0.63	grains/A-hr	N/A	6,669.1	100.00%	6,669.1
Various	Catechol	120-80-9	1-5	400	pounds	100.00	weight %		400.0	100.00%	400.0
Various	Methanol	67-56-1	1-5	3,000	pounds	100.00	weight %		3,000.0	100.00%	3,000.0
Various	Largest Single HAP	---	N/A	19,000	pounds	100.00	weight %		19,000.0	100.00%	19,000.0

Nickel Compounds are used in EU 1-1 (Nickel Plating). Nickel Compound MPTE is equal to PM10/PM2.5 emissions for EU 1-1. Nickel Compound emissions are conservatively estimated using an AP-42 emission factor found in Table 12.20-4 (July, 1996).

The row listing emissions of 'Largest Single HAP' has been entered to reflect the facility-wide limit of 19,000 pounds for any individual HAP set forth in Construction

SECTION 5 – MAXIMUM POTENTIAL TO EMIT (MPTE)

Table 5-D: Maximum Potential to Emit and Operating / Construction Permit Thresholds

Ver. 06/2018

Criteria Pollutant Name	Emissions (tons per year)	Class II Permitting Threshold (tons per year)	Meet or Exceed?	Class I Permitting Threshold (tons per year)	Meet or Exceed?
PM_{10}	4.31	15.0	No	100.0	No
$PM_{2.5}$	4.31				
NOx	0.12	40.0	No	100.0	No
SOx	0.01	40.0	No	100.0	No
VOC	188.49	40.0	Yes	100.0	Yes
CO	0.22	50.0	No	100.0	No
Lead	0.00	0.6	No	5.0	No
GHGs	154.50				

HAP Category	Emissions (tons per year)	Class II Permitting Threshold (tons per year)	Meet or Exceed?	Class I Permitting Threshold (tons per year)	Meet or Exceed?
Greatest Single HAP	9.50	2.5	Yes	10.0	No
Total Combined HAP	24.50	10.0	Yes	25.0	No

SECTION 6: DETERMINATION OF SOURCE CLASS

Part A: Operating Permit Class

The maximum potential emissions from your facility meet or exceed Class I permitting thresholds. However, the maximum potential HAP emissions from your facility are less than the HAP 'Major Source' thresholds. Proceed to answer the following questions.

Do you wish to take enforceable permit requirements to limit emissions to levels that are lower than Class I Permit thresholds?	☐ Yes	☑ No
	☐ Yes	☐ No

Your facility will be classified as a Class I (Title V) source of criteria pollutants, and as an 'Area Source' of HAP. Proceed to Part D of this section, below.

Because you are not taking Synthetic Minor limits and your facility is an 'Area Source' of HAP, Parts B and C of this section do not apply. Complete Part D of this section, below.

Part B: Source Elected Requirements for Synthetic Minor Sources

Not applicable.

Not applicable.

Not Applicable.	☐ Yes	☐ No
Not Applicable.	☐ Yes	☐ No

Part C: Source Elected Requirements for Synthetic Area Sources of HAPs

Not Applicable.

Not Applicable.

Not Applicable.	☐ Yes	☐ No
Not Applicable.	☐ Yes	☐ No

Part D: Source Elected Requirements for Actual Emission Reductions		
All sources that are required to hold an operating permit are required to pay an annual emission fee based on actual pollutant emissions. You may agree to control requirements in order to reduce actual emissions of pollutants to the atmosphere, thereby reducing the annual emission fees. Check the following, as applicable.		
Do you agree to accept control requirements to reduce actual pollutant emissions?	☑ Yes	☐ No
Sources may also agree to throughput limits in their permit to prevent the possibility of exceeding permit thresholds. Check the following, as applicable.		
Do you agree to accept throughput limits to prevent possible exceedances of permit thresholds?	☐ Yes	☑ No
Indicate in Table 6-A what throughput limits you will agree to accept.		

Ver. 06/2018

SECTION 6 – DETERMINATION OF SOURCE CLASS

Table 6-A: Source-Elected Throughput Limits and Emission Control Requirements

In the table below, indicate which emission units you will either accept throughput limits on, or to which you will agree to apply control equipment.

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Emission Unit #	SCC Code	Agree to Throughput Limit?	Maximum Annual Throughput	Annual Throughput Limit	Throughput Units	Agree to Emission Controls?	Control Device ID	Control Type	If 'Other', Specify Type
1-1	3-09-010-68	No	74,101		M-A-hrs/yr	Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
1-2	3-09-010-98	No				Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
1-3	3-09-010-98	No				Yes	Wet Scrubber (98%)	Other	Hi-Efficiency Wet Scrubber
1-4	3-09-010-45	No				Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
1-5	3-09-010-98	No				Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
1-6	3-09-010-98	No	15,768		MMcf/yr	Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
1-7	3-09-010-98	No				Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
1-8	3-09-010-98	No				Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
1-9	3-09-010-98	No				Yes	Wet Scrubber (90%)	Other	Hi-Efficiency Wet Scrubber
2-1	3-09-888-01	No	34,609		gallons/yr	No			
3-1	3-08-010-07	No	2.30E+07		pounds/yr	No			
4-1	A24-15-000-000	No	450.00		gallons/yr	No			
5-1	---	No	8,760		hours/yr	No			
6-1	---	No	170,000		pounds/yr	No			
7-1	---	No	1,500		gallons/yr	No			

SECTION 7 – ACTUAL POTENTIAL TO EMIT (APTE)

Table 7-A: Facility-Wide APTE – Regulated Air Pollutant Emissions

Shown below is your source's potential emissions after applying any operational limits or control equipment you elected in Section 6. Emissions are in units of pounds.

Ver. 06/2018

Emission Unit #	SCC Code	Annual Throughput	Throughput Units	PM_{10}	$PM_{2.5}$	NOx	SOx	VOC	CO	GHGs (CO_2e)	LEAD	Total HAP
1-1	3-09-010-68	74,101	M-A-hrs/yr	666.90	666.90	-	-	-	-	-	-	
1-2	3-09-010-98											
1-3	3-09-010-98											
1-4	3-09-010-45											
1-5	3-09-010-98	15,768	MMcf/yr	182.50	182.50	-	-	-	-	-	-	
1-6	3-09-010-98											
1-7	3-09-010-98											
1-8	3-09-010-98											49,000
1-9	3-09-010-98											
2-1	3-09-888-01	34,609	gallons/yr	-	-	-	-	185,366	-	-	-	
3-1	3-08-010-07	2.30E+07	pounds/yr	-	-	-	-	11,500	-	-	-	
4-1	A24-15-000-000	450.00	gallons/yr	-	-	-	-	153.00	-	-	-	
5-1	---	8,760	hours/yr	117.00	117.00	237.00	16.00	152.00	438.00	309,002	-	
6-1	---	170,000	pounds/yr	-	-	-	-	170,000	-	-	-	
7-1	---	1,500	gallons/yr	-	-	-	-	9,810	-	-	-	

Emission Factor for Emission Unit 1-1 (Nickel Plating) is from AP-42 Table 12.20-4 (July, 1996).

While not reflected in this table, HAP emissions from Emission Unit 1-1 are equal to PM10 emissions for this emission unit.

The PM Emission Factor for Emission Units 1-2 through 1-9 is derived from using the factor of 0.000081 grains/dscf from AP-42 Table 12.20-4 (July, 1996), then multiplying it by 10 because this factor assumes the use of a wet scrubber. Molex's proposed control efficiency is 90%.

While not reflected in this table, total HAP emissions from Emission Units 1-2 through 1-9 are equal to Cyanide, Methanol, and Catechol HAPs represented in Table 7-C of this application.

VOC emissions from Emission Unit 2-1 are based on the maximum allowable emissions in Construction Permit #124C.

SECTION 7 – ACTUAL POTENTIAL TO EMIT (APTE)

Table 7-B: Facility-Wide APTE – VOC Emissions from VOC-Containing Materials

Please indicate whether you are accepting throughput limits or emission control requirements for VOC-containing materials. Emissions will be calculated in units of pounds.

Ver. 06/2018

Material Name – Manufacturer: Purpose	Emission Unit #(s)	Maximum Annual Throughput (gallons)	Agree to Throughput Limit? (Yes or No)	Annual Throughput Limit (gallons)	Total VOC (pounds)	Release Factor (% release)	Agree to Control Emissions? (Yes or No)	Control Device Type	Total VOC Emissions (pounds)
Transdraw B-19 or Equivalent -- Various: Stamping Lubricants	2-1	34,609	No		218,077.6	85.00%	No		185,366.0
Thermoplastic Resin -- Various: Plastic Molding	3-1	23,000,000	No		11,500.0	100.00%	No		11,500.0
Parts Washer -- Various: Parts Degreaser	4-1	450	No		3,060.0	5.00%	No		153.0
Environmental Barrier -- Various: Tarnish Inhibitor/ Part Protection	6-1	170,000	No		170,000.0	100.00%	No		170,000.0
Isopropanol -- Various: Production Lubricant	7-1	1,500	No		9,810.0	100.00%	No		9,810.0

Transdraw B-19 or Equivalent (EU 2-1): Molex assumes 5% of the lubricant remains on the product, which is referred to as drag out. Molex also assumes that 10% of the lubricant is absorbed into absorbent rags and debris and is disposed of at a licensed municipal solid waste landfill. The VOC losses are not emitted to the atmosphere at the Molex Lincoln facility. VOC emissions from Emission Unit 2-1 are based on the maximum allowable emissions in Construction Permit #124C.

Plastic Molding Resin material (EU 3-1) throughput volume is represented in units of 'pounds'.

Environmental Barrier material (EU 6-1) throughput volume is represented in units of 'pounds' due to the fact that Molex uses various chemicals with different densities, and in order to account for VOC emissions relative to the VOC limit, throughput is tracked in terms of pounds of VOC. VOC emissions from Emission Unit 6-1 are based on the maximum allowable emissions in Construction Permit #211.

SECTION 7 – ACTUAL POTENTIAL TO EMIT (APTE)

Table 7-C: Facility-Wide APTE – HAP Emissions from HAP-Containing Materials

Please indicate whether you are accepting throughput limits or emission control requirements for HAP-containing materials. Emissions will be calculated in units of pounds. Ver. 06/2018

Material Name	HAP Name	CAS #	Emission Unit #(s)	Agree to Throughput Limit? (Yes or No)	Agree to Control Emissions? (Yes or No)	Maximum Annual Material Throughput	Material Throughput Units	Annual Throughput Limit	Control Device Type	Release Factor (% release)	Individual HAP Emissions (pounds)
Various	Cyanide Compounds	57-12-5	N/A	No	No	5,000	pounds			3.00%	150.0
Various	Nickel Compounds	7440-02-0	1-1	No	Yes	74,101	M-A-hrs		Other	100.00%	666.9
Various	Catechol	120-80-9	1-5	No	No	400	pounds			100.00%	400.0
Various	Methanol	67-56-1	1-5	No	No	3,000	pounds			100.00%	3,000.0
Various	Largest Single HAP	---	N/A	No	No	19,000	pounds			100.00%	19,000.0

Nickel Compounds are used in EU 1-1 (Nickel Plating). Nickel Compound MPTE is equal to PM10/PM2.5 emissions for EU 1-1. Nickel Compound emissions are conservatively estimated using an AP-42 emission factor found in Table 12.20-4 (July, 1996).

The row listing emissions of 'Largest Single HAP' has been entered to reflect the facility-wide limit of 19,000 pounds for any individual HAP set forth in Construction

SECTION 7 – ACTUAL POTENTIAL TO EMIT (APTE)

Table 7-D: Actual Potential to Emit and Operating Permit Thresholds

Ver. 06/2018

Criteria Pollutant Name	Emissions (tons per year)	Class II Permitting Threshold (tons per year)	Meet or Exceed?	Class I Permitting Threshold (tons per year)	Meet or Exceed?
PM_{10}	0.48	15.0	No	100.0	No
$PM_{2.5}$	0.48				
NOx	0.12	40.0	No	100.0	No
SOx	0.01	40.0	No	100.0	No
VOC	188.49	40.0	Yes	100.0	Yes
CO	0.22	50.0	No	100.0	No
Lead	0.00	0.6	No	5.0	No
GHGs	154.50				

HAP Category	Emissions (tons per year)	Class II Permitting Threshold (tons per year)	Meet or Exceed?	Class I Permitting Threshold (tons per year)	Meet or Exceed?
Greatest Single HAP	9.50	2.5	Yes	10.0	No
Total Combined HAP	24.50	10.0	Yes	25.0	No

SECTION 8: PERMIT SHIELD

Ver. 06/2018

Part A: Permit Shield Applicability

Do you wish to apply for a 'permit shield' as defined in Article 2, Section 8 of the LLCAPCPRS?

☑ Yes	Yes, I wish to apply for a permit shield.
☐ No	No, I do not wish to apply for a permit shield.

In the space provided under Part B (below), include all regulations from which you would like to be shielded from applicability.

Part B: Regulations Included Under Permit Shield

Regulation Citation (e.g. 40 CFR 63 Subpart A)	Regulation Name (e.g. General Provisions)	Reason(s) why regulation does not apply.
40 CFR 60 Subpart D	Standards of Performance for Fossil Fuel-Fired Steam Generators	The boilers at this facility all have heat input ratings lower than the applicability threshold in this rule.
40 CFR 60 Subpart Da	Standards of Performance for Electric Utility Steam Generating Units	The boilers at this facility are not 'electric utility steam-generating units' as defined in Subpart Da.
40 CFR 60 Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	The boilers at this facility all have heat input ratings lower than the applicability threshold in this rule.
40 CFR 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	The boilers at this facility all have heat input ratings lower than the applicability threshold in this rule.
40 CFR 60 Subpart K	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After 6/11/1973 and Before 5/19/1978	All liquid storage vessels at this facility were constructed after the applicability date range specified in the rule.
40 CFR 60 Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After 5/18/1978 and Before 7/23/1984	All liquid storage vessels at this facility were constructed after the applicability date range specified in the rule.
40 CFR 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After7/23/1984	The capacity of all volatile organic liquid storage vessels at this facility is lower than the applicability threshold specified in the rule.
40 CFR 60 Subpart CCCC	Standards of Performance for Commercial and Industrial Solid Waste Incineration Units	EU 5-1 (Pyrolysis Oven) is exempted from the definition of an incinerator provided in §60.2265 of the rule.
40 CFR 63 Subpart Q	National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers	None of the cooling towers at this facility use chromium-based water treatment chemicals.
40 CFR 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	This facility is not a major source for hazardous air pollutants.

SECTION 8: PERMIT SHIELD

Ver. 06/2018

Part B: Regulations Included Under Permit Shield		
Regulation Citation (e.g. 40 CFR 63 Subpart A)	**Regulation Name** (e.g. General Provisions)	**Reason(s) why regulation does not apply.**
40 CFR 63 Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	The boilers at this facility only burn natural gas, and meet the definition of 'gas fired boilers' in §63.11237 of Subpart JJJJJJ. Pursuant to §63.11195(e) of Subpart JJJJJJ, 'gas fired boilers' are exempt from the requirements of Subpart JJJJJJ.
40 CFR 63 Subpart XXXXXX	National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories	Subpart XXXXXX applies to sources that are 'primarily engaged' in one of the nine listed source operations under §63.11514(a) of Subpart XXXXXX. The primary function of this source is electronic component manufacturing, which is not one of the listed operations.
40 CFR 63 Subpart MMMM	National Emission Standards for Hazardous Air Pollutants Area Source Standards for Surface Coating of Miscellaneous Metal Parts and Products	This facility is not a major source of Hazardous Air Pollutants. Subpart MMMM applies to Surface Coating of Miscellaneous Metal Parts and Products. The thin layer of environmental barrier grease is considered a "protective oil" and is excluded from the definition of "coating" within the Subpart.

SECTION 9: APPLICABLE RULES AND REQUIREMENTS

Ver. 06/2018

PART A: Applicable Requirements of the LLCAPCPRS

Applicable requirements for your source may include maintaining allowable stack opacity, maintaining allowable particulate emissions for the total given heat input, adhering to fugitive dust regulations, adhering to the process weight/particulate emissions rates, adhering to all construction permit conditions, etc. In the boxes below, check all of those requirements in the LLCAPCPRS that may apply to your source, and identify the method by which you intend to demonstrate compliance with the requirement. If a requirement does not apply to your source, briefly explain the reason it does not apply.

Requirement Citation & Name	Does standard apply?	If "Yes", describe compliance method. If "No", explain reason it does not apply.
LLCAPCPRS Article 2, Section 18: New Source Performance Standards (40 CFR Part 60)	☐ Yes ☑ No	If none apply, in Part C, list any that 'appear' to apply, but do not actually apply.
LLCAPCPRS Article 2, Section 19: Prevention of Significant Deterioration (PSD) of Air Quality	☐ Yes ☑ No	Potential emissions are below the PSD applicability threshold.
LLCAPCPRS Article 2, Section 20, paragraph (A): Process Weight Rate-based Particulate Matter (PM) Standards	☐ Yes ☑ No	None of the emission units at this facility are subject to this standard.
LLCAPCPRS Article 2, Section 20, paragraph (B): Heat Input Rate-based PM Standards for Fuel Combustion Units	☑ Yes ☐ No	Emission rate calculations performed using EPA-approved emission factors.
LLCAPCPRS Article 2, Section 20, paragraph (E): <20% Opacity of Visible Emissions	☑ Yes ☐ No	Visible emissions monitoring as required by permit.
LLCAPCPRS Article 2, Section 21: Compliance Assurance Monitoring (CAM) (40 CFR Part 64)	☐ Yes ☑ No	Does not apply to Class II sources, but Class I sources must give explanation in Part C.
LLCAPCPRS Article 2, Section 22, paragraphs (B) & (I): Standards for Pathological Material Incinerators	☐ Yes ☑ No	There are no pathological material incinerators associated with this facility.
LLCAPCPRS Article 2, Section 22, paragraph (C): Standards for Air Curtain Incinerators	☐ Yes ☑ No	There are no air curtain incinerators associated with this facility.
LLCAPCPRS Article 2, Section 23: Hazardous Air Pollutants - Emission Standards (40 CFR Part 61)	☐ Yes ☑ No	If none apply, in Part C, list any that 'appear' to apply, but do not actually apply.
LLCAPCPRS Article 2, Section 24: Sulfur Compound Emissions - Existing Sources - Emission Standards	☐ Yes ☑ No	This regulation applies only to existing fossil fuel burning equipment.
LLCAPCPRS Article 2, Section 25: Nitrogen Oxides - Emission Standards for Existing Stationary Sources	☐ Yes ☑ No	There are no nitric acid plants associated with this facility.
LLCAPCPRS Article 2, Section 26: Acid Rain (40 CFR Parts 72 through 78)	☐ Yes ☑ No	If none apply, in Part C, list any that 'appear' to apply, but do not actually apply.
LLCAPCPRS Article 2, Section 27: Hazardous Air Pollutants - Maximum Achievable Control Technology (MACT)	☐ Yes ☑ No	If none apply, in Part C, list any that 'appear' to apply, but do not actually apply.
LLCAPCPRS Article 2, Section 28: MACT Emission Standards (40 CFR Part 63)	☑ Yes ☐ No	Describe compliance with each applicable MACT standard in Part B, below.
LLCAPCPRS Article 2, Section 32: Dust - Duty to Prevent the Escape Of	☐ Yes ☑ No	There are no potential sources of fugitive dust associated with this facility.

SECTION 9: APPLICABLE RULES AND REQUIREMENTS

Ver. 06/2018

PART B: Applicable Federal Regulations and Additional Applicable LLCAPCPRS

If your source is subject to any federal air regulations set forth under 40 CFR Parts 60, 61, 63, 64, 68, 82, or Parts 72-78, or to additional regulations set forth in the LLCAPCPRS not included in Part A, then in the spaces provided below, list all of those regulations that apply to your source. For each regulation that applies to your source, list which emission unit(s) the rule applies to, and attach a brief explanation of how you intend to comply with the rule.

Regulation Name (e.g. NSPS for Grain Elevators)	Regulation Citation (e.g. 40 CFR 60 Subpart DD)	Emission unit(s) covered by this regulation.
NESHAP: Area Source Standards for Plating and Polishing Operations	40 CFR 63 Subpart WWWWWW	EU 1-1 (Nickel Plating)
NESHAP for Asbestos	40 CFR 61 Subpart M	Facility-Wide (as applicable due to renovation or demolition)

SECTION 9: APPLICABLE RULES AND REQUIREMENTS

Ver. 06/2018

PART C: Non-Applicable LLCAPCPRS Regulations & Non-Applicable Federal Regulations

For those regulations that would appear to apply to your source, but do not actually apply to your source, use the spaces provided below to provide the citation of the regulation, as well as the reason(s) that the regulation does not apply to your source.

Regulation Citation (e.g. 40 CFR 60 Subpart DD)	Provide the reason(s) the regulation does not apply to your source.
LLCAPCPRS Article 2, Section 18 (New Source Performance Standards)	None of the New Source Performance Standards in 40 CFR 60 apply to this facility. Refer to Section 8 of application for reasons for specific non-applicability.
LLCAPCPRS Article 2, Section 21 (Compliance Assurance Monitoring) & 40 CFR 64	Compliance Assurance Monitoring (CAM) rule applicability criteria are established in 40 CFR 64 §64.2. CAM does not apply to emission limitations established pursuant to Section 112 of the Clean Air Act (i.e. Source Category NESHAPs in 40 CFR 63) are exempt from CAM requirements. None of the emission units or emission limits at this source meet the applicability criteria set forth in 40 CFR 64 §64.2
LLCAPCPRS Article 2, Section 26 (Acid Rain) & 40 CFR 72 through 78	Molex does not operate any electric generating units.
40 CFR 68 (Chemical Accident Prevention Provisions)	Molex does not store regulated substances at or above threshold quantities.
	Refer to Section 8 of application (Permit Shield) for additional non-applicable regulations.

SECTION 10: COMPLIANCE PLAN

Part A: Compliance Status for Applicable Rules and Requirements

Will your source be in compliance with all applicable rules and requirements identified in Section 9 of this application, including those that with compliance dates set to take place during the term of the permit?

☑ Yes ☐ No	**Proceed to Application Checklist.**

Part B: Applicable Rules and Requirements for Which Compliance Is Not Achieved or Will Not Be Achieved

Regulation Citation (e.g. 40 CFR 63 Subpart A)	**Regulation Name** (e.g. General Provisions)	**Reason(s) why source will not be in compliance.**

Ver. 06/2018

Air Quality Operating Permit Application Form
Lincoln-Lancaster County Health Department
Air Quality Program

APPLICATION COMPLETENESS CHECKLIST

Does this application contain confidential information?	☐ Yes ☑ No	If "Yes" are application pages containing confidential data clearly marked?	☐ Yes ☑ No or N/A
Continue with the remainder of the checklist.			
Will your source require a Class I (Title V) operating permit?			☑ Yes ☐ No
You must submit the original signed operating permit application, as well as two (2) additional signed copies of the permit application.			

Section Number & Name	Included With Application?	If not included, provide reason.
Section 1: Administrative Information And Responsible Official Certification	☑ Yes ☐ No	
Section 2: Detailed Source Information	☑ Yes ☐ No	
Table 3-A: Emission Unit Identification	☑ Yes ☐ No	
Table 3-B: Stack / Release Point Information	☑ Yes ☐ No	
Table 4-A: Insignificant Activities List	☑ Yes ☐ No	
Table 4-B: Insignificant Lubricating and Heavy Oil Storage Information	☐ Yes ☑ No	Molex does not have fuel storage on site
Table 4-C: Insignificant Cooling Towers	☑ Yes ☐ No	
Table 5-A: MPTE – Regulated Air Pollutant Emissions from Physical Plants and Other Equipment	☑ Yes ☐ No	
Table 5-B: Facility-Wide MPTE – VOC Emissions from VOC-Containing Materials	☑ Yes ☐ No	
Table 5-C: Facility-Wide MPTE - HAP Emissions from HAP-Containing Materials	☑ Yes ☐ No	
Table 5-D: Maximum Potential to Emit and Operating / Construction Permit Thresholds	☑ Yes ☐ No	
Section 6: Determination Of Source Class	☑ Yes ☐ No	
Table 6-A: Source-Elected Throughput Limits and Emission Control Requirements	☑ Yes ☐ No	
Table 7-A: Facility-Wide APTE – Regulated Air Pollutant Emissions	☑ Yes ☐ No	
Table 7-B: Facility-Wide APTE – VOC Emissions from VOC-Containing Materials	☑ Yes ☐ No	
Table 7-C: Facility-Wide APTE – HAP Emissions from HAP-Containing Materials	☑ Yes ☐ No	
Table 7-D: Actual Potential to Emit and Operating Permit Thresholds	☑ Yes ☐ No	
Section 8: Permit Shield	☑ Yes ☐ No	

APPLICATION COMPLETENESS CHECKLIST

Section 9: Applicable Rules And Requirements	☑ Yes ☐ No	
Section 10: Compliance Plan	☑ Yes ☐ No	
Table 10-A: Compliance Schedule	☐ Yes ☑ No	Molex is in compliance with all applicable standards

Ver. 06/2018