JE Compliance Services

Risk Reduction Plan
December 2019

Lubeco, Inc.

Prepared For:

Lubeco, Inc.
6859 Downey Avenue
Long Beach, California

EHS-6115

P: +1.909.483.3300
F: +1.909.646.9854
http://www.jecsi.net

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Introduction

This Risk Reduction Plan has been prepared on behalf of Lubeco, Inc. with the intent of satisfying the requirements of South Coast Air Quality Management District (SCAQMD) Rule 1402(f)(3).

Facility Information

Lubeco is located at 6859 Downey Avenue in Long Beach, California (the "facility"). Lubeco is currently conducting operations at the facility under existing permits to operate issued by SCAQMD. A summary of business information is provided in **Table 1**.

Table 1 – Business Identification Information

Business name:	Lubeco, Inc.
Facility address:	6859 Downey Avenue, Long Beach, California
Mailing address:	6859 Downey Avenue, Long Beach, CA 90805
County:	Los Angeles
Phone:	562.602.1791
Facility ID:	41229
Principle business Activity:	Metal parts finishing
Contact person:	Mr. Steve Rossi
SIC:	3471, 3479
NAICS:	332812, 332813

Process Description

Lubeco is a job-shop metal finishing facility. Operations conducted at the facility included painting, anodizing, sealing, and coloring of metal parts for the aerospace industry. Ancillary operations include abrasive blasting, wastewater treatment, and operation of a natural gas-fired boiler.

The facility currently operates six spray booths, anodizing line, and passivation line that potentially result in atmospheric emissions of hexavalent chromium.

Facility Risk Characterization

A revised health risk assessment prepared by JE Compliance Services in September 2019 estimates that the cancer risk at the off-site point of maximum impact (PMI) was determined to be 219.3 in one million during the 2015 calendar year, primarily due to emissions of hexavalent chromium. The cancer risk at the maximum exposed individual worker (MEIW) was determined to be 38.8 per one million. The cancer risk at the maximum exposed individual resident (MEIR) was determined to be 128.6 per one million.

The primary sources of hexavalent chromium include the spray booth 1, spray booth 2, spray booth 3, tanks 14 (dichromate seal), and tank 35 (Dow 7).

The chronic hazard index was determined to be 0.54 at the PMI. The chronic hazard index was determined to be 0.35 at the MEIR and 0.45 at the MEIW. Sulfuric acid appeared to contribute the most

potential chronic hazards at the PMI and MEIW. Methylene diphenyl diisocyanate and sulfuric acid contribute most to the potential chronic hazards at the MEIR.

The acute hazard index was determined to be 0.18 at the PMI and 0.12 at the MEIW. The acute hazard index was determined to be 0.10 at the MEIR. Emissions of methylene diphenyl diisocyanate and sulfuric acid appeared to contribute the most potential acute hazards at the PMI, MEIW, and MEIR.

The 8-hour hazard index was determined to be 0.11 at the PMI. Emissions of methylene diphenyl diisocyanate appeared to contribute the most potential acute hazards at the PMI.

Risk Reduction Measures

The facility has initiated several measures to reduce risk from hexavalent chromium emissions from the facility. A review of various alternatives was conducted including but not limited to, the potential shutdown of operations, installation of additional air pollution equipment, and product reformulation. The following measures were determined by Lubeco to be the most effective and feasible risk reduction alternatives:

1. **Modification to Existing Paint Spray Booths.**

   A total of six paint spray booths are operated at the plant under existing permits to operate issued by SCAQMD. Three of six paint spray booths are equipped with three-stage filtration systems with a particulate matter removal efficiency of approximately 99.8 percent. The spraying of coatings containing hexavalent chromium is limited to these three paint spray booths (G6512, G6513, and G6514).

   The remaining three spray booths are equipped with standard spray booth filters and no spraying of coatings containing hexavalent chromium is performed in these booths (F64155, F64157, and F64159).

   As identified in permits to construct (AN 603405, 603406, and 603407), Lubeco is modifying paint spray booths operating under permit to operate numbers G6512, G6513 and G6514 with ultra-low particulate air (ULPA) filtration devices with particulate matter control efficiencies of 99.9995% for particles of 0.12 micron or greater. Under this proposal the spraying of hexavalent chromium-containing coatings would continue to be limited to these three booths and will be limited to the existing throughput limit of 21.4 pounds of uncontrolled hexavalent chromium per calendar year.

2. **Modification to Existing Open Process Tank Sizes.**

   Surface area reduction. To reduce the potential to emit from existing open process tanks containing hexavalent chromium, Lubeco has completed modifications to the dimensions of the following tanks as indicated in the permits to construct (AN 603385 and AN 603408):

   - Tank 14, Dichromate seal. Reduced size from 3’0” wide X 10’0” long X 4’0” high to 2’0” wide X 8’0” long X 4’0” high.

   - Tank 16, Chromic acid anodizing. Installed partial cover to reduce working surface area from 3’0” wide X 16’0” long to 3’0” wide X 10’0” long.

- Tank 25, Chemical film. Reduced size from 2'0" wide X 9'0" long X 4'0" high to 2'0" wide X 8'0" long X 4'0" high.

- Tank 33, Chromic acid rinse. Reduced size from 3'0" wide X 7'0" long X 4'0" high to 22" diameter X 3'0" high.

Baffles. To enhance the capture efficiency associated with the air pollution control device serving open process tanks 14, 16, and 37, Lubeco has completed the following modifications as indicated in the permits to construct (AN 603408 and AN 603885):

- Tank 14, Dichromate seal. Installation of cross draft elimination baffles on three sides of the tank.

- Tank 16, Chromic acid anodizing. Installation of cross draft elimination baffles on three sides of the tank.

- Tank 37, Ticermet "A" anodizing. Installation of cross draft elimination baffles on three sides of the tank.

3. Modification to Existing Open Process Tank Ventilation.

As identified in the permits to construct, Lubeco is modifying the existing air pollution control device operating (AN 603409) under existing permit to operate number G28798 to vent Tank 14, Dichromate seal (AN 603408).

The ventilation system and associated ventilation rate will be designed in accordance with applicable design standards established in the Industrial Ventilation - A Manual of Recommended Practice as published by The American Conference of Governmental Industrial Hygienists.

4. Modification to Air Pollution Control System.

As identified in permit to construct (AN 603409), Lubeco is modifying the existing air pollution control system operating under permit to operate G28798 by replacing the existing high efficiency particulate air (HEPA) filters with a larger exhaust fan motor and ULPA filters with particulate matter control efficiency of 99.9995% for particles of 0.12 micron or greater. Tank 14, Tank 16, and Tank 37 will not be used until installation of the ULPA filters is completed.

5. Installation of Plastic Curtains.

As identified in the permits to construct (AN 603385 and AN 603408), Lubeco has completed the installation of an overlapping plastic strip curtain within 0.5 inches from the ground along the western edge of the canopy associated with the overhead door on the west side of the building. Additionally, Lubeco has installed an industrial curtain along portion of the southern and eastern end of the open process tank area. The curtains are intended to reduce the potential for cross drafts that may potentially impact the collection efficiency of existing ventilation systems connected to the scrubber/HEPA filtration system.

6. **Eliminate air sparging of open process tanks.**

   As identified in the permits to construct, Lubeco has eliminated air sparging in open process tank number 14 and 25 of the anodizing line (AN 603408) and tank numbers 33 and 39 of the passivation line (AN 603385). To further reduce hexavalent chromium emissions, Lubeco has removed open process tank numbers 23, 24, 35, and 41 from operation (AN 603385 and AN 603408).

7. **Covering of open process tanks.**

   As identified in the permits to construct, Lubeco is covering open process tank numbers 14 and 25 of the anodizing line (AN 603408) and tank numbers 33, 37, and 39 of the passivation line (AN 603385) with plastic when not in use. To further reduce hexavalent chromium emissions, Lubeco has removed open process tank numbers 23, 24, 35, and 41 from operation (AN 603385 and AN 603408).

8. **Limiting use of tank heaters.**

   As identified in the permits to construct, Lubeco is limiting the use of tank heaters associated with open process tank numbers 14 and 25 of the anodizing line (AN 603408) and tank numbers 33 and 39 of the passivation line (AN 603385) when not in use. To further reduce hexavalent chromium emissions, Lubeco has removed open process tank numbers 23, 24, 35, and 41 from operation (AN 603385 and AN 603408).

9. **Elimination of open process tanks.**

   As identified in the permits to construct, Lubeco has removed open process tank numbers 23, 24, 35, and 41 from operation (AN 603385 and AN 603408). The contents of tanks have been emptied and removed from the premises.

10. **Enclosing of de-masking operations.**

    As identified in the permits to construct, Lubeco is conducting de-masking operations involving chrome-sprayed parts inside spray booths equipped with ULPA filtration devices with particulate matter control efficiencies of 99.9995% for particles of 0.12 micron or greater (AN 603405, AN 603406, and AN 603407).

11. **Enclosed storage of paint trays.**

    As identified in the permits to construct, Lubeco is storing paint trays used during painting with chromated coatings in a closed container when not in use (AN 603405, AN 603406, and AN 603407).

12. **Enhanced housekeeping activities.**

    In accordance with the approved hexavalent chromium housekeeping plan identified in the permits to construct (AN 603405, AN 603406, and AN 603407), Lubeco conducts general housekeeping and maintenance with a vacuum device that is vented to HEPA filters and does not use brooms to sweep the premises. A copy of the housekeeping plan is provided in **Appendix A**.

Implementation Schedule

A schedule for implementation of the risk reduction measures is provided in **Table 2**.

Table 2 – Risk Reduction Measure Implementation Schedule

Item	Description	Implementation Schedule
1	Modification to existing paint spray booths	Completed
2	Modification to existing open process tank sizes	Completed
3	Modification to existing open process tank ventilation	Completed
4	Modification air pollution control system	By 8 January 2020 (see note)
5	Installation of plastic curtains	Completed
6	Eliminate air sparging of open process tanks	Completed
7	Covering of open process tanks	Completed
8	Limiting use of tank heaters	Completed
9	Elimination of open process tanks 23, 24, 35, and 41	Completed
10	Enclosing of de-masking operations	Completed
11	Enclosed storage of paint trays	Completed
12	Enhanced housekeeping activities	Completed

Note: Tank 14, Tank 16, and Tank 37 will not be used until installation of the ULPA filters is completed.

Residual Facility Risk Characterization

The modifications to existing operations as presented in this Plan are expected to significantly reduce the calculated risk resulting from the processing of hexavalent chromium-containing materials at the facility.

Hexavalent chromium emissions for the 2015 calendar year were calculated in the Air Toxics Inventory Report (ATIR) dated August 2019. Hexavalent chromium emissions for the 2015 calendar year were adjusted to account for the risk reduction measures included in the Plan. Adjustment to the calculations included:

1. Application of ULPA control efficiency of 99.9995% to emissions from Tank 14 since the tank will be vented to the air pollution control device equipped with ULPA filters.

2. Updated surface area for Tank 14.

3. Application of ULPA control efficiency of 99.9995% to emissions from spray booths 1 through 3.

4. Adjustment factor for Tank 16 and Ticermet A anodizing tank to account for the filters on the APCD venting the tanks being changed from HEPA (99.97%) to ULPA (99.9995%).

5. Removal of emissions from tanks that are no longer sparged or have been removed from the facility.

Additionally, as requested by SCAQMD, an alternate emission scenario was evaluated. The alternate emission scenario is based on the maximum potential of hexavalent chromium to be emitted after

application of the risk reduction methods ("hexavalent chromium PTE"). In addition to the adjustment to calculations previously noted, the following throughputs were applied to these calculations:

1. Tank 16, Chromic acid anodizing tank, a throughput of 750,000 ampere-hours for the tank.
2. Tank 37, Ticermet "A" tank, a throughput of 750,000 ampere-hours for the tank.
3. Tank 14, Dichromate seal, an assumption that the tank is heated 8,760 hours per year.
4. Spray booths equipped with ULPA filtration (99.9995%), a combined throughput of 21.4 pounds of hexavalent chromium in coatings sprayed. A throughput of 7.13 pounds of hexavalent chromium applied to each of the three spray booths.

A copy of the updated hexavalent chromium emission calculations for 2015 implementing risk reduction measures is included in **Appendix B**. A copy of the hexavalent chromium PTE calculations is included in **Appendix C**. A comparison of the hexavalent chromium emissions from the ATIR for 2015, updated hexavalent chromium emissions for 2015 after applying the risk reduction measures, and hexavalent chromium PTE emissions is provided in **Table 3**.

Table 3 – Comparison of Hexavalent Chromium Emissions

Substance	2015 ATIR, lbs/yr	2015 RRP, lbs/yr	Cr6 PTE, lbs/yr
Barium chromate[1]	4.29E-04	1.07E-06	-
Calcium chromate[1]	1.05E-05	2.64E-08	-
Chromium trioxide[1]	3.73E-03	9.33E-06	-
Hexavalent chromium	8.29E-02	1.56E-06	8.46E-05
Strontium chromate[1]	2.73E-02	6.83E-05	-

Note: 1 – The PTE hexavalent chromium-containing compounds is assumed to be a subset of the hexavalent chromium emissions under the Cr6 PTE, and therefore, not reported individually for this emission scenario.

Emissions calculated based on approved risk reduction measures were updated the Air Dispersion Modeling and Risk Tool (ADMRT) software and new cancer risk values were generated based on SCAQMD required risk assessment assumptions and updated emissions. The run parameters used in ADMRT for the Health Risk Assessment approved in September 2019 remained the same.

After application of the risk reduction measures to the 2015 emissions, the cancer risk at the off-site point of maximum impact (PMI) was determined to be 2.6 in one million. The cancer risk at the maximum exposed individual worker (MEIW) was determined to be 0.2 per one million. The cancer risk at the maximum exposed individual resident (MEIR) was determined to be 2.6 per one million.

For the hexavalent chromium PTE scenario, the cancer risk at the off-site PMI was determined to be 2.7 in one million. The cancer risk at the MEIW was determined to be 0.2 per one million. The cancer risk at the MEIR was determined to be 2.7 per one million.

A comparison of the cancer risk from the HRA for the 2015 calendar year, the updated cancer risk for 2015 after applying the risk reduction measures, and estimated cancer risk for hexavalent chromium PTE is provided in **Table 4**.

Table 4 – Comparison of Maximum Cancer Risk

Receptor	2015 HRA	2015 RRP	Cr6 PTE
PMI	219.3	2.6	2.7
MEIW	38.9	0.2	0.2
MEIR	128.6	2.6	2.7

Note: Values reported are per million.

The locations of the PMI, MEIW, and MEIR for the 2015 emissions with risk reduction measures applied are provided on **Figure 1**. The locations of the PMI, MEIW, and MEIR for the hexavalent chromium PTE scenario are provided on **Figure 2**. A 30-year cancer risk isopleth map for the one in one million ZOI based on the hexavalent chromium PTE scenario is provided as **Figure 3**.

Revised risk summary tables based on implementation of the risk reduction measures are provided in **Appendix D**. A list of electronic files submitted to SCAQMD in support of the revised risk values is provided in **Appendix E**. A more refined risk will be calculated based on actual emissions and source testing once the risk reduction measures have been fully implemented.

Figure 1 – Cancer Risk for PMI, MEIW, and MEIR for 2015 Adjusted Emissions

Lubeco, Inc.
6859 Downey Avenue
Long Beach, California

Base Map Link: DWG-1318

Figure 2 – Cancer Risk for PMI, MEIW, and MEIR for Potential to Emit

Lubeco, Inc.
6859 Downey Avenue
Long Beach, California

Base Map Link: DWG-1319

Figure 3 – 30 Year Cancer Risk Isopleth for Zone of Impact for Potential to Emit

Lubeco, Inc.
6859 Downey Avenue
Long Beach, California

Base Map Link: DWG-1320

Appendices

Appendix A – Hexavalent Chromium Housekeeping Plan

JE Compliance Services

Hexavalent Chromium Housekeeping Plan

September 2017

Lubeco, Inc.

Prepared For:

Lubeco, Inc.
6859 Downey Avenue
Long Beach, California

EHS-3105

P: +1.909.483.3300
F: +1.909.646.9854
http://www.jecsi.net

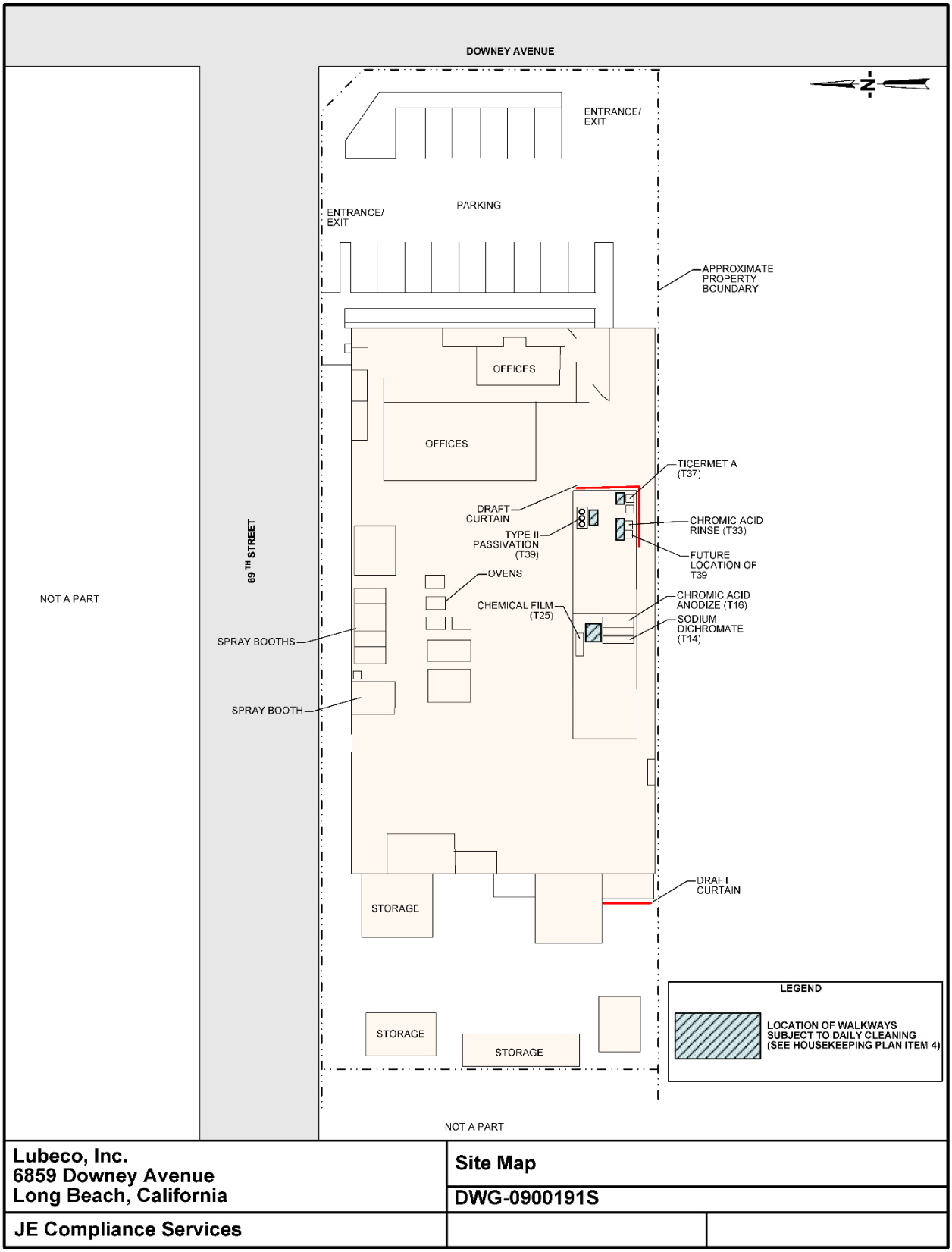
Daily inspection and routine housekeeping of areas associated with the storage and processing of materials containing hexavalent chromium will be conducted according to this housekeeping plan. In addition to daily inspection of process areas within the plant, the roof of the processing building is to be inspected weekly to detect staining or material accumulations of materials potentially containing hexavalent chromium. Records of inspections are documented. The intent of this plan is to reduce the potential for materials containing hexavalent chromium to be emitted into the atmosphere as a result of leaks, spills, or the general handling of hexavalent chromium-containing material during routine operations conducted at the plant.

No.	Description
1	Store chromic acid powder or flakes, or other substances that may contain hexavalent chromium, in a closed container in an enclosed storage area when not in use.
2	Use a closed container when transporting chromic acid powder or flakes from an enclosed storage area to anodizing tanks.
3	Clean up or contain any liquid or solid material that may contain hexavalent chromium that is spilled within one hour after being spilled.
4	Clean surfaces within the enclosed storage area referenced in item 1, open floor area, walkways around the anodizing tank(s), or any exposed surface potentially contaminated with hexavalent chromium or exposed surfaces that potentially accumulate dust at least daily in one or more of the following manners: • HEPA vacuum • Hand wiped with a damp cloth • Wet mopped • Washed with low pressure water
5	Vacuum the floors of spray booths used for the application of hexavalent chromium-containing coatings at least daily when in use.
6	Accumulate, dispose of, recover, or recycle hexavalent chromium or hexavalent chromium-containing wastes generated from housekeeping activities using practices that do not lead to fugitive dust; including maintaining containers closed unless actively adding or removing material.
7	When removing protective floor, wall or exhaust coverings* within the spray booth enclosures that may contain hexavalent chromium, the plant will: • Operate the ventilation system; and, • Ensure that the door of a fully enclosed spray booth is closed; and, • Encapsulate those materials contaminated with primers or coatings containing hexavalent chromium that are intended to be disposed of in a bag or container before removing from the spray booth. *Does not include air filtration devices associated with the air pollution control system.

No.	Description
8	Prohibit operation of spray booth ventilation systems serving hexavalent chromium-containing coating application operations when one or more filters, including HEPA filters are being removed or replaced.
9	Clean visible staining or other materials suspected to contain chromic acid residue, within 24 hours of being observed by plant personnel, using one or more of the following methods: • HEPA vacuum • Hand wiped with a damp cloth • Wet mopped • Washed with low pressure water This provision includes process areas, exterior storage areas, and roof areas.
10	Visible staining of surfaces outside of process equipment suspected to be a result of contact with hexavalent chromium-containing materials that remains after cleaning using HEPA vacuum, hand wiping with damp cloth, wet mopping, or washed with low pressure water must be documented in the housekeeping logs maintained by the plant. Staining of materials where no peeling, flaking, chipping, or dust is present is allowable.

Appendix A - Maps

Figure 1 – Walkways to be cleaned daily



Appendix B – Amended 2015 Emissions Based on Approved Risk Reduction Measures

Mist Eliminator (A/N 497233)

Tank 16 and Tank 37

Emissions of hexavalent chromium from Chrome Anodizing Tank 16 and Ticermet A Tank 37 are calculated using the following equation using the Hexavalent and Total Chromium Emissions Source Test Report conducted on 22-24 February 2010 by World Environmental and an adjustement factor to account from switch from HEPA filter to ULPA filter.

$$Y = Fac(1-R_1)/(1-R_2)$$

where,
Y = annual emissions of chromium and hexavalent chromium, lbs/yr.
F = emission factor, mg/amp-hr (Source test).
a = ampere hours used during the reporting period, amp-hr/yr.
c = conversion factor, 2.20462E-06 lbs/mg.
R_1 = ULPA control efficiency, 0.999995.
R_2 = HEPA control efficiency, 0.9997.

$$H = Yh^{-1}$$

where,
H = maximum hourly emissions of listed substances, lbs/hr.
h = operating hours, hrs/yr.

Listed Substance	Tank	F, mg/amp-hr	a, amp-hr/yr	c, lbs/mg	$1-R_1$	$1-R_2$	h, hrs	Y, lbs/yr	H, lbs/hr
Hexavalent chromium	Chrome Anodizing Tank 16	7.84E-04	27,741	2.20E-06	5.00E-06	3.00E-04	433.33	7.99E-07	1.84E-09
Hexavalent chromium	Ticermet A Anodizing Tank 37	7.84E-04	11,330	2.20E-06	5.00E-06	3.00E-04	333.67	3.26E-07	9.78E-10
							Total hexavalent chromium	1.13E-06	2.82E-09

Passivation line (A/N 497234)

Tank 33

Based on no air sparging, chromic acid concentration of 0.03% wt, and temperature of 160F the tank is not considered an emission source.

Tank 35

No hexavalent chromium emissions due to elimination of tank.

Tank 39

No hexavalent chromium emissions due to elimination of air sparging from the tank. Based on the results of the source test conducted on Passivate Type II Tank 39 on 31 August 2017 no evaporative emissions of hexavalent chromium are expected from Tank 39.

Tank 41

No hexavalent chromium emissions due to elimination of tank.

Anodizing line (A/N 497235)

Tank 14

No hexavalent chromium emissions due to elimination of air sparging from the tank. Emissions of hexavalent chromium from Tank 14 Dichromate Seal are calculated using the following equation using Source Test Report - Hexavalent Chromium Emissions From a Heated Sodium Dichromate Seal Tank and a Screening Test for a Chromate Spray Booth, SCAQMD, 27 April 2017. Emissions adjusted based on venting to APCD that includes an ULPA filter.

$$Y = FPThA(1-R)$$

where,

Y = emissions of listed substances during the reporting period, lbs/yr.

F = emission factor, 1.07E-06 lbs/hr-ft2 tank % dichromate.

P = percent sodium dichromate in tank, %.

h = operating hours, hrs/yr.

A = surface area of the tanks, ft^2.

R = ULPA control efficiency, 0.999995.

$$H = Yh^{-1}$$

where,

H = maximum hourly emissions of listed substances, lbs/hr.

h = operating hours, hrs/yr.

Listed Substance	Tank	F, lbs/hr-ft^2-%dichromate	P, %	h, hrs/yr	A, ft^2	1-R	Y, lbs/yr	H, lbs/hr
Hexavalent chromium	Tank 14, Dichromate Seal	1.07E-06	5.30	441.82	16.00	5.00E-06	2.00E-07	4.54E-10

Tank 23

No hexavalent chromium emissions due to elimination of tank.

Tank 24

No hexavalent chromium emissions due to elimination of tank.

Tank 25

Based on the results of the source test conducted on Passivate Type II Tank 39 on 31 August 2017 no evaporative emissions of hexavalent chromium are expected at temperatures at or below 125F. Chemical Film Tank 25 operates at 85F and is no longer air sparged; therefore, no emissions of hexavalent chromium are expected.

Spray Booths

Emissions from spray booths containing hexavalent chromium are calculated using the following equations. The emission calculations have been adjusted to account for installation of ULPA filter.

$$Y = QP(1-A)(1-R)$$

where,
Y = total annual emissions, lbs/yr.
Q = weight of the raw material used, lbs/yr.
P = weight proportion of listed substance in the raw material, lbs/lbs.
A = application efficiency, 65% (SCAQMD Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory, December 2016).
R = ULPA filter removal efficiency, 99.9995%.

$$H = Yh^{-1}$$

where,
H = maximum hourly emissions of the given listed substance, lbs/hr.
h = number of operating hours for the spray booth during the reporting period, 1,300 hrs/yr.

Spray Booth 1 (A/N 497227)

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
23	Aluminum	Akzo Nobel 446-22-1000	1.10	0.01	0.65	0.999995	1.99E-08	1.53E-11
26	Aluminum	Akzo Nobel ECL-G-1622	3.40	0.01	0.65	0.999995	6.18E-08	4.75E-11
43	Aluminum	Deft 44-GN-36	16.69	0.03	0.65	0.999995	8.76E-07	6.74E-10
						Total aluminum	9.58E-07	7.37E-10
20	Antimony	Akzo Nobel 20P1-21	30.69	3.72E-03	0.65	0.999995	2.00E-07	1.54E-10
						Total antimony	2.00E-07	1.54E-10
51	Antimony trioxide	E/M Everlube 620 C	5.98	0.08	0.65	0.999995	7.85E-07	6.04E-10
52	Antimony trioxide	E/M Everlube 642	0.60	0.08	0.65	0.999995	7.94E-08	6.11E-11
56	Antimony trioxide	E/M Everlube 9002	6.81	0.13	0.65	0.999995	1.49E-06	1.15E-09
60	Antimony trioxide	E/M Lube-lok 2109	4.20	0.08	0.65	0.999995	5.52E-07	4.25E-10
62	Antimony trioxide	E/M Lube-lok 5306	3.99	0.13	0.65	0.999995	8.72E-07	6.71E-10
						Total antimony trioxide	3.78E-06	2.91E-09
35	Barium	Deft 03-BK-99	0.47	0.04	0.65	0.999995	3.67E-08	2.82E-11
40	Barium	Deft 04-GN-03	1.54	0.21	0.65	0.999995	5.54E-07	4.26E-10
						Total barium	5.90E-07	4.54E-10
34	Barium chromate	Deft 02-Y-40A	8.75	5.50E-03	0.65	0.999995	8.42E-08	6.48E-11
41	Barium chromate	Deft 44-GN-11	11.56	5.50E-03	0.65	0.999995	1.11E-07	8.56E-11
42	Barium chromate	Deft 44-GN-24	2.04	5.50E-03	0.65	0.999995	1.96E-08	1.51E-11
43	Barium chromate	Deft 44-GN-36	16.69	5.50E-03	0.65	0.999995	1.61E-07	1.24E-10
44	Barium chromate	Deft 44-GN-54	3.67	5.50E-03	0.65	0.999995	3.53E-08	2.72E-11
45	Barium chromate	Deft 44-GN-72	9.11	5.50E-03	0.65	0.999995	8.77E-08	6.75E-11
84	Barium chromate	PRC De Soto 825X537	2.40	5.50E-03	0.65	0.999995	2.31E-08	1.78E-11
						Total barium chromate	5.22E-07	4.01E-10
30	Carbon black	Deft 01-BK-41	0.63	0.01	0.65	0.999995	1.09E-08	8.42E-12
31	Carbon black	Deft 01-BK-43	1.04	0.03	0.65	0.999995	5.44E-08	4.18E-11
35	Carbon black	Deft 03-BK-99	0.47	0.01	0.65	0.999995	8.31E-09	6.39E-12
36	Carbon black	Deft 03-GY-287	7.66	0.01	0.65	0.999995	1.34E-07	1.03E-10
37	Carbon black	Deft 03-GY-292	5.14	0.01	0.65	0.999995	8.99E-08	6.91E-11
38	Carbon black	Deft 03-GY-332	4.17	0.01	0.65	0.999995	7.30E-08	5.61E-11
40	Carbon black	Deft 04-GN-03	1.54	0.01	0.65	0.999995	2.69E-08	2.07E-11
64	Carbon black	E/M Lubri-bond 320	9.76	0.03	0.65	0.999995	4.27E-07	3.29E-10
66	Carbon black	Hentzen 8628 KUZ	1.30	0.03	0.65	0.999995	6.84E-08	5.26E-11
84	Carbon black	PRC De Soto 825X537	2.40	0.13	0.65	0.999995	5.28E-07	4.06E-10
85	Carbon black	PTI PT-19	17.11	0.02	0.65	0.999995	5.27E-07	4.05E-10
						Total carbon black	1.95E-06	1.50E-09

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
68	Chromium trioxide	Lubeco 2123	4.70	0.01	0.65	0.999995	8.22E-08	6.32E-11
70	Chromium trioxide	Lubeco 905	12.25	0.02	0.65	0.999995	4.29E-07	3.30E-10
						Total chromium trioxide	5.11E-07	3.93E-10
18	Crystalline silica	Akzo Nobel 10P20-13	23.32	0.18	0.65	0.999995	7.14E-06	5.49E-09
23	Crystalline silica	Akzo Nobel 446-22-1000	1.10	5.00E-03	0.65	0.999995	9.59E-09	7.38E-12
30	Crystalline silica	Deft 01-BK-41	0.63	0.01	0.65	0.999995	1.09E-08	8.42E-12
34	Crystalline silica	Deft 02-Y-40A	8.75	0.01	0.65	0.999995	1.53E-07	1.18E-10
41	Crystalline silica	Deft 44-GN-11	11.56	2.00E-03	0.65	0.999995	4.04E-08	3.11E-11
44	Crystalline silica	Deft 44-GN-54	3.67	0.01	0.65	0.999995	6.42E-08	4.94E-11
45	Crystalline silica	Deft 44-GN-72	9.11	2.00E-03	0.65	0.999995	3.19E-08	2.45E-11
46	Crystalline silica	Deft 44-GN-98	90.79	0.03	0.65	0.999995	4.77E-06	3.67E-09
65	Crystalline silica	Hentzen 8625 GUZ	6.33	0.16	0.65	0.999995	1.72E-06	1.32E-09
						Total crystalline silica	1.39E-05	1.07E-08
52	Lead	E/M Everlube 642	0.60	0.02	0.65	0.999995	2.24E-08	1.72E-11
60	Lead	E/M Lube-lok 2109	4.20	0.02	0.65	0.999995	1.56E-07	1.20E-10
62	Lead	E/M Lube-lok 5306	3.99	0.02	0.65	0.999995	1.48E-07	1.14E-10
75	Lead	Lubeco K-350	1.95	0.03	0.65	0.999995	1.02E-07	7.88E-11
						Total lead	4.29E-07	3.30E-10
20	Nickel	Akzo Nobel 20P1-21	30.69	8.97E-04	0.65	0.999995	4.82E-08	3.71E-11
						Total nickel	4.82E-08	3.71E-11
30	PAH	Deft 01-BK-41	0.63	9.20E-08	0.65	0.999995	1.01E-13	7.75E-17
31	PAH	Deft 01-BK-43	1.04	2.76E-07	0.65	0.999995	5.00E-13	3.85E-16
35	PAH	Deft 03-BK-99	0.47	9.20E-08	0.65	0.999995	7.64E-14	5.88E-17
36	PAH	Deft 03-GY-287	7.66	9.20E-08	0.65	0.999995	1.23E-12	9.49E-16
37	PAH	Deft 03-GY-292	5.14	9.20E-08	0.65	0.999995	8.27E-13	6.36E-16
38	PAH	Deft 03-GY-332	4.17	9.20E-08	0.65	0.999995	6.71E-13	5.17E-16
40	PAH	Deft 04-GN-03	1.54	9.20E-08	0.65	0.999995	2.47E-13	1.90E-16
64	PAH	E/M Lubri-bond 320	9.76	2.30E-07	0.65	0.999995	3.93E-12	3.02E-15
66	PAH	Hentzen 8628 KUZ	1.30	2.76E-07	0.65	0.999995	6.30E-13	4.84E-16
84	PAH	PRC De Soto 825X537	2.40	1.15E-06	0.65	0.999995	4.85E-12	3.73E-15
85	PAH	PTI PT-19	17.11	1.62E-07	0.65	0.999995	4.85E-12	3.73E-15
						Total PAH	1.79E-11	1.38E-14
108	Perchloroethylene	Catalyst 8800 Series	3.37	0.60	0.65	0.999995	3.53E-06	2.72E-09
						Total perchloroethylene	3.53E-06	2.72E-09
18	Strontium chromate	Akzo Nobel 10P20-13	23.32	0.33	0.65	0.999995	1.33E-05	1.02E-08
20	Strontium chromate	Akzo Nobel 20P1-21	30.69	0.08	0.65	0.999995	4.03E-06	3.10E-09
23	Strontium chromate	Akzo Nobel 446-22-1000	1.10	0.08	0.65	0.999995	1.44E-07	1.11E-10
34	Strontium chromate	Deft 02-Y-40A	8.75	0.20	0.65	0.999995	3.06E-06	2.36E-09
41	Strontium chromate	Deft 44-GN-11	11.56	0.20	0.65	0.999995	4.04E-06	3.11E-09
42	Strontium chromate	Deft 44-GN-24	2.04	0.20	0.65	0.999995	7.13E-07	5.49E-10
43	Strontium chromate	Deft 44-GN-36	16.69	0.20	0.65	0.999995	5.84E-06	4.49E-09
44	Strontium chromate	Deft 44-GN-54	3.67	0.20	0.65	0.999995	1.28E-06	9.88E-10
45	Strontium chromate	Deft 44-GN-72	9.11	0.20	0.65	0.999995	3.19E-06	2.45E-09
84	Strontium chromate	PRC De Soto 825X537	2.40	0.08	0.65	0.999995	3.15E-07	2.43E-10
						Total strontium chromate	3.59E-05	2.76E-08
70	Zinc compounds	Lubeco 905	12.25	0.25	0.65	0.999995	5.36E-06	4.12E-09
						Total zinc compounds	5.36E-06	4.12E-09

Spray Booth 2 (A/N 497228)

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
23	Aluminum	Akzo Nobel 446-22-1000	2.33	0.01	0.65	0.999995	4.23E-08	3.26E-11
43	Aluminum	Deft 44-GN-36	2.90	0.03	0.65	0.999995	1.52E-07	1.17E-10
						Total aluminum	1.95E-07	1.50E-10
20	Antimony	Akzo Nobel 20P1-21	41.70	3.72E-03	0.65	0.999995	2.71E-07	2.09E-10
						Total antimony	2.71E-07	2.09E-10
51	Antimony trioxide	E/M Everlube 620 C	9.47	0.08	0.65	0.999995	1.24E-06	9.56E-10
52	Antimony trioxide	E/M Everlube 642	3.07	0.08	0.65	0.999995	4.03E-07	3.10E-10
56	Antimony trioxide	E/M Everlube 9002	14.31	0.13	0.65	0.999995	3.13E-06	2.41E-09
60	Antimony trioxide	E/M Lube-lok 2109	19.12	0.08	0.65	0.999995	2.51E-06	1.93E-09
62	Antimony trioxide	E/M Lube-lok 5306	78.70	0.13	0.65	0.999995	1.72E-05	1.32E-08
63	Antimony trioxide	E/M Lubri-bond 220	5.25	0.03	0.65	0.999995	2.30E-07	1.77E-10
69	Antimony trioxide	Lubeco 901	2.09	0.10	0.65	0.999995	3.65E-07	2.81E-10
						Total antimony trioxide	2.51E-05	1.93E-08
34	Barium chromate	Deft 02-Y-40A	20.24	0.01	0.65	0.999995	1.95E-07	1.50E-10
41	Barium chromate	Deft 44-GN-11	12.02	0.01	0.65	0.999995	1.16E-07	8.90E-11
42	Barium chromate	Deft 44-GN-24	3.31	0.01	0.65	0.999995	3.18E-08	2.45E-11
43	Barium chromate	Deft 44-GN-36	2.90	0.01	0.65	0.999995	2.79E-08	2.15E-11
44	Barium chromate	Deft 44-GN-54	0.93	0.01	0.65	0.999995	8.95E-09	6.88E-12
45	Barium chromate	Deft 44-GN-72	12.13	0.01	0.65	0.999995	1.17E-07	8.98E-11
						Total barium chromate	4.96E-07	3.81E-10
31	Carbon black	Deft 01-BK-43	0.90	0.03	0.65	0.999995	4.74E-08	3.65E-11
32	Carbon black	Deft 01-GY-85	0.49	0.01	0.65	0.999995	8.52E-09	6.55E-12
36	Carbon black	Deft 03-GY-287	1.10	0.01	0.65	0.999995	1.93E-08	1.48E-11
47	Carbon black	DuPont 958-313	1.92	0.03	0.65	0.999995	1.01E-07	7.74E-11
67	Carbon black	Lord Z306 Black	0.73	0.01	0.65	0.999995	7.07E-09	5.44E-12
85	Carbon black	PTI PT-19	5.52	0.02	0.65	0.999995	1.70E-07	1.31E-10
						Total carbon black	3.53E-07	2.71E-10
72	Chromium trioxide	Lubeco 2023	1.11	0.06	0.65	0.999995	1.16E-07	8.96E-11
68	Chromium trioxide	Lubeco 2123	7.36	0.01	0.65	0.999995	1.29E-07	9.91E-11
69	Chromium trioxide	Lubeco 901	2.09	0.02	0.65	0.999995	7.30E-08	5.61E-11
70	Chromium trioxide	Lubeco 905	6.78	0.02	0.65	0.999995	2.37E-07	1.83E-10
						Total chromium trioxide	5.56E-07	4.27E-10
86	Cobalt	PTI PT-522 Green	2.43	1.60E-03	0.65	0.999995	6.80E-09	5.23E-12
						Total cobalt	6.80E-09	5.23E-12
18	Crystalline silica	Akzo Nobel 10P20-13	4.36	0.18	0.65	0.999995	1.33E-06	1.03E-09
23	Crystalline silica	Akzo Nobel 446-22-1000	2.33	0.01	0.65	0.999995	2.04E-08	1.57E-11
32	Crystalline silica	Deft 01-GY-85	0.49	0.01	0.65	0.999995	8.52E-09	6.55E-12
34	Crystalline silica	Deft 02-Y-40A	20.24	0.01	0.65	0.999995	3.54E-07	2.72E-10
41	Crystalline silica	Deft 44-GN-11	12.02	2.00E-03	0.65	0.999995	4.21E-08	3.24E-11
44	Crystalline silica	Deft 44-GN-54	0.93	0.01	0.65	0.999995	1.63E-08	1.25E-11
45	Crystalline silica	Deft 44-GN-72	12.13	2.00E-03	0.65	0.999995	4.25E-08	3.27E-11
46	Crystalline silica	Deft 44-GN-98	17.55	0.03	0.65	0.999995	9.22E-07	7.09E-10
65	Crystalline silica	Hentzen 8625 GUZ	1.00	0.16	0.65	0.999995	2.72E-07	2.09E-10
						Total crystalline silica	3.01E-06	2.32E-09
86	Hexavalent chromium	PTI PT-522 Green	2.43	0.05	0.65	0.999995	2.30E-07	1.77E-10
						Total hexavalent chromium	2.30E-07	1.77E-10
52	Lead	E/M Everlube 642	3.07	0.02	0.65	0.999995	1.14E-07	8.76E-11
60	Lead	E/M Lube-lok 2109	19.12	0.02	0.65	0.999995	7.09E-07	5.45E-10
62	Lead	E/M Lube-lok 5306	78.70	0.02	0.65	0.999995	2.92E-06	2.24E-09
63	Lead	E/M Lubri-bond 220	5.25	0.02	0.65	0.999995	1.95E-07	1.50E-10
72	Lead	Lubeco 2023	1.11	0.01	0.65	0.999995	1.94E-08	1.49E-11
69	Lead	Lubeco 901	2.09	0.02	0.65	0.999995	7.30E-08	5.61E-11
75	Lead	Lubeco K-350	2.15	0.03	0.65	0.999995	1.13E-07	8.69E-11
						Total lead	4.14E-06	3.18E-09

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
20	Nickel	Akzo Nobel 20P1-21	41.70	8.97E-04	0.65	0.999995	6.54E-08	5.03E-11
						Total nickel	6.54E-08	5.03E-11
31	PAH	Deft 01-BK-43	0.90	2.76E-07	0.65	0.999995	4.36E-13	3.36E-16
32	PAH	Deft 01-GY-85	0.49	9.20E-08	0.65	0.999995	7.84E-14	6.03E-17
36	PAH	Deft 03-GY-287	1.10	9.20E-08	0.65	0.999995	1.77E-13	1.36E-16
47	PAH	DuPont 958-313	1.92	2.76E-07	0.65	0.999995	9.26E-13	7.12E-16
67	PAH	Lord Z306 Black	0.73	5.06E-08	0.65	0.999995	6.51E-14	5.00E-17
85	PAH	PTI PT-19	5.52	1.62E-07	0.65	0.999995	1.56E-12	1.20E-15
						Total PAH	3.25E-12	2.50E-15
108	Perchloroethylene	Catalyst 8800 Series	2.27	0.60	0.65	0.999995	2.38E-06	1.83E-09
						Total perchloroethylene	2.38E-06	1.83E-09
18	Strontium chromate	Akzo Nobel 10P20-13	4.36	0.33	0.65	0.999995	2.48E-06	1.91E-09
19	Strontium chromate	Akzo Nobel 20P1-10	4.56	0.08	0.65	0.999995	5.98E-07	4.60E-10
20	Strontium chromate	Akzo Nobel 20P1-21	41.70	0.08	0.65	0.999995	5.47E-06	4.21E-09
23	Strontium chromate	Akzo Nobel 446-22-1000	2.33	0.08	0.65	0.999995	3.06E-07	2.35E-10
29	Strontium chromate	Cytec BR-6747-1 20%	22.58	0.03	0.65	0.999995	1.19E-06	9.12E-10
34	Strontium chromate	Deft 02-Y-40A	20.24	0.20	0.65	0.999995	7.08E-06	5.45E-09
41	Strontium chromate	Deft 44-GN-11	12.02	0.20	0.65	0.999995	4.21E-06	3.24E-09
42	Strontium chromate	Deft 44-GN-24	3.31	0.20	0.65	0.999995	1.16E-06	8.91E-10
43	Strontium chromate	Deft 44-GN-36	2.90	0.20	0.65	0.999995	1.01E-06	7.81E-10
44	Strontium chromate	Deft 44-GN-54	0.93	0.20	0.65	0.999995	3.25E-07	2.50E-10
45	Strontium chromate	Deft 44-GN-72	12.13	0.20	0.65	0.999995	4.25E-06	3.27E-09
						Total strontium chromate	2.81E-05	2.16E-08
69	Zinc compounds	Lubeco 901	2.09	0.25	0.65	0.999995	9.12E-07	7.02E-10
70	Zinc compounds	Lubeco 905	6.78	0.25	0.65	0.999995	2.97E-06	2.28E-09
86	Zinc compounds	PTI PT-522 Green	2.43	0.29	0.65	0.999995	1.25E-06	9.63E-10
						Total zinc compounds	5.13E-06	3.95E-09

Spray Booth 3 (A/N 497229)

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
43	Aluminum	Deft 44-GN-36	0.85	0.03	0.65	0.999995	4.45E-08	3.42E-11
74	Aluminum	Lubeco AL-52	0.80	0.02	0.65	0.999995	2.81E-08	2.16E-11
						Total aluminum	7.26E-08	5.59E-11
51	Antimony trioxide	E/M Everlube 620 C	740.98	0.08	0.65	0.999995	9.73E-05	7.48E-08
52	Antimony trioxide	E/M Everlube 642	37.35	0.08	0.65	0.999995	4.90E-06	3.77E-09
56	Antimony trioxide	E/M Everlube 9002	128.59	0.13	0.65	0.999995	2.81E-05	2.16E-08
58	Antimony trioxide	E/M Everlube 967	9.21	0.08	0.65	0.999995	1.21E-06	9.29E-10
60	Antimony trioxide	E/M Lube-lok 2109	34.95	0.08	0.65	0.999995	4.59E-06	3.53E-09
62	Antimony trioxide	E/M Lube-lok 5306	128.61	0.13	0.65	0.999995	2.81E-05	2.16E-08
63	Antimony trioxide	E/M Lubri-bond 220	9.40	0.03	0.65	0.999995	4.11E-07	3.16E-10
57	Antimony trioxide	E/M Perma-Slick G	1.02	0.03	0.65	0.999995	4.46E-08	3.43E-11
69	Antimony trioxide	Lubeco 901	1.30	0.10	0.65	0.999995	2.28E-07	1.75E-10
81	Antimony trioxide	Molykote 3402 C	2.40	0.12	0.65	0.999995	5.03E-07	3.87E-10
						Total antimony trioxide	1.65E-04	1.27E-07
34	Barium chromate	Deft 02-Y-40A	1.52	0.01	0.65	0.999995	1.47E-08	1.13E-11
41	Barium chromate	Deft 44-GN-11	1.67	0.01	0.65	0.999995	1.61E-08	1.24E-11
43	Barium chromate	Deft 44-GN-36	0.85	0.01	0.65	0.999995	8.16E-09	6.28E-12
45	Barium chromate	Deft 44-GN-72	1.16	0.01	0.65	0.999995	1.12E-08	8.59E-12
82	Barium chromate	PRC De Soto 515X349	0.25	0.01	0.65	0.999995	2.45E-09	1.89E-12
84	Barium chromate	PRC De Soto 825X537	0.32	0.01	0.65	0.999995	3.05E-09	2.34E-12
						Total barium chromate	5.56E-08	4.28E-11
83	Calcium chromate	PRC De Soto 515-700	0.50	0.03	0.65	0.999995	2.64E-08	2.03E-11
						Total calcium chromate	2.64E-08	2.03E-11
82	Carbon black	PRC De Soto 515X349	0.25	0.01	0.65	0.999995	2.45E-09	1.89E-12
84	Carbon black	PRC De Soto 825X537	0.32	0.13	0.65	0.999995	6.96E-08	5.35E-11
						Total carbon black	7.20E-08	5.54E-11
74	Chromium trioxide	Lubeco AL-52	0.80	1.00E-03	0.65	0.999995	1.40E-09	1.08E-12
71	Chromium trioxide	Lubeco 2020	3.84	0.06	0.65	0.999995	4.04E-07	3.11E-10
68	Chromium trioxide	Lubeco 2123	163.09	0.01	0.65	0.999995	2.85E-06	2.20E-09
69	Chromium trioxide	Lubeco 901	1.30	0.02	0.65	0.999995	4.55E-08	3.50E-11
70	Chromium trioxide	Lubeco 905	141.65	0.02	0.65	0.999995	4.96E-06	3.81E-09
						Total chromium trioxide	8.26E-06	6.36E-09
34	Crystalline silica	Deft 02-Y-40A	1.52	0.01	0.65	0.999995	2.67E-08	2.05E-11
41	Crystalline silica	Deft 44-GN-11	1.67	2.00E-03	0.65	0.999995	5.86E-09	4.51E-12
45	Crystalline silica	Deft 44-GN-72	1.16	2.00E-03	0.65	0.999995	4.06E-09	3.12E-12
83	Crystalline silica	PRC De Soto 515-700	0.50	0.01	0.65	0.999995	4.83E-09	3.72E-12
82	Crystalline silica	PRC De Soto 515X349	0.25	0.20	0.65	0.999995	8.92E-08	6.86E-11
						Total crystalline silica	1.31E-07	1.01E-10
52	Lead	E/M Everlube 642	37.35	0.02	0.65	0.999995	1.38E-06	1.07E-09
60	Lead	E/M Lube-lok 2109	34.95	0.02	0.65	0.999995	1.30E-06	9.97E-10
62	Lead	E/M Lube-lok 5306	128.61	0.02	0.65	0.999995	4.77E-06	3.67E-09
63	Lead	E/M Lubri-bond 220	9.40	0.02	0.65	0.999995	3.49E-07	2.68E-10
57	Lead	E/M Perma-Slick G	1.02	0.02	0.65	0.999995	3.78E-08	2.91E-11
71	Lead	Lubeco 2020	3.84	0.01	0.65	0.999995	6.73E-08	5.18E-11
73	Lead	Lubeco 7123	7.43	0.03	0.65	0.999995	3.90E-07	3.00E-10
69	Lead	Lubeco 901	1.30	0.02	0.65	0.999995	4.55E-08	3.50E-11
75	Lead	Lubeco K-350	4.30	0.03	0.65	0.999995	2.26E-07	1.74E-10
77	Lead	Lubeco M390-46	0.53	0.03	0.65	0.999995	2.76E-08	2.12E-11
79	Lead	Lubeco N-350-A	0.91	0.05	0.65	0.999995	7.95E-08	6.12E-11
						Total lead	8.67E-06	6.67E-09
82	PAH	PRC De Soto 515X349	0.25	5.06E-08	0.65	0.999995	2.26E-14	1.74E-17
84	PAH	PRC De Soto 825X537	0.32	1.15E-06	0.65	0.999995	6.40E-13	4.92E-16
						Total PAH	6.63E-13	5.10E-16

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
29	Strontium chromate	Cytec BR-6747-1 20%	47.21	0.03	0.65	0.999995	2.48E-06	1.91E-09
34	Strontium chromate	Deft 02-Y-40A	1.52	0.20	0.65	0.999995	5.33E-07	4.10E-10
41	Strontium chromate	Deft 44-GN-11	1.67	0.20	0.65	0.999995	5.86E-07	4.51E-10
43	Strontium chromate	Deft 44-GN-36	0.85	0.20	0.65	0.999995	2.97E-07	2.28E-10
45	Strontium chromate	Deft 44-GN-72	1.16	0.20	0.65	0.999995	4.06E-07	3.12E-10
82	Strontium chromate	PRC De Soto 515X349	0.25	0.10	0.65	0.999995	4.46E-08	3.43E-11
84	Strontium chromate	PRC De Soto 825X537	0.32	0.08	0.65	0.999995	4.16E-08	3.20E-11
						Total strontium chromate	4.39E-06	3.37E-09
69	Zinc compounds	Lubeco 901	1.30	0.25	0.65	0.999995	5.69E-07	4.38E-10
70	Zinc compounds	Lubeco 905	141.65	0.25	0.65	0.999995	6.20E-05	4.77E-08
74	Zinc compounds	Lubeco AL-52	0.80	1.00E-03	0.65	0.999995	1.40E-09	1.08E-12
						Total zinc compounds	6.25E-05	4.81E-08

Appendix C – Amended Emissions Based on Hexavalent Chromium Potential To Emit and Approved Risk Reduction Measures

Mist Eliminator (A/N 497233)

Tank 16 and Tank 37

Emissions of hexavalent chromium from Chrome Anodizing Tank 16 and Ticermet A Tank 37 are calculated using the following equation using the Hexavalent and Total Chromium Emissions Source Test Report conducted on 22-24 February 2010 by World Environmental and an adjustement factor to account from switch from HEPA filter to ULPA filter.

$$Y = Fac(1-R_1)/(1-R_2)$$

where,
Y = annual emissions of chromium and hexavalent chromium, lbs/yr.
F = emission factor, mg/amp-hr (Source test).
a = ampere hours used during the reporting period, amp-hr/yr.
c = conversion factor, 2.20462E-06 lbs/mg.
R_1 = ULPA control efficiency, 0.999995.
R_2 = HEPA control efficiency, 0.9997.

$$H = Yh^{-1}$$

where,
H = maximum hourly emissions of listed substances, lbs/hr.
h = operating hours, hrs/yr.

Listed Substance	Tank	F, mg/amp-hr	a, amp-hr/yr	c, lbs/mg	$1-R_1$	$1-R_2$	h, hrs	Y, lbs/yr	H, lbs/hr
Hexavalent chromium	Chrome Anodizing Tank 16	7.84E-04	750,000	2.20E-06	5.00E-06	3.00E-04	433.33	2.16E-05	4.99E-08
Hexavalent chromium	Ticermet A Anodizing Tank 37	7.84E-04	750,000	2.20E-06	5.00E-06	3.00E-04	333.67	2.16E-05	6.48E-08
							Total hexavalent chromium	4.32E-05	1.15E-07

Passivation line (A/N 497234)

Tank 33

Based on no air sparging, chromic acid concentration of 0.03% wt, and temperature of 160F the tank is not considered an emission source.

Tank 35

No hexavalent chromium emissions due to elimination of tank.

Tank 39

No hexavalent chromium emissions due to elimination of air sparging from the tank. Based on the results of the source test conducted on Passivate Type II Tank 39 on 31 August 2017 no evaporative emissions of hexavalent chromium are expected from Tank 39.

Tank 41

No hexavalent chromium emissions due to elimination of tank.

Anodizing line (A/N 497235)

Tank 14

No hexavalent chromium emissions due to elimination of air sparging from the tank. Emissions of hexavalent chromium from Tank 14 Dichromate Seal are calculated using the following equation using Source Test Report - Hexavalent Chromium Emissions From a Heated Sodium Dichromate Seal Tank and a Screening Test for a Chromate Spray Booth, SCAQMD, 27 April 2017. Emissions adjusted based on venting to APCD that includes an ULPA filter.

$$Y = FPThA(1-R)$$

where,

Y = emissions of listed substances during the reporting period, lbs/yr.

F = emission factor, 1.07E-06 lbs/hr-ft2 tank % dichromate.

P = percent sodium dichromate in tank, %.

h = operating hours, hrs/yr.

A = surface area of the tanks, ft^2.

R = ULPA control efficiency, 0.999995.

$$H = Yh^{-1}$$

where,

H = maximum hourly emissions of listed substances, lbs/hr.

h = operating hours, hrs/yr.

Listed Substance	Tank	F, lbs/hr-ft^2-%dichromate	P, %	h, hrs/yr	A, ft^2	1-R	Y, lbs/yr	H, lbs/hr
Hexavalent chromium	Tank 14, Dichromate Seal	1.07E-06	5.30	8,760	16.00	5.00E-06	3.97E-06	4.54E-10

Tank 23

No hexavalent chromium emissions due to elimination of tank.

Tank 24

No hexavalent chromium emissions due to elimination of tank.

Tank 25

Based on the results of the source test conducted on Passivate Type II Tank 39 on 31 August 2017 no evaporative emissions of hexavalent chromium are expected at temperatures at or below 125F. Chemical Film Tank 25 operates at 85F and is no longer air sparged; therefore, no emissions of hexavalent chromium are expected.

Spray Booths

Emissions from spray booths containing hexavalent chromium are calculated using the following equations. The emission calculations have been adjusted to account for installation of ULPA filter.

$$Y = QP(1-A)(1-R)$$

where,
Y = total annual emissions, lbs/yr.
Q = weight of the raw material used, lbs/yr.
P = weight proportion of listed substance in the raw material, lbs/lbs.
A = application efficiency, 65% (SCAQMD Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory, December 2016).
R = ULPA filter removal efficiency, 99.9995%.

$$H = Yh^{-1}$$

where,
H = maximum hourly emissions of the given listed substance, lbs/hr.
h = number of operating hours for the spray booth during the reporting period, 1,300 hrs/yr.

Spray Booth 1 (A/N 497227)

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
23	Aluminum	Akzo Nobel 446-22-1000	1.10	0.01	0.65	0.999995	1.99E-08	1.53E-11
26	Aluminum	Akzo Nobel ECL-G-1622	3.40	0.01	0.65	0.999995	6.18E-08	4.75E-11
43	Aluminum	Deft 44-GN-36	16.69	0.03	0.65	0.999995	8.76E-07	6.74E-10
						Total aluminum	9.58E-07	7.37E-10
20	Antimony	Akzo Nobel 20P1-21	30.69	3.72E-03	0.65	0.999995	2.00E-07	1.54E-10
						Total antimony	2.00E-07	1.54E-10
51	Antimony trioxide	E/M Everlube 620 C	5.98	0.08	0.65	0.999995	7.85E-07	6.04E-10
52	Antimony trioxide	E/M Everlube 642	0.60	0.08	0.65	0.999995	7.94E-08	6.11E-11
56	Antimony trioxide	E/M Everlube 9002	6.81	0.13	0.65	0.999995	1.49E-06	1.15E-09
60	Antimony trioxide	E/M Lube-lok 2109	4.20	0.08	0.65	0.999995	5.52E-07	4.25E-10
62	Antimony trioxide	E/M Lube-lok 5306	3.99	0.13	0.65	0.999995	8.72E-07	6.71E-10
						Total antimony trioxide	3.78E-06	2.91E-09
35	Barium	Deft 03-BK-99	0.47	0.04	0.65	0.999995	3.67E-08	2.82E-11
40	Barium	Deft 04-GN-03	1.54	0.21	0.65	0.999995	5.54E-07	4.26E-10
						Total barium	5.90E-07	4.54E-10
30	Carbon black	Deft 01-BK-41	0.63	0.01	0.65	0.999995	1.09E-08	8.42E-12
31	Carbon black	Deft 01-BK-43	1.04	0.03	0.65	0.999995	5.44E-08	4.18E-11
35	Carbon black	Deft 03-BK-99	0.47	0.01	0.65	0.999995	8.31E-09	6.39E-12
36	Carbon black	Deft 03-GY-287	7.66	0.01	0.65	0.999995	1.34E-07	1.03E-10
37	Carbon black	Deft 03-GY-292	5.14	0.01	0.65	0.999995	8.99E-08	6.91E-11
38	Carbon black	Deft 03-GY-332	4.17	0.01	0.65	0.999995	7.30E-08	5.61E-11
40	Carbon black	Deft 04-GN-03	1.54	0.01	0.65	0.999995	2.69E-08	2.07E-11
64	Carbon black	E/M Lubri-bond 320	9.76	0.03	0.65	0.999995	4.27E-07	3.29E-10
66	Carbon black	Hentzen 8628 KUZ	1.30	0.03	0.65	0.999995	6.84E-08	5.26E-11
84	Carbon black	PRC De Soto 825X537	2.40	0.13	0.65	0.999995	5.28E-07	4.06E-10
85	Carbon black	PTI PT-19	17.11	0.02	0.65	0.999995	5.27E-07	4.05E-10
						Total carbon black	1.95E-06	1.50E-09
18	Crystalline silica	Akzo Nobel 10P20-13	23.32	0.18	0.65	0.999995	7.14E-06	5.49E-09
23	Crystalline silica	Akzo Nobel 446-22-1000	1.10	5.00E-03	0.65	0.999995	9.59E-09	7.38E-12
30	Crystalline silica	Deft 01-BK-41	0.63	0.01	0.65	0.999995	1.09E-08	8.42E-12
34	Crystalline silica	Deft 02-Y-40A	8.75	0.01	0.65	0.999995	1.53E-07	1.18E-10
41	Crystalline silica	Deft 44-GN-11	11.56	2.00E-03	0.65	0.999995	4.04E-08	3.11E-11
44	Crystalline silica	Deft 44-GN-54	3.67	0.01	0.65	0.999995	6.42E-08	4.94E-11
45	Crystalline silica	Deft 44-GN-72	9.11	2.00E-03	0.65	0.999995	3.19E-08	2.45E-11
46	Crystalline silica	Deft 44-GN-98	90.79	0.03	0.65	0.999995	4.77E-06	3.67E-09
65	Crystalline silica	Hentzen 8625 GUZ	6.33	0.16	0.65	0.999995	1.72E-06	1.32E-09
						Total crystalline silica	1.39E-05	1.07E-08
1	Hexavalent chromium	Combined coatings	7.13	1.00	0.65	0.999995	1.25E-05	9.60E-09
						Total hexavalent chromium	1.25E-05	9.60E-09

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
52	Lead	E/M Everlube 642	0.60	0.02	0.65	0.999995	2.24E-08	1.72E-11
60	Lead	E/M Lube-lok 2109	4.20	0.02	0.65	0.999995	1.56E-07	1.20E-10
62	Lead	E/M Lube-lok 5306	3.99	0.02	0.65	0.999995	1.48E-07	1.14E-10
75	Lead	Lubeco K-350	1.95	0.03	0.65	0.999995	1.02E-07	7.88E-11
						Total lead	4.29E-07	3.30E-10
20	Nickel	Akzo Nobel 20P1-21	30.69	8.97E-04	0.65	0.999995	4.82E-08	3.71E-11
						Total nickel	4.82E-08	3.71E-11
30	PAH	Deft 01-BK-41	0.63	9.20E-08	0.65	0.999995	1.01E-13	7.75E-17
31	PAH	Deft 01-BK-43	1.04	2.76E-07	0.65	0.999995	5.00E-13	3.85E-16
35	PAH	Deft 03-BK-99	0.47	9.20E-08	0.65	0.999995	7.64E-14	5.88E-17
36	PAH	Deft 03-GY-287	7.66	9.20E-08	0.65	0.999995	1.23E-12	9.49E-16
37	PAH	Deft 03-GY-292	5.14	9.20E-08	0.65	0.999995	8.27E-13	6.36E-16
38	PAH	Deft 03-GY-332	4.17	9.20E-08	0.65	0.999995	6.71E-13	5.17E-16
40	PAH	Deft 04-GN-03	1.54	9.20E-08	0.65	0.999995	2.47E-13	1.90E-16
64	PAH	E/M Lubri-bond 320	9.76	2.30E-07	0.65	0.999995	3.93E-12	3.02E-15
66	PAH	Hentzen 8628 KUZ	1.30	2.76E-07	0.65	0.999995	6.30E-13	4.84E-16
84	PAH	PRC De Soto 825X537	2.40	1.15E-06	0.65	0.999995	4.85E-12	3.73E-15
85	PAH	PTI PT-19	17.11	1.62E-07	0.65	0.999995	4.85E-12	3.73E-15
						Total PAH	1.79E-11	1.38E-14
108	Perchloroethylene	Catalyst 8800 Series	3.37	0.60	0.65	0.999995	3.53E-06	2.72E-09
						Total perchloroethylene	3.53E-06	2.72E-09
70	Zinc compounds	Lubeco 905	12.25	0.25	0.65	0.999995	5.36E-06	4.12E-09
						Total zinc compounds	5.36E-06	4.12E-09

Spray Booth 2 (A/N 497228)

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
23	Aluminum	Akzo Nobel 446-22-1000	2.33	0.01	0.65	0.999995	4.23E-08	3.26E-11
43	Aluminum	Deft 44-GN-36	2.90	0.03	0.65	0.999995	1.52E-07	1.17E-10
						Total aluminum	1.95E-07	1.50E-10
20	Antimony	Akzo Nobel 20P1-21	41.70	3.72E-03	0.65	0.999995	2.71E-07	2.09E-10
						Total antimony	2.71E-07	2.09E-10
51	Antimony trioxide	E/M Everlube 620 C	9.47	0.08	0.65	0.999995	1.24E-06	9.56E-10
52	Antimony trioxide	E/M Everlube 642	3.07	0.08	0.65	0.999995	4.03E-07	3.10E-10
56	Antimony trioxide	E/M Everlube 9002	14.31	0.13	0.65	0.999995	3.13E-06	2.41E-09
60	Antimony trioxide	E/M Lube-lok 2109	19.12	0.08	0.65	0.999995	2.51E-06	1.93E-09
62	Antimony trioxide	E/M Lube-lok 5306	78.70	0.13	0.65	0.999995	1.72E-05	1.32E-08
63	Antimony trioxide	E/M Lubri-bond 220	5.25	0.03	0.65	0.999995	2.30E-07	1.77E-10
69	Antimony trioxide	Lubeco 901	2.09	0.10	0.65	0.999995	3.65E-07	2.81E-10
						Total antimony trioxide	2.51E-05	1.93E-08
31	Carbon black	Deft 01-BK-43	0.90	0.03	0.65	0.999995	4.74E-08	3.65E-11
32	Carbon black	Deft 01-GY-85	0.49	0.01	0.65	0.999995	8.52E-09	6.55E-12
36	Carbon black	Deft 03-GY-287	1.10	0.01	0.65	0.999995	1.93E-08	1.48E-11
47	Carbon black	DuPont 958-313	1.92	0.03	0.65	0.999995	1.01E-07	7.74E-11
67	Carbon black	Lord Z306 Black	0.73	0.01	0.65	0.999995	7.07E-09	5.44E-12
85	Carbon black	PTI PT-19	5.52	0.02	0.65	0.999995	1.70E-07	1.31E-10
						Total carbon black	3.53E-07	2.71E-10
86	Cobalt	PTI PT-522 Green	2.43	1.60E-03	0.65	0.999995	6.80E-09	5.23E-12
						Total cobalt	6.80E-09	5.23E-12
18	Crystalline silica	Akzo Nobel 10P20-13	4.36	0.18	0.65	0.999995	1.33E-06	1.03E-09
23	Crystalline silica	Akzo Nobel 446-22-1000	2.33	0.01	0.65	0.999995	2.04E-08	1.57E-11
32	Crystalline silica	Deft 01-GY-85	0.49	0.01	0.65	0.999995	8.52E-09	6.55E-12
34	Crystalline silica	Deft 02-Y-40A	20.24	0.01	0.65	0.999995	3.54E-07	2.72E-10
41	Crystalline silica	Deft 44-GN-11	12.02	2.00E-03	0.65	0.999995	4.21E-08	3.24E-11
44	Crystalline silica	Deft 44-GN-54	0.93	0.01	0.65	0.999995	1.63E-08	1.25E-11
45	Crystalline silica	Deft 44-GN-72	12.13	2.00E-03	0.65	0.999995	4.25E-08	3.27E-11
46	Crystalline silica	Deft 44-GN-98	17.55	0.03	0.65	0.999995	9.22E-07	7.09E-10
65	Crystalline silica	Hentzen 8625 GUZ	1.00	0.16	0.65	0.999995	2.72E-07	2.09E-10
						Total crystalline silica	3.01E-06	2.32E-09
1	Hexavalent chromium	Combined coatings	7.13	1.00	0.65	0.999995	1.25E-05	9.60E-09
						Total hexavalent chromium	1.25E-05	9.60E-09
52	Lead	E/M Everlube 642	3.07	0.02	0.65	0.999995	1.14E-07	8.76E-11
60	Lead	E/M Lube-lok 2109	19.12	0.02	0.65	0.999995	7.09E-07	5.45E-10
62	Lead	E/M Lube-lok 5306	78.70	0.02	0.65	0.999995	2.92E-06	2.24E-09
63	Lead	E/M Lubri-bond 220	5.25	0.02	0.65	0.999995	1.95E-07	1.50E-10
72	Lead	Lubeco 2023	1.11	0.01	0.65	0.999995	1.94E-08	1.49E-11
69	Lead	Lubeco 901	2.09	0.02	0.65	0.999995	7.30E-08	5.61E-11
75	Lead	Lubeco K-350	2.15	0.03	0.65	0.999995	1.13E-07	8.69E-11
						Total lead	4.14E-06	3.18E-09
20	Nickel	Akzo Nobel 20P1-21	41.70	8.97E-04	0.65	0.999995	6.54E-08	5.03E-11
						Total nickel	6.54E-08	5.03E-11
31	PAH	Deft 01-BK-43	0.90	2.76E-07	0.65	0.999995	4.36E-13	3.36E-16
32	PAH	Deft 01-GY-85	0.49	9.20E-08	0.65	0.999995	7.84E-14	6.03E-17
36	PAH	Deft 03-GY-287	1.10	9.20E-08	0.65	0.999995	1.77E-13	1.36E-16
47	PAH	DuPont 958-313	1.92	2.76E-07	0.65	0.999995	9.26E-13	7.12E-16
67	PAH	Lord Z306 Black	0.73	5.06E-08	0.65	0.999995	6.51E-14	5.00E-17
85	PAH	PTI PT-19	5.52	1.62E-07	0.65	0.999995	1.56E-12	1.20E-15
						Total PAH	3.25E-12	2.50E-15
108	Perchloroethylene	Catalyst 8800 Series	2.27	0.60	0.65	0.999995	2.38E-06	1.83E-09
						Total perchloroethylene	2.38E-06	1.83E-09
69	Zinc compounds	Lubeco 901	2.09	0.25	0.65	0.999995	9.12E-07	7.02E-10
70	Zinc compounds	Lubeco 905	6.78	0.25	0.65	0.999995	2.97E-06	2.28E-09
86	Zinc compounds	PTI PT-522 Green	2.43	0.29	0.65	0.999995	1.25E-06	9.63E-10
						Total zinc compounds	5.13E-06	3.95E-09

Spray Booth 3 (A/N 497229)

Product code	Listed Substance	Material	Q, lbs/yr	P, lbs/lbs	A, lbs/lbs	R, lbs/lbs	Y, lbs/yr	H, lbs/hr
43	Aluminum	Deft 44-GN-36	0.85	0.03	0.65	0.999995	4.45E-08	3.42E-11
74	Aluminum	Lubeco AL-52	0.80	0.02	0.65	0.999995	2.81E-08	2.16E-11
						Total aluminum	7.26E-08	5.59E-11
51	Antimony trioxide	E/M Everlube 620 C	740.98	0.08	0.65	0.999995	9.73E-05	7.48E-08
52	Antimony trioxide	E/M Everlube 642	37.35	0.08	0.65	0.999995	4.90E-06	3.77E-09
56	Antimony trioxide	E/M Everlube 9002	128.59	0.13	0.65	0.999995	2.81E-05	2.16E-08
58	Antimony trioxide	E/M Everlube 967	9.21	0.08	0.65	0.999995	1.21E-06	9.29E-10
60	Antimony trioxide	E/M Lube-lok 2109	34.95	0.08	0.65	0.999995	4.59E-06	3.53E-09
62	Antimony trioxide	E/M Lube-lok 5306	128.61	0.13	0.65	0.999995	2.81E-05	2.16E-08
63	Antimony trioxide	E/M Lubri-bond 220	9.40	0.03	0.65	0.999995	4.11E-07	3.16E-10
57	Antimony trioxide	E/M Perma-Slick G	1.02	0.03	0.65	0.999995	4.46E-08	3.43E-11
69	Antimony trioxide	Lubeco 901	1.30	0.10	0.65	0.999995	2.28E-07	1.75E-10
81	Antimony trioxide	Molykote 3402 C	2.40	0.12	0.65	0.999995	5.03E-07	3.87E-10
						Total antimony trioxide	1.65E-04	1.27E-07
82	Carbon black	PRC De Soto 515X349	0.25	0.01	0.65	0.999995	2.45E-09	1.89E-12
84	Carbon black	PRC De Soto 825X537	0.32	0.13	0.65	0.999995	6.96E-08	5.35E-11
						Total carbon black	7.20E-08	5.54E-11
34	Crystalline silica	Deft 02-Y-40A	1.52	0.01	0.65	0.999995	2.67E-08	2.05E-11
41	Crystalline silica	Deft 44-GN-11	1.67	2.00E-03	0.65	0.999995	5.86E-09	4.51E-12
45	Crystalline silica	Deft 44-GN-72	1.16	2.00E-03	0.65	0.999995	4.06E-09	3.12E-12
83	Crystalline silica	PRC De Soto 515-700	0.50	0.01	0.65	0.999995	4.83E-09	3.72E-12
82	Crystalline silica	PRC De Soto 515X349	0.25	0.20	0.65	0.999995	8.92E-08	6.86E-11
						Total crystalline silica	1.31E-07	1.01E-10
1	Hexavalent chromium	Combined coatings	7.13	1.00	0.65	0.999995	1.25E-05	9.60E-09
						Total hexavalent chromium	1.25E-05	9.60E-09
52	Lead	E/M Everlube 642	37.35	0.02	0.65	0.999995	1.38E-06	1.07E-09
60	Lead	E/M Lube-lok 2109	34.95	0.02	0.65	0.999995	1.30E-06	9.97E-10
62	Lead	E/M Lube-lok 5306	128.61	0.02	0.65	0.999995	4.77E-06	3.67E-09
63	Lead	E/M Lubri-bond 220	9.40	0.02	0.65	0.999995	3.49E-07	2.68E-10
57	Lead	E/M Perma-Slick G	1.02	0.02	0.65	0.999995	3.78E-08	2.91E-11
71	Lead	Lubeco 2020	3.84	0.01	0.65	0.999995	6.73E-08	5.18E-11
73	Lead	Lubeco 7123	7.43	0.03	0.65	0.999995	3.90E-07	3.00E-10
69	Lead	Lubeco 901	1.30	0.02	0.65	0.999995	4.55E-08	3.50E-11
75	Lead	Lubeco K-350	4.30	0.03	0.65	0.999995	2.26E-07	1.74E-10
77	Lead	Lubeco M390-46	0.53	0.03	0.65	0.999995	2.76E-08	2.12E-11
79	Lead	Lubeco N-350-A	0.91	0.05	0.65	0.999995	7.95E-08	6.12E-11
						Total lead	8.67E-06	6.67E-09
82	PAH	PRC De Soto 515X349	0.25	5.06E-08	0.65	0.999995	2.26E-14	1.74E-17
84	PAH	PRC De Soto 825X537	0.32	1.15E-06	0.65	0.999995	6.40E-13	4.92E-16
						Total PAH	6.63E-13	5.10E-16
69	Zinc compounds	Lubeco 901	1.30	0.25	0.65	0.999995	5.69E-07	4.38E-10
70	Zinc compounds	Lubeco 905	141.65	0.25	0.65	0.999995	6.20E-05	4.77E-08
74	Zinc compounds	Lubeco AL-52	0.80	1.00E-03	0.65	0.999995	1.40E-09	1.08E-12
						Total zinc compounds	6.25E-05	4.81E-08

Appendix D – Revised Cancer Health Risk Assessment Tables Based on Amended 2015 Emissions

Table D1 - Listed Substances Cancer Risk Summary at PMI, MEIW, MEIR

Listed substance	PMI (Rec 4625)	MEIW (Rec 2210)	MEIR (Rec 4625)
Acetaldehyde	1.80E-10	4.36E-11	1.76E-10
Acrolein	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00
Barium chromate	1.35E-10	2.46E-11	1.33E-10
Benzene	3.33E-09	8.09E-10	3.27E-09
Benzo (a) anthracene	6.64E-11	1.48E-12	6.63E-11
Benzo (a) pyrene	4.43E-10	9.89E-12	4.43E-10
Benzo (b) fluoranthene	6.64E-11	1.48E-12	6.63E-11
Benzo (k) fluoranthene	6.64E-11	1.48E-12	6.63E-11
Calcium chromate	6.36E-12	1.08E-12	6.28E-12
Chromium trioxide	3.45E-09	5.90E-10	3.40E-09
Chrysene	6.64E-12	1.48E-13	6.63E-12
Cresol	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	1.61E-10	6.74E-12	1.61E-10
Dichlorobenzene	2.00E-10	4.86E-11	1.96E-10
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	1.31E-07	5.47E-09	1.31E-07
Dioxane, 1,4-	1.62E-08	4.54E-09	1.59E-08
Ethylbenzene	5.65E-08	1.56E-08	5.54E-08
Ethylene dichloride	4.32E-08	1.21E-08	4.24E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	2.47E-08	6.90E-09	2.43E-08
Hexane, n-	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	1.89E-09	3.57E-10	1.86E-09
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	6.64E-11	1.48E-12	6.63E-11
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00
Lead	5.46E-12	2.82E-13	5.45E-12
Manganese	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	1.30E-09	5.42E-11	1.29E-09
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	2.34E-06	1.19E-07	2.33E-06
Naphthalene	5.51E-10	1.61E-10	5.41E-10
Nickel	6.16E-09	1.71E-09	6.04E-09
PAH	2.66E-12	6.80E-14	2.66E-12
Perchloroethylene	9.10E-14	2.65E-14	8.92E-14
Phenol	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	1.06E-08	1.94E-09	1.05E-08
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00

Table D2 - Cancer Risk by Emission Source at PMI

		Exposure Pathway												
Source ID	**Source Description**	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
S0001	Boiler	9.02E-09	7.25E-09	1.81E-09	1.72E-08	0.00E+00	0.00E+00	3.55E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-08
S0002	Oven #2	3.10E-09	2.50E-09	6.22E-10	5.94E-09	0.00E+00	0.00E+00	1.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-08
S0003	Oven #3	3.20E-09	2.57E-09	6.41E-10	6.12E-09	0.00E+00	0.00E+00	1.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-08
S0004	Oven #4	2.33E-09	1.87E-09	4.66E-10	4.45E-09	0.00E+00	0.00E+00	9.17E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-08
S0005	Mist eliminator	1.09E-09	1.89E-11	7.24E-13	0.00E+00	0.00E+00	0.00E+00	6.18E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-09
S0006	East door	4.09E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-09
S0007	Spray booth 1	2.21E-08	5.47E-11	2.10E-12	2.07E-15	0.00E+00	0.00E+00	1.79E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.39E-08
S0008	Spray booth 2	3.78E-08	6.04E-11	2.30E-12	2.30E-14	0.00E+00	0.00E+00	1.94E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-08
S0009	Spray booth 3	2.63E-07	6.95E-07	5.64E-08	4.99E-14	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-06
S0010	Spray booth 4	5.39E-08	2.80E-13	6.99E-14	6.67E-13	0.00E+00	0.00E+00	1.37E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-08
S0012	Spray booth 6	4.37E-09	2.13E-14	5.32E-15	5.08E-14	0.00E+00	0.00E+00	1.05E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-09
S0013	West door	8.16E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-10
S0014	Vent	1.26E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-09
	Total Risk	4.06E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-06

Table D3 - Cancer Risk by Emission Source at MEIW

		Exposure Pathway												
Source ID	**Source Description**	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
S0001	Boiler	2.91E-09	5.32E-10	2.40E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-09
S0002	Oven #2	9.87E-10	1.81E-10	8.14E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-09
S0003	Oven #3	1.07E-09	1.96E-10	8.85E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-09
S0004	Oven #4	5.12E-10	9.36E-11	4.22E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.48E-10
S0005	Mist eliminator	3.28E-10	1.65E-12	1.15E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-10
S0006	East door	4.15E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-10
S0007	Spray booth 1	6.85E-09	4.94E-12	3.42E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.85E-09
S0008	Spray booth 2	1.02E-08	4.70E-12	3.27E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-08
S0009	Spray booth 3	9.63E-08	2.30E-08	7.96E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-07
S0010	Spray booth 4	1.47E-08	2.23E-14	1.00E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-08
S0012	Spray booth 6	1.51E-09	2.15E-15	9.70E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-09
S0013	West door	5.14E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-10
S0014	Vent	7.83E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.83E-10
	Total Risk	1.37E-07	2.40E-08	8.41E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-07

Table D4 - Cancer Risk by Emission Source at MEIR

		Exposure Pathway												
Source ID	**Source Description**	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
S0001	Boiler	8.82E-09	7.25E-09	1.81E-09	1.72E-08	0.00E+00	0.00E+00	3.55E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E-08
S0002	Oven #2	3.04E-09	2.50E-09	6.22E-10	5.94E-09	0.00E+00	0.00E+00	1.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-08
S0003	Oven #3	3.13E-09	2.57E-09	6.41E-10	6.12E-09	0.00E+00	0.00E+00	1.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-08
S0004	Oven #4	2.28E-09	1.87E-09	4.66E-10	4.45E-09	0.00E+00	0.00E+00	9.17E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-08
S0005	Mist eliminator	1.07E-09	1.89E-11	7.24E-13	0.00E+00	0.00E+00	0.00E+00	6.18E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-09
S0006	East door	4.01E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-09
S0007	Spray booth 1	2.16E-08	5.47E-11	2.10E-12	2.07E-15	0.00E+00	0.00E+00	1.79E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-08
S0008	Spray booth 2	3.70E-08	6.04E-11	2.30E-12	2.30E-14	0.00E+00	0.00E+00	1.94E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-08
S0009	Spray booth 3	2.57E-07	6.95E-07	5.64E-08	4.99E-14	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-06
S0010	Spray booth 4	5.28E-08	2.80E-13	6.99E-14	6.67E-13	0.00E+00	0.00E+00	1.37E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-08
S0012	Spray booth 6	4.29E-09	2.13E-14	5.32E-15	5.08E-14	0.00E+00	0.00E+00	1.05E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-09
S0013	West door	8.00E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-10
S0014	Vent	1.23E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-09
	Total Risk	3.97E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-06

Table D5 - 30 Year Cancer Risks and PMI, MEIW, MEIR, and Sensitive Receptors

	UTM Coordinates		Exposure Pathway												
Receptor	Easting	Northing	INHAL	SOIL	DERM	MOTHER	WATER	FISH	VEG	BEEF	DAIRY	PIG	CHICK	EGG	TOTAL
PMI	393,534	3,749,434	4.06E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-06
MEIW	393,450	3,749,500	1.37E-07	2.40E-08	8.41E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-07
MEIR	393,534	3,749,434	3.97E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.43E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-06

Table D6 - Cancer Risk by Substances at PMI

Substance	Exposure Pathway												
	INHAL	SOIL	DERM	MOTHER	WATER	FISH	VEG	BEEF	DAIRY	PIG	CHICK	EGG	TOTAL
Acetaldehyde	1.80E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-10
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium chromate	8.52E-11	1.48E-12	5.66E-14	0.00E+00	0.00E+00	0.00E+00	4.83E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-10
Benzene	3.33E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-09
Benzo (a) anthracene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Benzo (a) pyrene	1.38E-11	5.03E-11	1.25E-11	1.20E-10	0.00E+00	0.00E+00	2.47E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-10
Benzo (b) fluoranthene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Benzo (k) fluoranthene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Calcium chromate	4.01E-12	6.95E-14	2.67E-15	0.00E+00	0.00E+00	0.00E+00	2.28E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-12
Chromium trioxide	2.17E-09	3.77E-11	1.44E-12	0.00E+00	0.00E+00	0.00E+00	1.23E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-09
Chrysene	2.07E-13	7.54E-13	1.88E-13	1.79E-12	0.00E+00	0.00E+00	3.70E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-12
Cresol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	1.45E-11	1.72E-11	4.28E-12	4.09E-11	0.00E+00	0.00E+00	8.42E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-10
Dichlorobenzene	2.00E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-10
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	1.18E-08	1.40E-08	3.48E-09	3.32E-08	0.00E+00	0.00E+00	6.84E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-07
Dioxane, 1,4-	1.62E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-08
Ethylbenzene	5.65E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.65E-08
Ethylene dichloride	4.32E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	2.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-08
Hexane, n-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	1.19E-09	2.06E-11	7.90E-13	0.00E+00	0.00E+00	0.00E+00	6.75E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-09
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	3.44E-13	4.11E-12	1.00E-13	7.46E-14	0.00E+00	0.00E+00	8.25E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-12
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	1.17E-10	1.38E-10	3.44E-11	3.29E-10	0.00E+00	0.00E+00	6.77E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-09
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	2.33E-07	6.95E-07	5.64E-08	0.00E+00	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-06
Naphthalene	5.51E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-10
Nickel	6.16E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-09
PAH	8.29E-14	3.02E-13	7.52E-14	7.18E-13	0.00E+00	0.00E+00	1.48E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-12
Perchloroethylene	9.10E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-14
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	6.69E-09	1.16E-10	4.44E-12	0.00E+00	0.00E+00	0.00E+00	3.79E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-08
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D7 - Cancer Risk by Substances at MEIW

Substance	Exposure Pathway												
	INHAL	SOIL	DERM	MOTHER	WATER	FISH	VEG	BEEF	DAIRY	PIG	CHICK	EGG	TOTAL
Acetaldehyde	4.36E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-11
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium chromate	2.44E-11	1.23E-13	8.54E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E-11
Benzene	8.09E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-10
Benzo (a) anthracene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Benzo (a) pyrene	4.74E-12	3.55E-12	1.60E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.89E-12
Benzo (b) fluoranthene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Benzo (k) fluoranthene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Calcium chromate	1.08E-12	5.42E-15	3.76E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-12
Chromium trioxide	5.86E-10	2.96E-12	2.05E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-10
Chrysene	7.10E-14	5.33E-14	2.40E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-13
Cresol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	4.98E-12	1.21E-12	5.47E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.74E-12
Dichlorobenzene	4.86E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-11
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	4.04E-09	9.86E-10	4.44E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E-09
Dioxane, 1,4-	4.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-09
Ethylbenzene	1.56E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-08
Ethylene dichloride	1.21E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	6.90E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-09
Hexane, n-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	3.55E-10	1.79E-12	1.24E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-10
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	1.31E-13	1.37E-13	1.42E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-13
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	4.01E-11	9.76E-12	4.40E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E-11
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	8.82E-08	2.30E-08	7.96E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-07
Naphthalene	1.61E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-10
Nickel	1.71E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-09
PAH	3.26E-14	2.44E-14	1.10E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-14
Perchloroethylene	2.65E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-14
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	1.93E-09	9.72E-12	6.74E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-09
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D8 - Cancer Risk by Substances at MEIR

Substance	Exposure Pathway												
	INHAL	SOIL	DERM	MOTHER	WATER	FISH	VEG	BEEF	DAIRY	PIG	CHICK	EGG	TOTAL
Acetaldehyde	1.76E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-10
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium chromate	8.36E-11	1.48E-12	5.66E-14	0.00E+00	0.00E+00	0.00E+00	4.83E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-10
Benzene	3.27E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-09
Benzo (a) anthracene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Benzo (a) pyrene	1.35E-11	5.03E-11	1.25E-11	1.20E-10	0.00E+00	0.00E+00	2.47E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-10
Benzo (b) fluoranthene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Benzo (k) fluoranthene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Calcium chromate	3.94E-12	6.95E-14	2.67E-15	0.00E+00	0.00E+00	0.00E+00	2.28E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.28E-12
Chromium trioxide	2.13E-09	3.77E-11	1.44E-12	0.00E+00	0.00E+00	0.00E+00	1.23E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-09
Chrysene	2.02E-13	7.54E-13	1.88E-13	1.79E-12	0.00E+00	0.00E+00	3.70E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-12
Cresol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	1.42E-11	1.72E-11	4.28E-12	4.09E-11	0.00E+00	0.00E+00	8.42E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-10
Dichlorobenzene	1.96E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-10
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	1.15E-08	1.40E-08	3.48E-09	3.32E-08	0.00E+00	0.00E+00	6.84E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-07
Dioxane, 1,4-	1.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-08
Ethylbenzene	5.54E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-08
Ethylene dichloride	4.24E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	2.43E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-08
Hexane, n-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	1.17E-09	2.06E-11	7.90E-13	0.00E+00	0.00E+00	0.00E+00	6.75E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-09
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	3.37E-13	4.11E-12	1.00E-13	7.46E-14	0.00E+00	0.00E+00	8.25E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-12
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	1.14E-10	1.38E-10	3.44E-11	3.29E-10	0.00E+00	0.00E+00	6.77E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-09
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	2.28E-07	6.95E-07	5.64E-08	0.00E+00	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-06
Naphthalene	5.41E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-10
Nickel	6.04E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E-09
PAH	8.11E-14	3.02E-13	7.52E-14	7.18E-13	0.00E+00	0.00E+00	1.48E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-12
Perchloroethylene	8.92E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.92E-14
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	6.56E-09	1.16E-10	4.44E-12	0.00E+00	0.00E+00	0.00E+00	3.79E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-08
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Appendix E – Revised Cancer Health Risk Assessment Tables Based on Hexavalent Chromium Potential to Emit

Table E1 - Listed Substances Cancer Risk Summary at PMI, MEIW, MEIR

Listed substance	PMI (Rec 4625)	MEIW (Rec 2210)	MEIR (Rec 4625)
Acetaldehyde	1.80E-10	4.36E-11	1.76E-10
Acrolein	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00
Barium chromate	0.00E+00	0.00E+00	0.00E+00
Benzene	3.33E-09	8.09E-10	3.27E-09
Benzo (a) anthracene	6.64E-11	1.48E-12	6.63E-11
Benzo (a) pyrene	4.43E-10	9.89E-12	4.43E-10
Benzo (b) fluoranthene	6.64E-11	1.48E-12	6.63E-11
Benzo (k) fluoranthene	6.64E-11	1.48E-12	6.63E-11
Calcium chromate	0.00E+00	0.00E+00	0.00E+00
Chromium trioxide	0.00E+00	0.00E+00	0.00E+00
Chrysene	6.64E-12	1.48E-13	6.63E-12
Cresol	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	1.61E-10	6.74E-12	1.61E-10
Dichlorobenzene	2.00E-10	4.86E-11	1.96E-10
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	1.31E-07	5.47E-09	1.31E-07
Dioxane, 1,4-	1.62E-08	4.54E-09	1.59E-08
Ethylbenzene	5.65E-08	1.56E-08	5.54E-08
Ethylene dichloride	4.32E-08	1.21E-08	4.24E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	2.47E-08	6.90E-09	2.43E-08
Hexane, n-	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	8.55E-08	1.60E-08	8.45E-08
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	6.64E-11	1.48E-12	6.63E-11
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00
Lead	5.46E-12	2.82E-13	5.45E-12
Manganese	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	1.30E-09	5.42E-11	1.29E-09
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	2.34E-06	1.19E-07	2.33E-06
Naphthalene	5.51E-10	1.61E-10	5.41E-10
Nickel	6.16E-09	1.71E-09	6.04E-09
PAH	2.66E-12	6.80E-14	2.66E-12
Perchloroethylene	9.10E-14	2.65E-14	8.92E-14
Phenol	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	0.00E+00	0.00E+00	0.00E+00
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00

Table E2 - Cancer Risk by Emission Source at PMI

		Exposure Pathway												
Source ID	**Source Description**	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
S0001	Boiler	9.02E-09	7.25E-09	1.81E-09	1.72E-08	0.00E+00	0.00E+00	3.55E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-08
S0002	Oven #2	3.10E-09	2.50E-09	6.22E-10	5.94E-09	0.00E+00	0.00E+00	1.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-08
S0003	Oven #3	3.20E-09	2.57E-09	6.41E-10	6.12E-09	0.00E+00	0.00E+00	1.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.52E-08
S0004	Oven #4	2.33E-09	1.87E-09	4.66E-10	4.45E-09	0.00E+00	0.00E+00	9.17E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-08
S0005	Mist eliminator	3.86E-08	6.69E-10	2.57E-11	0.00E+00	0.00E+00	0.00E+00	2.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.13E-08
S0006	East door	4.09E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-09
S0007	Spray booth 1	2.31E-08	7.17E-11	2.75E-12	2.07E-15	0.00E+00	0.00E+00	2.34E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-08
S0008	Spray booth 2	3.98E-08	9.61E-11	3.67E-12	2.30E-14	0.00E+00	0.00E+00	3.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-08
S0009	Spray booth 3	2.66E-07	6.95E-07	5.64E-08	4.99E-14	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-06
S0010	Spray booth 4	5.39E-08	2.80E-13	6.99E-14	6.67E-13	0.00E+00	0.00E+00	1.37E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-08
S0012	Spray booth 6	4.37E-09	2.13E-14	5.32E-15	5.08E-14	0.00E+00	0.00E+00	1.05E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-09
S0013	West door	8.16E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.16E-10
S0014	Vent	1.26E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-09
	Total Risk	4.50E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-06

Table E3 - Cancer Risk by Emission Source at MEIW

		Exposure Pathway												
Source ID	**Source Description**	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
S0001	Boiler	2.91E-09	5.32E-10	2.40E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-09
S0002	Oven #2	9.87E-10	1.81E-10	8.14E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-09
S0003	Oven #3	1.07E-09	1.96E-10	8.85E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-09
S0004	Oven #4	5.12E-10	9.36E-11	4.22E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.48E-10
S0005	Mist eliminator	1.16E-08	5.87E-11	4.07E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-08
S0006	East door	4.15E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-10
S0007	Spray booth 1	7.15E-09	6.46E-12	4.48E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.16E-09
S0008	Spray booth 2	1.08E-08	7.51E-12	5.22E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-08
S0009	Spray booth 3	9.71E-08	2.30E-08	7.96E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-07
S0010	Spray booth 4	1.47E-08	2.23E-14	1.00E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-08
S0012	Spray booth 6	1.51E-09	2.15E-15	9.70E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-09
S0013	West door	5.14E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E-10
S0014	Vent	7.83E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.83E-10
	Total Risk	1.50E-07	2.40E-08	8.41E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-07

Table E4 - Cancer Risk by Emission Source at MEIR

		Exposure Pathway												
Source ID	**Source Description**	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
S0001	Boiler	8.82E-09	7.25E-09	1.81E-09	1.72E-08	0.00E+00	0.00E+00	3.55E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E-08
S0002	Oven #2	3.04E-09	2.50E-09	6.22E-10	5.94E-09	0.00E+00	0.00E+00	1.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-08
S0003	Oven #3	3.13E-09	2.57E-09	6.41E-10	6.12E-09	0.00E+00	0.00E+00	1.26E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-08
S0004	Oven #4	2.28E-09	1.87E-09	4.66E-10	4.45E-09	0.00E+00	0.00E+00	9.17E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-08
S0005	Mist eliminator	3.79E-08	6.69E-10	2.57E-11	0.00E+00	0.00E+00	0.00E+00	2.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.05E-08
S0006	East door	4.01E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-09
S0007	Spray booth 1	2.26E-08	7.17E-11	2.75E-12	2.07E-15	0.00E+00	0.00E+00	2.34E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-08
S0008	Spray booth 2	3.90E-08	9.61E-11	3.67E-12	2.30E-14	0.00E+00	0.00E+00	3.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E-08
S0009	Spray booth 3	2.61E-07	6.95E-07	5.64E-08	4.99E-14	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-06
S0010	Spray booth 4	5.28E-08	2.80E-13	6.99E-14	6.67E-13	0.00E+00	0.00E+00	1.37E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-08
S0012	Spray booth 6	4.29E-09	2.13E-14	5.32E-15	5.08E-14	0.00E+00	0.00E+00	1.05E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-09
S0013	West door	8.00E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-10
S0014	Vent	1.23E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-09
	Total Risk	4.40E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-06

Table E5 - 30 Year Cancer Risks and PMI, MEIW, MEIR, and Sensitive Receptors

	UTM Coordinates		Exposure Pathway												
Receptor	Easting	Northing	INHAL	SOIL	DERM	MOTHER	WATER	FISH	VEG	BEEF	DAIRY	PIG	CHICK	EGG	TOTAL
PMI	393,534	3,749,434	4.50E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-06
MEIW	393,450	3,749,500	1.50E-07	2.40E-08	8.41E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-07
MEIR	393,534	3,749,434	4.40E-07	7.10E-07	6.00E-08	3.38E-08	0.00E+00	0.00E+00	1.45E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-06

Table E6 - Cancer Risk by Substances at PMI

	Exposure Pathway												
Substance	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
Acetaldehyde	1.80E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-10
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	3.33E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-09
Benzo (a) anthracene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Benzo (a) pyrene	1.38E-11	5.03E-11	1.25E-11	1.20E-10	0.00E+00	0.00E+00	2.47E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-10
Benzo (b) fluoranthene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Benzo (k) fluoranthene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Calcium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium trioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	2.07E-13	7.54E-13	1.88E-13	1.79E-12	0.00E+00	0.00E+00	3.70E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-12
Cresol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	1.45E-11	1.72E-11	4.28E-12	4.09E-11	0.00E+00	0.00E+00	8.42E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-10
Dichlorobenzene	2.00E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-10
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	1.18E-08	1.40E-08	3.48E-09	3.32E-08	0.00E+00	0.00E+00	6.84E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-07
Dioxane, 1,4-	1.62E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-08
Ethylbenzene	5.65E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.65E-08
Ethylene dichloride	4.32E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	2.47E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-08
Hexane, n-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	5.40E-08	9.35E-10	3.58E-11	0.00E+00	0.00E+00	0.00E+00	3.06E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.55E-08
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	2.07E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-11
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	3.44E-13	4.11E-12	1.00E-13	7.46E-14	0.00E+00	0.00E+00	8.25E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-12
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	1.17E-10	1.38E-10	3.44E-11	3.29E-10	0.00E+00	0.00E+00	6.77E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-09
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	2.33E-07	6.95E-07	5.64E-08	0.00E+00	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-06
Naphthalene	5.51E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-10
Nickel	6.16E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-09
PAH	8.29E-14	3.02E-13	7.52E-14	7.18E-13	0.00E+00	0.00E+00	1.48E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-12
Perchloroethylene	9.10E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-14
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table E7 - Cancer Risk by Substances at MEIW

	Exposure Pathway												
Substance	**INHAL**	**SOIL**	**DERM**	**MOTHER**	**WATER**	**FISH**	**VEG**	**BEEF**	**DAIRY**	**PIG**	**CHICK**	**EGG**	**TOTAL**
Acetaldehyde	4.36E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E-11
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	8.09E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-10
Benzo (a) anthracene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Benzo (a) pyrene	4.74E-12	3.55E-12	1.60E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.89E-12
Benzo (b) fluoranthene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Benzo (k) fluoranthene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Calcium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium trioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	7.10E-14	5.33E-14	2.40E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-13
Cresol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	4.98E-12	1.21E-12	5.47E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.74E-12
Dichlorobenzene	4.86E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-11
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	4.04E-09	9.86E-10	4.44E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.47E-09
Dioxane, 1,4-	4.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-09
Ethylbenzene	1.56E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-08
Ethylene dichloride	1.21E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	6.90E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.90E-09
Hexane, n-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	1.59E-08	8.03E-11	5.57E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-08
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	7.10E-13	5.33E-13	2.40E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-12
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	1.31E-13	1.37E-13	1.42E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-13
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	4.01E-11	9.76E-12	4.40E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E-11
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	8.82E-08	2.30E-08	7.96E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-07
Naphthalene	1.61E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-10
Nickel	1.71E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-09
PAH	3.26E-14	2.44E-14	1.10E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.80E-14
Perchloroethylene	2.65E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.65E-14
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table E8 - Cancer Risk by Substances at MEIR

Substance	Exposure Pathway												
	INHAL	SOIL	DERM	MOTHER	WATER	FISH	VEG	BEEF	DAIRY	PIG	CHICK	EGG	TOTAL
Acetaldehyde	1.76E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-10
Acrolein	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	3.27E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-09
Benzo (a) anthracene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Benzo (a) pyrene	1.35E-11	5.03E-11	1.25E-11	1.20E-10	0.00E+00	0.00E+00	2.47E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E-10
Benzo (b) fluoranthene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Benzo (k) fluoranthene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Calcium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium trioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	2.02E-13	7.54E-13	1.88E-13	1.79E-12	0.00E+00	0.00E+00	3.70E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-12
Cresol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crystalline silica	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenz (a,h) anthracene	1.42E-11	1.72E-11	4.28E-12	4.09E-11	0.00E+00	0.00E+00	8.42E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-10
Dichlorobenzene	1.96E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-10
Dimethyl formamide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dimethylbenz(a)anthracene, 7,12-	1.15E-08	1.40E-08	3.48E-09	3.32E-08	0.00E+00	0.00E+00	6.84E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-07
Dioxane, 1,4-	1.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-08
Ethylbenzene	5.54E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.54E-08
Ethylene dichloride	4.24E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.24E-08
Ethylene glycol monobutyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	2.43E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-08
Hexane, n-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent chromium	5.29E-08	9.35E-10	3.58E-11	0.00E+00	0.00E+00	0.00E+00	3.06E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-08
Hydrochloric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogen fluoride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-cd)pyrene	2.02E-12	7.54E-12	1.88E-12	1.79E-11	0.00E+00	0.00E+00	3.70E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-11
Isopropyl alcohol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	3.37E-13	4.11E-12	1.00E-13	7.46E-14	0.00E+00	0.00E+00	8.25E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-12
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl ethyl ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylcholanthrene, 3-	1.14E-10	1.38E-10	3.44E-11	3.29E-10	0.00E+00	0.00E+00	6.77E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-09
Methylene diphenyl diisocyanate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylenedianiline, 4,4'-	2.28E-07	6.95E-07	5.64E-08	0.00E+00	0.00E+00	0.00E+00	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-06
Naphthalene	5.41E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-10
Nickel	6.04E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E-09
PAH	8.11E-14	3.02E-13	7.52E-14	7.18E-13	0.00E+00	0.00E+00	1.48E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-12
Perchloroethylene	8.92E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.92E-14
Phenol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphoric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene glycol monomethyl ether	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sodium hydroxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Strontium chromate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfur dioxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfuric acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Appendix F – HARP2 Electronic Files

List of Electronic Files Submitted via OnBase

1. ADMRT project file.
2. CSV of RRP updated emissions.