PERMIT RATIONALE FOR MODIFICATION

Steel Dynamics Columbus, LLC

Lowndes County

Columbus, Mississippi

Water NPDES No. MS0059994

August 12, 2019

1. FACILITY INFORMATION

Facility Name: Steel Dynamics Columbus, LLC (SDC)

Facility Address: 1945 Airport Road

Columbus, MS 39701

Columbus,

Permit No.: MS0059994

SIC Code: 3312

Permit Writer: Rusty Parrish

EPD Branch: Water II Branch

1. NATURE OF BUSINESS

This facility manufactures and finishes flat-rolled steel products. Specifically, flat-rolled Interstitial-Free Steel is prepared for various end uses. An example end use is for the trunk, hood, and side panels for the automobile market.

Permitted wastewater includes process wastewater and stormwater that has potential exposure to process wastewater.

1. PROPOSED MODIFICATION

SDC is proposing to construct a third Galvanizing Line (CGL3), with an annual production rate of 400,000 tons per year of steel based on expected product mix. Improvements to CGL1 and the Cold Mill are proposed to allow for a larger variety of steel roll products. The addition of CGL3 will result in an increase of process wastewater generated at the facility. Also, SDC proposed to route treated process wastewater from the recently constructed Paint Line through the onsite wastewater treatment system at the Steel Mill for additional treatment.

The additional wastewater streams are expected to increase the discharge, therefore; SDC is requesting the current average flow limit from Outfall 101 be increased from 1.5 MGD to 2.0 MGD. The proposed modifications are expected to increase the production of galvanized steel, which is part of the Hot Coating Subcategory Subpart L of 40 CFR 420, from 1.0 million tons per year to 1.4 million tons per year. The wastewater generated from the Paint Line is subject to 40 CFR Part 465 Coil Coating Point Source Category Subparts A and B. SDC projects coating 1.87 million feet squared of steel on a daily basis with 90 % of this production being subject to Subpart B of 40 CFR Part 465.

An anti-degradation study was completed for this project. See Section XII for additional changes made to the draft permit.

1. EFFLUENT AND RECEIVING STREAM FLOW DATA

|  |  |  |  |
| --- | --- | --- | --- |
| **Outfall** | **Outfall Description** | **Permitted Flowrate** | **Location** |
| Outfall 101 | Process wastewater:   1. Non-contact cooling 2. Vacuum degassing contact cooling 3. Continuous caster contact cooling 4. Hot strip mill contact cooling 5. Cold mill 6. Galvanizing/galvalume contact cooling 7. Pickle line 8. Reverse osmosis reject 9. Paint Line | Monthly Avg.: 1.50 MGD  Proposed Avg.: 2.0 MGD  Daily Max.: Report | Lat.: 33º 26'  Long.: 88º 34' |
| Outfall 001 | Settling/reuse retention pond overflow:   1. Process wastewater from Outfall 101 2. Stormwater | Monthly Avg.: Report  Daily Max.: Report | Lat.: 33º 26'  Long.: 88º 34' |
| Outfall 002 | Settling/evaporation pond overflow:   1. Process wastewater from Scrap processing and Slag preparation 2. Stormwater | Monthly Avg.: Report  Daily Max.: Report | Lat.: 33º 26'  Long.: 88º 33' |

Internal Outfall 101 discharges into External Outfall 001. Outfalls 001 and 002 discharge into an unnamed tributary of Gilmer Creek and has a 7Q10 flowrate of 0 MGD. Gilmer Creek’s designated use is Fish and Wildlife and is located in the Tombigbee River Basin.

1. TOTAL DAILY MAXIMUM LOAD (TMDL) AND 303(d) ISSUES

The receiving stream, Unnamed Tributary of Gilmer Creek, is listed on the Mississippi 2018 303(d) List of Impaired Waterbodies. Specifically, the receiving stream is listed for biological impairment. This permit can be reopened and modified if a completed TMDL requires additional or more stringent monitoring based on the listed impairment.

A sediment TMDL for Designated Streams in HUCs 03160105 (Luxapallila Creek) and 03160106 (Middle Tombigbee River) in the Tombigbee River Basin was completed in January 2007. This TMDL is not applicable to SDC because, “the TSS contribution from wastewater treatment facilities was considered negligible in the development of this TMDL. The TSS component of any NPDES permitted facility is different from the pollutant addressed within this TMDL. The pollutant of concern for this TMDL is sediment from land use runoff and in-channel processes, consistent with discharges associated with construction activities and MS4s”.

1. TYPE OF WASTEWATER TREATMENT

|  |  |  |
| --- | --- | --- |
| **Outfall** | **Operation** | **Treatment Description** |
| Outfall 101 | Non-contact cooling | Sedimentation (settling), Multimedia filtration |
| Vacuum degassing contact cooling | Reuse/recycle of treated effluent, Neutralization |
| Continuous caster contact cooling | Belt filtration, Gravity thickening |
| Hot strip mill contact cooling | Flotation, Coagulation |
| Cold mill | Neutralization, Evaporation |
| Galvanizing/galvalume contact cooling | --- |
| Pickle line | --- |
| Reverse osmosis reject | --- |
| Paint | Neutralization, Oil Separation, Coagulation/Flocculation, Dissolved Air Flotation (DAF), Sand Filtration |
| Outfall 001 | Outfall 101 effluent | See list directly above |
| Stormwater | Sedimentation (settling), Evaporation |
| Outfall 002 | Scrap processing | Reuse/recycle of treated effluent |
| Slag preparation | --- |
| Stormwater | Sedimentation (settling), Evaporation |

VI. DATA FROM APPLICATION FORM NPDES FORM 2C (Renewal submitted 12/19/16)

|  |  |  |
| --- | --- | --- |
| **Outfall 101** | | |
| **Parameter** | **Maximum Daily Value** | |
|  | **Concentration**  **(mg/L)** | **Load**  **(lb/day)** |
| BOD | ND | ND |
| COD | 43 | 276.85 |
| TOC | 10.3 | 66.32 |
| TSS | 40.0 | 257.54 |
| Flow | 0.772 MGD | |
| Ammonia | 0.202 | 1.30 |
| Temperature (winter) | 23.2 ºC | |
| Temperature (summer) | 32.12 ºC | |
| pH (minimum) | 6.01 S.U. | |
| pH (maximum) | 8.83 S.U. | |
| Oil and Grease | ND | --- |
| Iron | 0.336 | 2.16 |
| Lead | ND | --- |
| Zinc | 0.898 | 5.41 |
| Chromium | 0.00171 | 0.000000011 |
| Nickel | 0.00551 | 0.000000036 |
| Naphthalene | ND | --- |
| Tetrachloroethylene | ND | --- |

|  |  |  |
| --- | --- | --- |
| **Outfall 001** | | |
| **Parameter** | **Maximum Daily Value** | |
|  | **Concentration**  **(mg/L)** | **Load**  **(lb/day)** |
| BOD | 32.00 | 2,909 |
| COD | 22 | 1,999.9 |
| TOC | 4.07 | 369.98 |
| TSS | 33 | 2999.9 |
| Flow | 10.9 MGD | |
| Ammonia | 0.72 | 65.45 |
| Temperature (winter) | 23.2 ºC | |
| Temperature (summer) | 32.12 ºC | |
| pH (minimum) | 6.01 S.U. | |
| pH (maximum) | 8.92 S.U. | |
| Oil and Grease | ND | --- |
| Iron | 0.200 | --- |
| Lead | ND | --- |
| Zinc | 0.00953 | ???? |
| Chromium | 0.00161 | 0.00000015 |
| Nickel | 0.00702 | 0.00000064 |
| Naphthalene | ND | --- |
| Tetrachloroethylene | ND | --- |

|  |  |  |
| --- | --- | --- |
| **Outfall 002** | | |
| **Parameter** | **Maximum Daily Value** | |
|  | **Concentration**  **(mg/L)** | **Load**  **(lb/day)** |
| BOD | ND | --- |
| COD | 52 | 1053.84 |
| TOC | 9.07 | 183.81 |
| TSS | 10 | 202.66 |
| Flow | 2.43 MGD | |
| Ammonia | 0.122 | 2.47 |
| Temperature (winter) | 18.33 ºC | |
| Temperature (summer) | --- | |
| pH (minimum) | 6.89 S.U. | |
| pH (maximum) | 8.12 S.U. | |
| Oil and Grease | ND | --- |
| Iron | 0.24 | 4.87 |
| Lead | ND | --- |
| Zinc | 0.0186 | 0.00000039 |
| Chromium | 0.00306 | 0.000000061 |
| Nickel | 0.00108 | 0.000000022 |
| Naphthalene | ND | --- |
| Tetrachloroethylene | ND | --- |

#### VII. WATER QUALITY LIMITATIONS BASED ON WASTELOAD ALLOCATION

A Waste Load Allocation (WLA) was requested by the permit writer. An e-mail dated January 23, 2017 by MDEQ’s Surface Water division stated: “Due to the nature of the

discharge from Steel Dynamics Columbus, a WLA is not required…”

1. EPA APPLICABLE CATEGORICAL GUIDELINES

Outfall 101 is subject to the following Subparts of 40 CFR Part 420: Iron and Steel Manufacturing Point Source Category:

|  |  |  |  |
| --- | --- | --- | --- |
| **Subpart** | **Subcategory** | **Regulation** | **Production Amounts** |
| Subpart D | Steelmaking | 40 CFR 420.44(b) NSPS | 10,300 MM Tons/day |
| Subpart E | Vacuum Degassing | 40 CFR 420.54 NSPS | 9,315 MM Tons/day |
| Subpart F | Continuous Casting | 40 CFR 420.64 NSPS | 9,260 MM Tons/day |
| Subpart G | Hot Forming | 40 CFR 420.74(b)(2) NSPS | 9,096 MM Tons/day |
| Subpart I | Acid Pickling | 40 CFR 420.94(a)(3) NSPS & 40 CFR 420.94(a)(5) NSPS | 7,726 MM Tons/day |
| Subpart J | Cold Forming | 40 CFR 420.104(a)(2) NSPS | 5,808 MM Tons/day |
| Subpart L | Hot Coating | 40 CFR 420.124(a) NSPS | 3,836 MM Tons/day |

NSPS = New Source Performance Standards

Outfall 001 is subject to the following Subparts of 40 CFR Part 465: Coil Coating Point Source Category:

|  |  |  |  |
| --- | --- | --- | --- |
| **Subpart** | **Subcategory** | **Regulation** | **Production Amounts** |
| Subpart A | Steel Basis Material | 40 CFR 465.13 NSPS | 0.187 MM ft2 |
| Subpart B | Galvanized Basis Material | 40 CFR 465.23 NSPS | 1.683 MM ft2 |

1. CATEGORICAL GUIDELINE LIMITATIONS CALCULATIONS

**40 CFR Part 420, Subpart D** – Steelmaking Subcategory: Basic Oxygen Furnace Steelmaking – Wet-suppressed combustion, 40 CFR 420.44(b). SDC produces 10,300 million tons/day. (10,300 tons/day)\*(2,000 tons/lbs) = (20,600,000 lbs/day)/1,000 lbs = 20,600

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG 1,000 Pounds lbs/day lbs/day

TSS 0.00522 0.0146 x 20,600 = 108 301

Lead 0.0000626 0.000188 x 20,600 = 1.29 3.87

Zinc 0.0000939 0.000282 x 20,600 = 1.93 5.81

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

**40 CFR Part 420, Subpart E** – Vacuum Degassing Subcategory, 40 CFR 420.54. SDC produces 9,315 million tons/day.

(9,315 tons/day)\*(2,000 tons/lbs) = (18,630,000 lbs/day)/1,000 lbs = 18,630

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG 1,000 Pounds lbs/day lbs/day

TSS 0.00261 0.00730 x 18,630 = 49 136

Lead 0.0000313 0.0000939 x 18,630 = 0.583 1.75

Zinc 0.0000469 0.000141 x 18,630 = 0.874 2.63

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

**40 CFR Part 420, Subpart F** – Continuous Casting Subcategory. SDC produces 9,260 million tons/day, 40 CFR 420.64.

(9,260 tons/day)\*(2,000 tons/lbs) = (18,412,000 lbs/day)/1,000 lbs = 18,520

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG 1,000 Pounds lbs/day lbs/day

TSS 0.00261 0.00730 x 18,520 = 48.337 135.20

Oil & Grease 0.00104 0.00313 x 18,520 = 19.261 57.97

Lead 0.0000313 0.0000939 x 18,520 = 0.580 1.74

Zinc 0.0000469 0.000141 x 18,520 = 0.869 2.61

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

**40 CFR Part 420, Subpart G** – Hot Forming Subcategory: Section Mills: Specialty. SDC produces 9,096 tons/day, 40 CFR 420.74(b)(2).

(9,096 tons/day)\*(2,000 tons/lbs) = (18,192,000 lbs/day)/1,000 lbs = 18,192

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG 1,000 Pounds lbs/day lbs/day

TSS 0.00813 0.0217 x 18,192 = 148 395

Oil & Grease N/A 0.00542 x 18,192 = N/A 99

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

**40 CFR Part 420, Subpart I** – Acid Pickling Subcategory: Sulfuric Acid Pickling: Strip, Sheet, and Plate, 40 CFR 420.94(a)(3). SDC produces 7,726 tons/day.

(7,726 tons/day)\*(2,000 tons/lbs) = (15,452,000 lbs/day)/1,000 lbs = 15,452

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG 1,000 Pounds lbs/day lbs/day

TSS 0.00501 0.0117 x 15,452 = 77 181

Oil & Grease1 0.00167 0.00501 x 15,452 = 26 77

Lead 0.0000250 0.0000751 x 15,452 = 0.386 1.16

Zinc 0.0000334 0.000100 x 15,452 = 0.516 1.55

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

1The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.

**40 CFR Part 420, Subpart I** – Acid Pickling Subcategory: Sulfuric Acid Pickling: Fume Scrubber. SDC produces 7,726 tons/day, 40 CFR 420.94(a)(5). These limitations shall be applicable to each fume scrubber associated with a sulfuric acid pickling operation.

Avg Max Avg Limit Max Limit

Parameter ELG ELG lbs/kg lbs/day lbs/day

TSS 2.45 kg 5.72 kg x 2.2 = 5.39 12.6

Oil & Grease1 0.819 kg 2.45 kg x 2.2 = 1.80 5.39

Lead 0.0123 kg 0.0368 kg x 2.2 = 0.0271 0.0810

Zinc 0.0164 kg 0.0491 kg x 2.2 = 0.0361 0.108

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

1The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.

**40 CFR Part 420, Subpart J** – Cold Forming Subcategory: Cold Rolling Mills: Recirculation: Multiple Stands, 40 CFR 420.104(a)(2). SDC produces 5,808 tons/day.

(5,808 tons/day)\*(2,000 tons/lbs) = (11,616,000 lbs/day)/1,000 lbs = 11,616

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG 1,000 Pounds lbs/day lbs/day

TSS 0.00125 0.00250 x 11,616 = 14.5 29

Oil & Grease 0.000417 0.00104 x 11,616 = 4.84 12

Chromium1 0.0000167 0.0000418 x 11,616 = N/A N/A

Lead 0.0000063 0.0000188 x 11,616 = 0.0732 0.218

Nickel1 0.0000125 0.0000376 x 11,616 = N/A N/A

Zinc 0.0000042 0.0000125 x 11,616 = 0.0488 0.145

Naphthalene N/A 0.0000042 x 11,616 = N/A 0.0488

Tetrachloro- N/A 0.0000063 x 11,616 = N/A 0.0732

ethylene ------- ------- ------- = ------- -------

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

1The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.

**40 CFR Part 420, Subpart L** – Hot Coating Subcategory: Galvanizing, Terne Coating and Other Coatings: Strip, Sheet, and Miscellaneous Products, 40 CFR 420.124(a). SDC produces 3,836 tons/day.

(3,836 tons/day)\*(2,000 tons/lbs) = (7,672,000 lbs/day)/1,000 lbs = 7,672

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG 1,000 Pounds lbs/day lbs/day

TSS 0.0188 0.0438 x 7,672 = 144 336

Oil & Grease 0.00626 0.0188 x 7,672 = 48 144

Lead 0.0000939 0.000282 x 7,672 = 0.72 2.16

Zinc 0.000125 0.000376 x 7,672 = 0.959 2.88

Chromium 0.0000125 0.0000376 x 7,672 = N/A N/A

(hexavalent)1 ------- ------- ------- = ------- -------

pH 6.0 (min)SU 9.0 SU = 6.0 (min)SU 9.0 SU

1The limitations for hexavalent chromium shall be applicable only to galvanizing operations which discharge wastewaters from the chromate rinse step. Note: the permittee does not discharge the chromate rinse from the galvanizing line.

**40 CFR Part 465, Subpart A** - Coil Coating Point Source Category, 40 CFR 465.13. SDC produces approximate 0.187 million feet2 of coated steel.

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG Million ft2 lbs/day lbs/day

Chromium 0.01 0.024 x 0.187 = 0.002 0.004

Cyanide 0.005 0.013 x 0.187 = 0.001 0.002

Zinc 0.027 0.066 x 0.187 = 0.005 0.012

Iron 0.041 0.086 x 0.187 = 0.008 0.016

Oil & Grease 0.65 0.65 x 0.187 = 0.122 0.122

TSS 0.78 0.97 x 0.187 = 0.146 0.181

pH 7.5 (min)SU 10.0 SU = 7.5 (min)SU 10.0 SU

**40 CFR Part 465, Subpart B** - Coil Coating Point Source Category, 40 CFR 465.23. SDC produces approximate 1.683 million feet2 of coated steel.

Avg Max Pounds per Avg Limit Max Limit

Parameter ELG ELG Million ft2 lbs/day lbs/day

Chromium 0.011 0.027 x 1.683 = 0.0185 0.045

Copper 0.043 0.090 x 1.683 = 0.072 0.151

Cyanide 0.006 0.015 x 1.683 = 0.010 0.025

Zinc 0.030 0.08 x 1.683 = 0.050 0.135

Iron 0.045 0.09 x 1.683 = 0.076 0.051

Oil & Grease 0.702 0.71 x 1.683 = 1.18 1.19

TSS 0.84 1.06 x 1.683 = 1.41 1.78

pH 7.5 (min)SU 10.0 SU = 7.5 (min)SU 10.0 SU

|  |  |  |
| --- | --- | --- |
| **TOTAL Categorical Limitation LOADS from all applicable Subparts** | | |
| **Pollutant** | **Monthly Average (lb/day)** | **Daily Maximum (lb/day)** |
| TSS | 596 | 1,527 |
| O&G | 101 | 397 |
| Lead | 3.7 | 12.0 |
| Zinc | 5.3 | 15.9 |
| Chromium | 0.020 | 0.050 |
| Copper | 0.072 | 0.151 |
| Cyanide | 0.011 | 0.028 |
| Iron | 0.083 | 0.168 |
| Naphthalene | 0.0488 | N/A |
| Tetrachloroethylene | 0.0732 | N/A |
| pH | 9.0 SU | 6.0 SU (min) |

1. METAL TRANSLATOR CALCULATIONS

Kpo\*TSSα; Kp C/CT = 1/(1+Kp\*TSS\*10-6)

Kpo and TSSα values obtained from EPA The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion (EPA 823-B-96-007, June 1996). Table 3 on page 6.

**LEAD**: These limitations have been evaluated using the Chemical Translator for the Dissolved Fraction utilizing a very conservative Total Suspended Solids (TSS) value of 10 mg/L. This value is less than what the facility has reported in its permit application.

For Lead in streams:

Kpo = 2.80E+06 α = -0.8 Kp = 2.80E+06\*10-0.8 = 443,770

C/CT = 1/[1+(443,770\*10\*10-6)] = 0.1839

CChronic = 0.0118 mg/L CTChronic = 0.0118 / 0.1839 = 0.0642 mg/l

CTChronic = 0.0642 mg/L \* 2.0 MGD (proposed) \* 8.34 = 1.070lbs/day

CAcute = 0.030 mg/L CTAcute = 0.030 / 0.1839 = 0.1631 mg/L

CTAcute = 0.1631 mg/L \* 2.0 MGD (proposed) \* 8.34 = 2.72 lbs/day

**ZINC**: These limitations have been evaluated using the Chemical Translator for the Dissolved Fraction utilizing a very conservative Total Suspended Solids (TSS) value of 10 mg/L. This value is less than what the facility has reported in its permit application.

For Zinc in streams:

Kpo = 1.25E+06 α = -0.7038 Kp = 1.25E+06\*10-0.7038 = 247,235

C/CT = 1/[1+(247,235\*10\*10-6)] = 0.2880

CChronic&Acute = 0.065 mg/L CT = 0.065 / 0.2880 = 0.2257 mg/l

CT = 0.2257mg/L \* 2.0 MGD (proposed) \* 8.34 = 3.76lbs/day

1. TOXICITY SCREENING

QW = max 30-day avg wastewater flow; Nov 2015 – Oct 2016 DMR data used

Qr = receiving stream flow (7Q10 flow used for acute and chronic screening and Mean Annual Flow used for Human Health screening)

Xr = receiving stream concentration

XW = historical effluent data; Nov 2015 – Oct 2016 DMR data used (use max concentration for acute screening and LTA concentration for chronic and human health screening)

XWa = permit limits from previous permit or from effluent guidelines

Xta = the calculated instream concentration based on existing permit limits or the calculated limit based on current effluent guidelines

Xt = the calculated instream concentration based on historical effluent data

IWC = Instream Wastewater Concentration

Xt = (Qr\*Xr) + (Qw\* XW) / (Qr+QW) When Qr = 0, then Xt =XW

Qw = 2.95 MGD

Qr = 0 MGD

IWC = [2.95/(2.95 + 0)]\*100 = 100%

Since IWC > 1%, both acute and chronic screening are developed.

Outfall 001 Toxicity Screening Results:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | DMR Values | | Water Quality Standard | | | Water Quality Standard > Maximum Value | | |
| Parameter | Monthly Average  XW(LTA) | Daily Maximum  XW(Max) | Chronic | Acute | Monthly Average | | Daily Maximum |
| Ammonia (mg/L) | 0.0394 | 0.182 | 2 | 3 | PASS | | PASS |
| Chromium (mg/L) | 0.0013 | 0.005 | 0.042 | 0.323 | PASS | | PASS |
| Iron (mg/L) | 0.2523 | 0.857 | 1.0 | N/A | PASS | | PASS |
| Lead (mg/L) | 0.0001 | 0.004 | 0.00642 | 0.1631 | PASS | | PASS |
| Nickel (mg/L) | 0.0066 | 0.012 | 0.029 | 0.260 | PASS | | PASS |
| Zinc (mg/L) | 0.0134 | 0.030 | 0.2257 | 0.2257 | PASS | | PASS |

1. PROPOSED FINAL LIMITATIONS
2. Outfall 101 (Internal): Wastewater Entering the Retention Pond

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | Categorical Standard | | Current Permit Limits | | Proposed Permit Limits | | Basis1 |
| Monthly Avg. mg/L (lb/day) | Daily Max.  mg/L (lb/day) | Monthly Avg.  mg/L (lb/day) | Daily Max.  mg/L (lb/day) | Monthly Avg.  mg/L (lb/day) | Daily Max. mg/L (lb/day) |  |
| Lead | (3.7) | (11) | Report (0.0801) | Report (0.1201) | Report (3.7) | Report (7) | CAT |
| Zinc | (5.3) | (16) | Report (2.8248) | Report (4.2371) | Report (5.3) | Report (16) | CAT |
| Chromium | (0.021) | (0.051) | N/A | N/A | Report (0.021) | Report (0.051) | CAT |
| Copper | (0.080) | (0.168) | N/A | N/A | Report (0.080) | Report (0.168) | CAT |
| Cyanide | (0.011) | (0.028) | N/A | N/A | Report (0.011) | Report (0.028) | CAT |
| Iron | (0.084) | (0.168) | N/A | N/A | Report (0.084) | Report (0.168) | CAT |
| Naphthalene | N/A | (0.0488) | Report (Report) | Report (0.0488) | Report (Report) | Report (0.0488) | CAT |
| Tetrachloro-  ethylene | N/A | (0.0732) | Report (Report) | Report (0.0412) | Report (Report) | Report (0.0732) | CAT |
| O&G | (101) | (397) | Report (86.04) | Report (187.65) | Report (101) | Report (397) | CAT |
| TSS | (596) | (1,527) | Report (553.19) | Report (1125.9) | Report (596) | Report (1,527) | CAT |
| pH | 6.0 SU (min) | 9.0 SU | 6.0 SU (min) | 9.0 SU | 6.0 SU (min) | 9.0 SU | CAT |
| Flow | N/A | N/A | 1.50 MGD | Report MGD | 2.0 MGD | Report MGD | BTJ |

Flow shall be monitored continuously using a continuous recorder. Total Recoverable Lead, Total Recoverable Zinc, Total Recoverable Chromium, Total Recoverable Copper, Total Recoverable Cyanide, Total Recoverable Iron, and Total Suspended Solids shall be monitored weekly using a 24-hour composite sample. Naphthalene, Tetrachloroethylene, Oil & Grease, and pH shall be monitored weekly using a grab sample. Data shall be submitted on a monthly DMR.

Anti-backsliding is not applicable to Total Recoverable Lead and Total Recoverable Zinc because the pervious permit applied water quality to this internal outfall. This was a technical mistake because water quality criteria should only be applied to the external outfalls.

Anti-backsliding is not applicable to Total Suspended Solids and Oil & Grease due to material changes at the facility (production increase) since the previous permit.

Anti-backsliding is not applicable to Tetrachloroethylene because the current permit limits were applied due to technical mistakes.

Within 180 days of commencing discharge of effluent associated with the new manufacturing process, the permittee shall submit to MDEQ a complete Form 2C containing results of data collected from the facility's wastewater discharge for those parameters required to be tested for the Coil Coating Point Source Category, 40 CFR Part 465. Based upon the results of the sampling, the permit may be reopened to address additional limits or requirements as deemed necessary to protect water quality.

1. OUTFALL 001 (External): Wastewater Exiting the Retention Pond

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | Water Quality Standard | | Current Permit Limits | | Proposed Permit Limits | | Basis1 |
| Monthly Avg. mg/L (lb/day) | Daily Max.  mg/L (lb/day) | Monthly Avg.  mg/L (lb/day) | Daily Max.  mg/L (lb/day) | Monthly Avg.  mg/L (lb/day) | Daily Max. mg/L (lb/day) |  |
| pH | 6.0 SU (min) | 9.0 SU | 6.0 SU (min) | 9.0 SU | 6.0 SU (min) | 9.0 SU | MSWQS |
| Flow | N/A | N/A | Report MGD | Report MGD | Report MGD | Report MGD | CPL |

Flow shall be monitored continuously using a continuous recorder. pH shall be monitored monthly using a grab sample. Data shall be submitted on a monthly DMR.

Total Recoverable Lead, Total Recoverable Zinc, Naphthalene, Tetrachloroethylene, Oil & Grease, Total Suspended Solids, Total Recoverable Iron, Total Recoverable Chromium, Ammonia, Biochemical Oxygen Demand (5-Day), Dissolved Oxygen, and Temperature have been removed from this draft permit. These parameters are being removed because the federal categorical limitations are being limited at Outfall 101, the toxicity screening completed for the permit reissuance indicated that there is no reasonable potential for water quality violations, and for the permit reissuance MDEQ’s Modeling and TMDL Branch in the Surface Water Division did not recommend any other water quality limitations.

1. OUTFALL 002 (External): Wastewater Exiting the Evaporation Pond

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Parameter | Water Quality Standard | | Current Permit Limits | | Proposed Permit Limits | | Basis1 |
| Annual Avg. | Daily Max. | Annual Avg. | Daily Max. | Annual Avg. | Daily Max. |  |
| pH | 6.0 SU (min) | 9.0 SU | 6.0 SU (min) | 9.0 SU | 6.0 SU (min) | 9.0 SU | MSWQS |
| Flow | N/A | N/A | Report MGD | Report MGD | Report MGD | Report MGD | CPL |

Flow shall be monitored annually instantaneously. pH shall be monitored annually using a grab sample. Data shall be submitted on an annual DMR.