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|  | Michigan Department of Environment, Great Lakes, and Energy  Air Quality Division |  |
| **State Registration Number** | **RENEWABLE OPERATING PERMIT** | **ROP Number** |
| B2873 | **STAFF REPORT** | MI-ROP-B2873-2019 |

**Michigan Sugar Company - Sebewaing**

SRN: B2873

Located at

763 North Beck Street, Sebewaing, Huron County, Michigan 48759

Permit Number: MI-ROP-B2873-2019

Staff Report Date: May 27, 2019

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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|  | Michigan Department of Environment, Great Lakes, and Energy  Air Quality Division | | |  | |
| **State Registration Number** | | **RENEWABLE OPERATING PERMIT** | **ROP Number** | |
| B2873 | | MAY 27, 2019 - STAFF REPORT | MI-ROP-B2873-2019 | |

**Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan’s Administrative Rules for Air Pollution Control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source’s applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

**General Information**

|  |  |
| --- | --- |
| Stationary Source Mailing Address: | Michigan Sugar Company – Sebewaing  763 North Beck Street  Sebewaing, Michigan 48759 |
| Source Registration Number (SRN): | B2873 |
| North American Industry Classification System (NAICS) Code: | 311313 |
| Number of Stationary Source Sections: | 1 |
| Is Application for a Renewal or Initial Issuance? |  |
| Application Number: | 201700027 |
| Responsible Official: | Kelly Scheffler, Factory Manager  989-883-3201 |
| AQD Contact: | Matthew Karl, Environmental Quality Analyst  989-439-3779 |
| Date Application Received: | February 15, 2017 |
| Date Application Was Administratively Complete: | May 26, 2017 |
| Is Application Shield In Effect? |  |
| Date Public Comment Begins: | May 27, 2019 |
| Deadline for Public Comment: | June 26, 2019 |

**Source Description**

Michigan Sugar Company - Sebewaing is located near Lake Huron in northern Sebewaing, Michigan. The facility manufactures table quality sugar and powdered sugar. The basic raw ingredient used in the manufacture of sugar is sugar beets. Filters and milk of lime are used to remove impurities, with agricultural lime being produced as a by-product. Other by-products produced as a result of the process includes pressed pulp and pellets for animal feed. The primary manufacturing steps include diffusion, juice purification, evaporation/concentration, crystallization, granulation drying, granulation cooling, sugar packaging, and dried pulp manufacture.

Existing process equipment located on-site is used in the manufacture of sugar and pellets. Process equipment includes, but is not limited to: beet slicers, diffusers, carbonators, filters, evaporators, vacuum pans, dryers, centrifuges, coolers, and packaging equipment. Production support process equipment at the facility includes the lime kiln and coat and natural gas/fuel oil fired boilers and waste water treatment lagoons.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2017**.

**TOTAL STATIONARY SOURCE EMISSIONS**

| **Pollutant** | **Tons per Year** |
| --- | --- |
| Carbon Monoxide (CO) | 58.65 |
| Lead (Pb) | 0.011 |
| Nitrogen Oxides (NOx) | 160.3 |
| Particulate Matter (PM 10, filterable) | 37.66 |
| Particulate Matter (PM 10, Primary) | 13.26 |
| Particulate Matter (PM 2.5, Primary) | 7.64 |
| Sulfur Dioxide (SO2) | 260.24 |
| Volatile Organic Compounds (VOCs) | 1.29 |
|  |  |

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2017 by AQD:

|  |  |
| --- | --- |
| **Individual Hazardous Air Pollutants (HAPs) \*\*** | **Tons per Year** |
| Ammonia | 0.55 |
| Arsenic | 0.01 |
| Cadmium | 0.001 |
| Chromium | 0.028 |
| Formaldehyde | 0.019 |
| HCl | 0.725 |
| Hexane | 0.31 |
| Mercury | 0.002 |
| **Total Hazardous Air Pollutants (HAPs)** | **1.65** |

\*\*As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

**Regulatory Analysis**

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Huron County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants (as of July 18, 2016).

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of nitrogen oxide, particulate matter, volatile organic compounds, carbon monoxide, and exceeds 100 tons per year. In addition, the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is equal to or more than10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

EU-DRYER#3 at the stationary source  subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21, because at the time of New Source Review permitting the potential to emit of VOCs and  was greater than  tons per year.

EU-CEPACKAGEBOIL, EU-DRYER#2, EU-DRYER#1, EU-LIMEKILN, EU-PELLETCOOLER,   
EU-PULPDUSTCOLL, EU-WETSCRUB, EU-WICKESEASTBOILER, and EU-WIKESWESTBOILER were installed or modified before August 15, 1967 and were exempt from New Source Review (NSR) permitting requirements at the time installed. However, future modifications of this equipment may be subject to NSR.

A total of four boilers located at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers promulgated in 40 CFR   
Part 63, Subparts A and DDDDD. The initial notification of applicability was submitted by the facility on May 28, 2013. The 2016 Annual Compliance Report for the referenced EUs was submitted electronically on March 15, 2017. These include:

|  |  |  |
| --- | --- | --- |
| **NESHAP** | **Emission Units (EUs)** | **Flexible Group (FG)** |
| 40 CFR Part 63, Subparts A and DDDDD | EU-WICKESEASTBOILER | FG-BOILERS, FG-STOKERBLR-5D |
| 40 CFR Part 63, Subparts A and DDDDD | EU-WICKESWESTBOILER | FG-BOILERS, FG-STOKERBLR-5D |
| 40 CFR Part 63, Subparts A and DDDDD | EU-CEPACKAGEBOIL (AKA EU-MURRAYBLR) | FG-NATGASBOILERS-5D |
| 40 CFR Part 63, Subparts A and DDDDD | EU-SUMBOILER | FG-NATGASBOILERS-5D |

It should be noted that EU-SUMBOILER has historically been identified as exempt under Rule 212(4) and was only incorporated into the ROP due to the applicability of the NESHAP.

A Notice of Violation was issued to the company on May 10, 2017, based on failure of the company to submit a complete renewal application six months prior to the ROP expiration date. Company representatives met with AQD Enforcement Staff on June 23, 2017 to discuss entering into a consent agreement. On November 3, 2017, the facility was issued the final signed copy of the State of Michigan (SOM), EGLE, AQD Stipulation for Entry of Final Order by Consent (Consent Order) AQD No. 16-2017 for Michigan Sugar Company - Sebewaing. The effective date on the Consent Order was November 2, 2017. No schedule of compliance was determined to be required at the time of permit renewal.

EGLE’s AQD revised R 336.1287 and R 336.1290 on December 20, 2016. The revised rules, specifically R 336.1287(2)(c) and R 336.1290, have some requirements that are more detailed compared to the earlier versions. FG-RULE287(2)(c) and FG-RULE290 are flexible group requirement tables created for emission units subject to R 336.1287(2)(c) and R 336.1290, respectively.  Emission units installed before December 20, 2016, can comply with the requirements of Rule 287 and Rule 290 in effect at the time of installation or modification. However, emission units installed or modified after December 20, 2016 must comply with the requirements of the current rules.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

The emission limitation(s) or standard(s) for PM from EU-DRYER#3 and FG-PULPDRYERS (all rotary pulp dryers) at the stationary source are subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR Part 64. These emission units have a control device (multiclone equipped with flue gas recirculation) and potential pre-control emissions of PM are greater than the major source threshold level. The monitoring for the control device includes both a once a day emission survey as well as monitoring and recording of pressure drops across pollution control devices by facility operators. It should also be noted that the company has not historically agreed and stated that the CAM is for PM10, not PM.

The emission limitation or standard for PM from EU-WICKESWESTBOILER and   
EU-WICKESEASTBOILER (FG-BOILERS) at the stationary source subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64. The two coal fired boilers (FG-BOILERS) are controlled by multiclone, wet scrubber, and wet electrostatic precipitator (ESP).  The coal fired boilers are subject to the boiler MACT in addition to a SIP limit of .45 lbs PM/1000 lbs exhaust.  A request by Michigan Sugar Company - Sebewaing to EPA was made for an applicability determination to figure out which control devices were subject to the CAM regulations.  EPA decided that only the multiclone would be subject to CAM.  This is because the multiclone that was installed many years ago was installed to comply with the SIP limit and had done stack testing to verify compliance with the SIP limit.  The multiclone alone could comply with the SIP limit.  The wet scrubber and wet ESP were installed many years later to comply with the federal boiler MACT regulations.

| **Emission Unit ID** | **Pollutant/ Emission Limit** | **UAR(s)** | **Control Equipment** | **Monitoring** | **Presumptively Acceptable Monitoring?** |
| --- | --- | --- | --- | --- | --- |
| EU-DRYER#3 | PM - 0.1 lbs per 1,000 lbs of exhaust gas | R 336.1201(3); R 336.1331(c) | Multiclones equipped with Flue Gas Recirculation for PM | Once per day emission monitoring and measure of pressure drop across the multiclones 3X per shift. |  |
| FG-PULPDRYERS | PM - 0.1 lbs per 1,000 lbs of exhaust gas | R 336.1331(a) | Multiclones equipped with Flue Gas Recirculation for PM | Once per day emission monitoring and measure of pressure drop across the multiclones 3X per shift. |  |
| FG-BOILERS | PM – 0.45 lbs per 1,000 lbs of exhaust gas, corrected to 50% excess air | R 336.1331(a) | Multiclone and a venturi wet scrubber. (Wet ESP installed in 2016) | Once per day emission monitoring and measure of pressure drop across the multiclones; and measure of pressure drop across the wetscrubber in addition to measure of liquid flow rate. |  |

Please refer to Parts B, C, and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

**Source-wide Permit to Install (PTI)**

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-PTI-2873-2012 are identified in Appendix 6 of the ROP.

| **PTI Number** | | | |
| --- | --- | --- | --- |
| 36-08 (temporary boiler) | 120-03 | 49-93 | 339-05A |
| 309-94 | 48-93 | 90-03 | 174-01 |
| 234-89A | 115-85 | 964-89 | 260-07 |
| 35-83 | 1049-84 | 347-85 | 90-03A |
| 90-03B |  |  |  |

**Streamlined/Subsumed Requirements**

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

**Non-applicable Requirements**

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

**Processes in Application Not Identified in Draft ROP**

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement:

| **PTI Exempt**  **Emission Unit ID** | **Description of PTI**  **Exempt Emission Unit** | **Rule 212(4)**  **Citation** | **PTI Exemption Rule Citation** |
| --- | --- | --- | --- |
| EGGRANULATOR | Dries crystalized sugar |  | Rule 285(dd) |
| EGSUGARCOOLER | Cools sugar after the drying process |  | Rule 285(dd) |
| EGSUGDUSTCOLL | Collects air from sugar transfer scrolls and sugar packaging machines |  | Rule 285(dd) |
| EGPOWDERMILLS | Hammer mills to grind sugar into fine powder |  | Rule 285(dd) |
| EGSUMBOILER\* | 77 MMBTU/hr Natural Gas fired boiler used for heating after processing seasons |  | Rule 282(2)(b)(i) |

\* EGSUMBOILER (AKA EU-SUMBOILER) was also identified in the ROP application EU Summary Table due to the applicability of the Boiler MACT and its inclusion in FG-NATGASBOILER-5D.

Other equipment previously identified as exempt from Rule 201, but not included in the recent renewal application include:

| **PTI Exempt**  **Emission Unit ID** | **Description of PTI**  **Exempt Emission Unit** | **PTI Exemption Rule Citation** |
| --- | --- | --- |
| EGNATGASHTRS | Natural gas-fired heaters for space heating | Rule 282(b)(i) |
| EG#6OILTANK | Vents on top of #6 oil tank, east side. | Rule 284(d) |
| DVDRUMFILTER | Vacuum drum filter vents for lime rinsing. | Rule 281(e) |

**Draft ROP Terms/Conditions Not Agreed to by Applicant**

The following table lists terms and/or conditions of the draft ROP that the AQD and the applicant did not agree upon and outlines the applicant’s objections pursuant to Rule 214(2). The terms and conditions that the AQD believes are necessary to comply with the requirements of Rule 213 shall be incorporated into the ROP.

| **Emission Unit/ Flexible Group ID** | **Permit Term(s) and/or Condition(s) in Dispute** | **Applicant’s Objection** |
| --- | --- | --- |
| EUDRYER#3 and FG-PULPDRYERS | 40 CFR Part 64, CAM applicability | With respect to the pulp dryers and CAM, the company expresses its opinion that the emission units are not subject to Part 64, and that the multiclones are effective in control and removal of total PM but are not effective in removal of PM10 and PM2.5. EGLE believes that control of total PM as a surrogate for PM10 and PM 2.5 under Michigan Part 3 Rules is appropriate and Federally enforceable. |

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP. The permittee will continue to comply with AQD ACO No. 16-2017 and the schedule of compliance noted in Appendix 2.

**Action taken by the EGLE, AQD**

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD’s proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Chris Hare, Bay City District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

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|  | Michigan Department of Environment, Great Lakes, and Energy  Air Quality Division |  |
| **State Registration Number** | **RENEWABLE OPERATING PERMIT** | **ROP Number** |
| B2873 | JULY 9, 2019 - STAFF REPORT ADDENDUM | MI-ROP-B2873-2019 |

**Purpose**

A Staff Report dated May 27, 2019, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the  comment period as described in . In addition, this addendum describes any changes to the ROP resulting from these pertinent comments.

**General Information**

|  |  |
| --- | --- |
| Responsible Official: | Kelly Scheffler, Factory Manager  989-883-3201 |
| AQD Contact: | Matthew Karl, Environmental Quality Analyst  989-439-3779 |

**Summary of Pertinent Comments**

No pertinent comments were received during the comment period.

**Changes to the May 27, 2019 ROP**

No changes were made to the ROP.

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| --- | --- | --- |
|  | Michigan Department of Environment, Great Lakes, and Energy  Air Quality Division |  |
| **State Registration Number** | **RENEWABLE OPERATING PERMIT** | **ROP Number** |
| B2873 | AUGUST 1, 2019 - STAFF REPORT ADDENDUM | MI-ROP-B2873-2019 |

**Purpose**

A Staff Report dated May 27, 2019, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize a change in a monitoring condition as stated below.

**General Information**

|  |  |
| --- | --- |
| Responsible Official: | Kelly Scheffler, Factory Manager  989-883-3201 |
| AQD Contact: | Matthew Karl, Environmental Quality Analyst  989-439-3779 |

The draft ROP was sent to EPA for 45-day review on July 9, 2019. During the 45-day EPA review, an error was brought to the AQD’s attention by Michigan Sugar Company – Sebewaing. Staff had previously discussed with the company the EU-CEPACKAGEBOIL monitoring/recordkeeping special condition VI.1. The company requested consistency with the same monitoring conditions in the ROP renewals for the Caro and Croswell facilities; however, the condition was not changed. The requested language is now corrected, and the change is described below:

**EUCEPACKAGEBOIL VI.1 Current:**

1. The permittee shall perform and record the results of a non-certified visible emissions check on EUCEPACKAGEBOIL at least once per operating day.

**EUCEPACKAGEBOIL VI.1 Correction:**

1. The permittee shall perform and record the results of a non-certified visible emissions check on EUCEPACKAGEBOIL at least once per operating day when firing fuel oil.

Due to this change in the permit, the 45-day EPA review is restarting on August 1, 2019.

|  |  |  |
| --- | --- | --- |
|  | Michigan Department of Environment, Great Lakes, and Energy  Air Quality Division |  |
| **State Registration Number** | **RENEWABLE OPERATING PERMIT** | **ROP Number** |
| B2873 | SEPTEMBER 18, 2019 - STAFF REPORT ADDENDUM | MI-ROP-B2873-2019 |

**Purpose**

A Staff Report with Addendum dated August 1, 2019, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize changes in monitoring conditions for EU-DRYER#3,   
FG-PULPDRYERS, the Appendix 7 emissions calculations, and the Appendix 9 fuel sampling plan as stated below.

**General Information**

|  |  |
| --- | --- |
| Responsible Official: | Kelly Scheffler, Factory Manager  989-883-3201 |
| AQD Contact: | Matthew Karl, Environmental Quality Analyst  989-439-3779 |

The draft ROP was re-sent to EPA for 45-day review on August 1, 2019. During the second 45-day EPA review, several comments were brought to the AQD’s attention by Michigan Sugar Company – Sebewaing. Staff had previously discussed with the company the EU-DRYER#3 and FG-PULPDRYERS monitoring/recordkeeping special condition VI.1. The company requested consistency with the same monitoring conditions in the ROP renewals for the Caro and Croswell facilities; however, the condition was not removed. The requested language is now removed. The removal was due to the moisture plume present making visible emissions observations difficult to perform and use as an indicator for compliance.

The company also requested consistency with the Appendix 7 emissions calculations and the Appendix 9 fuel sampling plan to have the units used in the appendices match the emission limit and material limit conditions.

During the 7-day period given to the company to review the draft ROP, several additional comments were brought to the AQD’s attention by Michigan Sugar Company – Sebewaing. The following changes were made to the draft ROP conditions to maintain consistency with the Michigan Sugar Company - Croswell and Caro ROP conditions:

EU-CEPACKAGEBOIL V.1 Current:

1. At least once per campaign the permittee shall verify the vendor supplied sulfur content data by conducting independent analysis in accordance with the Fuel Sampling Plan in Appendix 9, as may be amended with the approval of the District Supervisor.

EU-CEPACKAGEBOIL V.1 Change:

1. If fuel oil is fired in EU-CEPACKAGEBOIL, the permittee shall verify the vendor supplied sulfur content data at least once per campaign by conducting independent analysis in accordance with the Fuel Sampling Plan in Appendix 9, as may be amended with the approval of the District Supervisor.

EU-CEPACKAGEBOIL VI.3 Addition:

1. The permittee shall record the date, time, and duration that fuel oil is fired in EU-CEPACKAGEBOIL. (R 336.1213(3))

EU-DRYER#3 III.2 Current:

1. Permittee shall not operate EU-DRYER#3 unless the multiple cyclone collector is installed, maintained, and operated in a satisfactory manner.

EU-DRYER#3 III.2 Change:

1. Permittee shall not operate EU-DRYER#3 unless the multiple cyclone collector and flue gas recirculation system are installed, maintained, and operated in a satisfactory manner.

EU-DRYER#3 V.1 Current:

1. At least once per campaign and when the boiler is in liquid fuel service, the permittee shall verify the vendor supplied sulfur content data by conducting independent analysis in accordance with the Fuel Sampling Plan in Appendix 9, as may be amended with the approval of the District Supervisor.

EU-DRYER#3 V.1 Change:

1. If fuel oil is fired in EU-DRYER#3, the permittee shall verify the vendor supplied sulfur content data at least once per campaign by conducting independent analysis in accordance with the Fuel Sampling Plan in Appendix 9, as may be amended with the approval of the District Supervisor. (R 336.1213)

EU-DRYER#3 V.2 Current:

1. The permittee shall verify particulate, VOC, and CO emission rates from EU-DRYER#3 by testing at owner’s expenses, in accordance with the Department requirements, within five years from the date of the most recent performance test.

|  |  |
| --- | --- |
| **Pollutant** | **Test Method Reference** |
| PM | Method 5B, 5C |

EU-DRYER#3 V.2 Change:

1. The permittee shall verify particulate, VOC, and CO emission rates from EU-DRYER#3 by testing at owner’s expenses, in accordance with the Department requirements, within five years from the date of the last particulate matter performance testing and within five years of the most recent performance test thereafter.

|  |  |
| --- | --- |
| **Pollutant** | **Test Method Reference** |
| PM | Method 5B, 5C, or Method 17 |

EU-DRYER#3 VI.1 Current:

1. Calibration of the monitor shall be performed on an annual basis.

EU-DRYER#3 VI.1 Change:

1. Calibration or zeroing of the monitor shall be performed on an annual basis.

EU-DRYER#3 VI.2 Addition:

1. When operating, permittee shall continuously monitor the air flow through the flue gas recirculation system with a differential pressure cell or pitot tube or similar device. Results of the monitoring shall be recorded every hour on a chart recorder or log and shall be kept on file. If a log is the recording method used, and best efforts are employed to keep hourly records, it shall not be a deviation if at least three data points per shift are recorded. The backup indicator shall be the pressure change in the flue gas recirculation fan. Repairs shall be made to the flue gas recirculation system as soon as is reasonable after detection of a malfunction and a record of the malfunction and repairs taken to maintain compliance with the requirements of the RO Permit shall be recorded and kept on file. Calibration of the measuring devices shall be performed on an annual basis.2 (**R 336.1205)**

FG-BOILERS VI.1 Current:

1. Calibration of the monitor shall be performed on an annual basis.

FG-BOILERS VI.1 Change:

1. Calibration or zeroing of the monitor shall be performed on an annual basis.

FG-PULPDRYERS III.1 Current:

1. Permittee shall not operate the pulp dryers unless the multiclone collector are installed, maintained, and operated in a satisfactory manner.

FG-PULPDRYERS III.1 Change:

1. Permittee shall not operate the pulp dryers unless the multiclone collector and flue gas recirculation system are installed, maintained, and operated in a satisfactory manner.

FG-PULPDRYERS V.1 Current:

1. At least once per campaign the permittee shall verify the vendor supplied sulfur content data by conducting independent analysis in accordance with the Fuel Sampling Plan in Appendix 9, as may be amended with the approval of the District Supervisor.

FG-PULPDRYERS V.1 Change:

1. If fuel oil is fired in FG-PULPDRYERS, the permittee shall verify the vendor supplied sulfur content data at least once per campaign by conducting independent analysis in accordance with the Fuel Sampling Plan in Appendix 9, as may be amended with the approval of the District Supervisor.

FG-PULPDRYERS V.2 Current:

1. Testing shall be performed using Method 5B or 5C.

FG-PULPDRYERS V.2 Change:

1. Testing shall be performed using Method 5B or 5C or Method 17.

FG-PULPDRYERS VI.1 Current:

1. Calibration of the monitor shall be performed on an annual basis.

FG-PULPDRYERS VI.1 Change:

1. Calibration or zeroing of the monitor shall be performed on an annual basis.

FG-PULPDRYERS VI.2 Addition:

1. When operating, permittee shall continuously monitor the air flow through the flue gas recirculation system with a differential pressure cell or pitot tube or similar device. Results of the monitoring shall be recorded every hour on a chart recorder or log and shall be kept on file. If a log is the recording method used, and best efforts are employed to keep hourly records, it shall not be a deviation if at least three data points per shift are recorded. The backup indicator shall be the pressure change in the flue gas recirculation fan. Repairs shall be made to the flue gas recirculation system as soon as is reasonable after detection of a malfunction and a record of the malfunction and repairs taken to maintain compliance with the requirements of the RO Permit shall be recorded and kept on file. Calibration of the monitors shall be performed on an annual basis. **(R 336.1205, R 336.1213(3))**

FG-PULPDRYERS VI.7 Addition:

1. The permittee shall record the date, time, and duration that fuel oil is fired in FG-PULPDRYERS.

Due to these changes in the permit, the 45-day EPA review is restarting on September 18, 2019. If these changes were made to the permit after permit issuance, the changes would be consistent with the provisions of a minor modification.