



January 4, 2017

Mr. Garland
Sidney Sugars, Inc.
35140 County Road 125
Sidney, MT 59270

Dear Mr. Garland:

Montana Air Quality Permit #1826-13 is deemed final as of January 4, 2017, by the Department of Environmental Quality (Department). This permit is for Sidney Sugars Inc.'s Sugar Refining Plant. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

A handwritten signature in black ink that reads "Julie A. Merkel".

Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626

A handwritten signature in black ink that reads "Shawn Juers".

Shawn Juers
Environmental Engineer
Air Quality Bureau
(406) 444-2049

JM:SJ
Enclosure

Montana Department of Environmental Quality
Air, Energy, and Mining Division

Montana Air Quality Permit #1826-13

Sidney Sugars Inc.
35140 County Road 125
Sidney, MT 59270

January 4, 2017



MONTANA AIR QUALITY PERMIT

Issued to: Sidney Sugars Incorporated
35140 County Road 125
Sidney, MT 59270

MAQP: #1826-13
Application Complete: 11/15/16
Preliminary Determination Issued: 11/30/16
Department's Decision Issued: 12/19/2016
Permit Final: 1/4/2017
AFS #083-0002

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Sidney Sugars Incorporated (Sidney Sugars), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

Sidney Sugars operates a sugar refining plant. The facility is located in the NW¹/₄, of the NW¹/₄, Section 34, Township 23 North, Range 59 East, Richland County, Montana; East Holly Street, Sidney, Montana.

B. Current Permit Action

On November 2, 2016, the Department received from Sidney Sugars an application for a natural gas-fired boiler to replace the existing Superior Mohawk Boiler. The existing Superior Mohawk Boiler was damaged in a fire at the facility and therefore a replacement is necessary. The replacement boiler, named the "CBW-600 Boiler" is slightly smaller in size with a capacity of 24.7 million British thermal units per hour (MMBtu/hr), while the prior boiler had a stated capacity of 25.1 MMBtu/hr.

The replacement boiler was reviewed under the requirements of ARM 17.8.752 – Best Available Control Technology. Because no manufacturer guaranteed emissions rates can be provided for this used boiler, the Department is requiring testing for oxides of nitrogen (NO_x) and carbon monoxide (CO) to confirm assumed emissions rates, with further testing requirements based on the results of the tests. This permit action allows for the installation of the CBW-600 Boiler to replace the Superior Mohawk Boiler. Fuel-fired emissions sources were reviewed to confirm the area source status of the facility, and during that process all other pollutant emission levels were updated as well. Therefore, this action also updates the emissions inventory in the permit analysis for the fuel-fired sources (PM emissions from fuel and product handling were not reviewed or updated during this action). For hydrochloric acid and hydrofluoric acid emissions from coal combustion, emissions factors from the Environmental Protection Agency's Toxic Release Inventory guidance was used as this guidance provides emissions factors specific to lignite combustion.

Section II: Conditions and Limitations

A. Operational Requirements and Emission Limitations

Combustion Engineering (CE) Boilers:

1. Sidney Sugars shall install, operate, and maintain an Anderson 2000 Inc. Model WAV-162 wetted approach venturi scrubber with wetted elbow and an Anderson 2000 Inc. Model VES-162 vertical cyclonic entrainment separator on each CE boiler (ARM 17.8.752).
2. The sulfur content of the lignite coal and coke breeze fired in the CE boilers shall not exceed 0.63% by weight, determined on a monthly average (ARM 17.8.749).
3. Total fuel consumption by the CE boilers shall not exceed 17.4 ton/hour of lignite coal and coke breeze combined (ARM 17.8.749).
4. Annual hours of operation of each CE boiler shall not exceed 4,320 hour/year (ARM 17.8.749).
5. Sidney Sugars shall not cause or authorize to be discharged into the atmosphere from each CE boiler stack particulate matter in excess of the following (ARM 17.8.752):
 - a. 0.10 lb/MMBtu heat input; and
 - b. 0.046 gr/dscf.
6. Sidney Sugars shall not cause or authorize to be discharged into the atmosphere from both CE boiler stacks particulate matter in excess of 23 pound/hour (ARM 17.8.752).
7. Sidney Sugars shall not cause or authorize to be discharged into the atmosphere, from either CE boiler, SO₂ emissions in excess of the following (ARM 17.8.752):
 - a. 0.43 lb/MMBtu heat input; and
 - b. 106.8 ton/year.
8. Sidney Sugars shall maintain a minimum SO₂ removal efficiency of 70% by the control device on the CE boilers. Removal efficiency, in this case, shall be determined based on stack emissions from the CE boilers as a percentage of total sulfur in the lignite coal and coke breeze fuel fired in the boilers (ARM 17.8.752).

Coal Handling:

9. Sidney Sugars shall not add more than 3.0 tons/day of coke breeze to the lignite coal stock pile as supplemental fuel for the CE Boilers (ARM 17.8.749).

10. Sidney Sugars shall install, operate, and maintain pulse jet baghouses on the lignite coal and coke breeze handling, conveying, screening, and crushing system (ARM 17.8.752).
11. Sidney Sugars shall cover all external lignite coal and coke breeze conveyors (ARM 17.8.752).
12. Sidney Sugars shall not cause or authorize to be discharged into the atmosphere from the baghouse controlling the lignite coal and coke breeze handling, conveying, screening, and crushing system, particulate matter in excess of 0.01 gr/dscf (ARM 17.8.749).

Boilers and Dryers:

13. Prior to startup of the CBW-600 Boiler, Sidney Sugars shall permanently remove or make inoperable the Superior Mohawk Boiler. At no point in time may the CBW-600 Boiler and the Superior Mohawk Boiler be fired at the same time. (ARM 17.8.749).
14. The CBW-600 Boiler shall burn only pipeline quality natural gas (ARM 17.8.749).
15. Sidney Sugars shall install a flowmeter to measure the amount of natural gas burned in the CBW-600 Boiler (ARM 17.8.749).
16. NO_x emissions from the CBW-600 Boiler shall not exceed 0.09 lb/MMBtu and 2.23 lb/hr (ARM 17.8.749).
17. CO emissions from the CBW-600 Boiler shall not exceed 0.09 lb/MMBtu and 2.23 lb/hr (ARM 17.8.749).
18. At least once every 3 years from startup of the CBW-600 Boiler, Sidney Sugars shall record an inspection of the boiler for combustion performance. The inspection shall include observing the flame pattern of the burners, and measuring CO emissions via a portable analyzer to assess burner performance. Sidney Sugars shall record the date of the inspection, the CO levels observed, and any adjustments made including cleaning of the nozzles or other actions deemed necessary, as a result of the inspection. The inspection records shall be maintained for a minimum of 5 years from the date of inspection, and shall be submitted to the Department upon request. (ARM 17.8.752).
19. By the 25th day of each month, Sidney Sugars shall record in a log the total amount of gas burned in the CBW-600 boiler for the previous month. (ARM 17.8.749 and a compliance option of ARM 17.8.340 and 40 CFR 60 Subpart Dc).
20. Sidney Sugars shall comply with all applicable requirements of 40 CFR 60 Subpart Dc as applicable to the CBW-600 boiler, including the reporting requirements of 40 CFR 60.48c(a) and 40 CFR 60.48c(g)(1)-(3) and (i). (ARM 17.8.340 and 40 CFR 60 Subpart Dc). The Department waives the requirement for initial performance tests required by 40 CFR 60.8 because the Department

considers the burning of only pipeline quality natural gas as demonstrating by other means to the Department's satisfaction that the affected facility is in compliance with the standard. (ARM 17.8.340 and 40 CFR 60 Subparts A and Dc).

21. The sulfur content of the natural gas fired in the boilers or dryers shall not exceed 50 grains per 100 cubic feet of gaseous fuel (ARM 17.8.322).
22. The sulfur content of the fuel oil fired in the boilers shall not exceed one pound of sulfur per million BTU fired (ARM 17.8.322).
23. Sidney Sugars shall not burn fuel oil in the Union Boilers except for any time frame not to exceed 672 hours during any rolling 12 month time frame, for each boiler (ARM 17.8.749).
24. Each dryer is limited to burning natural gas only, except during emergency curtailment situations (ARM 17.8.749).
25. Each dryer process rate (to include molasses) shall not exceed 114,192 tons during any one campaign (ARM 17.8.749).
26. Sidney Sugars shall install, operate, and maintain a weighing device on each dryer to verify the process rate and to demonstrate compliance with the process rate limitation. In the event of weigh device malfunction, Sidney Sugars shall use an alternative monitoring method approved by the Department. (ARM 17.8.749).
27. Sidney Sugars shall not cause, suffer, allow, or permit to be discharged into the atmosphere, from each pulp dryer (#1 and #2), particulate matter in excess of the amount allowed by ARM 17.8.310. The following equations shall be used to calculate the values:

$$E = 55.0 * P^{0.11} - 40 \quad \text{For process weight rates in excess of 30 tons/hr;}$$

Or

$$E = 4.10 * P^{0.67} \quad \text{For process weight rates up to 30 tons/hr:}$$

Where E is the emission rate in pounds per hour and P is the process weight in tons per hour.

28. Sidney Sugars shall not cause or authorize to be discharged into the atmosphere from any of the boilers or dryers, particulate matter in excess of that allowed by ARM 17.8.309.

Sugar Silos:

29. Sidney Sugars shall install, operate, and maintain a filter vent on sugar silos #7 through #16 (ARM 17.8.752).

30. Sidney Sugars shall install, operate, and maintain a connection between conditioner silo #6 and silo #7 to control emissions from silo #6 through the silo #7 filter vent (ARM 17.8.752).
31. Sidney Sugars shall install, operate, and maintain enclosed screw conveyors and enclosed bucket elevators, used to transfer sugar (ARM 17.8.752).
32. Sidney Sugars shall not cause or authorize to be discharged into the atmosphere from each of the sugar silos (#7 through #16), visible emissions in excess of 10% opacity averaged over 6 consecutive minutes (ARM 17.8.752).

Sugar Packaging Line:

33. Sidney Sugars shall install, operate, and maintain a baghouse on the sugar packaging line (ARM 17.8.752).

Lime Handling:

34. The pebble lime hopper throughput shall not exceed 400 ton/day (ARM 17.8.752).
35. Sidney Sugars shall vent all emissions from the loading of the pebble lime hopper to the existing MAC Equipment 72-avw baghouse (ARM 17.8.752).
36. A pneumatic loading device shall be used when loading the pebble lime hopper (ARM 17.8.752).

Fugitives:

37. Sidney Sugars shall chemically stabilize, as necessary, ash piles from dredging operations to prevent fugitive particulate emissions from wind erosion (ARM 17.8.752).
38. Sidney Sugars shall not cause or authorize to be discharged into the atmosphere any visible fugitive emissions that exhibit opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.308).

All Applicable Units:

39. Sidney Sugars shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. This includes, but is not limited to the CE boilers and the coal handling baghouse (ARM 17.8.304).
40. Sidney Sugars shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

41. Sidney Sugars shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
42. Sidney Sugars shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 60, Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* as it applies to the CBW-600 Boiler and Subpart Y - *Standards of Performance for Coal Preparation and Processing Plants* as it applies to the coal handling, conveying, screening, crushing, and stockpile facilities at the Sidney Sugars facility (ARM 17.8.340 and 40 CFR 60, Subpart Dc and Subpart Y).

B. Testing Requirements

1. Within 365 days of startup of the CBW-600 Boiler, Sidney Sugars shall conduct an initial source test on the CBW-600 Boiler for NO_x and CO, concurrently, to determine lb/MMBtu and lb/hr emissions rates. During the performance test, the amount of fuel burned shall be recorded. (ARM 17.8.105).
2. Sidney Sugars shall conduct source tests for opacity, particulate, and SO₂ on the two CE boilers, and demonstrate compliance with the limitations in Sections II.A.5, A.6, A.7, A.8, and A.30. Testing shall be conducted within 180 days of initial startup following the addition of coke breeze as a fuel source for the CE boilers. Testing shall continue on an every 4-year basis, or according to another testing/monitoring schedule as may be approved by the Department of Environmental Quality (Department) (ARM 17.8.105).
3. Sidney Sugars shall conduct source tests for opacity and particulate on the pulp dryers to demonstrate compliance with the emissions limitations in Section II.A.18 and A.31. The testing shall be performed on an every 4-year basis, or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105).
4. All testing shall include a determination of production rate and fuel consumption rate at the time of testing (ARM 17.8.749).
5. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
6. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Sidney Sugars shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). Sidney Sugars shall submit the following information annually to the Department by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

- a. Tons of lignite coal and coke breeze burned in CE boiler #1;
 - b. Tons of lignite coal and coke breeze burned in CE boiler #2;
 - c. Heat content of the lignite coal received, on a monthly average;
 - d. Annual average heat content of the lignite coal and coke breeze burned;
 - e. Ash content of lignite coal received, on a monthly average;
 - f. Annual average ash content of the lignite coal burned;
 - g. Sulfur content of lignite coal received, on a monthly average;
 - h. Annual average sulfur content of lignite coal and coke breeze burned;
 - i. Amount of natural gas used in the Union Pacific boilers (in mmcf);
 - j. Amount of fuel oil used in the Union Pacific boilers (in gallons);
 - k. Amount of natural gas used in the CBW-600 boiler (in mmcf);
 - l. Amount of natural gas used in the pulp dryers (in mmcf);
 - m. Amount of fuel oil used in the pulp dryers during emergency curtailment situations (in gallons);
 - n. Amount of fuel oil used in each of the Union Boilers (in gallons) and the amount of time in hours that each of the Union Boilers were fired on fuel oil.
 - o. Average heat content of natural gas;
 - p. Average heat content of fuel oil;
 - q. Average sulfur content of fuel oil;
 - r. Quantity of wet beet pulp produced;
 - s. Quantity of beet pulp dried;
 - t. Process rate for each dryer, reported on a campaign basis;
 - u. Operating hours of each CE boilers and the coal handling system;
 - v. Quantity of sugar beets sliced;
 - w. Quantity of limestone handled;
 - x. Quantity of coke used in the lime kiln;
 - y. Quantity of coal used in the lime kiln;
 - z. Quantity of sugar produced/packaged;
 - aa. Quantity of pellets produced;
 - bb. Quantity of reject pellets produced;
 - cc. Quantity of sugar loaded into silos #7 through #16; and
 - dd. Quantity of sugar unloaded from silos #7 through #16.
2. Sidney Sugars shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include *the addition of a new emissions unit*, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. Sidney Sugars shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. This includes, but is not limited to, the daily pebble lime hopper throughput and the cumulative process rate for each dryer. All records compiled in accordance with this permit must be maintained by Sidney Sugars as a permanent business record for at least five years following the date of the measurement, must be available at the plant site for inspection by the Department and must be submitted to the Department upon request (ARM 17.8.749).
4. Sidney Sugars shall record in a log anytime fuel other than natural gas is combusted in the dryers. The log must be maintained on site, contain the date, time, type, and quantity of fuel fed into the dryers, and must be submitted to the Department upon request (ARM 17.8.749).
5. Sidney Sugars shall maintain a daily log with a cumulative total of the current campaign production. This log shall be maintained on site, made available to Department personnel during facility visits, and submitted to the Department upon request (ARM 17.8.749).

D. Notification

1. Sidney Sugars shall provide the Department with written notification of the startup date of the CBW-600 boiler within 15 days after the actual start-up date, as determined by the earlier of postmark or email date. The notification shall also include a brief description of the current method of compliance with Section II.A.13 which requires that the Superior Mohawk Boiler be removed from service. (ARM 17.8.749).

Section III: General Conditions

- A. Inspection – Sidney Sugars shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (continuous emissions monitoring system (CEMS) or continuous emissions rate monitoring system (CERMS)) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Sidney Sugars fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Sidney Sugars of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.

- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Sidney Sugars may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit (MAQP) Analysis
Sidney Sugars Incorporated
MAQP #1826-13

I. Introduction/Process Description

Sidney Sugars Incorporated (Sidney Sugars) owns and operates a sugar refining plant. The facility is located in the NW¹/₄, of the NW¹/₄, Section 34, Township 23 North, Route 59 East, Richland County; East Holly Street, Sidney, Montana.

A. Permitted Equipment and Source Description

1. Two Combustion Engineering (CE) boilers, fueled with lignite coal and coke breeze, each rated at 115 MMBtu/hr. The boilers each have 80-foot stacks.
2. Two Union Pacific natural gas/fuel oil-fired boilers. Union Pacific boiler #1 is rated at 130 MMBtu/hr (100,000 lb steam/hr @ 85% boiler efficiency). Union Pacific boiler #2 is rated at 83 MMBtu/hr (60,000 lb steam/hr @ 80% boiler efficiency).
3. One CBW-600 boiler with a capacity of 24.7 MMBtu/hr, burning only pipeline quality natural gas.
4. Two beet pulp dryers. The dryers are heated by natural gas only, except during emergency curtailment situations (each dryer is rated at 95 MMBtu/hr).
5. Coal or Coke-fired vertical lime kiln (closed system, no emissions to the atmosphere).
6. Two sulfitators (used to control bacteria in the sugar).
7. Lignite coal handling, conveying, screening, crushing, and stockpile facilities, including two coal bunkers with dust collector (installed 1984).
8. Beet handling, screening, conveying, and stockpile facilities.
9. Limestone handling and stockpile facilities.
10. Coke handling and stockpiling for use in the lime kiln.
11. Coal handling and stockpiling for use in the lime kiln.
12. Sugar handling and storage.
13. Sugar packaging line (enclosed in building, no emissions to the atmosphere).
14. Pulp pelletizer.
15. Pellet storage, shipping, and handling.
16. Reject pellet system.

17. Wet pulp handling and storage.
18. Weibul (used to condition the finished sugar) with baghouse controls, installed April 1968.
19. Vacuum cleaning system with dust collector, installed mid-1960s.
20. Sugar handling equipment, including 20 enclosed screw conveyors (50 tph) and one bucket elevator (50 tph).
21. Sugar Silos #7 through #16 (12.5 million pounds each) with filter vents for the control of particulates.
22. Conditioner silo #6 (1.9 million pounds). Exhaust from this silo is routed to silo #7 for particulate control.
23. Pebble Lime Hopper. Emissions from the hopper are controlled by the existing MAC Equipment baghouse.

B. Permit History

On May 2, 1984, Holly Sugar Incorporated (Holly) received **MAQP #1826** for the conversion of the two existing CE boilers from gas and oil fired to coal fired. The company was required to receive a permit due to changes in emissions for the different fuel sources.

On March 29, 1993, Holly received **MAQP #1826-01** for removal of a permit condition limiting the ash content of the lignite coal burned in their two CE boilers. This modification had no effect on emissions since the existing particulate and SO₂ emission limitations and production limitations would not be changed. Increased testing, monitoring, and reporting requirements were imposed to demonstrate compliance.

On January 6, 1995, Holly received **MAQP #1826-02** to correct errors that existed in MAQP #1826-01. The language limiting the hours of operation of the entire plant was changed to correctly state that the limitation applies to the CE boiler and associated coal handling equipment. Another change was to reference the appropriate rules that determine the maximum emissions from the other boilers and dryers at differing performance loads. Also, references to the applicable rules that were used to determine the conditions or limitations were added to the permit. The corrections did not cause a change in the allowable or actual emissions at the facility. A summary of some of the changes follows. A more complete description of the changes is included in the analysis of MAQP #1826-02.

1. The section listing limitations for the CE boilers was changed to identify that the CE boilers were limited to 180 days of operation. The previous permit had incorrectly stated the entire facility was subject to the limitation. The limitation was included as part of MAQP #1826 and should have been specific to the CE boilers and coal-handling equipment since this equipment was the only equipment reviewed as part of the original permit application.

2. The limitation for the dryers was incorrectly stated in MAQP #1826-01. The condition was rewritten to identify the equations that must be used by the facility to determine allowable emissions from the dryers.

On June 10, 1995, Holly was issued **MAQP #1826-03** to authorize the construction of sugar silos #7 through #16 that allowed for additional sugar storage on site. The equipment also included sugar handling equipment and a conditioner silo #6. Each sugar silo has a filter vent to control emissions from loading and unloading. The conditioner silo #6 vents to silo #7 and emissions are controlled by the silo #7 filter vent.

On April 14, 1996, Holly was issued **MAQP #1826-04** to extend the operating schedule of the coal handling equipment at the facility. Previously, the permit had limited the operation of the CE boilers and the coal handling equipment to 180 days per year. Holly determined that they could meet their needs with only one CE boiler operating and needed the flexibility to extend their campaign beyond the 180-day limit. Therefore, Holly requested that the operating limit on the coal handling equipment be increased to 360 days per year. To ensure there was no increase in the allowable particulate emissions from the coal handling equipment, Holly requested that the emission limit from the coal handling baghouse be reduced from 0.02 gr/dscf to 0.01 gr/dscf. Actual emissions from the coal handling facility were not expected to change as a result of the permitting action.

Holly also requested, and the Department agreed, that the following testing requirements be removed: 1) The requirement to test the Union boilers and the pulp dryers for SO₂ has been removed; the permit contained no limits for SO₂ emissions from these sources and it was not reasonable to require Sidney Sugars to test for the sake of information gathering. 2) The requirement to perform compliance tests for opacity on the sugar silos was removed; the silo vents are located inside small enclosures on top of the silos. The exhaust exits the enclosure through various openings such as the door seals and it would be difficult to perform a compliance test on each opening. The opacity limit on the silo emissions was not affected by this action.

On February 28, 1998, Holly was issued **MAQP #1826-05** to remove the particulate and opacity testing requirements for the two Union boilers. Previously, Holly was required to test the Union boilers for particulate and opacity because the boilers could be fired with natural gas or fuel oil. However, Holly requested that these testing requirements be removed because the boilers are fired almost exclusively on natural gas. Fuel oil is used only during emergency gas curtailments, for less than 30 days per year. With natural gas as the primary fuel, Holly is expected to be in compliance with the opacity and particulate emission limits. If it is determined that Holly is using more fuel than expected, the Department may require testing. This change did not increase the facility's allowable or potential emissions.

On July 28, 1998, Holly was issued **MAQP #1826-06** for the addition of a pebble lime hopper that would use a pneumatic loading system when lime is loaded into the hopper. This permit modification also clarified the language limiting total annual hours of operation to apply to each CE boiler. This change increased the facility's actual emissions of particulate matter (PM) and particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) by less than 1.5 tons for each pollutant.

On February 26, 1999, Holly was issued **MAQP #1826-07** to increase the throughput capacity of the pebble lime hopper. This increase was necessary to handle the variable quality of beets being processed. Particulate emissions increased by 13.51 tpy as a result of this permitting action. The increase in emissions resulting from the increase in throughput will occur during pneumatic loading from the truck. The tank air vent is ducted directly to the slaker building vent baghouse via a 10" duct. This is an existing baghouse on the slaker building and no new equipment was installed to perform the increased throughput. Also included in this permit modification is clarification of some of the permit conditions. The language for the particulate matter and SO₂ conditions concerning the CE boilers has been changed to indicate the original intent of the conditions. The language concerning the pulp dryer particulate limits was clarified by indicating it applied to each pulp dryer (#1 and #2) rather than both.

As a result of Notice of Violation: EK99-02, an extensive review revealed that Holly's replacement of the facility's diffuser required a permit modification. On August 18, 1999, Holly submitted an application for the increase in emissions resulting in down-stream units from the new diffuser. Affected down-stream units included both pulp dryers, the dry-pulp cyclone, the pellet-cooler cyclone and the pellet-tank fan. The resulting increase in allowable PM and PM₁₀ emissions are 14.06 tons per year (tpy) and 11.60 tpy, respectively. The following conditions were added to MAQP #1826-07:

1. Each dryer process rate (to include molasses) shall not exceed 114,192 tons during any one campaign. Holly shall maintain a daily log with a cumulative total of the current campaign production. This log shall be maintained on site, made available to Department personnel during facility visits, and submitted to the Department upon request.
2. Holly shall install, operate, and maintain a weighing device on each dryer to verify the process rate and to demonstrate compliance with the process rate limitation.
3. Each dryer is limited to burning natural gas only, except during emergency curtailment situations. Holly shall record in a log anytime fuel other than natural gas is combusted in the dryers. The log must be maintained on site, contain the date, time, type, and quantity of fuel fed into the dryers, and must be submitted to the Department upon request.

MAQP #1826-08 replaced MAQP #1826-07.

On November 20, 2001, the Department issued **MAQP #1826-09** to Holly. The administrative amendment included Holly's request to add the following language to permit condition II.A.16: "In the event of weigh device malfunction, Holly shall use an alternative monitoring method approved by the Department." MAQP #1826-09 replaced MAQP #1826-08.

On February 19, 2002, a modification to MAQP #1826-09 was issued to Holly. The modification involved the installation and operation of a Superior Mohawk natural gas-fired boiler and the removal of a Cleaver Brooks natural gas-fired boiler. **MAQP #1826-10** replaced MAQP #1826-09.

The modification also included the relocation of the Sly filter baghouse, which was approved by the Department on May 2, 2000. The Sly Filter baghouse was moved from the sugar handling and storage area to Silos 1-4. The dust from the sugar handling and storage area was routed to the existing MAC baghouse, which vents inside the sugar warehouse. The change was considered de minimis as described in ARM 17.8.705 (1)(r) because the potential emissions were less than 15 ton/year and the proposal did not violate any conditions of the existing permit.

On October 18, 2002 the Department received a request for an administrative amendment to transfer ownership of the facility from Holly Sugar Corporation to Sidney Sugars Incorporated. The permit action transferred ownership of the facility and **MAQP #1826-11** replaced MAQP #1826-10.

On June 24, 2013, the Department received an application to modify MAQP #1826-11 to include coke breeze as a fuel for the two CE boilers. Coke breeze, the undersized screenings collected during the loading of coke, is collected and added to the lignite coal to fuel the CE boilers. The Department has determined that the properties of the coke-breeze are similar to coal and that air pollutant emissions from the CE boiler would be similar to those encountered in burning coal fuel alone. The permit action added coke breeze as a fuel for the CE boilers and updated the permit to reflect current permit language and rule references used by the Department. **MAQP #1826-12** replaced MAQP #1826-11.

C. Current Permit Action

On November 2, 2016, the Department received from Sidney Sugars an application for a natural gas-fired boiler to replace the existing Superior Mohawk Boiler. The existing Superior Mohawk Boiler was damaged in a fire at the facility and therefore a replacement is necessary. The replacement boiler, named the “CBW-600 Boiler” is slightly smaller in size with a capacity of 24.7 million British thermal units per hour (MMBtu/hr), while the prior boiler had a stated capacity of 25.1 MMBtu/hr.

The replacement boiler was reviewed under the requirements of ARM 17.8.752 – Best Available Control Technology. Because no manufacturer guaranteed emissions rates can be provided for this used boiler, the Department is requiring testing for oxides of nitrogen (NO_x) and carbon monoxide (CO) to confirm assumed emissions rates, with further testing requirements based on the results of the tests. This permit action allows for the installation of the CBW-600 Boiler to replace the Superior Mohawk Boiler. Fuel-fired emissions sources were reviewed to confirm the area source status of the facility, and during that process all other pollutant emission levels were updated as well. Therefore, this action also updates the emissions inventory in the permit analysis for the fuel fired sources (PM emissions from fuel and product handling were not reviewed or updated during this action). For hydrochloric acid and hydrofluoric acid emissions from coal combustion, emissions factors from the Environmental Protection Agency’s Toxic Release Inventory guidance was used as this guidance provides emissions factors specific to lignite combustion. **MAQP #1826-13** replaces MAQP #1826-12.

D. Response to Comments

No comments received.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments are included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1, General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emissions of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Sidney Sugars shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by phone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air

contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2, Ambient Air Quality. including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Sidney Sugars must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3, Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emissions sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Sidney Sugars shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions - Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions.

6. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Sidney Sugars is considered an NSPS affected facility under 40 CFR Part 60 and has applicability considerations for the following subparts.
- a. 40 CFR 60, Subpart A – General Provisions. apply to all equipment or facilities subject to an NSPS Subpart as listed below:
 - b. 40 CFR 60, Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators. The affected facilities to which the provisions of this subpart apply are each fossil-fuel-fired steam generating unit of more than 73 megawatts (MW) heat input rate (250 million British thermal units per hour (MMBtu/hr)). The fossil fuel-fired CE Boilers and the Union Pacific Boilers have a heat input capacity less than 250 million MMBtu/hr; therefore 40 CFR 60, Subpart D does not apply.
 - c. 40 CFR 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The affected facilities to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

The CE Boilers and the Union Pacific Boiler # 1, meet the applicable threshold for steam generating units greater than 100 MMBtu/hr, however, these units were installed or modified prior to the compliance applicability date of June 19, 1984 and are therefore not subject to the standard (The modification to permit a change in fuel from oil/natural gas to coal for the CE Boilers was issued by the Department on May 5, 1984). The Union Pacific Boiler #2 is not subject to 40 CFR 60, Subpart Db as the heat input does not meet the applicability threshold, and as it was installed prior to the June 19, 1984 applicability date.
 - d. 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). The CBW-600 Boiler is an affected source under Subpart Dc.
 - e. 40 CFR 60, Subpart Y – Standards of Performance for Coal Preparation and Processing Plants. The provisions of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after October 27, 1974, and on or before April 28, 2008: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems. Sidney Sugars emitting sources include coal handling, conveying, screening, crushing, and stockpile facilities, and are therefore subject to this subpart.

7. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

- a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to an NESHAP Subpart as listed below:
- b. 40 CFR 63, Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. A facility is subject to this subpart if it owns or operates an industrial, commercial, or institutional boiler as defined in § 63.11237 (which includes industrial boilers used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity), that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in § 63.2, except as specified in § 63.11195 (which includes gas-fired boilers). Current applicability at Sidney Sugars is limited to CE Boilers #1 and #2, due to combustion of coal. Additional boilers may fall under regulation of the Area Source Boiler MACT in the event a change in combustion fuel(s) occur.

D. ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Sidney Sugars submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Sidney Sugars has the potential to emit greater than 25 tons/year of PM, PM₁₀, NO_x, CO, SO_x, and VOCs; therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Sidney Sugars submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Sidney Sugars submitted an affidavit of publication of public notice for the October 30, 2016 issue of the Sidney Herald, a newspaper of general circulation in the Town Sidney in Richland County, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Condition of Issuance of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts. Sidney Sugars has demonstrated compliance with applicable rules and standards as required for permit issuance.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Sidney Sugars of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
 12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
 13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
 14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.
- F. ARM 17.8, Subchapter 8, Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
 2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications – Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is considered a major stationary source. This modification will not cause a net emission increase greater than significance levels and, therefore, does not require a New Source Review (NSR) analysis.

G. ARM 17.8, Subchapter 12, Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. Potential to Emit (PTE) > 100 tons/year of any pollutant,
 - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or a lesser quantity as the Department may establish by rule;
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #1826-13 for Sidney Sugars, the following conclusions were made:
 - a. The facility's PTE is greater than 100 tons/year for several pollutants.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAP's.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is subject to NSPS requirements (40 CFR 60, Subparts Dc and Y).
 - e. This facility is subject to current NESHAP standards (40 CFR 63, Subpart JJJJJJ).
 - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Sidney Sugars is a major source of emissions as defined under Title V.

III. BACT Determination

A BACT determination is required for each new or modified source. Sidney Sugars shall install on the new or modified source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized.

The primary pollutants of concern for natural gas fired boilers are NO_x and CO. Emissions of SO₂ are negligible due to the low sulfur content of pipeline quality natural gas. PM emissions are also very low with pipeline quality natural gas.

The amount of allowable emissions from the proposed boiler is less than 10 tons per year of NO_x and CO. At such low emissions rates, detailed analyses investigating alternatives compared to the cost of this particular boiler demonstrates economic infeasibility on a cost per ton basis. While the Department does not determine economic infeasibility on any set numeric dollar per ton of

pollutant reduction, Sydney Sugars presented, and the Department concurs in this case, that alternatives resulting in lower NO_x and CO emissions are economically infeasible. No alternative presented resulted in less than an \$18,000/ton reduction determination. Work practice standards to include periodic tune-ups and emissions checks to ensure the boiler is firing optimally are prescribed as BACT in this case. A detailed and thorough BACT analysis is in the application on file with the Department.

IV. Emission Inventory

Emissions Source	Emissions in Tons/yr					
	PM(fil+cond)	SO ₂	NO _x	VOC	CO	HAPs
C.E. Boiler #1	24.84	106.84	217.99	1.13	187.92	1.64
C.E. Boiler #2	24.84	106.84	217.99	1.13	187.92	1.64
Union Boiler #1	8.26	93.55	158.98	2.92	44.85	1.12
Union Boiler #2	5.27	59.73	101.50	1.87	28.64	0.72
CBW-600 Boiler	0.81	0.06	9.77	0.58	9.77	0.20
#1 Pulp Dryer Combustion Emissions	3.10	0.24	40.79	2.24	34.27	0.77
#2 Pulp Dryer Combustion Emissions	3.10	0.24	40.79	2.24	34.27	0.77
Pulp Dryers Beet Pulp PM Emissions	141.07					
Coal Handling	300.67					0.03
Coke Handling	0.31					
Beet Handling	193.22					
Lime Handling	0.31					
Sugar Silos #7-#16	0.04					
Pebble Lime Hopper	14.60					
Dry Pulp Cyclone	10.21					
Pellet Cooler Cyclone	10.21					
Pellet Tank Fan	10.21					
TOTAL:	751.07	367.52	787.81	12.11	527.63	6.89

<u>C.E. Boiler Emissions</u>						
Lignite Coal fired Boiler						
<u>PM(fil+con) Emissions</u>						
Emissions Factor:	0.1 lb/MMBtu - emissions limitation					
Capacity:	115 MMBtu/hr					
Hours of Operation:	4320 hr/yr					
Calculations:						
	0.1lb/MMBtu - emissions limitation*115MMBtu/hr*4320hr/yr*0.005 ton/lb =					24.84 ton/yr
<u>SO2 Emissions</u>	106.8 ton/yr emissions limitation					

<u>NOX Emissions</u>								
Emissions Factor:	5.8 lb/ton (Table 1.7-1, AP-42 5th Edition)							
Capacity:	17.4 ton/hr							
Hours of Operation:	4320 hr/yr							
Calculations:								
		5.8lb/ton (Table 1.7-1, AP-42 5th Edition) *17.4ton/hr*4320hr/yr*0.005 ton/lb =						217.99 ton/yr
<u>VOC Emissions</u>								
Emissions Factor:	0.03 lb/ton (Table 1.7-1, AP-42 5th Edition)							
Capacity:	17.4 ton/hr							
Hours of Operation:	4320 hr/yr							
Calculations:								
		0.03lb/ton (Table 1.7-1, AP-42 5th Edition) *17.4ton/hr*4320hr/yr*0.005 ton/lb =						1.13 ton/yr
<u>CO Emissions</u>								
Emissions Factor:	5 lb/ton (EI Submission - Webfire) **subject to MACT JJJJJ CO limitations							
Capacity:	17.4 ton/hr							
Hours of Operation:	4320 hr/yr							
Calculations:								
		5lb/ton (EI Submission - Webfire) *17.4ton/hr*4320hr/yr*0.005 ton/lb =						187.92 ton/yr

<u>HAPs Emissions</u>								
Other Non-Metal Emissions Factor:	0.009207138 lb/ton (AP-42 5th Edition)							
Capacity:	17.4 ton/hr							
Hours of Operation:	4320 hr/yr							
Other Non-Metal Calculations:								
		0.009207138lb/ton (AP-42 5th Edition) *17.4ton/hr*4320hr/yr*0.005 ton/lb =						0.35 ton/yr
Acid Gases Emissions Factor:	0.02 lb/ton							
Capacity:	17.4 ton/hr							
Hours of Operation:	4320 hr/yr							
Acid Gases Calculations:								
		0.02lb/ton *17.4ton/hr*4320hr/yr*0.005 ton/lb =						0.75 ton/yr
Metals Emissions Factor:	0.014512 lb/ton (Table 1.7-14, AP-42 5th Edition)							
Capacity:	17.4 ton/hr							
Hours of Operation:	4320 hr/yr							
Acid Gases Calculations:								
		0.014512lb/ton (Table 1.7-14, AP-42 5th Edition)*17.4ton/hr*4320hr/yr*0.005 ton/lb =						0.55 ton/yr
TOTAL HAPS:								1.64 ton/yr

Union Boiler #1			
Natural Gas / Fuel Oil Fired Boiler			
Maximum Capacity:	130 MMBtu/hr		
Fuel Oil Sulfur:	1 lb/MMBtu		
Hours Fuel Oil Service:	672 hr/yr		
Hours Natural Gas Service:	8088 hr/yr		
<u>PM (fil + cond) Emissions - Fuel Oil</u>			
Filterable Emissions			
Factor:	12.41 lb/1000 gal		
Condensable Emissions			
Factor:	1.5 lb/1000 gal		
TOTAL PM:	13.91 lb/1000 gal		
TOTAL PM:	0.099 lb/MMBtu @ 140 MMBtu/1000 gal		
Fuel Oil Calculations:	$0.099\text{lb/MMBtu} * 130\text{MMBtu/hr} * 672\text{ hr/yr} * 0.0005\text{ ton/lb} =$		4.34 ton/yr
<u>PM (fil+cond) Emissions - Natural Gas</u>			
Emissions Factor:	7.6 lb/MMscf		
	0.0075 lb/MMBtu		
Natural Gas Calculations:	$0.0075\text{lb/MMBtu} * 130\text{MMBtu/hr} * 8088\text{hr/yr} * 0.0005\text{ ton/lb} =$		3.92 ton/yr
<u>SO2 Emissions - Fuel Oil</u>			
	1.90 permit allowable wt% Sulfur		
Emissions Factor:	298.857868 lb/1000 gal		
	2.13 lb/MMBtu @ 140 MMBtu/1000 gal		
Fuel Oil Calculations:	$2.135\text{lb/MMBtu} * 130\text{MMBtu/hr} * 672\text{ hr/yr} * 0.0005\text{ ton/lb} =$		93.24 ton/yr
<u>SO2 Emissions - Natural Gas</u>			
Emissions Factor:	0.6 lb/MMscf		
	0.000588235 lb/MMBtu		
Natural Gas Calculations:	$0.0006\text{lb/MMBtu} * 130\text{MMBtu/hr} * 8088\text{hr/yr} * 0.0005\text{ ton/lb} =$		0.31 ton/yr
<u>NOX Emissions - Fuel Oil</u>			
Emissions Factor:	47 lb/1000 gal (AP-42 Table 1.3-1)		
	0.34 lb/MMBtu		
Fuel Oil Calculations:	$0.3357\text{lb/MMBtu} * 130\text{MMBtu/hr} * 672\text{ hr/yr} * 0.0005\text{ ton/lb} =$		14.66 ton/yr
<u>NOX Emissions - Natural Gas</u>			
Emissions Factor:	280 lb/MMscf		
	0.274509804 lb/MMBtu		
Natural Gas Calculations:	$0.2745\text{lb/MMBtu} * 130\text{MMBtu/hr} * 8088\text{hr/yr} * 0.0005 =$		144.32 ton/yr

<u>VOC Emissions - Fuel Oil</u>								
Emissions Factor:	0.28 lb/1000 gal	(AP-42 Table 1.3-3)						
	0.002 lb/MMBtu							
Fuel Oil Calculations:	0.002lb/MMBtu*130MMBtu/hr*672 hr/yr * 0.0005 ton/lb =							0.09 ton/yr
<u>VOC Emissions - Natural Gas</u>								
Emissions Factor:	5.5 lb/MMscf							
	0.005392157 lb/MMBtu							
Natural Gas Calculations:	0.0054lb/MMBtu*130MMBtu/hr*8088hr/yr*0.0005 ton/lb =							2.83 ton/yr
<u>CO Emissions - Fuel Oil</u>								
Emissions Factor:	5 lb/1000 gal							
	0.0357 lb/MMBtu							
Fuel Oil Calculations:	0.036lb/MMBtu*130MMBtu/hr*672 hr/yr * 0.0005 ton/lb =							1.56 ton/yr
<u>CO Emissions - Natural Gas</u>								
Emissions Factor:	84 lb/MMscf							
	0.082352941 lb/MMBtu							
Natural Gas Calculations:	0.0824lb/MMBtu*130MMBtu/hr*8088hr/yr*0.0005 ton/lb =							43.29 ton/yr
<u>HAPs Emissions - Fuel Oil</u>								
Organics Emissions Factor:	0.041013176 lb/1000 gal							
	0.000292951 lb/MMBtu							
Metals Emissions Factor:	0.4532368 lb/1000 gal							
	0.003237406 lb/MMBtu							
TOTAL Emissions Factor:	0.003530357 lb/MMBtu							
Fuel Oil Calculations:	0.0035lb/MMBtu*130MMBtu/hr*672 hr/yr * 0.0005 ton/lb =							0.15 ton/yr
<u>HAPs Emissions - Natural Gas</u>								
Emissions Factor:	1.8823618 lb/MMscf							
	0.001845453 lb/MMBtu							
Natural Gas Calculations:	0.0018lb/MMBtu*130MMBtu/hr*8088hr/yr*0.0005 ton/lb =							0.97 ton/yr

Union Boiler #2									
Natural Gas / Fuel Oil Fired Boiler									
Maximum Capacity:	83	MMBtu/hr							
Allowable Fuel Oil Hours:	672	hr/yr							
Allowable Natural Gas Hours:	8088	hr/yr							
Fuel Sulfur:	1	lb/MMBtu							

PM (fil + cond) Emissions - Fuel Oil									
Filterable Emissions									
Factor:	12.41	lb/1000 gal							
Condensable Emissions									
Factor:	1.5	lb/1000 gal							
TOTAL PM:	13.91	lb/1000 gal							
TOTAL PM:	0.099	lb/MMBtu @ 140 MMBtu/1000 gal							
Fuel Oil Calculations:	0.099lb/MMBtu	*83MMBtu/hr	672hr/yr	* 0.0005 ton/lb =					2.77 ton/yr
PM (fil+cond) Emissions - Natural Gas									
Emissions Factor:									
	7.6	lb/MMscf							
	0.00745098	lb/MMBtu							
Calculations:	0.0075lb/MMBtu	*83MMBtu/hr	*8088hr/yr	*0.0005 ton/lb =					2.50 ton/yr
SO2 Emissions - Fuel Oil									
1.90 permit allowable wt% Sulfur									
Emissions Factor:	298.3	lb/1000 gal							
	2.13	lb/MMBtu @ 150 MMBtu/1000 gal							
Fuel Oil Calculations:	2.131lb/MMBtu	*83MMBtu/hr	*672 hr/yr	* 0.0005 ton/lb =					59.42 ton/yr
SO2 Emissions - Natural Gas									
Emissions Factor:									
	0.6	lb/MMscf							
	0.000588235	lb/MMBtu							
Natural Gas Calculations:	0.0006lb/MMBtu	*83MMBtu/hr	*8088hr/yr	*0.0005 ton/lb =					0.20 ton/yr

<u>NOX Emissions - Fuel Oil</u>								
Emissions Factor:	47 lb/1000 gal	(AP-42 Table 1.3-1)						
	0.34 lb/MMBtu							
Fuel Oil Calculations:	0.3357lb/MMBtu*83MMBtu/hr*672 hr/yr * 0.0005 ton/lb =						9.36 ton/yr	
<u>NOX Emissions - Natural Gas</u>								
Emissions Factor:	280 lb/MMscf							
	0.274509804 lb/MMBtu							
Natural Gas Calculations:	0.2745lb/MMBtu*83MMBtu/hr*8088hr/yr*0.0005 ton/lb =						92.14 ton/yr	
<u>VOC Emissions - Fuel Oil</u>								
Emissions Factor:	0.28 lb/1000 gal	(AP-42 Table 1.3-3)						
	0.002 lb/MMBtu							
Fuel Oil Calculations:	0.002lb/MMBtu*83MMBtu/hr*672 hr/yr * 0.0005 ton/lb =						0.06 ton/yr	
<u>VOC Emissions - Natural Gas</u>								
Emissions Factor:	5.5 lb/MMscf							
	0.005392157 lb/MMBtu							
Natural Gas Calculations:	0.0054lb/MMBtu*83MMBtu/hr*8088hr/yr*0.0005 ton/lb =						1.81 ton/yr	

<u>CO Emissions - Fuel Oil</u>								
Emissions Factor:	5 lb/1000 gal							
	0.0357 lb/MMBtu							
Fuel Oil Calculations:	0.036lb/MMBtu*83MMBtu/hr*672 hr/yr * 0.0005 ton/lb =						1.00 ton/yr	
<u>CO Emissions - Natural Gas</u>								
Emissions Factor:	84 lb/MMscf							
	0.082352941 lb/MMBtu							
Natural Gas Calculations:	0.0824lb/MMBtu*83MMBtu/hr*8088hr/yr*0.0005 ton/lb =						27.64 ton/yr	
<u>HAPs Emissions - Fuel Oil</u>								
Organics Emissions Factor:	0.041013176 lb/1000 gal							
	0.000292951 lb/MMBtu							
Metals Emissions Factor:	0.4532368 lb/1000 gal							
	0.003237406 lb/MMBtu							
TOTAL Emissions Factor:	0.003530357 lb/MMBtu							
Fuel Oil Calculations:	0.0035lb/MMBtu*83MMBtu/hr*672 hr/yr * 0.0005 ton/lb =						0.10 ton/yr	
<u>HAPs Emissions - Natural Gas</u>								
Emissions Factor:	1.8823618 lb/MMscf	(AP-42 Table 1.4-3)						
	0.001845453 lb/MMBtu							
Natural Gas Calculations:	0.0018lb/MMBtu*83MMBtu/hr*8088hr/yr*0.0005 ton/lb =						0.62 ton/yr	

CBW Boiler			
Natural Gas Fired Boiler			
Capacity:	24.7 MMBtu/hr		
Operation:	8760 hr/yr		
<u>PM(fil+cond) Emissions</u>			
Emissions Factor:	7.6 lb/MMscf (AP-42 Table 1.4-2)		
	0.00745098 lb/MMBtu		
Calculations:	$0.0075\text{lb/MMBtu} \times 24.7\text{MMBtu/hr} \times 8760\text{hr/yr} \times 0.0005\text{ ton/lb} =$		0.81 ton/yr
<u>SO2 Emissions</u>			
Emissions Factor:	0.6 lb/MMscf (AP-42 Table 1.4-2)		
	0.00058824 lb/MMBtu		
Calculations:	$0.0006\text{lb/MMBtu} \times 24.7\text{MMBtu/hr} \times 8760\text{hr/yr} \times 0.0005\text{ ton/lb} =$		0.06 ton/yr

<u>NOX Emissions</u>			
Emissions Factor:	2.23 lb/hr (Emissions Limitation)		
Calculations:	$2.23\text{lb/hr} \times 8760\text{hr/yr} \times 0.0005\text{ ton/lb} =$		9.77 ton/yr
<u>VOC Emissions</u>			
Emissions Factor:	5.5 lb/MMscf (AP-42 Table 1.4-2)		
	0.00539216 lb/MMBtu		
Calculations:	$0.0054\text{lb/MMBtu} \times 24.7\text{MMBtu/hr} \times 8760\text{hr/yr} \times 0.0005\text{ ton/lb} =$		0.58 ton/yr
<u>CO Emissions</u>			
Emissions Factor:	2.23 lb/hr		
Calculations:	Identical to NOX		
<u>HAPs Emissions</u>			
Emissions Factor:	1.8823618 lb/MMscf (AP-42 Table 1.4-3)		
	0.00184545 lb/MMBtu		
Calculations:	$0.0018\text{lb/MMBtu} \times 24.7\text{MMBtu/hr} \times 8760\text{hr/yr} \times 0.0005\text{ ton/lb} =$		0.20 ton/yr

<u>Pulp Dryer Combustion</u>			
Natural Gas Dryers			
Capacity:	95 MMBtu/hr		
<u>PM(fil+cond) Emissions</u>			
Emissions Factor:	7.6 lb/MMscf (AP-42 Table 1.4-2)		
	0.00745098 lb/MMBtu		
Calculations:	0.0075lb/MMBtu*95MMBtu/hr*8760 hr/yr * 0.0005 ton/lb =		3.10 ton/yr
<u>SO2 Emissions:</u>			
Emissions Factor:	0.6 lb/MMscf (AP-42 Table 1.4-2)		
	0.00058824 lb/MMBtu		
Calculations:	0.0006lb/MMBtu*95MMBtu/hr*8760 hr/yr * 0.0005 ton/lb =		0.24 ton/yr
<u>NOX Emissions</u>			
Emissions Factor:	100 lb/MMscf (AP-42 Table 1.4-1)		
	0.09803922 lb/MMBtu		
Calculations:	0.098lb/MMBtu*95MMBtu/hr*8760 hr/yr * 0.0005 ton/lb =		40.79 ton/yr
<u>VOC Emissions</u>			
Emissions Factor:	5.5 lb/MMscf (AP-42 1.4-2)		
	0.00539216 lb/MMBtu		
Calculations:	0.0054lb/MMBtu*95MMBtu/hr*8760 hr/yr * 0.0005 ton/lb =		2.24 ton/yr
<u>CO Emissions</u>			
Emissions Factor:	84 lb/MMscf (AP-42 1.4-1)		
	0.08235294 lb/MMBtu		
Calculations:	0.0824lb/MMBtu*95MMBtu/hr*8760 * 0.0005 ton/lb =		34.27 ton/yr
<u>HAPs Emissions</u>			
Emissions Factor:	1.8823618 lb/MMscf (AP-42 Table 1.4-3)		
	0.00184545 lb/MMBtu		
Calculations:	0.0018lb/MMBtu*95MMBtu/hr*8760 hr/yr * 0.0005 ton/lb =		0.77 ton/yr
<u>Pulp Dryers Pulp PM Emissions</u>			
Emissions Factor:	1.2354 lb/ton (EI Submitted EF)		
Throughput Limit:	114,192 ton/yr (Permit Limit - each boiler)		

V. Existing Air Quality

Sidney Sugars beet sugar plant is located in eastern Montana in a sparsely populated area with generally very good ventilation throughout the year. There are only a few significant air pollution sources in the surrounding area (a coal-fired power plant, two natural gas processing plants, coal strip mine, natural gas and oil well flares and vents). Ambient monitoring for several pollutants was discontinued in the area in 1987 due to a history of low ambient concentrations and good meteorological air dispersion. While there is no current ambient air monitoring data from nearby monitors available, the Department does not believe the area is in danger of approaching any ambient air quality standards at the present time.

VI. Ambient Air Quality Impacts

The current permit action will not result in an increase in emissions from the facility. Therefore, the Department believes the current permit action will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following

	questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)
--	---

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy, and Mining Division
Air Quality Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Sidney Sugars Incorporated
35140 County Road 125
Sidney, MT 59270

Montana Air Quality Permit Number (MAQP#): 1826-13

Preliminary Determination Issued: November 30, 2016

Department Decision Issued: December 19, 2016

Permit Final: January 4, 2017

1. *Legal Description of Site:* The Sidney Sugars Incorporated (Sidney Sugars) sugar beet facility is located in the NW¹/₄ of the NW¹/₄ of Section 34, Township 23 North, Range 59 East, Richland County, Montana.
2. *Description of Project:* Sidney Sugars proposed to replace an existing natural gas fired boiler with a replacement natural gas fired boiler.
3. *Objectives of Project:* To replace an existing natural gas fired boiler with a replacement natural gas fired boiler.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. Not issuing the permit would result in Sidney Sugars not being able to run auxiliary facilities as needed. However, the Department does not consider the “no-action” alternative to be appropriate because Sidney Sugars demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #1826-12.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:
The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

There will be no new habitat destruction as a result of this project, as a new boiler will be replacing an existing boiler within the facility. Further, because the facility is an existing industrial site, terrestrials that routinely inhabit the area are accustomed to the industrial character of the facility. Any impact to terrestrial and aquatic life and habitats from the proposed project would be expected to be minor.

B. Water Quality, Quantity and Distribution

The proposed project would not result in any impacts to water quantity or distribution in the area of operation because the replacement boiler would be installed at an existing facility and would not require any significant additional water consumption for proper operation nor any significant change in discharge to any area surface water resource. Overall, there would be no more than minor impact to water quality, quantity, and distribution expected in the surrounding area.

C. Geology and Soil Quality, Stability and Moisture

The actions addressed in this permit would not change the soil stability, quality, moisture, or geologic substructure. The proposed changes would not result in impacts to productivity or fertility at or near the site. No unique geologic or physical features would be disturbed. Therefore, no impact to geology or soil quality, stability, and moisture would occur.

D. Vegetation Cover, Quantity, and Quality

Currently, the surrounding area is residential and commercial. The current permit action would take place in the existing facility, and would involve the replacement of an existing boiler with a new boiler. Impacts, if any, would be expected to be minor.

E. Aesthetics

The site is an established sugar beet processing facility near the town of Sidney, Montana. The proposed project at this existing facility would not alter any scenic vista or create any additional noise at the site because the permitting action would involve the replacement of an existing boiler with a new boiler. Any impacts to aesthetics would be expected to be minor.

F. Air Quality

The Sidney Sugars facility is located in an area considered unclassified/attainment for all National and Montana Ambient Air Quality Standards (NAAQS and MAAQS). MAQP#1826-13 would limit any increase in the amount of allowable emission of pollutants. Any impacts to air quality from the proposed project would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

Because the project is to replace an existing boiler with a new boiler, impacts, if any, to any unique endangered, fragile or limited environmental resources would be expected to be minor.

H. Demands on Environmental Resource of Water, Air and Energy

No significant demands would be placed on environmental resources such as water, air and energy. The proposed project would occur in an existing facility and would involve the replacement of an existing boiler with a new boiler of smaller capacity. Overall, there would be no significant additional demands for environmental resources of water, air, and energy.

I. Historical and Archaeological Sites

Since this facility is existing and the plant property would not be expanded by the proposed project, no affects on historical and archeological findings are expected to occur.

J. Cumulative and Secondary Impacts

As previously described in this environmental assessment, no significant impacts to the individual considerations above are expected. Any cumulative impacts would be expected to be minor. In addition, the proposed project would not result in any known secondary impacts.

Air pollution from the facility would be controlled by MAQP #1826-13. This facility would be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #1826-13.

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores

The proposed project would not cause a disruption to any native or traditional lifestyles or communities in the area as the site is an existing facility and the proposed project does not change the purpose or means of operation of the sugar refining plant or expand upon the facility boundary. Therefore, use of the immediate surrounding area would be expected to remain the same.

B. Cultural Uniqueness and Diversity

The proposed project would not be expected to cause a change in the cultural uniqueness and diversity of the area because the site is an existing facility and is currently used predominantly for industrial purposes. Further, the proposed project would not change the existing industrial character of the area.

C. Local and State Tax Base and Tax Revenue

The proposed changes would not have an effect on the local and state tax base and tax revenue because Sidney Sugars would not hire any additional employees and therefore would not add to the overall income base of the area. Further, production rates and capabilities would not be expected to change as a result of this project.

D. Agricultural or Industrial Production

Because the proposed project would operate within the existing boundaries of the Sidney Sugars facility, the project would not be expected to displace or otherwise affect any agricultural land or practices.

E. Human Health

MAQP #1826-13 would incorporate conditions to ensure that the facility would be operated in compliance with all applicable rules and standards. These rules and standards are designed to be protective of human health.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed operations would not be expected to affect any access to or quality of any recreational or wilderness activities in the area because the site is an existing facility which currently operates for industrial purposes.

G. Quantity and Distribution of Employment

The replacement boiler would not be expected to affect the quantity and distribution of employment in the area. The proposed project would not increase the number of permanent employees at the plant.

H. Distribution of Population

The proposed operations would not be expected to increase the normal population distribution in the area because the number of permanent employees would not increase as a result of the proposed project.

I. Demands for Government Services

Government services would be required for acquiring the appropriate permits from government agencies (including a state air quality permit). In addition, the permitted source of emissions would be subject to periodic inspections by government personnel. Therefore, the project would have a minor effect on the demands of government services.

J. Industrial and Commercial Activity

No additional industrial or commercial activity is expected as a result of the proposed changes because the site is an existing facility, which is an industrial operation.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the current permit action. The state standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from the proposed project on the economic and social resources of the human environment in the immediate area would be minor due to the fact that the proposed area of operation would take place at an existing industrial operation the predominant use of the surrounding area would not change as a result of the modified operations. In addition, the proposed project would not result in any known secondary impacts.

The amount of allowable air pollution from the facility would be limited by MAQP #1826-13. This facility would be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #1826-13.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: There are no significant impacts expected with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Quality Bureau.

EA prepared by: Shawn Juers

Date: 11/23/2016