

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

**Air, Energy & Mining Division
1520 E. Sixth Avenue
P.O. Box 200901
Helena, Montana 59620-0901**

**Sidney Sugars Incorporated
NW ¼, NW ¼, Section 34, Township 23 North, Range 59 East, Richland County
35140 County Road 125
Sidney, MT 59270**

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		Method 5, 6, and 9
Ambient Monitoring Required		X	
Continuous Opacity Monitoring Systems (COMS) Required		X	
Continuous Emission Monitoring Systems (CEMS) Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		Annual and Semiannual
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
ARM Subchapter 7 Montana Air Quality Permit (MAQP)	X		MAQP #1826-15
New Source Performance Standards (NSPS)	X		40 CFR 60, Subpart Y 40 CFR 60, Subpart Dc
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	Except 40 CFR 61, Subpart M
Maximum Achievable Control Technology (MACT)	X		40 CFR 63, Subpart JJJJJJ
Major New Source Review (NSR) – includes Prevention of Significant Deterioration (PSD) and/or Non-attainment Area (NAA) NSR	X		Major Source, but permitting requirements have not been triggered
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
Compliance Assurance Monitoring (CAM)	X		Appendix E of OP1826-13
State Implementation Plan (SIP)	X		General SIP

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SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emissions units affected by the operating permit proposed for this facility. The document is intended for reference during review of the permit by the Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit.

Conclusions in this document are based on information provided in the application for permit renewal submitted by Sidney Sugars Incorporated (Sidney Sugars) on May 10, 2022. The application incorporated information from the original operating permit application submitted to the Department of Environmental Quality (DEQ) by the Holly Sugar Corporation (Holly Sugar) on March 21, 1995, and the following additional submittals:

- September 11, 1995, July 28, 1998, and August 18, 1999, for issuance of Operating Permit #OP1826-00 on May 26, 2000;
- November 2, 2000, for issuance of Operating Permit #OP1826-01;
- May 2, 2000, October 2, 2001, November 20, 2001, January 11, 2002, and February 1, 2002, for issuance of Operating Permit #OP1826-02;
- October 18, 2002, for Operating Permit #OP1826-03;
- September 29, 2003, October 29, 2003, for Operating Permit #OP1826-04;
- January 26, 2005, for issuance of Operating Permit #OP1826-05;
- May 27, 2007, for issuance of Operating Permit #OP1826-08;
- July 27, 2011, for issuance of Operating Permit #OP1826-07;
- April 28, 2012, and August 15, 2012, for issuance of Operating Permit #OP1826-09;
- June 24, 2013, for issuance of Operating Permit #OP1826-10;
- September 16, 2014, for issuance of Operating Permit #OP1826-11; and
- October 26, 2016, for issuance of Operating Permit #OP1826-12.

B. Facility Location

Sidney Sugars is located in the NW¹/₄, of the NW¹/₄, Section 34, Township 23 North, Range 59 East, P.M.M., in Richland County, Montana. Richland County is designated as an Unclassifiable/Attainment area for National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. The facility is located immediately east of the town of Sidney, all other boundaries are essentially undeveloped/agricultural use properties expect for occasional single family residential locations.

C. Facility Background Information

Montana Air Quality Permit (MAQP) Background

On May 2, 1984, Holly Sugar received **MAQP #1826-00** for the conversion of 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 Sugar 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 Sugar 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 which determine the maximum emissions from the other boilers and dryers at differing performance loads. Also, references to the applicable rules, which 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.

1. The section listing limitation 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 #1826-00 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 which must be used by the facility to determine allowable emissions from the dryers.

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

On April 14, 1996, Holly Sugar 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 Sugar determined that they could meet their needs with only one CE boiler operating and need the flexibility to extend their campaign beyond the 180-day limit. Therefore, Holly Sugar 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 Sugar 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 because the total amount of coal handled at the facility did not change.

Holly Sugar also requested, and DEQ agreed, that the following testing requirements be removed: 1) The requirement to test the Union boilers and the pulp dryers for SO₂; the permit contained no limits for SO₂ emissions from these sources and it was not reasonable to require Holly Sugar to test for information only purposes. 2) The requirement to perform compliance tests for opacity on the sugar silos. The silo vents are located inside small enclosures on top of the silos. The exhaust exits the enclosure through various natural draft 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 is not affected by this action.

On February 28, 1998, Holly Sugar was issued **MAQP #1826-05** to remove the particulate and opacity testing requirements for the two Union boilers. Previously, Holly Sugar 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 Sugar requested that these testing requirements be removed as 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 Sugar is expected to be in compliance with the opacity and particulate emission limits. If it is determined that the Union boilers are using more fuel oil than anticipated or identified, DEQ may require testing. This change did not increase the facility's allowable or potential emissions.

On July 28, 1998, Holly Sugar was issued **MAQP #1826-06** for the addition of a pebble lime hopper, which would use a pneumatic loading system when lime is loaded into the hopper. This permit alteration also clarified the language limiting total annual hours of operation for each CE boiler. This change increased the facility's actual emissions of PM and PM-10 by less than 1.5 tons for each pollutant.

On February 26, 1999, Holly Sugar 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 additional throughput will occur during pneumatic loading from the truck. The tank air vent will be 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 the permit alteration was clarification of some of the permit conditions. The language for the particulate matter and SO₂ conditions concerning the CE boilers were 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 (NOV), EK99-02, an extensive review revealed that Holly Sugar's replacement of the facility's diffuser required a permit alteration. On August 18, 1999, Holly Sugar submitted an application for the increase in emissions resulting in downstream units from the new diffuser. Affected down-stream units include both pulp dryers, the dry pulp cyclone, the pellet cooler cyclone and the pellet tank fan. The resulting increase in allowable PM and PM-10 emissions was 14.06 tons per year (tpy) and 11.60 tpy, respectively. The following conditions were added to **MAQP #1826-08** to ensure PSD significant levels would not be violated in the future:

1. Each dryer process rate (to include molasses) shall not exceed 114,192 tons during any one campaign. Holly Sugar shall maintain a daily log with a cumulative total of the current campaign production. This log shall be maintained on site, made available to DEQ personnel during facility visits, and submitted to DEQ upon request.
2. Holly Sugar 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 Sugar 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 DEQ upon request.

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

The alteration to **MAQP #1826-09** involved the installation and operation of a Superior Mohawk natural gas-fired boiler and the removal of a Cleaver Brooks natural gas-fired boiler. This permitting action also reflected the relocation of the Sly filter baghouse which was approved by DEQ 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 is considered de minimis as described in ARM 17.8.705 (1)(r) because the potential emissions are less than 15 tons/year, and the proposal did not violate any conditions of the existing permit. **MAQP #1826-10** replaced **MAQP #1826-09**.

DEQ received a request on October 18, 2002, from Sidney Sugars Incorporated to change the name of the Sidney, Montana facility from Holly Sugar Corporation to Sidney Sugars Incorporated (Sydney Sugars). **MAQP #1826-11** replaced **MAQP #1826-10**.

On June 24, 2013, DEQ received an application to modify MAQP #1826-11 to include coke breeze as a supplemental fuel for the two CE boilers. **MAQP #1826-12** replaced MAQP #1826-11.

On November 2, 2016, DEQ 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 was 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 could be provided for this used boiler, DEQ required 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 allowed 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. This action also updated 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 were used as this guidance provided emissions factors specific to lignite combustion. **MAQP #1826-13** replaced MAQP #1826-12.

On May 10, 2017, DEQ received from Sidney Sugars an application for a new Pebble Lime Silo to replace the existing lime silo located in the Slaker Building. The new silo will be used to store lime as well as pneumatic conveyance of pebble lime for the Lime Kiln. Particulate emissions from the lime silo will be controlled through the use of a baghouse. **MAQP #1826-14** replaced MAQP #1826-13.

On December 2, 2021, DEQ received an application from Sidney Sugars to replace two (2) existing CW coal fired boilers with one (1) 185 MMBtu natural gas-fired boiler. The permit action did not trigger PSD major source permitting because it did not result in a significant net emission increase of any pollutant. **MAQP #1826-15** replaced MAQP #1826-14.

Title V Operating Permit Background

Operating Permit #OP1826-00 was issued as final on May 26, 2000. On correspondence dated November 02, 2000, Holly Sugar submitted a request for modification to Operating Permit #OP1826-00. This modification requested that in place of a supplier’s certification of the gas sulfur content the permit states that only pipeline quality natural gas is fired for the Union Pacific boilers, Cleaver Brooks boiler, and pulp dryers. In addition, Holly Sugar requested the option to obtain a certification from the oil supplier or to sample each shipment of fuel oil delivered to the factory and have a laboratory analysis performed to determine sulfur content for fuel oil used in the Union Pacific boilers and pulp dryers.

Operating Permit #OP1826-01 replaced Operating Permit #OP1826-00.

DEQ received a preconstruction permit application on January 11, 2002, for the installation and operation of a Superior Mohawk natural gas-fired boiler and the removal of a Cleaver Brooks natural gas-fired boiler. This alteration is also included in this permit modification. **Operating Permit #OP1826-02** replaced Operating Permit #OP1826-01.

In addition, the modification of Operating Permit #OP1826-01 also incorporated several de minimis and administrative amendment permit actions. Including, the relocation of the Sly filter baghouse which was a de minimis change occurring on May 2, 2000. The Sly Filter baghouse was moved from the sugar handling and storage area to Silos 1-4. Sly Filter baghouse emissions will remain the same as estimated in Operating Permit #OP1826-00. The dust from the sugar handling and storage area was routed to the existing MAC baghouse, which vents inside the sugar warehouse. Therefore, Section L for EU023 – Sugar Handling and Storage was removed from the permit. Also, silos 1-4 and the Sly Filter Baghouse were added to the insignificant emission units as IEU046.

Additional inclusion was provided from November 20, 2001, where DEQ issued an administrative amendment which reflected Holly Sugar's request to add the following language to Section II.A.16 of MAQP #1826-09: "In the event of weigh device malfunction, Holly Sugar shall use an alternative monitoring method approved by DEQ."

Finally, on February 1, 2002, Holly requested approval to install and operate a continuous vacuum pan to improve efficiency of extracting pure granulated sugar from the thick juice, which comes from the evaporator. The amount of material (juice) sent to the pan floor is limited by the factory evaporator capacity. The juice is boiled in the pans to produce a pure sugar product and a molasses by-product.

The continuous vacuum pan will allow additional sugar extraction from the juice. Therefore, some of the sugar that would be lost to molasses is instead refined into pure sugar, which is sent to the silos. The vacuum pan is not an emitting unit, and potential to emit from the additional sugar production handling and storage would be approximately 1.6 tons per year. The existing sugar handling equipment will accommodate the additional sugar without modification, and the increase in emissions falls within the de minimis rule.

DEQ issued Operating Permit #OP1826-03 final and effective on December 9, 2002. The permit action was an administrative amendment to Operating Permit #OP1826-02. DEQ received a request on October 18, 2002, from Sidney Sugars Incorporated (Sidney Sugars) to change the name of the Sidney, Montana facility from Holly Sugar Corporation to Sidney Sugars. DEQ also updated the responsible official and the contact person. **Operating Permit #OP1826-03** replaced Operating Permit #OP1826-02.

On September 29, 2003, DEQ received a request from Sidney Sugars to update the facility's Title V Air Quality Permit #OP1826-03 so the permit language would be consistent with the new rules for the compliance certifications. DEQ received an additional submittal on October 29, 2003, requesting an update the responsible official. **Operating Permit #OP1826-04** replaced Operating Permit #OP1826-03.

On January 26, 2005, DEQ received a renewal application from Sidney Sugars. The application was deemed administratively and technically complete on February 24, 2005. DEQ issued Operating Permit #OP1826-05 final and effective on April 11, 2006. **Operating Permit #OP1826-05** replaced Operating Permit #OP1826-04.

On February 20, 2009, DEQ received an application from Sidney Sugars proposing the modification of three (3) existing control systems and the installation of emission control equipment on three (3) previously uncontrolled sources. The application was assigned **Operating Permit #OP1826-06** and included the following proposed alterations:

Existing Control Systems: Control systems on the following sources were to be abandoned and replaced with new baghouse control devices:

1. Coal Handling and Storage System (EU022).
2. Weibul Conditioner System (EU027).
3. Hoffman Vent (EU028).

New Control Systems: Control systems were installed on the following releases that were either previously fugitive or which exhausted to the interior portion of a building:

1. Warehouse Packaging Dust Collection - Previous dust collection equipment was vented to the interior of the sugar packaging warehouse. This collection system was abandoned, and a new MAC Equipment baghouse was installed and vented to the exterior in late 2010.
2. Lime Kiln System - A MAC Equipment baghouse was installed on the Lime Kiln Vacuum System exhaust to control dust generated from lime handling and transfer activities. The new equipment was vented to the exterior of the building.
3. Sugar Silos Vacuum System - Silo exhaust was fitted with a MAC Equipment baghouse unit in early 2010 to control dust generated from the vacuum transfer of refined sugar.

After review of the permit application, DEQ determined that these changes were de minimis in nature and did not constitute a major modification to the existing operating permit, therefore the application was withdrawn, and application fee returned. Operating Permit #OP1826-06 was withdrawn.

On November 15, 2010, DEQ received a renewal application from Sidney Sugars. The application also included the de minimis changes to the control equipment identified previously in the aforementioned February 20, 2009, application. These emission units were added to the insignificant source/activities table within the permit action. The operating permit was also updated to incorporate recently promulgated federal regulations which affect Sidney Sugars. The application was assigned **Operating Permit #OP1826-07**.

On May 27, 2011, DEQ received an application requesting the installation of a portable coal screen and an update of the operating permit to reflect the addition. The modification was

subsequently determined to be a de minimis action and was addressed through an administrative amendment. **Operating Permit #OP1826-08** issued on July 27, 2011, replaced Operating Permit #OP1826-05.

The Title V permit renewal action, #OP1826-07, was under development prior to initiation of the administrative action that resulted in the issuance of Operating Permit #OP1826-08. Therefore, when Operating Permit #OP1826-07 was issued, it replaced Operating Permit #OP1826-08.

On August 15, 2012, DEQ received notification from Sidney Sugars, of a change of responsible official at the sugar refining plant. The permit action reflected this change and **Operating Permit #OP1826-09** replaced Operating Permit #OP1826-07.

On June 24, 2013, DEQ received an application for a permit modification to include coke breeze as a supplemental fuel for the two CE boilers. Coke breeze, the undersized screenings collected during the loading of coke, will be collected and added to the lignite coal stockpiles to fuel the CE boilers. The permit action added coke breeze as a supplemental fuel for the CE boilers (EU001 and EU002), added the handling and storage of coke breeze to EU022, and updated the permit to reflect current permit language and rule references used by DEQ. **Operating Permit #OP1826-10** replaced Operating Permit #OP1826-09.

On September 16, 2014, DEQ received a request for an administrative amendment to revise the Compliance Assurance Monitoring (CAM) Plan for the Combustion Engineering (CE) boilers. The existing controls on the two CE boilers included a wetted approach venturi scrubber with wetted elbow and a vertical cyclonic entrainment separator. The scrubber and separator control emissions of particulate matter and sulfur dioxide (SO₂) generated in the burning of the coal fuel in the boilers. One of the indicators of performance of the controls was the differential pressure across the scrubber/separator. The reduced the lower end of the pressure differential range to allow for a decrease in the air flow through the boilers and consequently through the scrubber/separator. This change in air flow allowed more heat to be retained within the boiler system, which produced more steam with less consumption of coal, resulting not only in improved energy efficiency of the CE Boilers, but also less coal consumption, thereby lowering overall emissions of air pollutants. Results from engineering testing, conducted in October 2004 and January 2005 indicated that the emissions limits will still be met when the system operates within the proposed pressure differential range.

The current permit action reduced the lower end of the pressure differential range from 9.5 inches of water to 8.5 inches of water and updated the permit to reflect current permit language and rule references used by DEQ. **Operating Permit #OP1826-11** replaced Operating Permit #OP1826-10.

On October 20, 2016, DEQ received a renewal application from Sidney Sugars. The application included changes to the significant emitting units list, more specifically, changing the name of the Superior Mohawk Boiler to CBW-600 boiler and updating the necessary equipment information to reflect the correct Btu per hour (Btu/hr) output of the new boiler. The change also included the addition of federal regulations from 40 CFR 63, Subpart JJJJJJ and a new Pebble Lime Silo to replace the existing lime silo located in the Slaker Building. **Operating Permit #OP1826-12** replaced Operating Permit #OP1826-11.

D. Current Permit Action

On May 10, 2022, DEQ received a renewal application from Sidney Sugars. No changes to the Title V Operating Permit were requested by Sidney Sugars. The Operating Permit has been updated to reflect current naming conventions and language used by the DEQ. **Title V Operating Permit #OP1826-13** replaces Title V Operating Permit #OP1826-12.

E. Taking and Damaging Analysis

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, DEQ is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 2-10-105, MCA, DEQ 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, DEQ determined there are no taking or damaging implications associated with this permit action.

F. Compliance Designation

The Sidney Sugars facility was last inspected on September 28, 2021. At this time, DEQ conducted a full compliance evaluation (FCE), including any partial compliance evaluations (PCE) and any investigations conducted for the period from November 14, 2018, to September 28, 2021. As part of this full compliance evaluation (FCE) DEQ reviewed Title V Certifications, semiannual Compliance Monitoring Reports, and annual Emission Inventories.

DEQ found Sidney Sugars to be in compliance with the terms and conditions of the Operating Permit #OP1826-12 during that time period.

However, DEQ determined that there are compliance issues at Sidney Sugars which resulted in a warning letter being issued to Sidney Sugars (Violation Letter #VL-2022418-00349). Four (4) violations were discovered; failing to maintain the average monthly fuel sulfur content less than or equal to that allowed by the permit, failure to demonstrate compliance with CE Boiler #1 Particulate Matter (PM) emission limit, failure to demonstrate compliance with Sterns-Roger Pulp Dryer 2 PM Emissions limit, and failure to submit a Source Test Protocol Prior to Conducting Emissions Testing. DEQ is currently engaged with Sidney Sugars regarding the violation letter.

SECTION II. SUMMARY OF EMISSIONS UNITS

A. Facility Process Description

This facility processes sugar beets for the production of sugar. Sugar beets are received at the plant by truck and are screened for dirt and rock removal. The beets are then either fed into the plant or stockpiled to be processed at a later time. Processing of the beets begins by first washing any residual dirt from the beets and slicing them into log thin strips referred to as cossettes. The cossettes are run into a diffuser where the beet sugar is removed with water and heat. The juice goes through several purifying stages and then is sent to the evaporators, which remove the liquids and allow crystallization. A total of two by-products of this process are molasses and pulp, which at the Sidney plant are mixed together to create pellets that are sold as livestock feed. Shipment of the sugar from the facility is completed by both rail and truck.

B. Emissions Units and Pollution Control Device Identification

The following table lists the significant emissions units located at the Sidney Sugars facility.

Emission Unit ID	Description	Pollution Control
EU001	#1 combustion engineering (CE) lignite coal and coke breeze-fired boiler	Anderson 2000 Inc. Venturi scrubber and separator
EU002	#2 combustion engineering (CE) lignite coal and coke breeze-fired boiler	Anderson 2000 Inc. Venturi scrubber and separator
EU003	Union Pacific natural gas/fuel oil-fired boiler	none
EU005	Union Pacific natural gas/fuel oil-fired boiler	none
EU007	CBW-600 natural gas-fired boiler	Work Practice Standards
EU022	Coal and coke breeze Handling and Storage - Coal and coke breeze Belt Feeders (2) - Coal and coke breeze Screw Conveyors (4) - Crusher - Coal and coke breeze Elevator - Coal and coke breeze Bunker	Baghouse Filter and enclosed conveyor(s)
EU024A&B	#1 Stearns-Roger Pulp Dryer	Cyclones
EU025A&B	#2 Stearns-Roger Pulp Dryer	Cyclones
EU026A&B	Dry Pulp Handling Screw Conveyors (18)	Dry Cyclone Separator
EU030	Pellet Mills and Cooler - Pellet Mills (4) - Pellet Cooler	Cyclone
EU031	Pellet Tank Exhaust Fan - Mechanical Conveyors (3) - Oscillating Pellet Screen - Pneumatic Conveyor (2) - Pellet Tank	none
EU043A	Slaker Building Vent - Pebble Lime Hopper - Lime Kiln Pan Feeder	Baghouse
EU020	Granulator	Wet Scrubber
EU027	Weibul Conditioner System	Baghouse Filter

Emission Unit ID	Description	Pollution Control
EU028	Reclaiming sugar from silos and packaging (Hoffman Vent)	Baghouse Filter
EU047-056	Sugar Silos	Filter Vents
EU057	Pebble Lime Silo	Baghouse Filter
EU101	Beet Unloading and Handling - Wet Flume Hopper (2) - Beet Pilers (on site)	none
EU102	Coal Unloading - Truck Hoppers (2)	none
EU103	Coke Unloading and Handling - Railcar Unloader (belt conveyor) - Bucket Elevator - Coke Vibrating Feeder	none
EU104	Lime Unloading and Handling - Railcar Unloader (belt conveyor) - Limerock Reciprocating Feeder - Limerock Covered Belt Conveyor - Limerock Scalping Screen - Limerock Vibrating Feeder - Belt Conveyors (2)	none
EU500	Haul Roads	Water Application

C. Categorically Insignificant Sources/Activities

The following table lists insignificant emissions units located at the Sidney Sugars facility.

Insignificant Emissions Unit ID	Description
IEU004	Steam Vent Blowdown Tank Vent
IEU006	Boiler Feed Tank Vent
IEU008A, B, & C	Boiler Safety Vents
IEU009	Exhaust Steam Vents
IEU010	Generator Turbine Relief Vents
IEU011, IEU029 A & B, IEU046	Extraction & Purification Ammonia Vents
IEU012A, B, C & D	Pulp Dryer Building Roof Vent
IEU013A, B, C, D & E	Dried Pulp Warehouse Roof Vents
IEU014	Kiln Draft Fan
IEU015A & B	Kiln Building Vent Fans
IEU016	Oliver Building Vent
IEU17A, B, & C	Diffuser Roof Vents
IEU018A & B	Diffuser Vapor Vents
IEU019A, B, & C	Control House Roof Vents
IEU021	Slaker Building Wet Scrubber
IEU032	Maintenance Shop Vent
IEU033	Oliver Vacuum Pump Vent
IEU034	Sidney Carb Vent
IEU035A, B, & C	Benning Vent, Evaporator Supply Tank Vent, and Diffuser Supply

Insignificant Emissions Unit ID	Description
	Tank
IEU036	Suction for Oliver Air Compressor
IEU037	Second Carb Vent
IEU038	Dorr Tank Vent
IEU039	Press Steam Vapor Vent
IEU040	Oliver Wet Scrubber
IEU041	Wash House Roof Vent
IEU042	Oliver Roof Vent
IEU043B	Slaker Building Vent
IEU044	Tower Diffuser Vapor Vent
IEU045	Mixer Building Roof Vent
IEU046	Silos #1 to #4 and Sly Filter Baghouse
IEU108	Mud Pond Cleaning/Handling
IEU109	Boiler ash Pond Cleaning/Handling
IEU110	PCC Pond Cleaning/Handling
IEU111	Portable Coal Screen
IEU112 & IEU113	1,000 Gallon Diesel Steel Horizontal Above Ground Storage Tank (2)
IEU114	1,000 Gallon Gasoline - Steel Horizontal Above Ground Storage Tank
IEU115	50,000 Gallon No. 2 Fuel Oil - Steel Vertical-Fixed Roof Above Ground Storage Tank

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

Emission limits and standards for Operating Permit #OP1826-13 were established from limits and standards contained in Sidney Sugars MAQP #1826-15. Additional limits and standards are presented from applicable requirements of 40 Code of Federal Regulations (CFR) Part 63 and Part 60.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance do not require the permit to impose the same level of rigor for all emissions units. Furthermore, they do not require extensive testing or monitoring to assure compliance with the applicable requirements for emissions units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for a insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (**i.e., no monitoring**) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emissions units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, DEQ may request additional testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but DEQ has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

D. Recordkeeping Requirements

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least five years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit “General Conditions” explains the reporting requirements. However, the permittee is required to submit semi-annual and annual monitoring reports to DEQ and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the Sidney Herald newspaper on or before September 14, 2022. DEQ provided a 30-day public comment period on the draft operating permit from September 14, 2022, to October 14, 2022. ARM 17.8.1232 requires DEQ to keep a record of both comments and issues raised during the public participation process. The comments and issues received by October 14, 2022, will be summarized, along with DEQ's responses, in the following table. All comments received during the public comment period will be promptly forwarded to Sidney Sugars so they may have an opportunity to respond to these comments as well.

Summary of Public Comments

Draft Permit Comments

Person/Group Commenting	Comment	DEQ Response
No Public Comments Received		

Summary of Permittee Comments

Permit Reference	Permittee Comment	DEQ Response
No Permittee Comments Received		

Summary of EPA Comments

Permit Reference	EPA Comment	DEQ Response
No EPA Comments Received		

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

Rule Citation	Comment
40 CFR 51.119 40 CFR 51.165 40 CFR 51.166 40 CFR 51.300-307 40 CFR 51, Appendix P 40 CFR 51, Appendix S 40 CFR 52.21 40 CFR 52.22(b) 40 CFR 52.24 40 CFR 52.29 40 CFR 58, Appendix B 40 CFR 62 40 CFR 70 and 71	Although these rules contain requirements for the regulatory authorities and not major sources, these rules can be used as authority to impose specific requirements on major sources.
40 CFR 61, Subpart M 40 CFR 82, Subpart F	These rules are always applicable and may contain specific requirements for compliance.
ARM 17.8.120 ARM 17.8.204 ARM 17.8.326 ARM 17.8.330 ARM 17.8.504 ARM 17.8.514 ARM 17.8.515 ARM 17.8.611 ARM 17.8.612 ARM 17.8.701 ARM 17.8.804 ARM 17.8.825 ARM 17.8.826 ARM 17.8.828 ARM 17.8.901 ARM 17.8.1001 ARM 17.8.1103	These rules may be procedural rules that have specific requirements that may become relevant to a major source during the permit span. These rules may be applicable to a major source and may contain specific requirements of compliance. These rules may consist of either a statement of purpose, applicability statement, regulatory definitions or a statement of incorporation by reference. These types of rules do not have specific requirements associate with them.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards (Part 63)

As of the issuance date of this action, DEQ is not aware of any future MACT standards to be promulgated that may affect the facility. The facility is currently subject to 40 CFR 63, Subpart JJJJJJ – National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

Affected sources under the Area Source Boiler MACT are industrial, commercial, and institution boilers that burn coal, oil, biomass, or other solid and liquid non-waste materials. This rule does not apply to boilers burning only gaseous fuels or any solid waste. Current applicability is limited to Combustion Engineering (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.

B. NESHAP Standards (Part 61)

As of the issuance date of this action, DEQ is not aware of any future NESHAP standards to be promulgated that may affect the facility. The facility is currently subject to 40 CFR 61, Subpart M (National Emission Standard for Asbestos).

C. NSPS Standards

As of the issuance date of this action, DEQ is not aware of any future NSPS standards to be promulgated that may affect the facility. The facility is currently subject to 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants and Processing Plants and 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The CBW-600 is the affected source under Subpart Dc.

The fossil fuel-fired CE Boilers (EU001 & EU002) and the Union Pacific Boilers (EU003 & EU005) have a heat input capacity less than 250 million British Thermal Units per hour (MMBtu/hr); therefore 40 CFR 60, Subpart D does not apply. The CE Boilers and the Union Pacific Boiler #1 (EU003), meet the applicable threshold for steam generating units greater than 100MMBtu/hr, established within 40 CFR 60, Db, 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 (A modification to permit a change in fuel from oil/natural gas to coal for the CE Boilers was issued by DEQ on May 5, 1984). The Union Pacific Boiler #2 (EU005) is not subject to 40 CFR 60, Subpart Db as the heat input does not meet the applicability threshold and is not subject to 40 CFR 60, Subpart as it was installed prior to the June 9, 1989 applicability.

The 50,000 gallon fuel storage tank was constructed prior to June 11, 1973; therefore 40 CFR 60, Subpart K Standards of Performance for Storage Vessels for Petroleum Liquids does not apply.

D. Risk Management Plan

As of the issuance of this action, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than June 21, 1999; three years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

E. CAM Applicability

An emitting unit located at a Title V facility that meets the following criteria listed in ARM 17.8.1503 is subject to Subchapter 15 and must develop a CAM Plan for that unit:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (unless the limitation or standard that is exempt under ARM 17.8.1503(2)):
- The emitting unit uses a control device to achieve compliance with such limit; and
- The emitting unit has potential pre-control device emissions of the applicable regulated air pollutant that is greater than major source thresholds.

Currently, emitting units EU001 and EU002, Combustion Engineering Boiler #1 and #2 respectively, meet the applicability criteria established in ARM 17.8.1503. Sidney Sugars is required to develop a CAM Plan for the facility. The details of the CAM Plan are located within Appendix E of Operating Permit #OP1826-13.

F. PSD and Title V Greenhouse Gas Tailoring Rule

On May 7, 2010, EPA published the “light duty vehicle rule” (Docket # EPA-HQ-OAR-2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG “Tailoring Rule” (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011, would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO₂e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO₂e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO₂e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO₂e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

The Supreme Court of the United States (SCOTUS), in its *Utility Air Regulatory Group v. EPA* decision on June 23, 2014, ruled that the Clean Air Act neither compels nor permits EPA to require a source to obtain a PSD or Title V permit on the sole basis of its potential emissions of GHG. SCOTUS also ruled that EPA lacked the authority to tailor the Clean Air Act's unambiguous numerical thresholds of 100 or 250 TPY to accommodate a CO₂e threshold of 100,000 TPY. SCOTUS upheld that EPA reasonably interpreted the Clean Air Act to require sources that would need PSD permits based on their emission of conventional pollutants to comply with BACT for GHG. As such, the Tailoring Rule has been rendered invalid and sources cannot become subject to PSD or Title V regulations based on GHG emissions alone. Sources that must undergo PSD permitting due to pollutant emissions other than PSD may still be required to comply with BACT for GHG emissions.