Iowa Department of Natural Resources
Title V Operating Permit

Name of Permitted Facility: Valero Renewable Fuels Company, LLC dba Valero Hartley Plant
Facility Location: 3260 Van Buren Avenue, Hartley, Iowa 51346
Air Quality Operating Permit Number: 16-TV-004R1
Expiration Date: November 3, 2026
Permit Renewal Application Deadline: May 3, 2026

EIQ Number: 92-6953
Facility File Number: 71-02-010

Responsible Official
Name: Kraig Kruger
Title: Plant Manager
Mailing Address: 3260 Van Buren Avenue
Hartley, Iowa 51346
Phone #: (712) 928-5811

Permit Contact Person for the Facility
Name: Ryan Murray
Title: HSE Manager
Mailing Address: 3260 Van Buren Avenue
Hartley, Iowa 51346
Phone #: (712) 928-5815

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Marnie Stein 11/04/2021

Marnie Stein, Supervisor of Air Operating Permits Section Date

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Abbreviations

acfm.....actual cubic feet per minute
bu……bushels
CFR.....Code of Federal Regulation
CE .....control equipment
CEM.....continuous emission monitor
°F.....degrees Fahrenheit
EIQ.....emissions inventory questionnaire
EP.....emission point
EU .....emission unit
gr./dscf .....grains per dry standard cubic foot
IAC.....Iowa Administrative Code
IDNR.....Iowa Department of Natural Resources
MVAC.....motor vehicle air conditioner
NAICS.....North American Industry Classification system
NSPS.....new source performance standard
ppmv .....parts per million by volume
lb./hr.....pounds per hour
lb./MMBtu .....pounds per million British thermal units
SCC.....Source Classification Codes
scfm.....standard cubic feet per minute
SIC .....Standard Industrial Classification
TPY .....tons per year
USEPA.....United States Environmental Protection Agency
VMT/hr……...Vehicle miles traveled per hour

Pollutants
PM.....particulate matter
PM_{10}.....particulate matter ten microns or less in diameter
SO_2.....sulfur dioxide
NO_x .....nitrogen oxides
VOC .....volatile organic compound
CO.....carbon monoxide
HAP.....hazardous air pollutant

I. Facility Description and Equipment List

Facility Name: Valero Hartley Plant
Permit Number: 16-TV-004R1

Facility Description: Dry Mill Ethanol (SIC 2869)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
S10	01	DDGS Dryer A	06-A-1091-S3
	02	DDGS Dryer B	
	03	Thermal Oxidizer/ Waste Heat recovery Boiler	
	04	DDGS Dryer C	
	05	DDGS Dryer D	
	06	Thermal Oxidizer/ Waste Heat recovery Boiler	
	58	DDGS Cooling Drum	
	43	Mixer	
		Slurry Tank #1	
		Slurry Tank #2	
		Flash Tank	
		Cook Tubes	
		Liquefaction Tank #1	
		Liquefaction Tank #2	
		Yeast Tank #1	
		Yeast Tank #2	
		Beer Column	
		Side Stripper	
		Rectifier Column	
		190 Proof Condenser	
		Molecular Sieve	
		200 Proof Condenser	
		Centrate Tanks	
		Evaporators	
	65	Blender Feed Screw	
	69	DDGS Feed Conveyors	
S20	07	Truck Receiving Dump Pit & Transfer Drag #1	06-A-1092-S2

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
	08	Receiving Leg #1	
	09	Silo Fill Conveyor #1	
	10	Grain Silo #1	
	62	Grain Silo #4	
	11	Silo Reclaim Conveyor #1	
	13	Truck Receiving Dump Pit & Transfer Drag #2	
	14	Receiving Leg #2	
	15	Silo Center Fill Conveyor #2	
	16	Grain Silo #2	
	63	Grain Silo #5	
	17	Silo Reclaim Conveyor #2	
	61	Grain Silo #3	
	64	Rail Receiving Dump Pit & Drag Conveyor	
	65	Silo Reclaim Conveyor #3	
	66	Silo Reclaim Conveyor #4	
	67	Silo Reclaim Conveyor #5	
	68	Hammermill Feed Silo	
S30	20	Hammermill No. 1	06-A-1093-S2
	21	Hammermill No. 2	
	22	Hammermill No. 3	
	23	Hammermill No. 4	
	62	Rotary Scalpers	
	63	Scalping Bin 3B	
	64	Grinding Reclaim & Transfer Conveyors	
S40	35	Batch Mash Fermenter #1	06-A-1094-S4
	36	Batch Mash Fermenter #2	
	37	Batch Mash Fermenter #3	
	38	Batch Mash Fermenter #4	
	39	Batch Mash Fermenter #5	
	40	Batch Mash Fermenter #6	
	41	Batch Mash Fermenter #7	
	42	Beerwell	
S70	58	DDGS Cooler (Thermal Oxidizer Bypass)	06-A-1096-S3

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
S75	49	DDGS Inclined Drag	06-A-1097-S3
	50	DDGS Topfill Drag (Flat Storage)	
	51	DDGS Flat Storage Building	
	52	DDGS Flat Storage Floor Drag	
	53	DDGS Recirc/Loadout Leg	
	54	DDGS Topfill Drag (Silo Recirc)	
	55	DDGS Loadout Drag	
	56	Truck Load Spout	
	69	DDGS Transfer Drag	
	70	DDGS Storage Drag	
	71	DDGS Topfill Drag	
	72	DDGS Storage Silo #1	
	73	DDGS Storage Silo #2	
	74	DDGS Reclaim Drag #1	
	75	DDGS Reclaim Drag #2	
	76	Rail Load Spout #1	
	77	Rail Load Spout #2	
	78	Rail Load Spout #3	
S80	59A	Ethanol Truck Loadout	06-A-1098-S2
	59B	Ethanol Rail Loadout	
	59C	Combustion Emissions from Loadout	
S90	60	Firewater Pump	06-A-1099-S3
FS10	FS10	Truck Traffic	06-A-1100-S4
FS40	FS40	Equipment Leaks	06-A-1101-S1
FS70	FS70	WDGS & MDGS Loadout & Storage	06-A-1102-S2
FS80	FS80	Cooling Tower	06-A-1103-S2
TK001	TK001	190 Proof Ethanol Storage Tank	06-A-1104-S2
TK002	TK002	200 Proof Ethanol Storage Tank	06-A-1105-S2
TK003	TK003	Denaturant Tank	06-A-1106-S2
TK004	TK004	Final Product Tank #1	06-A-1107-S3
TK005	TK005	Final Product Tank #2	06-A-1108-S3
TK006	TK006	Corrosion Inhibitor Tank	06-A-1109-S2

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
SS-CO3	Paved Road Emissions From Corn Oil Proc.
SS-CS1	Corn Storage Pile 1
SS-CS2	Corn Storage Pile 2
SS-CS3	Fugitive Emissions for Corn Storage Pile
SS-CS4	Fugitive Emissions for Corn Storage Pile
SS-CS5	Fugitive Emissions for Corn Storage Pile
SS-HCl	HCl Storage Tank
SS-Tanks	Miscellaneous Storage Tanks
SS-WTL	Water Treatment Facility Lime Storage
SS-WTSA	Water Treatment Facility Sod Ash Storage Silo (with Bagfilter)
47A	PRV for Sieve Vaporizer
80	PRV and Boot for Fermenter 1
81	PRV and Boot for Fermenter 2
82	PRV and Boot for Fermenter 3
83	PRV and Boot for Fermenter 4
84	PRV and Boot for Fermenter 5
85	PRV and Boot for Fermenter 6
86	PRV and Boot for Fermenter 7
87	PRV and Boot for Beerwell
88	Corn Oil Loadout
90	AOS Equipment Leaks

II. Plant-Wide Conditions

Facility Name: Valero Hartley Plant
Permit Number: 16-TV-004R1

Permit conditions are established in accord with 567 Iowa Administrative Code Rule 22.108

Permit Duration

The term of this permit is: Five (5) years
Commencing on: November 4, 2021
Ending on: November 3, 2021

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits
Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO_2): 500 parts per million by volume
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter:
No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed on or after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.
For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).
Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported or stored or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. (the preceding sentence is State Only) All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The public highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not be limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizer or limestone.
4. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.
6. Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

Authority for Requirement: 567 IAC 23.3(2)"c"

NESHAP and NSPS Requirements

40 CFR 60 Subpart A

This facility is an affected source and these *General Provisions* apply to the facility. The affected units are 03, 06, TK001, TK002, TK003, TK004, TK005, FS40, and 60.

Authority for Requirements: 40 CFR 60 Subpart A
567 IAC 23.1(2)

40 CFR 60 Subpart Db
This facility is subject to Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The affected units are the Thermal Oxidizers/Waste Heat Recovery Boilers, Emission Units 03 and 06.
Authority for Requirements: 40 CFR 60 Subpart Db
567 IAC 23.1(2) "ccc"

40 CFR 60 Subpart Kb
This facility is subject to the Standards of Performance for Volatile Organic Liquid storage vessels (including petroleum liquids). This is applicable for storage tanks constructed after July 1984. The affected units are storage tanks TK001 through TK005.
Authority for Requirements: 40 CFR 60 Subpart Kb
567 IAC 23.1(2) "ddd"

40 CFR 60 Subpart VVa
This facility is subject to the Standards of Performance for Equipment leaks of VOC in the Synthetic Organic Chemicals Manufacturing industry for Which Construction, Reconstruction or Modification Commenced after November 7, 2006. The affected unit is FS40 which encompasses all ethanol storage and handling sources.
Authority for Requirements: 40 CFR 60 Subpart VVa
567 IAC 23.1(2) "nn"

40 CFR 60 Subpart IIII
This facility is subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The affected unit is 60.
Authority for Requirements: 40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

40 CFR 63 Subpart A
This facility is an affected source and these *General Provisions* apply to the facility. The affected unit is 60.
Authority for Requirements: 40 CFR 63 Subpart A
567 IAC 23.1(4)

40 CFR 63 Subpart ZZZZ
This facility is subject to National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) for emission unit 60. The engine is a new reciprocating internal combustion engine located at an area source of HAP. In accordance with §63.6590 (c)(1), the engine must comply with the requirements of Subpart ZZZZ by meeting the requirements of NSPS subpart IIII. No further requirements apply to this engine under Subpart ZZZZ.
Authority for Requirements: 40 CFR 63 Subpart ZZZZ
567 IAC 23.1(4)"cz"

III. Emission Point-Specific Conditions

Facility Name: Valero Hartley Plant
Permit Number: 16-TV-004R1

Emission Point ID Number: S10

Associated Emission Unit ID Numbers: See Table: Dryers, Boilers and Distillation
Emissions Control Equipment ID Number: See Table: Dryers, Boilers and Distillation
Emissions Control Equipment Description: See Table: Dryers, Boilers and Distillation
Continuous Emissions Monitors ID Numbers: ME10A, ME10B

Table: Dryers, Boilers and Distillation

Emission Unit	Emissions Unit Description	Raw Material/Fuel	Rated Capacity	Emissions Control ID Number	Control Equipment Description
01	DDGS Dryer A	Natural Gas	45 MMBtu/hr	C60 C10	Multiclone Thermal Oxidizer
02	DDGS Dryer B	Natural Gas	45 MMBtu/hr		
03	Thermal Oxidizer/ Waste Heat Recovery Boiler	Natural Gas	165 MMBtu/hr	None (Emission unit is located post control)	
04	DDGS Dryer C	Natural Gas	45 MMBtu/hr	C61 C11	Multiclone Thermal Oxidizer
05	DDGS Dryer D	Natural Gas	45 MMBtu/hr		
06	Thermal Oxidizer/ Waste Heat Recovery Boiler	Natural Gas	165 MMBtu/hr	None (Emission unit is located post control)	
58	DDGS Cooling Drum	DDGS	44 tons/hr	C70 C10 or C11	Baghouse & Thermal Oxidizer Thermal Oxidizer

Distillation Process					
Emission Unit	**Emissions Unit Description**	**Raw Material/Fuel**	**Rated Capacity**	**Emissions Control ID Number**	**Control Equipment Description**
43	Mixer	Mash	2000 gal/min	C10 or C11	Thermal Oxidizer or Thermal Oxidizer
	Slurry Tank #1		25,467 gal		
	Slurry Tank #2		29,325 gal		
	Flash Tank		4,830 gal		
	Cook Tubes		2,000 gal/min		
	Liquefaction Tank #1		128,500 gal		
	Liquefaction Tank #2		128,500 gal		
	Yeast Tank #1	Yeast	21,175 gal		
	Yeast Tank #2		21,175 gal		
	Beer Column	Beer	3,000 gal/min from Beer Feed		
	Side Stripper	Ethanol	3,000 gal/min from Beer Feed		
	Rectifier Column		3,000 gal/min from Beer Feed		
	190 Proof Condenser		3,000 gal/min from Beer Feed		
	Molecular Sieve		550 gal/min from 190º Feed		
	200 Proof Condenser		550 gal/min from Distillate		
	Centrate Tanks	Centrate	1,500 gal/min from Centrifuges 1 - 6		
	Evaporators	Thin Stillage	3,000 gal/min from Thin Stillage		
65	Blender Feed Screw	Thin Stillage	6,000 bushels/hr	None	NA
69	DDGS Feed Conveyors	DDGS	120 tons/hr	None	NA

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1091-S3

(1) An exceedance of the indicator opacity of no visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 14.10 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant: Particulate Matter (PM)
Emission Limit(s): 14.10 lb/hr, 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.4(7)
DNR Construction Permit 06-A-1091-S3

Pollutant: Sulfur Dioxide (SO_2)
Emission Limits: 22.70 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant: Nitrogen Oxides (NO_x)
Emission Limits: 33.0 lb/hr (2), and 99.0 tons/yr (3), 0.1 lb/MMBtu (4)
Authority for Requirement: DNR Construction Permit 06-A-1091-S3
40 CFR §60.44b
567 IAC 23.1(2)"ccc"

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 10.0 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 06-A-1091-S3

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 33.0 lb/hr (2) and 99.0 tons/yr (3)
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant: Single HAP (except acetaldehyde)
Emission Limit(s): 0.70 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant: Acetaldehyde
Emission Limit(s): 0.40 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant: Total HAP (formaldehyde, acrolein, acetaldehyde, methanol only)
Emission Limit(s): 2.0 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant: Total HAP (including combustion HAPs)
Emission Limit(s): 10.971 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

(2) Based on 30-day rolling average
(3) Based on rolling 365-day basis.
(4) Based on 30-day rolling average and applies at all times, including startup, shutdown or malfunction.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NESHAP and NSPS

The thermal oxidizer/heat recovery boiler system is subject to the New Source Performance Standards (NSPS) for Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60 Subpart Db; 567 IAC 23.1(2)"ccc" and the General Provisions (40 CFR Part 60 Subpart A; 567 IAC 23.1(2).

Authority for Requirement: DNR Construction Permit 06-A-1091-S3
40 CFR 60 Subpart Db
567 IAC 23.1(2)"ccc"

Operating Limits

Process throughput:

1. DDGS Dryer A, DDGS Dryer B, DDGS Dryer C, DDGS Dryer D, Thermal Oxidizer (C10) and Thermal Oxidizer (C11) are limited to firing natural gas or process off-gasses.

Control equipment parameters:

2. The Thermal Oxidizer (C10) and Thermal Oxidizer (C11) shall maintain a temperature of no less than -50 deg. F than the average temperature observed during the last performance test that demonstrated compliance at comparable operating conditions based on a 3-hour block average, when the DDGS dryers or distillation units controlled by the Thermal Oxidizers are in operation.
3. The Thermal Oxidizer (C10) shall be operated at all times the DDGS Dryer A and DDGS Dryer B are in operation. Thermal Oxidizer (C11) shall be operated at all times the DDGS

Dryer C and DDGS Dryer D are in operation. At least one of the Thermal Oxidizers shall be in operation when the Distillation Process is in operation. This requirement shall not apply during periods when the Thermal Oxidizer, or the equipment the Thermal Oxidizer controls, is not in operation.

4. The owner or operator shall inspect and maintain the control equipment according to the manufacturer's specifications or written operation and maintenance plan.
5. The facility is required to monitor annual NOx and CO emission monthly and on a 365-day rolling basis to ensure compliance with the 99.0 ton/yr limits.

Reporting & Recordkeeping

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. Per 40 CFR §60.49b(d), The owner or operator shall record and maintain records of the amounts of each fuel combusted in the Thermal Oxidizer/HRSG system during each calendar day and calculate the annual capacity factor on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. The annual capacity factor is defined as the ratio between the actual heat input to a steam generating unit during a calendar year, and the potential heat input had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity.
2. The owner or operator shall properly operate and maintain equipment to continuously monitor the temperature of the Thermal Oxidizer. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per a written facility-specific operation and maintenance plan.
3. The owner or operator shall keep hourly records of the operating temperature of the Thermal Oxidizer and record all periods (during actual operations) where the 3-hour block average temperature is less than -50 degrees Fahrenheit than the average temperature observed during any performance test that demonstrated compliance at comparable operating conditions. This requirement shall not apply on the days the Thermal Oxidizer, or the equipment the Thermal Oxidizer controls, is not in operation.
4. The owner or operator shall maintain a record of all inspections/maintenance and any action resulting from the inspection/maintenance of the control equipment and monitoring devices.
5. The owner/operator shall comply with all reporting, notification, and recordkeeping requirements as specified 40 CFR Part 60 Subpart Db- *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*, specifically §60.49b.
6. The owner/operator shall comply with all reporting, notification, and recordkeeping requirements as specified 40 CFR Part 60 Subpart VV- *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*, specifically §60.486 and §60.487.
7. The owner/operator shall comply with all reporting, notification, and recordkeeping requirements as specified 40 CFR Part 60 Subpart A-*General Provisions* §60.1 through

§60.19.

8. The owner or operator shall demonstrate compliance with the NOx and CO pound per hour and TPY emissions limits, as specified in the Emission Limitations section above, in the following manner:
    a. NOX and CO emissions shall be calculated using CEMS concentration readings (ppmv), Method 19, and fuel gas flow rate. The equations provided in Step 1 and Step 2 shall be used to calculate NOx and CO emission rate.

       Step 1
       E = Cd x Fd [20.9/(20.9 - O2d)]
       Where E = pollutant emission rate in lb/MMBtu
       Cd = pollutant concentration in lb/dscf
       For NOx Cd = (ppmv x 1.194 x 10^-7)
       For CO Cd = (ppmv x 7.27 x 10^-8)
       Fd = Oxygen based F-factor in dscf/MMBtu (use 8710 for natural gas)
       O2d = oxygen content of stack gas on a dry basis

       Step 2
       Er = E (lb/MMBtu) x [heat input per hour for TO + DDGS Dryers] (MMBtu/hr)
       Where Er is emission rate calculated in lb/hr
       heat input per hour in MMBtu/hr is calculated as:
       fuel feed rate for TO and DDGS Dryers (cubicfeet/hr x fuel heat content (MMBtu/cubicfeet)
       Fuel heat content value for natural gas will be based on 12-month rolling average of the facility's actual values.

    b. The facility shall conduct four quarterly Bias-Adjustment Tests (BAT). After each Bias-Adjustment test (BAT) facility shall use the following equation to calculate a percentage difference.
        i. [(Er –BAT)x 100]/BAT = percentage difference = PD
        ii. 1 + abs(PD/100) = adjustment factor = AF
    c. The facility shall adjust the Er value calculated in Step 2 using the methodologies listed below.
        i. After each BAT, the facility shall adjust the calculated Er values for NOx and CO, if the percentage difference as calculated in H.b.1. is a negative value. If the percentage difference in 8.b.i. is positive, facility shall not make any adjustment. Adjusted Er = Er * AF
        ii. If adjustments are needed for more than one of the initial quarterly BATs, the total adjustment will be calculated as sum of the absolute value of the new percentage difference and the previous adjustment factor. If the percentage difference in 8.b.i. is positive, facility shall not make any change to the adjustment factor. New adjustment factor = old adjustment factor + abs(PD)
        iii. In subsequent years, during the annual BAT, the facility shall compare the adjusted Er value, in lb/hr, for NOx and CO, as specified in 8.c steps 1 and

2, with the BAT test result. The facility shall calculate a percentage difference using the equation specified in 8.b.i. If the percentage difference shows that the facility is under-reporting (i.e. negative value), an adjustment will be made using the adjustment factor in 8.b. and the adjusted Er equation in 8.c.i.

iv. If any adjustment factors are utilized by the facility, the CEM quarterly report submission will include an explanation of the adjustment factor and start date for using this factor. The total adjustment factor utilized after completion of four consecutive quarterly BATs will be detailed in the annual TPY report submitted to the department with the 4th Quarter CEM report. Adjustment factor information will also be included as part of the bias adjustment test report submission.

v. If the facility would like to remove or decrease the adjustment factor, four consecutive quarterly BATs will be completed per the procedures above and the adjustment factor (if necessary) will be recalculated per the procedures of this permit.

d. The facility shall calculate daily emissions in Pounds Per Day, using the adjusted Er value as specified in 8.a, b and c.

e. Using the daily values in pounds per day, the facility shall convert the calculated values to TPY, on a rolling 365-day basis. The TPY values shall be submitted to the department at the end of each year with the 4th quarter CEM report.

f. The department shall evaluate compliance with TPY emissions limits in Section 10 using the pound per day and annual TPY results submitted by the facility for NOx and CO each year.

9. The facility shall submit the following within 45-days of BAT test completion to the department for four consecutive quarters:

    a. The BAT test result in lb/hr and the corresponding calculated Er value in lb/hr, as specified in 8.a, b and c., for the duration of the BAT test.

10. The adjusted Er value for NOx and CO, as specified in 8.a, b and c., cannot be underreported greater than 10.0% of the BAT test emission rate in lb/hr. If the adjusted Er value for NOx and CO, as specified in 8.a, b and c., underreports more than 10.0%, the facility shall conduct quarterly RATA tests until four consecutive tests show a variation of less than or equal to -10.0%.

11. If the facility has been unable to demonstrate that the facility's calculation, using Method 19, for four consecutive quarters (out of the eight consecutive quarters allotted for achieving compliance), is underreporting less than 10.0% when comparing the Adjusted Er to the BAT test results, then installation, calibration, maintenance and operation of a flow meter shall be required within six months to calculate lb/hr emission rate of NOx and CO. This flow meter shall be capable of meeting EPA Performance Specification 6, (40 CFR Part 60, Appendix B).

12. The facility shall be required to submit quarterly reports for all pollutants monitored using the CEMS. The NOx and CO lb/hr Er included in these reports should reflect any applicable adjustment factors. If an adjustment factor is applied to only a portion of the quarter, the cover letter to the CEM quarterly report will include the start date for the adjustment factor.

Authority for Requirement: DNR Construction Permit 06-A-1091-S3
40 CFR 60 Subpart Db
567 IAC 23.1(2)"ccc"

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height (ft, from the ground): 125
Stack Opening (inches, dia.): 132
Exhaust Flow Rate (scfm): 164,225
Exhaust Temperature (^{o}F): 325
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Stack Testing:

Pollutant - Opacity
Stack Test to be Completed every 36 months (1)
Test Method – 40 CFR 60 Appendix A, Method 9
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant – PM
Stack Test to be Completed every 36 months (1)
Test Method – 40 CFR 60 Appendix A, Method 5, 40 CFR 51 Appendix M, Method 202
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant – PM_{10}
Stack Test to be Completed every 36 months [(1)]
Test Method – 40 CFR 51 Appendix M, Method 201A with 202
Authority for Requirement – DNR Construction Permit 06-A-1091-S3

[(1)] PM and PM10 testing was conducted on October 2, 2020 as required by permit #06-A-1091-S3. Next PM and PM10 test shall be required at 36-months from the test conducted in October 2020.

Pollutant – VOC
Stack Test to be Completed Annually [(2)]
Test Method – 40 CFR 60 Appendix A, Method 320 or Method 18
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant – Acetaldehyde
Stack Test to be Completed Annually [(2)]
Test Method – According to Iowa DNR approved Method
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant – Single HAP [(3)]
Stack Test to be Completed Annually [(2)]
Test Method – According to Iowa DNR approved Method
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

Pollutant – Total HAP [(3)]
Stack Test to be Completed Annually [(2)]
Test Method – According to Iowa DNR approved Method
Authority for Requirement: DNR Construction Permit 06-A-1091-S3

[(2)] The tests shall be conducted once a year with a minimum of 180 days between tests.

[(3)] Acrolein, Formaldehyde and Methanol shall be tested under the SHAP limit in the Emission Limitations section. Acetaldehyde has a separate emission limit in the Emission Limitations section.

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Continuous Emissions Monitoring:

The owner or operator shall demonstrate compliance with the nitrogen oxide emission limits (both NSPS and non-NSPS) through the use of a continuous emission monitoring system (CEMS). The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides emissions discharged from the emission point to the atmosphere. The CEM shall be installed, evaluated, operated and data collected to meet the requirements of 40

CFR Part 60, Appendix B, Performance Specification 2 (PS2). The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.

The 1-hour average NO_X emission rates measured by the NO_X CEM required by 40 CFR 60.48b(b) and required under 40 CFR 60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emissions rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2).

Per 40 CFR 60.49b(f), when NO_X emissions are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data shall be obtained by using standby monitoring systems, 40 CFR Part 60 Appendix A Method 7, 40 CFR Part 60 Appendix A Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

The owner or operator shall demonstrate compliance with the carbon monoxide emission limits through the use of a continuous emission monitoring system (CEMS). The owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged from the emission point to the atmosphere. The CEM shall be installed, evaluated, operated and data collected to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 4 (PS4). The specifications of 40 CFR 60, Appendix F (Quality Assurance/Quality Control) shall apply. Appendix F requirements shall be supplemented with a quarterly notice to the Department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit.

In accordance with 40 CFR Part 60 Subpart Db, the owner or operator shall install, calibrate, maintain, and operate a CEMS for measuring either the oxygen content or the carbon dioxide content of the flue gas discharged from the emission point to the atmosphere.

All continuous monitoring systems (CMS) required by this permit shall be operated and data recorded during all periods of operation of the Dryers/TO/HRSG except for CMS breakdowns and repairs. Data shall be recorded during calibration checks, and zero and span adjustments

If requested by the Department, the owner/operator shall coordinate the quarterly cylinder gas audits with the Department to afford the Department the opportunity to observe these audits. The relative accuracy test audits shall be coordinated with the Department.

The procedures under 40 CFR §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

The 1-hour average emission rates measured by the CEMS required by this permit shall be used to calculate compliance with the emission standards of this permit. At least 2 data points must be used to calculate each 1-hour average.

For each hour of missing emission data, the owner or operator shall substitute data by:

1. If the monitor data availability is equal to or greater than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
    a. For the missing data period less than or equal to 24 hours, substitute the average of the hourly concentrations recorded by a pollutant concentrations monitor for the hour before and the hour after the missing data period.
    b. For missing data period greater than 24 hours, substitute the greater of:
        i. The 90th percentile hourly concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
        ii. The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
2. If the monitor data availability is greater than or equal to 90.0% but less than 95.0%, the owner or operator shall calculate substitute data by means of the automated data acquisition and handling system for each hour of each missing data period according to the following procedures:
    a. For the missing data period less than or equal to 8 hours, substitute the average of the hourly concentrations recorded by a pollutant concentrations monitor for the hour before and the hour after the missing data period.
    b. For missing data period greater than 8 hours, substitute the greater of:
        i. The 95th percentile hourly concentration recorded by a pollutant concentration monitor during the previous 720 quality-assured monitor operating hours; or
        ii. The average of the hourly concentrations recorded by a pollutant concentration monitor for the hour before and the hour after the missing data period.
3. If the monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an alternate testing or monitoring method that is approved by the Department.

Authority for Requirement: DNR Construction Permit 06-A-1091-S3
40 CFR 60 Subpart Db
567 IAC 23.1(2)"ccc"

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☒ **No** ☐

Authority for Requirement: 567 IAC 22.108(3)

EP S10 – DDGS Dryers/TO/HSRG CAM Plan

I. Background

A. Emissions Unit

Description:	DDGS Dryers/TO
Identification:	EP S10
Facility:	Valero Renewable Fuels Company, LLC Hartley, Iowa

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	IDNR Permit 06-A-1091-S3
VOC emission limit:	10.0 lb/hr
Current Monitoring requirements:	Thermal Oxidizer Temperature (3-hour average)

C. Control Technology — Thermal Oxidizers (2)

II. Monitoring Approach

A. Indicator

Thermal Oxidizer temperature will be used as an indicator.

B. Measurement Approach

Thermal oxidizer temperature will be monitored continuously and recorded in 3-hour averages to ensure that no 3-hour average is less than 50 degrees F below the temperature recorded during the most recent stack test.

C. Indicator Range

Temperature > 50 degrees F below the recorded temperature during the most recent stack test

D. QIP (Quality Improvement Plan) Threshold

The QIP threshold is six excursions in a six month reporting period

E. Performance Criteria

Data representativeness: A decrease in temperature below this threshold would indicate a decrease in destruction efficiency for the thermal oxidizer and potentially an increase in VOC emissions.

Verification of operational status: Records of 3–hour average temperatures will be maintained for five years.

QA/QC practices and criteria: The facility shall check the temperature continuously when the emission unit on this emission point is in operation. If a 3-hour average temperature less than 50 degrees F below the temperature recorded during the most recent stack test, corrective action will be taken.

Monitoring frequency and data collection procedure:
Thermal Oxidizer temperature shall be monitored continuously during a period when the emission unit on this emission point is in operation. Records of the readings shall be maintained for five years.

Emission Point ID Number: S20

Associated Emission Unit ID Numbers: See Table: Grain Receiving and Storage
Emissions Control Equipment ID Number: See Table: Grain Receiving and Storage
Emissions Control Equipment Description: See Table: Grain Receiving and Storage

Table: Grain Receiving and Storage

Emission Unit	Emissions Unit Description	Raw Material/ Fuel	Rated Capacity	Emissions Control ID Number	Emissions Control Equipment Description
07	Truck Receiving Dump Pit & Transfer Drag #1	Corn	20,000 bu/hr	C20	Baghouse
08	Receiving Leg #1	Corn	20,000 bu/hr		
09	Silo Fill Conveyor #1	Corn	20,000 bu/hr		
10	Grain Silo #1	Corn	523,913 bu		
62	Grain Silo #4	Corn	523,913 bu		
11	Silo Reclaim Conveyor #1	Corn	20,000 bu/hr		
13	Truck Receiving Dump Pit & Transfer Drag #2	Corn	20,000 bu/hr		
14	Receiving Leg #2	Corn	20,000 bu/hr		
15	Silo Center Fill Conveyor #2	Corn	20,000 bu/hr		
16	Grain Silo #2	Corn	523,913 bu		
63	Grain Silo #5	Corn	523,913 bu		
17	Silo Reclaim Conveyor #2	Corn	6,000 bu/hr		
61	Grain Silo #3	Corn	88,692 bu		
64	Rail Receiving Dump Pit & Drag Conveyor	Corn	40,000 bu/hr		
65	Silo Reclaim Conveyor #3	Corn	6,000 bu/hr		
66	Silo Reclaim Conveyor #4	Corn	6,000 bu/hr		
67	Silo Reclaim Conveyor #5	Corn	6,000 bu/hr		
68	Hammermill Feed Silo	Corn	37,000 bu/hr		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1092-S2

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 3.0 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1092-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 3.0 lb/hr, 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.4(7)
DNR Construction Permit 06-A-1092-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

Process throughput:

1. Valero Renewable Fuels (Plant No. 71-02-010) is limited to receiving and processing 59.60 million bushels of corn per rolling 12-month period.
2. The amount of corn received (i.e. originated from) Ag Partners Cooperative of Hartley (Plant Number 71-02-009) shall not exceed 50.0% of the total bushels received at Valero Renewable Fuels-Hartley, on a 12-month rolled total basis.

Control equipment parameters:

1. Maintain Baghouse (CE20) according to manufacturer specifications and maintenance schedule.

Work practice standards:

1. The facility shall conduct visible emissions observation (opacity) on EP S20 once per calendar day.

Reporting & Recordkeeping
The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The facility shall maintain the following records for each delivery:
    a. The amount of corn in bushels, and
    b. Where the corn originated (i.e. local farmer, elevator, cooperative, etc.)
2. Record the total amount of corn delivered to Valero Renewable Fuels on a daily basis.
3. Record the total amount of corn delivered from Ag Partners (Plant Number 71-02-009) on a daily basis.
4. Calculate and record the rolling 12-month total amount of corn delivered from Ag Partners (Plant Number 71-02-009) on a monthly basis.
5. Calculate and record on a monthly basis the amount of corn delivered to Valero Renewable Fuels. Calculate and record rolling 12-month total.
6. Using the rolling 12-month totals, calculate the percent of corn delivered from Ag Partners (Plant Number 71-02-009) on a monthly basis.
7. The owner or operator shall collect and record the visible emissions observations. If visible emissions are observed, the owner or operator shall investigate Baghouse (CE20) and make corrections to Baghouse (CE20). The owner or operator shall maintain a record of all corrective actions taken. This requirement shall not apply on the days that Baghouse (CE20) is not in operation.
8. Maintain a record of all inspections and maintenance and any action resulting from the inspection and maintenance of Baghouse (CE20).

Authority for Requirement: DNR Construction Permit 06-A-1092-S2

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40
Stack Opening, (inches, dia.): 44
Exhaust Flow Rate (scfm): 35,000
Exhaust Temperature (^{o}F): 70
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1092-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below:

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: S30

Associated Emission Unit ID Numbers: See Table: Hammermilling
Emissions Control Equipment ID Number: See Table: Hammermilling
Emissions Control Equipment Description: See Table: Hammermilling

Table: Hammermilling

Emission Unit	Emissions Unit Description	Raw Material/ Fuel	Rated Capacity	Emissions Control ID Number	Emissions Control Equipment Description
20	Hammermill #1	Corn	1,500 bu/hr	C30	Baghouse
21	Hammermill #2	Corn	1,500 bu/hr		
22	Hammermill #3	Corn	1,500 bu/hr		
23	Hammermill #4	Corn	1,500 bu/hr		
62	Rotary Scalpers	Corn	6,000 bu/hr		
63	Scalping Bin 3B	Corn	27,641 bu		
64	Grinding Reclaim & Transfer Conveyors	Corn	170 tons/hr		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1093-S2

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 1.50 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1093-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 1.50 lb/hr, 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.4(7)
DNR Construction Permit 06-A-1093-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

Control equipment parameters:

1. Maintain Baghouse (C30) according to manufacturer specifications and maintenance schedule.

Work practice standards:

1. The facility shall conduct visible emissions observation on EP S30 once per calendar day.

Reporting & Recordkeeping

The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The owner or operator shall collect and record the visible emissions observations. If visible emissions are observed, the owner or operator shall investigate Baghouse (C30) and make corrections to Baghouse (C30). The owner or operator shall maintain a record of all corrective actions taken. This requirement shall not apply on the days that Baghouse (C30) is not in operation.
2. Maintain a record of all inspections and maintenance and any action resulting from the inspection and maintenance of Baghouse (CE30).

Authority for Requirement: DNR Construction Permit 06-A-1093-S2

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40
Stack Opening, (inches, dia.): 38
Exhaust Flow Rate (scfm): 17,000
Exhaust Temperature (^{o}F): 70
Discharge Style: Vertical unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1093-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements
The owner/operator of this equipment shall comply with the monitoring requirements listed below:

See visible emissions observation requirements under Operational Limits & Requirements

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: S40

Associated Equipment

Associated Emissions Unit ID Numbers: See Table: Fermentation Process
Emissions Control Equipment ID Number: See Table: Fermentation Process
Emissions Control Equipment Description: See Table: Fermentation Process

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Table: Fermentation Process

Emission Unit Number	Emission Unit Description	Raw Material/ Fuel	Rated Capacity (gallons)	Control Equipment ID	Control Equipment Description
35	Batch Mash Fermenter #1	Corn Mash/ Ethanol	807,000	CE40	Packed Bed Scrubber
36	Batch Mash Fermenter #2		807,000		
37	Batch Mash Fermenter #3		807,000		
38	Batch Mash Fermenter #4		807,000		
39	Batch Mash Fermenter #5		807,000		
40	Batch Mash Fermenter #6		807,000		
41	Batch Mash Fermenter #7		807,000		
42	Beer Well		1,080,000		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

1a. Emission Limits while C40 is operating
Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1094-S4

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 2.30 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant: Particulate Matter (PM)
Emission Limit(s): 2.30 lb/hr, 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.4(7)
DNR Construction Permit 06-A-1094-S4

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 15.00 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant: Single HAP (except Acetaldehyde)
Emission Limit(s): 1.00 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant: Acetaldehyde
Emission Limit(s): 1.50 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant: Total HAP
Emission Limit(s): 2.00 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

1b. Emission Limits while C40 is by-passed

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1094-S4

(1) An exceedance of the indicator opacity of 20% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)
Emission Limit(s): 9.20 lb/hr, 0.04 tons/yr, 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.4(7)
DNR Construction Permit 06-A-1094-S4

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 1500 lb/hr, 6.0 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant: Single HAP (except Acetaldehyde)
Emission Limit(s): 10.0 lb/hr, 0.04 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant: Acetaldehyde
Emission Limit(s): 15.0 lb/hr, 0.06 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant: Total HAP
Emission Limit(s): 20.0 lb/hr, 0.08 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

ALLOWED FERMENTATION PROCESS OPERATING SCENARIOS

1. The owner or operator may operate the fermentation process at Plant No. 71-02-010 under (1) the ***Scrubber Recycle Operating Scenario***; or (2) the ***Scrubber Non-Recycle Operating Scenario***; or (3) the ***Scrubber By-Pass Operating Scenario***.

    a. The ***Scrubber Recycle Operating Scenario*** is defined as scrubber operation where the recycled water flow rate is at or greater than 90 percent of the total scrubbing liquid flow rate observed during the most recent stack test that demonstrated compliance with the VOC and HAP emission limits listed in Permit Condition 1a.
    b. The ***Scrubber Non-Recycle Operating Scenario*** is defined as scrubber operation where the recycled water flow rate is below 90 percent of the total scrubbing liquid flow rate observed during the most recent stack test that demonstrated compliance with the VOC and HAP emission limits listed in Permit Condition 1a.
    c. The ***Scrubber By-Pass Operating Scenario*** is defined as the time period during which the scrubber is shut down to perform maintenance activities on the scrubber while the fermentation process continues operation.

PACKED BED SCRUBBER C40 OPERATION REQUIREMENTS

1. The owner or operator shall maintain an average pressure drop across Packed Bed Scrubber C40 that is between 0.75 and 14 inches water column based on a 3-hour averaging period.

    a. The owner or operator shall record the scrubber pressure drop, in inches water column, across Packed Bed Scrubber C40 on a continuous basis.
    b. The owner or operator shall calculate and record the average scrubber pressure drop, in inches water column, across Packed Bed Scrubber C40 on a 3-hour averaging period.
        i. If the pressure drop deviates below the minimum required, the owner or operator shall record the time, date, and actions taken to correct the situation. The owner or operator shall also record when the pressure drop across Packed Bed Scrubber C40 has returned to or above the minimum average pressure drop required.

c. The owner or operator shall establish an alarm setting for the purpose of initiating corrective action based on a pressure drop across Packed Bed Scrubber C40 of 0.65 inches water column or less.
    i. After collection of 12 months of pressure drop data, the owner or operator shall re-evaluate minimum pressure drop requirements to determine if the pressure drop monitoring needs to be adjusted. If so, the owner or operator shall submit a permit modification request to the Department.
    ii. On those days when there is an alarm for the pressure drop reaching 0.65 inches water column or less, the owner or operator shall calculate and record the average pressure drop across the scrubber based on a 3-hour averaging period.
        a) This requirement shall not apply on the days that Packed Bed Scrubber C40 is not in operation or during facility start-up, shutdown, or during operation at less than 50% of capacity.

2. Packed Bed Scrubber C40 shall have a minimum scrubbing liquid flow rate that is calculated as 90 percent of the average liquid flow rate observed during the most recent stack test for each operating scenario, i.e., the ***Scrubber Recycle Operating Scenario*** or the ***Scrubber Non-Recycle Operating Scenario*** that demonstrated compliance with the VOC and HAP limits listed in Permit Condition 1a.

    a. The owner or operator shall record the scrubbing liquid flow rate on a continuous basis.
    b. The owner of operator shall calculate and record the average scrubbing liquid flow rate based on a 3-hour averaging period.
        i. If the scrubbing liquid flow rate deviates below the minimum required, the owner or operator shall record the time, date, and actions taken to correct the situation. The owner or operator shall also record when the scrubbing liquid flow rate has returned to or above the minimum average scrubbing liquid flow rate required.

3. The additive feed rate shall be maintained at or above the average feed rate observed during the most recent stack test for each operating scenario, i.e., the ***Scrubber Recycle Operating Scenario*** or the ***Scrubber Non-Recycle Operating Scenario*** that demonstrated compliance with the VOC and HAP limits listed in Permit Condition 1a.

    a. The owner or operator shall record the additive feed rate on a continuous basis.
    b. The owner or operator shall calculate and record the average additive feed rate based on a 3-hour averaging period.
        i. If the additive feed rate deviates below the minimum required, the owner or operator shall record the time, date, and actions taken to correct the situation. The owner or operator shall also record when the additive feed

rate has returned to or above the minimum average additive feed rate required.

4. The owner or operator shall record the recycled water flow rate on a continuous basis.

5. The owner or operator shall calculate and record the recycled water flow rate based on a 3-hour averaging period.

    a. If the recycled water flow rate is at or above 90 percent of the average scrubbing liquid flow rate observed during the most recent stack test that demonstrated compliance, the owner or operator shall set the scrubbing liquid flow rate, the additive feed rate, and the recycled water flow rate based on the rates used during the most recent stack test that demonstrated compliance while the fermentation process operated under the ***Scrubber Recycle Operating Scenario***.
    b. If the recycled water flow rate is below 90 percent of the average scrubbing liquid flow rate observed during the most recent stack test that demonstrated compliance, the owner or operator shall set the scrubbing liquid flow rate, the additive feed rate, and the recycled water flow rate based on the rates used during the most recent stack test that demonstrated compliance while the fermentation process operated under the ***Scrubber Non-Recycle Operating Scenario***.

6. The owner or operator shall maintain on-site a copy of the most recent stack test report detailing pressure drop, scrubbing liquid flow rate, recycled water flow rate, and additive feed rate measured during the most recent stack test for each operating scenario, i.e., the ***Scrubber Recycle Operating Scenario*** or the ***Scrubber Non-Recycle Operating Scenario*** that demonstrated compliance with the VOC and HAP limits listed in Permit Condition 1a.

7. The owner or operator shall inspect and maintain Packed Bed Scrubber C40 according to manufacturer's specifications and instructions.

    a. The owner or operator shall keep a log of all maintenance and inspection activities performed on Packed Bed Scrubber C40. At a minimum, this log shall include:
        i. The date that any inspection and/or maintenance was performed on Packed Bed Scrubber C40;
        ii. Any issues identified during the inspection;
        iii. Any issues addressed during the maintenance activities and the date each issue was resolved; and
        iv. Identification of the staff member performing the maintenance or inspection.

PACKED BED SCRUBBER C40 BY-PASS OPERATION REQUIREMENTS

1. The ***Scrubber By-Pass Operating Scenario*** shall be limited to a maximum of two (2) hours per calendar quarter.

    a. The owner or operator shall record the date and duration of each scrubber by-pass event.

2. Monitoring of pressure drop, scrubbing liquid flow rate, recycled water flow rate, or additive feed rate is not required while the fermentation process operates under the ***Scrubber By-Pass Operating Scenario***.

Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 70
Stack Opening, (inches, dia.): 29
Exhaust Flow Rate (scfm): 10,500 – 17,500
Exhaust Temperature (^{o}F): 68
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below:

Stack Testing: Required while C40 is operating

Pollutant - VOC
Stack Test to be completed Semi-Annually (1)
Test Method – 40 CFR 60 Appendix A, Method 18 or 40 CFR 63, Appendix A, Method 320
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

Pollutant – HAP (2)
Stack Test to be completed Semi-Annually (1)
Test Method – 40 CFR 60, Appendix A, Method 18 or 40 CFR 63, Appendix A, Method 320
Authority for Requirement: DNR Construction Permit 06-A-1094-S4

(1) The tests shall be conducted semi-annually with a minimum of 90 days between tests. At least, one test shall be conducted during June, July or August every year. Periodic testing shall be performed separately for each of the following scenarios: Scrubber Recycle Operating Scenario and Scrubber Non-Recycle Operating Scenario.

(2) Acetaldehyde, acrolein, formaldehyde, and methanol shall be tested for specifically for both initial and periodic testing. The specified HAP that tests below the detection limit shall be assumed to be emitting at a rate equal to detection limit.

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required?* **Yes** ☒ **No** ☐
*A CAM plan is not required due to the requirements in construction permit 06-A-1094-S4

Authority for Requirement: 567 IAC 22.108(3)

EP S40 – Fermentation CAM Plan

I. Background

A. Emissions Unit

Description:	Fermentation
Identification:	EP S40
Facility:	Valero Renewable Fuels Company, LLC Hartley, Iowa

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	IDNR Permit 06-A-1094-S4
VOC emission limit:	15 lb/hr
Current Monitoring requirements:	Scrubber Water and Additive Flows

C. Control Technology — Packed Bed Scrubber

II. Monitoring Approach

A. Indicator

Scrubber water flow and additive flow will be used as an indicator

B. Measurement Approach

The scrubber water and additive flows will be monitored continuously and recorded based on a 3-hour rolling average. Water flow rate must 90% or greater than flow measured during last stack test for each operating scenario. Scrubber additive must be added at the same rate or higher rate than used during the most recently approved stack testing for each operating scenario.

C. Indicator Range

Additive rate >= rate utilized during most recent stack test

D. QIP (Quality Improvement Plan) Threshold

The QIP threshold is six excursions in a six month reporting period

E. Performance Criteria

Data representativeness:	A decrease in additive below this threshold would indicate a decrease in HAP and VOC control efficiency.

Verification of operational status:	Record of water flow and additive rate based on 3-hour rolling average will be maintained for five years.
QA/QC practices and criteria:	If water and/or additive flow rates is less than the rate recorded during the most recent stack test, corrective action will be taken.
Monitoring frequency and data Collection procedure:	Scrubber water and additive rate shall be monitored and recorded continuously with compliance based on a 3-hour rolling average during a period when the emission unit on this emission point is in operation. Records of the readings shall be maintained for five years.

Emission Point ID Number: S70

Associated Equipment

Associated Emissions Unit ID Number: 58
Emissions Control Equipment ID Number: C70
Emissions Control Equipment Description: Baghouse

Emission Unit vented through this Emission Point: 58
Emission Unit Description: Cooling Drum Thermal Oxidizer Bypass Stack
Raw Material/Fuel: DDGS
Rated Capacity: 42 tons/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1096-S3

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 3.10 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1096-S3

Pollutant: Particulate Matter (PM)
Emission Limit(s): 3.10 lb/hr, 0.1 gr./dscf
Authority for Requirement: 567 IAC 23.4(7)
DNR Construction Permit 06-A-1096-S3

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 12.0 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1096-S3

Pollutant: Single HAP
Emission Limit(s): 0.20 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1096-S3

Pollutant: Total HAP
Emission Limit(s): 0.75 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1096-S3

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

1. This stack does not operate under normal operating scenario. It is a bypass stack for the DDGS Cooler. Hence, the stack is limited to operating 300 hours on a rolling 12-month basis, to the atmosphere. If the operation of the stack is over the threshold, the facility should submit a permit modification request to the department to have the permit re-evaluated.
2. The facility shall have a site specific plan for S70 documenting the following:
    a. Time duration of operation of S70.
    b. The actions that the facility took to bring the operation back to normal operation mode.
    c. Calculate emissions from each event.
3. Maintain Baghouse (C70) according to manufacturer specifications and maintenance schedule.

Reporting & Recordkeeping

The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The owner or operator shall keep records of the number of hours the stack is operated on a rolling 12-month basis.
2. The owner or operator shall keep records of time duration, actions taken to rectify the problem, and emissions calculations from each event.
3. Maintain a record of all inspections and maintenance and any action resulting from the inspection and maintenance of Baghouse (C70).

Authority for Requirement: DNR Construction Permit 06-A-1096-S3

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40
Stack Opening, (inches, dia.): 42
Exhaust Flow Rate (scfm): 20,000
Exhaust Temperature (^{o}F): 100
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1096-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: S75

Associated Emission Unit ID Numbers: See Table: DDGS Storage, Handling, Loadout
Emissions Control Equipment ID Number: See Table: DDGS Storage, Handling, Loadout
Emissions Control Equipment Description: See Table: DDGS Storage, Handling, Loadout

Table: DDGS Storage, Handling, Loadout

Emission Unit	Emissions Unit Description	Raw Material /Fuel	Rated Capacity	Emissions Control ID Number	Emissions Control Equipment Description
49	DDGS Inclined Drag	DDGS	70 tons/hr	C75	Baghouse
50	DDGS Topfill Drag (Flat Storage)	DDGS	70 tons/hr		
51	DDGS Flat Storage Building	DDGS	1000 tons		
52	DDGS Flat Storage Floor Drag	DDGS	200 tons/hr		
53	DDGS Recirc/Loadout Leg	DDGS	400 tons/hr		
54	DDGS Topfill Drag (Silo Recirc)	DDGS	400 tons/hr		
55	DDGS Loadout Drag	DDGS	400 tons/hr		
56	Truck Load Spout	DDGS	400 tons/hr		
69	DDGS Transfer Drag	DDGS	70 tons/hr		
70	DDGS Storage drag	DDGS	70 tons/hr		
71	DDGS Topfill Drag	DDGS	70 tons/hr		
72	DDGS Storage Silo #1	DDGS	4,000 tons		
73	DDGS Storage Silo #2	DDGS	4,000 tons		
74	DDGS Reclaim Drag #1	DDGS	200 tons/hr		
75	DDGS Reclaim Drag #2	DDGS	400 tons/hr		
76	Rail Loadout Spout #1	DDGS	400 tons/hr		
77	Rail Loadout Spout #2	DDGS	400 tons/hr		
78	Rail Loadout Spout #3	DDGS	400 tons/hr		

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1097-S3

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 0.86 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1097-S3

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.86 lb/hr, 0.1 gr/dscf
Authority for Requirement: DNR Construction Permit 06-A-1097-S3
567 IAC 23.4(7)

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 1.0 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1097-S3

Pollutant: Single HAP
Emission Limit(s): 0.10 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1097-S3

Pollutant: Total HAP
Emission Limit(s): 0.40 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1097-S3

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

1. This facility (71-02-010) is limited to loading/shipping a maximum of 536,400 tons of DDGS per rolling 12-month period.
   a. The owner or operator shall calculate and record on a monthly basis, the total amount of DDGS loaded/shipped at Valero Renewable Fuels (71-02-010), in tons, and calculate and record rolling 12-month totals.

2. The facility shall conduct visible emissions observation (opacity) on EP S75 once per calendar day.
    a. The owner or operator shall collect and record the visible emissions observations. If visible emissions are observed, the owner or operator shall investigate Baghouse (C75) and make corrections to Baghouse (C75). The owner or operator shall maintain a record of all corrective actions taken. This requirement shall not apply on the days that the Baghouse (C75) is not in operation.

3. The facility shall maintain Baghouse (C75) according to manufacturer specifications and maintenance schedule. The facility shall maintain a log of all maintenance and inspection activities performed on the control equipment, C75. This log shall include, but is not limited to:
    i. The date and time any inspection and/or maintenance was performed on the emission unit and/or control equipment;
    ii. Any issue(s) identified during the inspection and the date each issue(s) was resolved; and,
    iii. Any issue(s) addressed during the maintenance activities and the date each issue(s) was resolved.

Authority for Requirement: DNR Construction Permit 06-A-1097-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 40
Stack Opening, (inches, dia.): 24
Exhaust Flow Rate (scfm): 6,100
Exhaust Temperature (^{o}F): 70
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1097-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below:

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☒ **No** ☐

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

The data pertaining to the plan shall be maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: S80

Associated Equipment

Associated Emissions Unit ID Number: 59A, 59B, 59C
Emissions Control Equipment ID Number: C80
Emissions Control Equipment Description: Vapor Combustor (12.4 MMBtu/hr)

Emission Unit vented through this Emission Point: 59A
Emission Unit Description: Truck Loadout
Raw Material/Fuel: Ethanol
Rated Capacity: 36,000 gal/hr

Emission Unit vented through this Emission Point: 59B
Emission Unit Description: Railcar Loadout
Raw Material/Fuel: Ethanol
Rated Capacity: 120,000 gal/hr

Emission Unit vented through this Emission Point: 59C
Emission Unit Description: Combustion Emissions from Loadout
Raw Material/Fuel: Natural Gas
Rated Capacity: 12.4 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1098-S2

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 0.09 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.09 lb/hr, 0.1 gr./dscf
Authority for Requirement: 567 IAC 23.3(2)"a"
DNR Construction Permit 06-A-1098-S2

Pollutant: Sulfur Dioxide (SO_2)
Emission Limits: 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)"e"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limits: 1.22 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 39.0 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 4.59 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Pollutant: Single HAP
Emission Limit(s): 0.63 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Pollutant: Acetaldehyde
Emission Limit(s): 0.13 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Pollutant: Total HAP
Emission Limit(s): 0.91 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

Process throughput:

1. Owner or operator is limited to a maximum production/loadout (loadout by truck or rail) of 165 million gallons of ethanol or denatured ethanol per twelve month rolling period at Valero Renewable Fuels (Plant No. 71-02-010).

2. Owner or operator is limited to blending a maximum of 8.25 million gallons of denaturant (gasoline) with ethanol per twelve month rolling period at Valero Renewable Fuels (Plant No. 71-02-010).
3. Owner or operator is limited to loading non-dedicated trucks with ethanol for a maximum of 100.0 million gallons per rolling 12-month period at Valero Renewable Fuels (Plant No. 71-02-010). Switch-loading is not allowed at the rail loadout.

Control equipment parameters:

1. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame in the vapor combustor.
2. The vapor combustor shall be operated with a flame when emissions are vented to it.
3. The vapor combustor shall be a smokeless design.
4. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Reporting & Recordkeeping

The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. On a monthly basis, the owner or operator shall keep records of the amount of ethanol or denatured ethanol produced/loaded out at Valero Renewable Fuels (Plant No. 71-02-010) in gallons. Calculate and record rolling 12-month totals.
2. On a monthly basis, the owner or operator shall keep records of the amount of denaturant (gasoline) used in ethanol blending at Valero Renewable Fuels (Plant No. 71-02-010) in gallons. Calculate and record rolling 12-month totals.
3. On a monthly basis, the owner or operator shall keep records of the amount of ethanol loaded into non-dedicated trucks at Valero Renewable Fuels (Plant No. 71-02-010) in gallons. Calculate and record rolling 12-month totals.
4. Maintain a record of all inspections and maintenance and any action resulting from the inspection and maintenance of Vapor Combustor (C80).

Authority for Requirement: DNR Construction Permit 06-A-1098-S2

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 35
Stack Opening, (inches, dia.): 72
Exhaust Flow Rate (scfm): 8,000
Exhaust Temperature (^{o}F): 1,800
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1098-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: S90

Associated Equipment

Associated Emissions Unit ID Number: 60

Emission Unit vented through this Emission Point: 60
Emission Unit Description: Fire Pump
Raw Material/Fuel: Diesel Fuel
Rated Capacity: 300 bhp

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40% (1)
Authority for Requirement: 567 IAC 23.3(2)"d"
DNR Construction Permit 06-A-1099-S3

(1) An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 0.98 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1099-S3

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.98 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1099-S3

Pollutant: Sulfur Dioxide (SO_2)
Emission Limits: 1.10 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1099-S3

Pollutant: Nitrogen Oxides (NO_x)
Emission Limits: 13.90 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1099-S3

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 1.10 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1099-S3

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 3.0 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1099-S3

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP

This engine is subject to 40 CFR Part 60 NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (IAC 23.1(2)"yyy").

The engine must be certified by its manufacturer to comply with the emissions standards from Table 4 of Subpart IIII Part 60. As stated in §60.4205 (c) and §60.4202 (d). The emission standards that the engine must be certified by the manufacturer to meet are:

Pollutant	Emission Standard	Basis
Particulate Matter (PM)	0.54 grams/kW-hr	Table 4 Part 60 Subpart IIII
NMHC1 + NOx	10.5 grams/kW-hr	Table 4 Part 60 Subpart IIII
Carbon Monoxide (CO)	3.5 grams/kW-hr	Table 4 Part 60 Subpart IIII
Opacity – acceleration mode	20%	§ 89.113 (a)(1)
Opacity – lugging mode	15%	§ 89.113 (a)(2)
Opacity – peaks in acceleration or lugging modes	50%	§ 89.113 (a)(3)

[1] Non-methane hydrocarbon

The owner or operator must comply with the required NSPS emissions standards by purchasing an engine certified by its manufacturer to meet the applicable emission standards for the same model year and engine power. The engine must be installed and configured to the manufacturer's specifications. Provided these requirements are satisfied, no further demonstration of compliance with the emission standards from the rule is required. However, if the engine is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, a compliance demonstration is required in accordance with §60.4211(g).

Authority for Requirement: DNR Construction Permit 06-A-1099-S3
40 CFR 60 Subpart IIII
567 IAC 23.1(4)"yyy"

This engine is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) [40 CFR Part 63, Subpart ZZZZ). The engine is a new reciprocating internal combustion engine located at an area source of HAP. In accordance with §63.6590 (c)(1), the engine must comply with the requirements of Subpart ZZZZ by meeting the requirements of NSPS subpart IIII. No further requirements apply to this engine under Subpart ZZZZ.

Authority for Requirement: DNR Construction Permit 06-A-1099-S3
40 CFR 63 Subpart ZZZZ
567 IAC 23.1(4)"cz"

Operating Limits

1. This engine is limited to burning diesel fuel oil that meets the requirements of Condition 5, below.
2. This engine is limited to operating a maximum of 250 hours in any rolling 12-month period.
3. This engine is limited to operate as an emergency stationary internal combustion engine as defined in §60.4219 and in accordance with §60.4211. There is no time limit on the use of the engine in emergency situations provided that the annual hourly limit established in Condition 2, above is not exceeded. In accordance with §60.4211, the engine is limited to operate a maximum of 100 hours per year for maintenance checks and readiness testing.
4. The engine is also allowed to operate up to 50 hours per year in non-emergency situations, but the 50 hours are counted toward the 100 hours provided for maintenance and testing. The 50 hours per year for non-emergency operation cannot be used to generate income for the facility to supply power to the grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. This engine is not allowed to operate as a peak shaving unit.
5. In accordance with §60.4207(b), the diesel fuel oil burned in this engine shall meet the following specifications from 40 CFR 80.510(b) for nonroad diesel fuel:
   a. a maximum sulfur content of 15 ppm (0.0015%) by weight; and
   b. a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.
6. In accordance with §60.4209(a), the engine shall be equipped with a non-resettable hour meter.
7. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g).
8. In accordance with §60.4211(a), this engine shall be operated and maintained in accordance with the manufacturer's emission-related written instructions. The owner or operator may only change emission-related engine settings that are permitted by the manufacturer.

Reporting & Recordkeeping
The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The owner or operator shall maintain the following monthly records:
   a. the number of hours that the engine operated for maintenance checks and readiness testing;
   b. the number of hours that the engine operated for allowed non-emergency operations;
   c. the total number of hours that the engine operated in emergency situation; and
   d. the rolling 12-month total amount of the number of hours that the engine operated.
2. The owner or operator shall maintain the following annual records:
   a. the number of hours that the engine operated for maintenance checks and readiness testing; and
   b. the number of hours that the engine operated for allowed non-emergency operations.
3. The owner or operator of the engine shall comply with the requirements of Operating Limits Condition 4 listed above by one of the following methods:
   a. have the fuel supplier certify that the fuel delivered meets the definition of non-road diesel fuel as defined in 40 CFR 80.510(b);
   b. obtain a fuel analysis from the supplier showing the sulfur content and cetane index or aromatic content of the fuel delivered; or
   c. perform an analysis of the fuel to determine the sulfur content and cetane index or aromatic content of the fuel received.

Authority for Requirement: DNR Construction Permit 06-A-1099-S3
40 CFR 60 Subpart IIII
567 IAC 23.1(4)"yyy"

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 14
Stack Opening, (inches, dia.): 5
Exhaust Flow Rate (scfm): 607
Exhaust Temperature (^{o}F): 855
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1099-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below:

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: FS10

Associated Equipment

Associated Emissions Unit ID Number: FS10
Emissions Control Measure Description: Paved Road Sweeping

Emission Unit vented through this Emission Point: FS10
Emission Unit Description: Truck Traffic
Raw Material/Fuel: Dust from Truck Traffic

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): (1)
Authority for Requirement: 567 IAC 23.3(2)"c"(1)
DNR Construction Permit 06-A-1100-S4

(1) The owner/operator shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond lot line of the property.

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 5.0 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1100-S4

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

1. Fugitive dust emissions generated from truck traffic on the paved haul roads shall be controlled by:
   a. Sweeping two time per week when the haul roads are used 7 days in a week, with a minimum of one day between sweeping events except as noted in Conditions (i) and (ii). The sweeper type must be at minimum an enclosed sweeper type.
      i. If sweeping cannot be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35^0 F (1.7^0 C) or conditions due to weather could create hazardous driving conditions,

then the sweeping shall be postponed and accomplished as soon after the scheduled date as the conditions preventing the sweeping have abated.

ii. Paved road sweeping need not occur when a rain gauge located at the site indicates that at least 0.2 inches of precipitation (water equivalent) has occurred within the preceding 24 hour time period.

2. In the event that PM_{10} emissions exceed 3.75 tons per rolling 12-month period, Valero Renewable Fuels is required to commence daily road sweeping of the haul roads. If PM_{10} emissions are maintained below 3.75 tons per rolling 12-month period, Valero Renewable Fuels may revert back to sweeping requirements as specified in condition 1 above.
3. The speed limit shall be posted on the haul roads.
4. Any spills on the road shall be cleaned up immediately.

Reporting & Recordkeeping

The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. Performance testing on the haul road surface silt loading shall be completed on a quarterly basis. For each performance test, silt loading sampling shall be done at least 3 different locations. Performance testing shall be completed prior to paved road sweeping.
2. The owner or operator shall maintain a log of each silt load sampling event that contains the following:
   a. The date of silt load sampling event;
   b. The measured silt content in grams;
   c. Sample area used for silt load sampling in meters,
   d. The operator's initials.
3. Record on a monthly basis, the total number of trucks to transport or receive materials at Valero Renewable Fuels (grain, ethanol, denaturant, DDGS, etc.)
4. Record the frequency of cleaning performed on the haul roads. If the roads are not cleaned due to weather, a written record must be kept on site outlining the conditions.
5. The owner or operator shall calculate and record the monthly haul road emissions according to the following formulas, which use the equations from AP-42 Section 13.2.1 and empirical constants. The monthly haul road emissions shall be determined from the total of emissions calculated using equations E(i) below:

$$E_{PM10} = k(sL)^{0.91}(W)^{1.02}(1-\frac{P}{4N})$$

Where E_{PM10} = tons of PM_{10} emissions per month
sL = road surface silt loading (g/m^2) for the average of three silt load samples conducted for the month
W = mean vehicle weight in tons
K = empirical constant

P = number of "wet" days with at least 0.254 mm (0.01 in) of precipitation during the averaging period, and
N = number of hours in the averaging period (e.g. 8760 for annual, 2124 for season, 720 for monthly).

The owner or operator shall update monthly the twelve-month rolling total of PM_{10} emissions by adding up the calculated monthly emissions for the previous twelve months.

Authority for Requirement: DNR Construction Permit 06-A-1100-S4

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below:

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: FS40

Associated Equipment

Associated Emissions Unit ID Numbers: FS40

Emission Unit vented through this Emission Point: FS40
Emission Unit Description: Equipment Leaks
Raw Material/Fuel: Ethanol
Rated Capacity: N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below. The limits have been established to restrict potential emissions. They are a plant-wide equipment leak limits with a compliance demonstration outlined in the Operational Limits and Requirements section.

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 12.0 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1101-S1

Pollutant: Single HAP
Emission Limit(s): 0.25 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1101-S1

Pollutant: Acetaldehyde
Emission Limit(s): 0.25 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1101-S1

Pollutant: Total HAP
Emission Limit(s): 0.50 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1101-S1

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NSPS and NESHAP

This facility is subject to the requirements and conditions of New Source Performance Standards (NSPS) Subpart VVa- Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry as specified in 40 CFR Part

60 §60.480. This facility is also subject to the requirements and conditions of NSPS Subpart A-*General Provisions.*

Authority for Requirement: DNR Construction Permit 06-A-1101-S1
40 CFR 60 Subpart VVa
567 IAC 23.1(2)"nn"

Operating Limits

1. The owner/operator shall follow the applicable standards of NSPS Subpart VVa, 40 CFR 60.480a through 40 CFR 60.489a.

Authority for Requirement: DNR Construction Permit 06-A-1101-S1
40 CFR 60 Subpart VVa
567 IAC 23.1(2)"nn"

2. The component count shall be documented as to the number and types of components used. Components include but are not limited to valves, pumps, compressor seals, flanges, etc. The component count shall be updated as the component count varies.

Authority for Requirement: 567 IAC 22.108(3)

Reporting & Recordkeeping

The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The owner or operator shall keep records as required in 40 CFR 60.486a and reports as required in 40 CFR 60.487a.
2. The owner or operator shall comply with all reporting, notification, and recordkeeping requirements as specified in 40 CFR Part 60 Subpart VVa- *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*, specifically §60.486a and §60.487a.
3. The owner or operator shall comply with all reporting, notification, and recordkeeping requirements as specified in 40 CFR Part 60 Subpart A General Provisions §§60.1 through 60.19.

Authority for Requirement: DNR Construction Permit 06-A-1101-S1
40 CFR 60 Subpart VVa
567 IAC 23.1(2)"nn"

4. Calculate and record the VOC and HAP emissions based on the documented component count. Update annualized VOC and HAP emission calculations as the component count varies. Emission factors shall be based on EPA document 453/R-95-017 entitled Protocol for Equipment Leak Emission Estimates.

Authority for Requirement: 567 IAC 22.108(3)

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP FS70

Associated Equipment

Associated Emissions Unit ID Number: FS70

Emission Unit vented through this Emission Point: FS70
Emission Unit Description: WDGS & MDGS Storage & Loadout
Raw Material/Fuel: WDGS & MDGS
Rated Capacity: N/A

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Fugitive Dust
Emission Limit: No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent a nuisance. All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate.
Authority for Requirement: 567 IAC 23.3(2)"c"

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 2.49 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1102-S2

Pollutant: Single HAP
Emission Limit(s): 0.07 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1102-S2

Pollutant: Acetaldehyde
Emission Limit(s): 0.03 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1102-S2

Pollutant: Total HAP
Emission Limit(s): 0.12 tons/yr
Authority for Requirement: DNR Construction Permit 06-A-1102-S2

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

Process throughput:

1. Valero Renewable Fuels is limited to loading/shipping a maximum of 600,000 tons of WDGS/MDGS, produced at the facility, per rolling 12-month period.
2. The WDGS production at the facility cannot exceed 60,000 tons per rolling 12 month basis.

Reporting & Recordkeeping

The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The facility shall record the total amount of material (WDGS and MDGS) loaded out on a monthly basis, and determine the twelve-month rolling total amount of material produced.

Authority for Requirement: DNR Construction Permit 06-A-1102-S2

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: FS80

Associated Equipment

Associated Emissions Unit ID Number: FS80

Emission Unit vented through this Emission Point: FS80
Emission Unit Description: Cooling Tower
Raw Material/Fuel: Water
Rated Capacity: 4,544,480 gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter (PM_{10})
Emission Limit(s): 9.10 lb/hr
Authority for Requirement: DNR Construction Permit 06-A-1103-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 39.87 tons/yr, 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a"
DNR Construction Permit 06-A-1103-S2

Operational Limits & Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits

Process throughput:

1. The Total Dissolved Solids (TDS) concentration in the cooling water shall not exceed 4,800 parts per million by weight (4,800 mg/l) for any single sampling event.
2. Biocide or additive used in cooling water shall not contain any VOCs or HAPs.

Control equipment parameters:

1. Maintain Cooling Tower (FS80) according to manufacturer specifications and maintenance schedule.

Reporting & Recordkeeping
The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. The owner or operator shall complete an analysis of the Total Dissolved Solids (TDS) concentration in the cooling water associated with Cooling Tower (FS80) on a quarterly basis expressed as parts per million by weight (mg/l). Sampling shall occur four times per calendar year with a minimum of one month between sampling events.
2. Maintain onsite a copy of Material Safety Data Sheet (MSDS) of any biocide or additive used in cooling water detailing VOC and HAP content (if any).
3. Maintain a record of all inspections and maintenance and any action resulting from the inspection and maintenance of Cooling Tower (FS80).

Authority for Requirement: DNR Construction Permit 06-A-1103-S2

Emission Point Characteristics
The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 30
Stack Opening, (inches, dia.): 336
Exhaust Flow Rate (scfm): 4,544,480
Exhaust Temperature (^{0}F): Ambient
Discharge Style: Vertical Unobstructed
Authority for Requirement: DNR Construction Permit 06-A-1103-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Numbers: See Table: Storage Tanks

Associated Equipment

Associated Emission Unit ID Numbers: See Table: Storage Tanks
Emissions Control Equipment ID Numbers: See Table: Storage Tanks
Emissions Control Equipment Descriptions: See Table: Storage Tanks

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Table: Storage Tanks

Emission Point Number	Emission Unit Number	Emission Unit Description	Raw Material & Size (gal)	Control Equipment & ID	Construction Permit
TK001	TK001	190 Proof Ethanol Storage Tank	Ethanol 188,000	CE TK001 Internal Floating Roof	06-A-1104-S2
TK002	TK002	200 Proof Ethanol Storage Tank	Ethanol 188,000	CE TK002 Internal Floating Roof	06-A-1105-S2
TK003	TK003	Denaturant Storage Tank	Denaturant 188,000	CE TK003 Internal Floating Roof	06-A-1106-S2
TK004	TK004	Denatured or Undenatured Ethanol	Denatured Ethanol 1,785,000	CE TK004 Internal Floating Roof	06-A-1107-S3
TK005	TK005	Denatured or Undenatured Ethanol	Denatured Ethanol 1,785,000	CE TK005 Internal Floating Roof	06-A-1108-S3
TK006	TK006	Corrosion Inhibitor Storage Tank	Corrosion Inhibitor 2,300	N/A	06-A-1109-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)
The emissions from each emission point shall not exceed the levels specified below.

Table: Storage Tanks-Emission Limits

Emission Point Number	Associated Emission Unit Number	VOC (tons/yr)[(1)]	Single HAP (tons/yr)[(1)]	Total HAP (tons/yr)[(1)]	Authority for Requirement (Construction Permit Number)
TK001	TK001	0.67	0.014	0.014	06-A-1104-S2
TK002	TK002	0.67	0.014	0.014	06-A-1105-S2
TK003	TK003	1.80	0.030	0.036	06-A-1106-S2
TK004	TK004	1.50	0.010	0.020	06-A-1107-S3
TK005	TK005	1.50	0.010	0.020	06-A-1108-S3
TK006	TK006	0.50	0.010	0.020	06-A-1109-S2

[(1)] Standard is a 12-month rolling total.

NSPS and NESHAP

TK001, 002, 003, 004, & 005 are subject to the requirements/conditions of New Source Performance Standards (NSPS) Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 as specified in 40 CFR Part 60 §60.110b(a).

TK001, 002, 003, 004, & 005 are subject to the requirements/conditions of NSPS Subpart A-General Provisions.

TK 001, 002, & 003
Operating Limits

1. The fixed roof in combination with an internal roof shall meet the specifications as stated in 40 CFR Part 60 §60.112b(a)(1).
2. The owner or operator shall comply with all reporting, notification, and recordkeeping requirements as specified in 40 CFR Part 60 Subpart Kb-*Standards of Performance for Volatile Organic Liquid Storage Vessels* specifically §60.115b and §60.116b.

3. The owner or operator shall comply with all reporting, notification, and recordkeeping requirements as specified in 40 CFR Part 60 Subpart A-General Provisions §60.1 through 60.19.

Reporting & Recordkeeping
The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. Record and report as specified in 40 CFR Part 60 §60.115b(a) Reporting and recordkeeping requirements.
2. Record as specified in 40 CFR Part 60 §60.116b(a), the owner or operator shall keep copies of all records required by §60.11b(b) for the life of the source.
3. Record as specified in 40 CFR Part 60 §60.116b(b), the owner or operator shall keep readily accessible records showing the dimension of the storage vessel and analysis showing the capacity of the vessel.
4. As specified in 40 CFR Part 60 §60.116b(c), the owner or operator shall maintain a record of the volume stored, the period of storage, and the maximum true vapor pressure of that volume during the respective storage period.
5. Record annually, the net material throughput in gallons.

Authority for Requirement: DNR Construction Permits 06-A-1104-S2, 06-A-1105-S2, 06-A-1106-S2

TK 004 & 005
Operational Limits & Reporting/Record keeping Requirements
The owner/operator of this equipment shall comply with the operational limits and requirements listed below.
Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The fixed roof in combination with an internal roof shall meet the specifications as stated in 40 CFR Part 60 §60.112b(a)(1).
2. The owner or operator shall comply with all reporting, notification, and recordkeeping requirements as specified 40 CFR Part 60 Subpart Kb- Standards of Performance for Volatile Organic Liquid Storage Vessels, specifically §60.115b and §60.116b.
3. The owner or operator shall comply with all reporting, notification, and recordkeeping requirements as specified 40 CFR Part 60 Subpart A-General Provisions §§60.1 through 60.19.
4. Each of the two tanks, Final Product Tank #1 and Final Product Tank #2 is allowed a total of four roof landings per rolling 12-month period.
5. The owner or operator shall keep records of roof landings on an annual basis for each of the tanks.
6. Denatured or un-denatured ethanol storage is allowed in Final Product Tank #1 and Final

Product Tank #2.

7. The owner or operator shall keep records of the type of liquid stored in each of the tanks.

Authority for Requirement: DNR Construction Permits 06-A-1107-S3 & 06-A-1108-S3

TK006

Reporting & Recordkeeping

The following records shall be maintained on site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. Retain Material Safety Data Sheet (MSDS) of all materials stored in the Fuel Additive Storage Tank (TK006). MSDS shall contain the VOC and HAP content of materials stored.
2. Record annually, the net material throughput in gallons.

Authority for Requirement: DNR Construction Permit 06-A-1109-S2

Emission Point Characteristics

These emission points shall conform to the specifications listed below.

Emission Point Number	Emission Unit Number	Construction Permit #	Height (feet)	Diameter (inches)	Exhaust Flowrate (scfm)	Exhaust Temp. (^{0}F)	Discharge Style
TK001	TK001	06-A-1104-S2	33	10	Working/ Breathing Loss	Ambient	Downward
TK002	TK002	06-A-1105-S2	33	10	Working/ Breathing Loss	Ambient	Downward
TK003	TK003	06-A-1106-S2	33	10	Working/ Breathing Loss	Ambient	Downward
TK004	TK004	06-A-1107-S3	50	9.96	Working/ Breathing Loss	68	Downward
TK005	TK005	06-A-1108-S3	50	9.96	Working/ Breathing Loss	68	Downward
TK006	TK006	06-A-1109-S2	8	2	Working/ Breathing Loss	Ambient	Downward

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that either the temperature or flow rate above are different than the values stated, the owner or operator shall submit a request to the Department within thirty (30) days of the discovery to determine if a permit amendment is required or submit a permit application requesting to amend the permit.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Facility Maintained Operation & Maintenance Plan Required? **Yes** ☐ **No** ☒

Compliance Assurance Monitoring (CAM) Plan Required? **Yes** ☐ **No** ☒

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*
6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. *567 IAC 22.108(15)"c"*

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source’s right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to U.S. EPA Region VII, Attention: Chief of Air Permits, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable

inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
    a. Form 1.0 "Facility Identification";
    b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
    c. Form 5.0 "Title V annual emissions summary/fee"; and
    d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
    a. Form 1.0 "Facility Identification";
    b. Form 5.0 "Title V annual emissions summary/fee";
    c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms

from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:
1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:
1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
    a. The date, place and time of sampling or measurements
    b. The date the analyses were performed.
    c. The company or entity that performed the analyses.
    d. The analytical techniques or methods used.

e. The results of such analyses; and

f. The operating conditions as existing at the time of sampling or measurement.

g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)

2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:

a. Comply with all terms and conditions of this permit specific to each alternative scenario.

b. Maintain a log at the permitted facility of the scenario under which it is operating.

c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;

b. Compliance test methods specified in 567 Chapter 25; or

c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

a. Any monitoring or testing methods provided in these rules; or

b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not

later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. A variance from this subrule may be available as provided for in Iowa Code section 455B.143. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Initial Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An initial report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The initial report may be made by electronic mail (E-mail), in person, or by telephone and shall include as a minimum the following:

i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and expected duration of the excess emission.

iv. The cause of the excess emission.

v. The steps being taken to remedy the excess emission.

vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required initial reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.

ii. The estimated quantity of the excess emission.

iii. The time and duration of the excess emission.

iv. The cause of the excess emission.

v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.

vi. The steps that were taken to limit the excess emission.

vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The facility at the time was being properly operated;

c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and

d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice fulfills the requirement of paragraph 22.108(5)"b." – See G15. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or upset provision contained in any applicable requirement. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified

in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.

b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);

c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);

d. The changes are not subject to any requirement under Title IV of the Act (revisions affecting Title IV permitting are addressed in rules 567—22.140(455B) through 567 - 22.144(455B));.

e. The changes comply with all applicable requirements.

f. For each such change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:

i. A brief description of the change within the permitted facility,

ii. The date on which the change will occur,

iii. Any change in emission as a result of that change,

iv. The pollutants emitted subject to the emissions trade

v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.

vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and

vii. Any permit term or condition no longer applicable as a result of the change. *567 IAC 22.110(1)*

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*

5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

a. An administrative permit amendment is a permit revision that does any of the following:

i. Correct typographical errors

ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;

iii. Require more frequent monitoring or reporting by the permittee; or

iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Title V Permit Modification.

a. Minor Title V permit modification procedures may be used only for those permit modifications that satisfy all of the following:

i. Do not violate any applicable requirement;

ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit;

iii. Do not require or change a case by case determination of an emission limitation or other standard, or an increment analysis;

iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would

otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act;

v. Are not modifications under any provision of Title I of the Act; and

vi. Are not required to be processed as significant modification under rule 567 - 22.113(455B).

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;

ii. The permittee's suggested draft permit;

iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against the facility.

3. Significant Title V Permit Modification.

Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, as those requirements that apply to Title V issuance and renewal.

The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.111-567 IAC 22.113*

G19. Duty to Obtain Construction Permits

Unless exempted in 567 IAC 22.1(2) or to meet the parameters established in 567 IAC 22.1(1)"c", the permittee shall not construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, or conditional

permit, or permit pursuant to rule 567 IAC 22.8, or permits required pursuant to rules 567 IAC 22.4, 567 IAC 22.5, 567 IAC 31.3, and 567 IAC 33.3 as required in 567 IAC 22.1(1). A permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon. *567 IAC 22.1(1)*

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations (*567 IAC 23.1(3)"a");* training fires and controlled burning of a demolished building *(567 IAC 23.2).*

G21. Open Burning

The permittee is prohibited from conducting open burning, except as provided in 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
    a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
    b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
    c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
    d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
    a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
    b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
    c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
    d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)

e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,

5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*

2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.

a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;

b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.

c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:

a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided that the reopening may be stayed pending judicial review of that determination;

b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions

standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

5. A notice of intent shall be provided to the Title V source at least 30 days in advance of the date the permit is to be reopened, except that the director may provide a shorter time period in the case of an emergency. *567 IAC 22.114(3)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to

other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought consistent with the requirements of 567 IAC 22.111(1). *567 IAC 22.111 (1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. If the owner or operator does not provide timely notice to the department, the department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with applicable rules or permit conditions. Upon written request, the department may allow a notification period of less than 30 days. At the department’s request, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance demonstration. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 725-9545

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.
567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.
567 IAC 26.1(1)

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
U.S. EPA Region 7
Air Permits and Compliance Branch
11201 Renner Blvd.
Lenexa, KS 66219
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 725-9500

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1
1101 Commercial Court, Suite 10
Manchester, IA 52057
(563) 927-2640

Field Office 2
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3
1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4
1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5
7900 Hickman Road, Suite #200
Windsor Heights, IA 50324
(515) 725-0268

Field Office 6
1023 West Madison Street
Washington, IA 52353-1623
(319) 653-2135

Polk County Public Works Dept.
Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health
Air Quality Branch
1020 6th Street SE
Cedar Rapids, IA 52401
(319) 892-6000

Title V Application Review Notes

Facility Name:	**Valero Renewable Fuels Company, LLC dba Valero Hartley Plant**
City:	Hartley
County:	O'Brien
Facility #:	71-02-010
EIQ #:	92-6953
Application Received:	October 16, 2020
Permit #:	16-TV-004R1
Reviewer:	Emilie Peterson

A. Facility Identification:

Facility Name: Valero Renewable Fuels Company, LLC dba Valero Hartley Plant
Facility Location: 3260 Van Buren Avenue, Hartley, Iowa 51346
Responsible Official: Kraig Kruger, Plant Manager

B. Title V Major Source Status by Pollutant:

Pollutant	Major for Title V?
PM_{10}	☒
SO_2	☐
NO_x	☒
VOC	☒
CO	☒
Lead	☐
Individual HAP	☐
Total HAPs	☐

C. Process Description:

SIC Code(s) – Dry Mill Ethanol (SIC 2869)

Valero Renewable Fuels Company, LLC dba Valero Hartley Plant is an ethanol manufacturing facility. The primary emissions are particulate matter from corn unloading and grinding and NOx, CO and VOC emissions from fermentation, distillation, ethanol loading and DDGS drying and cooling.

D. Emission Sources:

All significant emission sources have been issued construction permits and are listed below:

Emission Point Number	Emission Unit Number	Emission Unit Description	Control Equipment	Construction Permit
S10	01	DDGS Dryer A	Multiclone & Thermal Oxidizer	06-A-1091-S3
	02	DDGS Dryer B		
	03	TO/Heat Recovery Boiler	None	
	04	DDGS Dryer C	Multiclone & Thermal Oxidizer	
	05	DDGS Dryer D		
	06	TO/Heat Recovery Boiler	None	
	58	DDGS Cooling Drum	Baghouse	
	43	Distillation Process (19 units)	Thermal Oxidizer	
	65	Blender Feed Screw	None	
	69	DDGS Feed Conveyors		
S20	07	Truck Receiving Dump Pit & Transfer Drag #1	Baghouse	06-A-1092-S2
	08	Receiving Leg #1		
	09	Silo Fill Conveyor #1		
	10	Grain Silo #1		
	11	Silo Reclaim Conveyor #1		
	13	Truck Receiving Dump Pit & Transfer Drag #2		
	14	Receiving Leg #2		
	15	Silo Center Fill Conveyor #1		
	16	Grain Silo #2		
	17	Silo Reclaim Conveyor #2		
	61	Grain Silo #3		
	64	Rail Receiving Dump Pit & Drag Conveyor		
	65	Silo Reclaim Conveyor #3		
	66	Silo Reclaim Conveyor #4		
	67	Silo Reclaim Conveyor #5		
	68	Hammermill Feed Silo		
S30	20	Hammermill #1	Baghouse	06-A-1093-S2
	21	Hammermill #2		
	22	Hammermill #3		
	23	Hammermill #4		
	62	Rotary Scalpers		
	63	Scalping Bin 3B		
	64	Grinding Reclaim & Transfer Conveyors		
S40	35-42	Fermenting	Scrubber	06-A-1094-S4
S70	58	DDGS Cooler (Thermal Oxidizer Bypass)	Baghouse	06-A-1096-S3

Emission Point Number	Emission Unit Number	Emission Unit Description	Control Equipment	Construction Permit
S75	49-56; 69-78	DDGS Storage & Loadout	Baghouse	06-A-1097-S3
S80	59A, 59B, 59C	Ethanol Loadout by Truck/Rail	Baghouse	06-A-1098-S2
S90	60	Firewater Pump	N/A	06-A-1099-S3
FS10	FS10	Truck Traffic	N/A	06-A-1100-S4
FS40	FS40	Equipment Leaks	N/A	06-A-1101-S1
FS70	FS70	WDGS & MDGS Loadout & Storage	N/A	06-A-1102-S2
FS80	FS80	Cooling Tower	Mist Eliminator	06-A-1103-S1
TK001-TK005	TK001-TK005	Denatured or Un-Denatured Ethanol	Internal Floating Roof	0-A-1104-S2 through 05-A-731-06-A-1108-S3
TK006	TK006	Corrosion Inhibitor Tank	N/A	06-A-1109-S2

E.Emission Estimations

Potential Emissions:

Below is a summary of potential emissions for the facility. All the significant emission sources have construction permits and the permit limits were used to calculate the potential emissions in most cases.

Summary of Criteria Pollutant Potential Emissions							
PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	NOx (tpy)	SO2 (tpy)	VOC (tpy)	CO (tpy)	Total HAPs (tpy)
178.9	153.9	142.02	210.76	104.25	264.25	177.78	58.35

F. Applicable Rules and Regulations

1. Facility-wide Emission limits and conditions: None at this time.

2. Facility Wide Opacity: no more than 40%. 567--IAC 23.3(2)"d".
3. Facility Wide SO_2: 500 parts per million by volume. 567--IAC 23.3(3)"e"
4. Title IV: Not applicable at this time.
5. Subject to 112(r) Prevention of Accidental Releases? No
6. NSPS: The following sources are subject to NSPS

NSPS Applicability

EP	Source Description	Permit#	NSPS Subpart
S10	Heat Recovery Boilers	06-A-1091-S3	A, Db
TK001	190 Proof Ethanol Storage Tank	06-A-1104-S2	A, Kb
TK002	200 Proof Ethanol Storage Tank	06-A-1105-S2	A, Kb,
TK003	Denaturant Storage Tank	06-A-1106-S2	A, Kb
TK004	Denatured Ethanol Storage Tank	06-A-1107-S3	A, Kb
TK005	Denatured Ethanol Storage Tank	06-A-1108-S3	A, Kb
FS40	VOC Emissions from Equipment Leaks	06-A-1101-S1	A, VVa
S90	Firewater Pump	06-A-1099-S3	IIII

7. NESHAP: The following sources are subject to NESHAP

NESHAP Applicability

The Firewater Pump is subject to National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) but it is a new reciprocating internal combustion engine located at an area source of HAP and is required to comply with the requirements of Subpart ZZZZ by meeting the requirements of NSPS subpart IIII, and no further requirements under Subpart ZZZZ apply.

Note that some of the emission units in the facility are the source type regulated by NESHAP subpart VVVVVV – National Emission Standards for *Hazardous Air Pollutants for Chemical Manufacturing Area Sources.* However, stack testing data provided by Iowa Renewable Fuels indicated that the concentrations of acetaldehyde in the liquid and gas stream in the processes of fermentation and distillation in dry mill ethanol plants are less than the threshold of 0.1% for NESHAP Subpart VVVVVV. Therefore, this facility is NOT subject to NESHAP subpart VVVVVV.

The heat recovery boilers are not subject to NESHAP Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for *Industrial, Commercial, and Institutional Boilers Area Sources* since waste heat (or heat recovery) boilers are specifically excluded from the definition of boiler in the subpart.

G. Stack Testing Requirements

Emission Point	Pollutant Tested	To Be Completed By	Authority for Requirement
S10	PM, PM_{10}, Opacity	Every 36 months (1)	

	VOC, Acetaldehyde, Single HAP [3], Total HAP	Annually [2]	DNR Construction Permit 06A-1091-S3
S40	VOC, Acetaldehyde, Single HAP [3], Total HAP.	Semi-Annually[4]	DNR Construction Permit 06-A-1094-S4

[1] The next PM and PM_{10} test shall be required at 36-months from the test conducted in October 2020.

[2] The tests shall be conducted once a year with a minimum of 180 days between tests. If the facility has successfully completed a test in 2015 under permit #06-A-1091-S2 for VOC and HAPs, it may be used as an initial test under the requirements of this permit.

[3] Acrolein, Formaldehyde and Methanol shall be tested under the SHAP limit in the Emission Limitations section. Acetaldehyde has a separate emission limit in the Emission Limitations section.

[4] The tests shall be conducted semi-annually with a minimum of 90 days between tests. At least, one test shall be conducted during June, July or August every year. If the results of three consecutive tests are below 90% of the applicable emission limitations, the facility may reduce the testing to once per year and test only during June, July or August each year. If the test results are at or above 90% of the applicable emission limitations, the facility shall conduct semi-annual testing. If the facility has successfully completed a test in 2015, it could be used as an initial test under the requirements of this permit.

H. Additional Periodic Monitoring Requirements

Facility Operation and Maintenance Plans Required

Emission Point Number	Emission Point Description	Type of Control
S20	Grain Receiving and Storage	Baghouse
S30	Milling/Hammermill	Baghouse
S75	DDGS Storage, Handling, Loadout	Baghouse

Note: The Dryers, Boilers and Distillation (S10), Fermentation and Distillation (S40) and truck and rail ethanol loadout (80) have adequate control equipment O&M requirements in their construction permits, so they do not need a separate Facility O&M plan.

I. Compliance Assurance Monitoring (CAM)

CAM plans were submitted with the renewal application for emission points S10 and S40. The emission point S40 CAM plan was not included in the R1 renewal because the requirements of 06-A-1094-S4 are sufficient.

J. Other Information

New emission units FS20 and FS75 were included in the renewal application. The emission units as designated as fugitive emissions for grain receiving (FS20) and DDGS loadout (FS75). The department has determined that uncaptured emissions are included in the emission limits for the associated emission points and do not need to be included in the operating permit as separate emission units.