

Estimated Costs of Crop Production in Iowa - 2010

Ag Decision Maker

File A1-20

The estimated costs of corn, corn silage, soybeans, alfalfa, and pasture maintenance in this report are based on data from several sources. They include the annual Iowa Farm Business Association record summaries, production and costs data from the Departments of Economics, Agricultural and Biosystems Engineering, and Agronomy at Iowa State University and a survey of selected agricultural cooperatives and other input suppliers around the state.

These costs estimates are representative of average costs for farms in Iowa. Very large or small farms may have lower or higher fixed costs per acre.

Due to differences in soil potentials, quantity of inputs used and other factors, production costs will vary from farm to farm. Price shifts for inputs can change production costs in both the short and long run. The attached data reflect average cost of purchased inputs and a return to land and labor resources, but do not provide a margin for profit or a return to management. They reflect production costs only, and do not include costs of storage.

Labor has been treated as a fixed cost, since most labor on Iowa farms is supplied by the operator, family or permanent hired labor. However, when deciding among alternative crops, labor should be considered a variable cost. The wage rate used here is \$11 per hour. The hours assumed per crop are presented in the budgets. The hours per crop acre includes not only the field work but also time for maintenance, travel, and other activities related to crop production. The land charge is based on rent equivalent. Owned land may require a greater or lesser cash outlay.

In the short run, cash income must be sufficient to pay cash costs, including seed, fertilizer, chemicals, insurance, cash rent and hired labor, as well as machinery fuel and repairs and interest on operating capital. In the long run, income should be sufficient to pay all costs of production for resources to be used in their most profitable alternative.

Corn yields reflect rotation effects. Fertilizer rates have been adjusted to reflect current data on removal and application rates. Crop insurance costs reflect the mix of multiple peril, revenue and hail insurance, as well as noninsured acres.

Machinery costs reflect both new and used equipment. The machine operations assumed are based on the 2000 Crop Production Practices Survey conducted by the Iowa Agricultural Statistics Service. Further information on this survey can be obtained by contacting the author. The Estimated Machinery Costs table can be used to budget other tillage and harvesting systems.

Estimates represent typical costs and are only intended to be guidelines. Actual costs will vary considerably and can be entered in the column for "Your Estimates." Electronic spreadsheets for developing crop production budgets are available on the Ag Decision Maker web site, www.extension.iastate.edu/agdm.

Budgets for alfalfa hay establishment with an oat companion crop and by direct seeding are included in this publication. Annual production costs for established alfalfa or alfalfa-grass hay as well as a budget for maintaining grass pastures are included as well. Additional pasture establishment budgets are published in Iowa State University Extension publication Estimated Costs of Pasture and Hay Production - AG-96.

Two low-till budgets, one for corn and one for soybeans, are included. The major differences between the low-till and conventional budgets are the preharvest machinery, labor, herbicide, and seeding costs. The soybean budgets are for herbicide tolerant varieties. A strip-till budget is also included.

Corn following Corn

	145 bu. per acre		165 bu. per acre		185 bu. per acre		Your Estimate
	Fixed	Variable	Fixed	Variable	Fixed	Variable	
Preharvest Machinery ^{1/}	\$20.30	\$17.00	\$20.30	\$17.00	\$20.30	\$17.00	\$ _____
Seed, Chemical, etc.	Units		Units		Units		
Seed @ \$3.44 per 1000 k.	25,000	\$86.00	30,000	\$103.20	35,000	\$120.40	\$ _____
Nitrogen @ \$0.33 per lb.	179	59.07	179	59.07	179	59.07	_____
Phosphate @ \$0.38 per lb.	54	20.52	62	23.56	69	26.22	_____
Potash @ \$0.43 per lb.	44	18.92	50	21.50	56	24.08	_____
Lime (yearly cost)		9.67		9.67		9.67	_____
Herbicide		25.00		25.00		25.00	_____
Insecticide		10.00		10.00		10.00	_____
Crop Insurance		17.00		17.00		17.00	_____
Miscellaneous		8.00		9.00		10.00	_____
Interest on preharvest variable costs (8 months @ 6.5%)		11.75		12.78		13.80	_____
Total		\$265.93		\$290.78		\$315.24	\$ _____
Harvest Machinery							
Combine	\$16.20	\$8.00	\$16.20	\$8.00	\$16.20	\$8.00	\$ _____
Grain Cart	4.60	2.20	4.60	2.20	4.60	2.20	_____
Haul	7.25	4.35	8.25	4.95	9.25	5.55	_____
Dry (LP Gas @ \$1.70/gal.)	5.80	29.58	6.60	33.66	7.40	37.74	_____
Handle	1.45	0.73	1.65	0.83	1.85	0.93	_____
Total	\$35.30	\$44.86	\$37.30	\$49.64	\$39.30	\$54.42	\$ _____
Labor							
2.85 hours @ \$11.00	\$31.35		\$31.35		\$31.35		\$ _____
Land							
Cash rent equivalent	\$168.00		\$195.00		\$222.00		\$ _____
Total fixed, variable							
Per acre	\$254.95	\$327.79	\$283.95	\$357.42	\$312.95	\$386.65	Yield:
Per bushel	\$1.76	\$2.26	\$1.72	\$2.17	\$1.69	\$2.09	bu./acre _____
Total cost per acre	\$582.74		\$641.37		\$699.60		\$ _____
Total cost per bushel	\$4.02		\$3.89		\$3.78		\$ _____

^{1/}Chisel plow, tandem disk, apply N, field cultivate, plant, cultivate, and spray. See the Estimated Machinery Costs table.

Corn following Soybeans

	160		180		200		Your Estimate
	bu. per acre		bu. per acre		bu. per acre		
	Fixed	Variable	Fixed	Variable	Fixed	Variable	
Preharvest Machinery ^{1/}	\$16.70	\$13.70	\$16.70	\$13.70	\$16.70	\$13.70	\$ _____
Seed, Chemical, etc.	Units		Units		Units		
Seed @ \$3.44 per 1000 k.	25,000	\$86.00	30,000	\$103.20	35,000	\$120.40	\$ _____
Nitrogen @ \$0.33 per lb.	127	41.91	127	41.91	127	41.91	_____
Phosphate @ \$0.38 per lb.	60	22.80	68	25.84	75	28.50	_____
Potash @ \$0.43 per lb.	48	20.64	54	23.22	60	25.80	_____
Lime (yearly cost)		9.67		9.67		9.67	_____
Herbicide		25.00		25.00		25.00	_____
Crop Insurance		17.00		17.00		17.00	_____
Miscellaneous		8.00		9.00		10.00	_____
Interest on preharvest variable costs (8 months @ 6.5%)		10.60		11.64		12.65	_____
Total		\$241.62		\$266.48		\$290.93	\$ _____
Harvest Machinery							
Combine	\$16.20	\$8.00	\$16.20	\$8.00	\$16.20	\$8.00	\$ _____
Grain Cart	4.60	2.20	4.60	2.20	4.60	2.20	_____
Haul	8.00	4.80	9.00	5.40	10.00	6.00	_____
Dry (LP Gas @ \$1.70/gal.)	6.40	32.64	7.20	36.72	8.00	40.80	_____
Handle	1.60	0.80	1.80	0.90	2.00	1.00	_____
Total	\$36.80	\$48.44	\$38.80	\$53.22	\$40.80	\$58.00	\$ _____
Labor							
2.6 hours @ \$11.00	\$28.60		\$28.60		\$28.60		\$ _____
Land							
Cash rent equivalent	\$168.00		\$195.00		\$222.00		\$ _____
Total fixed, variable							
Per acre	\$250.10	\$303.76	\$279.10	\$333.40	\$308.10	\$362.63	Yield: _____
Per bushel	\$1.56	\$1.90	\$1.55	\$1.85	\$1.54	\$1.81	bu./acre _____
Total cost per acre	\$553.86		\$612.50		\$670.73		\$ _____
Total cost per bushel	\$3.46		\$3.40		\$3.35		\$ _____

^{1/}Apply N, tandem disk, field cultivate, plant, cultivate, and spray. See the Estimated Machinery Costs table.

Corn Silage following Corn

	21 tons per acre		24 tons per acre		26 tons per acre		Your Estimate
	Fixed	Variable	Fixed	Variable	Fixed	Variable	
Preharvest Machinery ^{1/}	\$20.30	\$17.00	\$20.30	\$17.00	\$20.30	\$17.00	\$ _____
Seed, Chemical, etc.	Units		Units		Units		
Seed @ \$3.44 per 1000 k.	28,750	\$98.90	34,500	\$118.70	40,250	\$138.50	\$ _____
Nitrogen @ \$0.33 per lb.	150	49.50	150	49.50	150	49.50	_____
Phosphate @ \$0.38 per lb.	74	28.12	84	31.92	91	34.58	_____
Potash @ \$0.43 per lb.	168	72.24	192	82.56	208	89.44	_____
Lime (yearly cost)		10.50		10.50		10.50	_____
Herbicide		25.00		25.00		25.00	_____
Insecticide		10.00		10.00		10.00	_____
Crop Insurance		17.00		17.00		17.00	_____
Miscellaneous		8.00		9.00		10.00	_____
Interest on preharvest variable costs (8 months @ 6.5%)		<u>14.57</u>		<u>16.08</u>		<u>17.40</u>	_____
Total		\$333.83		\$370.26		\$401.92	\$ _____
Harvest Machinery							
Silage Harvester	\$29.80	\$12.20	\$29.80	\$12.20	\$29.80	\$12.20	\$ _____
Haul	27.30	21.00	31.20	24.00	33.80	26.00	_____
Total	\$57.10	\$33.20	\$61.00	\$36.20	\$63.60	\$38.20	\$ _____
Labor							
5.0 hours @ \$11.00	\$55.00		\$55.00		\$55.00		\$ _____
Land							
Cash rent equivalent	\$168.00		\$195.00		\$222.00		\$ _____
Total fixed, variable							
Per acre	\$300.40	\$384.03	\$331.30	\$423.46	\$360.90	\$457.12	Yield:
Per ton	\$14.30	\$18.29	\$13.80	\$17.64	\$13.88	\$17.58	bu./acre _____
Total cost per acre	\$684.43		\$754.76		\$818.02		\$ _____
Total cost per ton	\$32.59		\$31.45		\$31.46		\$ _____

^{1/} Chisel plow, tandem disk, apply N, field cultivate, plant, cultivate, and spray. See the Estimated Machinery Costs table.

Herbicide Tolerant Soybeans following Corn

	45		50		55		Your Estimate
	bu. per acre		bu. per acre		bu. per acre		
	Fixed	Variable	Fixed	Variable	Fixed	Variable	
Preharvest Machinery ^{1/}	\$14.50	\$11.60	\$14.50	\$11.60	\$14.50	\$11.60	\$ _____
Seed, Chemical, etc.	Units		Units		Units		
Seed @ \$50.00 per 140 k.	140	\$50.00	140	\$50.00	140	\$50.00	\$ _____
Phosphate @ \$0.38 per lb.	36	13.68	40	15.20	44	16.72	_____
Potash @ \$0.43 per lb.	68	29.24	75	32.25	83	35.69	_____
Lime (yearly cost)		9.67		9.67		9.67	_____
Herbicide ^{2/}		20.00		20.00		20.00	_____
Crop Insurance		11.00		11.00		11.00	_____
Miscellaneous		8.00		9.00		10.00	_____
Interest on preharvest variable costs (8 months @ 6.5%)		6.64		6.88		7.14	_____
Total		\$148.23		\$154.00		\$160.22	\$ _____
Harvest Machinery							
Combine	\$13.70	\$6.30	\$13.70	\$6.30	\$13.70	\$6.30	\$ _____
Grain Cart	4.60	2.20	4.60	2.20	4.60	2.20	_____
Haul	2.25	1.35	2.50	1.50	2.75	1.65	_____
Handle	0.45	0.20	0.55	0.25	0.65	0.30	_____
Total	\$21.00	\$10.05	\$21.35	\$10.25	\$21.70	\$10.45	\$ _____
Labor							
2.45 hours @ \$11.00	\$26.95		\$26.95		\$26.95		\$ _____
Land							
Cash rent equivalent	\$168.00		\$195.00		\$222.00		\$ _____
Total fixed, variable							
Per acre	\$230.45	\$169.88	\$257.80	\$175.85	\$285.15	\$182.27	Yield: _____
Per bushel	\$5.12	\$3.78	\$5.16	\$3.52	\$5.18	\$3.31	bu./acre _____
Total cost per acre	\$400.33		\$433.65		\$467.42		\$ _____
Total cost per bushel	\$8.90		\$8.67		\$8.50		\$ _____

^{1/} Chisel plow, tandem disk, field cultivate, plant, and spray. See the Estimated Machinery Costs table.

^{2/} Estimates do not include any insecticide or fungicide costs.

Strip Tillage Corn and Soybeans

	<u>Corn Following Soybeans</u>			<u>Herbicide Tolerant Soybeans Following Corn</u>		
	180 bu. per acre		Your Estimate	50 bu. per acre		Your Estimate
	Fixed	Variable		Fixed	Variable	
Preharvest Machinery ^{1/}	\$8.20	\$6.70	\$ _____	\$7.70	\$6.00	\$ _____
Seed, Chemical, etc.	Units			Units		
Seed @ \$3.44 per 1000 k.	30,000	\$103.20	\$ _____			
Seed @ \$50.00 per 140 k.				160	57.10	\$ _____
Nitrogen @ \$0.33 per lb.	127	\$41.91	_____			
Phosphate @ \$0.38 per lb.	68	\$25.84	_____	40	15.20	_____
Potash @ \$0.43 per lb.	54	\$23.22	_____	75	32.25	_____
Lime (yearly cost)		9.67	_____		9.67	_____
Herbicide ^{2/}		35.00	_____		30.00	_____
Crop Insurance		17.00	_____		11.00	_____
Miscellaneous		9.00	_____		9.00	_____
Interest on preharvest variable costs (8 months @ 6.5%)		11.77	_____		7.38	_____
Total		\$276.61	\$ _____		\$171.60	\$ _____
Harvest Machinery						
Combine	\$16.20	\$8.00	\$ _____	\$13.70	\$6.30	\$ _____
Grain Cart	4.60	2.20	_____	4.60	2.20	_____
Haul	9.00	5.40	_____	2.50	1.50	_____
Dry (LP Gas @ \$1.70/gal.)	7.20	36.72	_____			
Handle	1.70	0.75	_____	0.55	0.25	_____
Total	\$38.70	\$53.07	\$ _____	\$21.35	\$10.25	\$ _____
Labor						
2.3 hours @ \$11.00	\$25.30		\$ _____			
1.75 hours @ \$11.00				\$19.25		\$ _____
Land						
Cash rent equivalent	\$195.00		\$ _____	\$195.00		\$ _____
Total fixed, variable						
Per acre	\$267.20	\$336.38	Yield: _____	\$243.30	\$187.85	Yield: _____
Per bushel	\$1.48	\$1.87	bu./acre _____	\$4.87	\$3.76	bu./acre _____
Total cost per acre	\$603.58		\$ _____	\$431.15		\$ _____
Total cost per bushel	\$3.35		\$ _____	\$8.62		\$ _____

^{1/} Strip till, plant and spray for corn. No-till drill, spray for soybeans. See the Estimated Machinery Costs table.

^{2/} Estimates do not include any insecticide or fungicide costs.

Low-till Corn and Soybeans

	<u>Corn Following Soybeans</u>			<u>Herbicide Tolerant Drilled Soybeans Following Corn</u>		
	180 bu. per acre		Your Estimate	50 bu. per acre		Your Estimate
	Fixed	Variable		Fixed	Variable	
Preharvest Machinery ^{1/}	\$11.80	\$10.10	\$ _____	\$9.50	\$7.00	\$ _____
Seed, Chemical, etc.	Units			Units		
Seed @ \$3.44 per 1000 k.	30,000	\$103.20	\$ _____			
Seed @ \$50.00 per 140 k.				160	\$57.10	\$ _____
Nitrogen @ \$0.33 per lb.	127	41.91	_____			
Phosphate @ \$0.38 per lb.	68	25.84	_____	40	15.20	_____
Potash @ \$0.43 per lb.	54	23.22	_____	75	32.25	_____
Lime (yearly cost)		9.67	_____		9.67	_____
Herbicide ^{2/}		35.00	_____		30.00	_____
Crop Insurance		17.00	_____		11.00	_____
Miscellaneous		9.00	_____		9.00	_____
Interest on preharvest variable costs (8 months @ 6.5%)		11.91	_____		7.42	_____
Total		\$276.75	\$ _____		\$171.64	\$ _____
Harvest Machinery						
Combine	\$16.20	\$8.00	\$ _____	\$13.70	\$6.30	\$ _____
Grain Cart	4.60	2.20	_____	4.60	2.20	_____
Haul	9.00	5.40	_____	2.50	1.50	_____
Dry (LP Gas @ \$1.70/gal.)	7.20	36.72	_____			
Handle	1.70	0.75	_____	0.55	0.25	_____
Total	\$38.70	\$53.07	\$ _____	\$21.35	\$10.25	\$ _____
Labor						
2.3 hours @ \$11.00	\$25.30		\$ _____			
1.75 hours @ \$11.00				\$19.25		\$ _____
Land						
Cash rent equivalent	\$195.00		\$ _____	\$195.00		\$ _____
Total fixed, variable						
Per acre	\$270.80	\$339.92	Yield: _____	\$245.10	\$188.89	Yield: _____
Per bushel	\$1.50	\$1.89	bu./acre _____	\$4.90	\$3.78	bu./acre _____
Total cost per acre	\$610.72		\$ _____	\$433.99		\$ _____
Total cost per bushel	\$3.39		\$ _____	\$8.68		\$ _____

^{1/} Apply N, field cultivate, plant, and spray for corn. Disk, drill and spray for soybeans. See the Estimated Machinery Costs table.

^{2/} Estimates do not include any insecticide or fungicide costs.

Oats and Hay Production - Seeding Year Costs

Establishment Costs	Alfalfa-Grass Seeded with Oat Companion Crop ^{1/}		Alfalfa Seeded with Herbicide ^{2/}		Your Estimate
	Fixed	Variable	Fixed	Variable	
Preharvest Machinery					
Spray herbicide			\$1.20	\$0.90	\$ _____
Tandem disk (2 times)	\$6.80	\$4.40	6.80	4.40	_____
Spread fertilizer	1.60	1.20	1.60	1.20	_____
Harrow	1.60	0.90	1.60	0.90	_____
Seed (drill)	4.90	3.90	4.90	3.90	_____
Total preharvest machinery	\$14.90	\$10.40	\$16.10	\$11.30	\$ _____
Seed ^{3/}					
Oats	2 bu.	\$16.00			\$ _____
Alfalfa	8 lb.	37.20	15 lb.	\$69.75	_____
Bromegrass	6 lb.	9.90			_____
Orchardgrass	3 lb.	9.00			_____
Total seed cost		\$72.10		\$69.75	\$ _____
Herbicide				\$14.70	_____
Lime (total cost for hay lifetime)		\$40.00		40.00	_____
Labor @ \$11.00	1 hr.	\$11.00	1 hr.	\$11.00	\$ _____
Total establishment costs		\$25.90	\$27.10	\$135.75	\$ _____
Annual Costs	Fixed	Variable	Fixed	Variable	
One-Third of Est. Costs (for establishment year)	\$8.63	\$40.83	\$9.03	\$45.25	\$ _____
Fertilizer					
Nitrogen	60 lb.	\$19.80			\$ _____
Phosphorus	45 lb.	17.10	35 lb.	\$13.30	_____
Potash	130 lb.	55.90	125 lb.	53.75	_____
Total fertilizer		\$92.80		\$67.05	\$ _____
Insurance, oats		\$5.00			\$ _____
Labor @ \$11.00	4 hr.	\$44.00	3 hr.	\$33.00	\$ _____
Land Cash rent equivalent		\$90.00		\$90.00	\$ _____
Harvest Machinery					
Oats: combine		\$15.70			\$ _____
rake, bale, and haul straw		9.80		6.20	\$ _____
Alfalfa: mower-conditioner, rake, bale, and haul hay		\$14.90		\$10.00	\$ _____
Total harvest cost		\$40.40		\$23.30	\$ _____
Total fixed and variable costs		\$183.03	\$162.53	\$133.75	\$ _____
Total cost per acre		\$344.97		\$296.28	\$ _____

^{1/} Assumes 80 bushels oat yield, one ton straw yield and one ton per acre alfalfa yield from one cutting.

^{2/} Assumes two and a half tons per acre from two alfalfa cuttings with a herbicide-assisted seeding.

^{3/} Omit oats from August seedings. Higher priced seed varieties or different seed mixtures could vary these costs by 1.2 to 2.0 times.

Annual Production Costs for Established Alfalfa or Alfalfa-Grass Hay

	Hay Production Level				Your Estimate
	4 tons per acre ^{1/}		6 tons per acre		
	Fixed	Variable	Fixed	Variable	
One-third of establishment costs					
Machinery, seed, lime, labor, and herbicide ^{2/}	\$8.63	\$40.83	\$9.03	\$45.25	\$ _____
Annual fertilizer ^{3/}					
0-13-50 lbs/ton removed plus spreading	\$1.60	\$110.96	\$3.20	\$167.04	\$ _____
Harvesting Costs: Large Round Bales ^{4/}					
Mower-conditioner, rake, baling, and hauling	\$46.10	\$32.60	\$62.40	\$44.60	\$ _____
Labor costs: 1.33 hr./cutting @ \$11.00 per hour	\$44.00		\$58.67		\$ _____
Land					
Cash rent equivalent	\$90.00		\$113.00		\$ _____
Total fixed and variable cost using large round bales	\$190.33	\$184.39	\$246.30	\$256.89	\$ _____
Fixed and variable cost per ton	\$47.58	\$46.10	\$41.05	\$42.82	\$ _____
Total cost per acre	\$374.73		\$503.19		\$ _____
Total cost per ton	\$93.68		\$83.86		\$ _____
Harvesting Costs: Small Square Bales ^{4/}					
Mower-conditioner, rake, baling, haul and stack	\$42.20	\$29.60	\$57.20	\$40.60	\$ _____
Labor costs: 2 hr./cutting @ \$11.00 per hour	\$66.00		\$88.00		\$ _____
Land					
Cash rent equivalent	\$90.00		\$113.00		\$ _____
Total fixed and variable cost using small square bales	\$208.43	\$181.39	\$270.43	\$252.89	\$ _____
Fixed and variable cost per ton	\$52.11	\$45.35	\$45.07	\$42.15	\$ _____
Total cost per acre	\$389.83		\$523.32		\$ _____
Total cost per ton	\$97.46		\$87.22		\$ _____

^{1/} For harvest as silage use machine cost estimates from the Estimated Machinery Costs table.

^{2/} Assumes alfalfa-grass seeded with oat companion crop. If alfalfa seeded with preplant herbicide use other costs (see previous page).

^{3/} For 6-ton yield goal, a split application of fertilizer is assumed.

^{4/} Harvest cost estimates assume 3 cuttings for 4 tons and 4 cuttings for 6 tons; stacker cost per acre.

Maintaining Grass Pastures - Annual Cost per Acre

	<u>Improved Grass</u> ^{2/}		<u>Improved Grass-Legume</u> ^{3/}		Your Estimate
	Fixed	Variable	Fixed	Variable	
Machinery Costs					
Spreading fertilizer	\$1.60	\$1.20	\$1.60	\$1.20	\$ _____
Spraying herbicide	1.20	0.90			_____
Clipping weeds	2.60	1.80	2.60	1.80	_____
Total machinery cost	\$5.40	\$3.90	\$4.20	\$3.00	\$ _____
Fertilizer and Herbicide ^{1/}					
Nitrogen @ \$0.33 per lb.	80 lb.	\$26.40			\$ _____
Phosphate @ \$0.38 per lb.	30 lb.	11.40	30 lb.	\$11.40	_____
Potash @ \$0.43 per lb.			40 lb.	17.20	_____
Herbicide		5.23			_____
Total fertilizer and herbicide		\$43.03		\$28.60	\$ _____
Labor					
Growing practices .5 hr. @ \$11.00	\$5.50		\$5.50		\$ _____
Fence maintenance 1 hr. @ \$11.00	11.00		11.00		_____
Total labor	\$16.50		\$16.50		\$ _____
Land					
Cash rent equivalent	\$49.00		\$58.00		\$ _____
Total annual cost	\$70.90	\$46.93	\$78.70	\$31.60	\$ _____
Total annual cost per acre		\$117.83		\$110.30	\$ _____

^{1/} These are average rates and may vary with soil test and the level of management on a particular field. Different herbicide alternatives could vary this cost.

^{2/} Improved grass pastures assume a dominance of cool season grasses such as smooth brome grass, orchardgrass, tall fescue, or reed canarygrass.

^{3/} Improved grass-legume pasture assumed one third of the forage is made up of red clover, birdsfoot trefoil, or alfalfa.

Estimated Machinery Costs

The following cost estimates are for on-farm use, excluding labor. Depreciation is based on current replacement cost, interest is based on average market rates. Fixed costs will be greater for newer machinery. If annual machine use is greater than that assumed, fixed costs per acre will be lower, and vice versa. Hauling costs are based on a round trip of one mile. Remember these are estimates and they should not take the place of accurate record-keeping. **Diesel fuel is estimated to cost \$2.25 per gallon, delivered to the farm in bulk.**

Operation	Hours of Use Assumed per Year	Fixed Cost per Acre (depreciation, interest, insurance, housing)	Variable Cost per Acre (fuel, oil, repairs)
Subsoiling (V-ripper)	120	\$6.30	\$6.70
Moldboard plow	120	\$8.30	\$7.80
Chisel plow	120	\$3.60	\$3.30
Chop stalks	120	\$4.00	\$3.50
Tandem disk	120	\$3.40	\$2.20
Offset disk	120	\$3.90	\$2.80
Peg tooth harrow	60	\$1.60	\$0.90
Sprayer/disk	120	\$3.70	\$2.60
Field cultivator	120	\$2.20	\$2.10
Disk/Field cultivator	120	\$2.50	\$2.30
Strip tiller	120	\$2.90	\$2.70
Bulk fertilizer spreader	60	\$1.60	\$1.20
NH3 applicator	120	\$4.30	\$4.00
Chisel plow, NH3 applic.	120	\$4.60	\$4.70
Grain drill	100	\$4.90	\$3.90
Broadcast seeder	100	\$1.80	\$1.00
Planter	100	\$4.10	\$3.10
No-till planter	100	\$5.20	\$4.00
No-till drill	100	\$6.50	\$5.10
Rotary hoe	60	\$1.40	\$0.80
Cultivator	120	\$1.50	\$1.40
Sprayer	150	\$1.20	\$0.90
Combine corn	180	\$16.20	\$8.00
Combine soybeans	120	\$13.70	\$6.30
Combine small grain	120	\$11.70	\$4.70
Haul grain (on farm)	600	\$0.05 /bu.	\$0.03 /bu.
Grain Cart	200	\$4.60	\$2.20
Silage harvester	200	\$29.80	\$12.20
Haul silage	140	\$1.30 /ton	\$1.00 /ton
Rotary mower	120	\$2.60	\$1.80
Mower-conditioner	120	\$3.80	\$2.80
Rake	120	\$2.00	\$1.30
Small square baler	120	\$6.40 /cutting	\$3.50 /cutting
Round baler	120	\$7.70	\$4.50
Stacker	120	\$8.00	\$4.70
Large square baler	120	\$7.40	\$4.90
Windrower	200	\$2.20	\$1.60
Forage chopper	200	\$13.40	\$9.30
Haul small square bales	120	\$1.40 /ton	\$1.70 /ton
Haul large round bales	120	\$1.40 /ton	\$1.70 /ton

Estimated Crop Production Costs in Iowa, 2003-2010

	2003 ^{1/}	2004	2005 ^{2/}	2006 ^{3/}	2007	2008	2009	2010 ^{4/}
Corn following Corn								
Machinery	\$80.99	\$86.78	\$94.55	\$100.07	\$102.94	\$110.88	\$115.99	\$124.25
Seed, Chemicals, etc.	146.19	159.57	184.77	201.62	222.22	271.97	387.44	290.78
Labor	25.65	27.08	27.08	29.93	31.35	31.35	31.35	31.35
Land	135.00	140.00	140.00	145.00	155.00	190.00	205.00	195.00
Total Cost Per Acre	387.83	413.43	446.39	476.61	511.51	604.20	739.77	641.37
Assumed Yield	135 bu	135 bu	135 bu	140 bu	145 bu	145 bu	145 bu	165 bu.
Total Cost Per Bushel	\$2.87	\$3.06	\$3.31	\$3.40	\$3.53	\$4.17	\$5.10	\$3.89
Corn following Soybeans								
Machinery	\$79.55	\$85.68	\$93.37	\$97.39	\$100.12	\$107.88	\$113.98	\$122.42
Seed, Chemicals, etc.	125.10	135.74	156.03	169.26	189.33	230.35	344.03	266.48
Labor	23.40	24.70	24.70	27.30	28.60	28.60	28.60	28.60
Land	135.00	140.00	140.00	145.00	155.00	190.00	205.00	195.00
Total Cost Per Acre	363.04	386.12	414.10	438.95	473.05	556.83	691.61	612.50
Assumed Yield	150 bu	150 bu	150 bu	155 bu	160 bu	160 bu	160 bu	180 bu
Total Cost Per Bushel	\$2.42	\$2.57	\$2.76	\$2.83	\$2.96	\$3.48	\$4.32	\$3.40
Soybeans following Corn ^{2/}								
Machinery	\$43.38	\$41.51	\$40.53	\$45.90	\$46.76	\$48.50	\$55.80	\$57.70
Seed, Chemicals, etc.	84.47	90.76	96.53	106.79	107.58	126.06	202.85	154.00
Labor	22.05	23.28	23.28	25.73	26.95	26.95	26.95	26.95
Land	135.00	140.00	140.00	145.00	155.00	190.00	205.00	195.00
Total Cost Per Acre	284.90	295.54	300.34	323.41	336.29	391.51	490.60	433.65
Assumed Yield	45 bu	45 bu	45 bu	45 bu	50 bu	50 bu	50 bu	50 bu
Total Cost Per Bushel	\$6.33	\$6.57	\$6.67	\$7.19	\$6.73	\$7.83	\$9.81	\$8.67
Alfalfa Hay, annual production, 6 ton per acre, large round bales								
One-Third of Est. Costs	\$32.84	\$33.84	\$34.45	\$36.83	\$37.27	\$46.23	\$38.97	\$54.28
Annual Fertilizer	60.25	71.62	84.74	103.36	103.46	126.00	294.60	170.24
Harvest Machinery	103.12	96.24	108.30	107.10	90.40	96.60	102.90	107.00
Labor	48.00	50.67	50.67	56.00	58.67	58.67	58.67	58.67
Land	85.00	88.00	95.00	95.00	100.00	125.00	125.00	113.00
Total Cost Per Acre	329.21	340.36	373.16	398.29	389.79	452.50	632.27	503.19
Assumed Yield	6 ton	6 ton	6 ton	6 ton	6 ton	6 ton	6 ton	6 ton
Total Cost Per Ton	\$54.87	\$56.73	\$62.19	\$66.38	\$64.97	\$75.42	\$105.38	\$83.86

^{1/} Starting 2003 corn yields and machinery use were adjusted to reflect recent averages.

^{2/} Starting 2005 primary soybean estimates are for herbicide tolerant varieties.

^{3/} Starting 2006 corn drying and fertilizer practices were adjusted to reflect recent practices.

^{4/} Starting 2010 corn yields adjusted.

... and justice for all

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Jack M. Payne, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

File: Economics 1-8

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**Iowa Department of Natural Resources
Title V Operating Permit**

Name of Permitted Facility: Global Ethanol LLC - Lakota
Facility Location: 1660 428th Street, Lakota, IA 50451
Air Quality Operating Permit Number: 10-TV-001
Expiration Date: December 31, 2014
Permit Renewal Application Deadline: June 30, 2014

EIQ Number: 92-6852
Facility File Number: 55-09-003

Responsible Official

Name: Tom Branhan
Title: Manager of Operations
Mailing Address: 1660 428th Street, Lakota, IA 50451
Phone #: (515) 866-2222

Permit Contact Person for the Facility

Name: Jeff Varboncoeur
Title: Environmental Manager
Mailing Address: 1660 428th Street, Lakota, IA 50451
Phone #: (515)866-2222 ext. 172

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

Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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- B. 40 CFR Part 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
- C. 40 CFR Part 60 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
- D. 40 CFR Part 60 Subpart VV –Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry
- E. 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Abbreviations

acfm.....	actual cubic feet per minute
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
gr./100 cf.....	grains per one hundred cubic feet
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
NESHAP.....	National Emission Standards for Hazardous Air Pollutants
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

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: Global Ethanol LLC – Lakota

Permit Number: 10-TV-001

Facility Description: Fuel Grade Ethanol Production (SIC 2869)

Equipment List

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP-S10	EU-P10a	DDG Dryer A	01-A-521-S8
	EU-P10b	DDG Dryer B	
	EU-B10	Heat Recovery Boiler	
EP-S10b	EU-P10c	DDG Dryer C	04-A-989-S4
	EU-P40b	Fermentation & Distillation Process	
EP-S11b	EU-S11b	Natural Gas Fired Boiler	04-A-990-S3
EP-SFX105	EU-P20	Grain Receiving/Handling System	04-A-991-S1
EP-SFX110		Grain Handling	02-A-825-S3
EP-SFX120		Grain Handling	02-A-826-S2
EP-SFX146		Grain Receiving/Handling System	04-A-995-S2
EP-SFX147		Grain Receiving/Handling System	02-A-827-S2
EP-SFX165		Milling/Hammermill: Corn Day Bin	01-A-523-S3
EP-SFX190	EU-P30	Hammermill	02-A-828-S2
EP-SFX191		Hammermill	02-A-829-S3
EP-SFX150	EU-P30b	Hammermill	04-A-996-S2
EP-SFX151		Hammermill	04-A-997-S2
EP-SFX152		Hammermill	04-A-998-S2
EP-S40b	EU-P40b	Bypass Stack for EU-P10c and EU-P40b	08-A-531-S1
EP-SFX810	EU-P60	DDGS Loading	02-A-830-S3
EP-SFX825		DDGS Loading	02-A-831-S2
EP-S70	EU-P70	DDGS Cooler	01-A-526-S10
EP-S70b	EU-P70b	DDGS Cooler	05-A-227-S6
EP-S110(S80)*	EU-P110(P80)*	Biomethanator Flare	01-A-533-S1
EP-S80a	EU-P80a	Cooling Tower	04-A-1003
EP-P80b	EU-P80b	Cooling Tower	04-A-1004
EP-T870(T61)*	EU-T870(T61)*	Denatured Ethanol Storage Tank	01-A-527
EP-T872(T62)*	EU-T872(T62)*	Denatured Ethanol Storage Tank	01-A-528
EP-T860(T63)*	EU-T860(T63)*	200 Proof Ethanol Process Tank	01-A-529-S1
EP-T865(T64)*	EU-T865(T64)*	Denaturant Tank	01-A-530-S1
EP-T855(T65)*	EU-T855(T65)*	190 Proof Ethanol Process Tank	01-A-531-S2
EP-T2874(T66)*	EU-T2874(T66)*	Denatured Ethanol Storage Tank	04-A-1005-S1
EP-SFX130	EU-T130	Grain Silo	03-A-1372-S4
EP-SFX131	EU-T131	Grain Silo	04-A-1001-S2

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP-SFX140	EU-T140	Grain Silo	04-A-340-S2
EP-SFX141	EU-T141	Grain Silo	04-A-1002-S2
EP-S50(SEP22)*	EU-F50	Truck & Rail Product Loadout	02-A-832-S5
EP-F60	EU-F60	DDGS Auxiliary Loadout	05-A-802-S1
EP-F90	EU-F90	VOC Emissions from Equipment Leaks	05-A-803
EP-F100	EU-F100	Truck Traffic	05-A-805-S2
EP-G1916	EU-G1916	Emergency Generator	Not Required
EP-P1916	EU-P1916	Emergency Fire Pump	Not Required

* : Facility proposed renaming these emission points. No physical changes associated with the renaming procedure. See Review Notes for more details.

Insignificant Activities Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
T-868	Corrosion Inhibitor Tank, 2,300 gallons
T-620	Syrup Storage Tank, 50,000 gallons
T-600	Thin Stillage Storage Tank, 146,000 gallons
T-1916	Diesel Tank, 750 gallons
T-EIA01	Gasoline Tank, 500 gallons
V-985	Sulfuric Acid Tank, 7,100 gallons
V-980	Ammonia Tank, 18,000 gallons
T-EIA02	Parts Washer, 110 gal/yr throughput
T-621	Corn Oil Tank #1, 20,000 gallons
T-622	Corn Oil Tank #2, 20,000 gallons
L-EIA03	Corn Truck Loadout

II. Plant-Wide Conditions

Facility Name: Global Ethanol LLC - Lakota
Permit Number: 10-TV-001

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

Permit Duration

The term of this permit is: Five years from permit issuance
Commencing on: January 01, 2010
Ending on: December 31, 2014

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 (SO₂): 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 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 - 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, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. 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 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 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, fertilizers 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.

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

Compliance Plan

The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.

Unless otherwise noted in Section III of this permit, Global Ethanol LLC – Lakota is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, Global Ethanol LLC – Lakota shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

40 CFR 60 Subpart A Requirements

This facility is subject to 40 CFR 60 Subpart A – General Provisions. The affected emission points include EP-S10, EP-S10b, EP-S11b, EP-S40b, EP-T870, EP-T872, EP-T865, EP-T2874, EP-S50, EP-F90, EP-G1916, and EP-P1916.

See Appendix for the complete text of the Standard.

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

40 CFR Part 60 Subpart Db Requirements

This facility is subject to 40 CFR Part 60 Subpart Db – Standards of Performance for Industrial, Commercial, Institutional Steam Generating Units. The affected emission points include EP-S10 and EP-S11b.

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart Db
567 IAC 23.1(2) "ccc"

40 CFR Part 60 Subpart Kb Requirements

This facility is subject to 40 CFR Part 60 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. The affected emission points include EP-T870, EP-T872, EP-T865, and EP-T2874.

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart Kb
567 IAC 23.1(2) "ddd"

40 CFR 60 Subpart VV Requirements

This facility is subject to 40 CFR Part 60 Subpart VV – Standards of Performance for Equipment leaks of VOC in the Synthetic Organic Chemicals Manufacturing industry. The affected emission points include EP-S10, EP-S10b, EP-S40b, EP-S50, EP-F90, EP-T870 (T61), EP-T872 (T62), EP-T860 (T63), EP-T865 (T64), and EP-T2874 (T66).

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart VV
567 IAC 23.1(2) "nn"

40 CFR 60 Subpart IIII Requirements

This facility is subject to 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Affected emission points include the emergency generator EP-G1916 and the emergency fire pump EP-P1916.

See Appendix for the complete text of the Standard.

Applicable requirements are incorporated in the Emission Point Specific conditions.

Authority for Requirements: 40 CFR 60 Subpart IIII
567 IAC 23.1(2) "yyy"

III. Emission Point-Specific Conditions

Facility Name: Global Ethanol LLC – Lakota
 Permit Number: 10-TV-001

Emission Point ID Number: EP-S10

Associated Equipment

Associated Emission Unit ID Numbers: EU-P10a, EU-P10b, EU-B10
 Emissions Control Equipment ID Number: CE-C10
 Emissions Control Equipment Description: Thermal Oxidizer
 Continuous Emissions Monitors ID Numbers: ME-M10

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-S10	EU-P10a	DDG Dryer A	Natural Gas	40 MMBtu/hr
	EU-P10b	DDG Dryer B		40 MMBtu/hr
	EU-B10	Heat Recovery Boiler		62.5 MMBtu/hr
	CE-C10	Thermal Oxidizer		125 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: Iowa DNR Construction Permit 01-A-521-S8
 567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 5.64 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 5.64 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8
 567 IAC 23.4(7)

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 6.23 lb/hr; 500 ppmv
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 14.95 lb/hr; 0.1 lb/MMBtu
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8
NSPS Subpart Db

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 5.34 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 9.36 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Pollutant: Acetaldehyde (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Pollutant: Acrolein (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Pollutant: Formaldehyde (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Pollutant: Methanol (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Pollutant: Total HAP
Emission Limit(s): 5.57 lb/hr; 24.4 ton/yr ⁽³⁾
Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

^{(2),(3)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall follow the applicable standards of NSPS 40 CFR Part 60 § 60.480 to §60.489 Subpart VV.
- B. The owner or operator shall follow the applicable standards of NSPS 40 CFR Part 60§ 60.40b to §60.49b Subpart Db.
- C. The thermal oxidizer shall maintain a temperature (3-hour average) during operation no less than 50 degrees Fahrenheit below the average temperature of the oxidizer recorded during the most recent performance test which demonstrated compliance with the emission limits and shall be operated at all times the dryers or distillation equipment is

being operated.

- D. The dryers/thermal oxidizer shall combust only natural gas and/or process off-gasses.
- E. The heat recovery boiler shall not combust any supplemental fuel.
- F. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Reporting and 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.

- A. The owner or operator shall keep hourly records of the operating temperature of the thermal oxidizer, and record all three-hour periods (during actual operations) during which the average temperature of the thermal oxidizer is more than 50 degrees Fahrenheit below the average temperature of the oxidizer during its most recent performance test which demonstrated compliance with the emission limits.
- B. The owner or operator shall keep records of the frequency and amount of time the thermal oxidizer malfunctions and estimate the emissions emitted during these malfunctions.
- C. The owner or operator shall keep records as required in 40 CFR Part 60 § 60.486, and reports as required in 40 CFR § 60.487.
- D. The owner or operator shall keep records of control equipment inspection and repairs.
- E. The owner or operator shall record and maintain records of the amounts of each fuel combusted during each 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, as required in 40 CFR 60.49b(d) for the thermal oxidizer/waste heat boiler. 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.
- F. The owner or operator shall maintain records of the following information for each steam generating unit operating day, as required in 40 CFR 60.49(g). This information shall also be submitted in a reports, as required in 40 CFR 60.49(i).
 - F1. Calendar date.
 - F2. Average hourly nitrogen oxides emission (as NO₂) rates measured or predicted.
 - F3. 30-day average nitrogen oxides emission rates calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
 - F4. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the emission standard, with the reason for such excess emissions as well as a description of corrective actions taken.
 - F5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

- F6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.
- F7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
- F8. Identification of the times when the pollutant concentrations exceeded the full span of the continuous emission monitoring system (CEMS).
- F9. Description of any modifications to the continuous emission monitoring system that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.
- F10. Results of daily CEMS drift test and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.

Continuous Emission Monitoring

The owner or operator shall install, calibrate, maintain and operate a continuous monitoring system, and record the output of the system, for measuring Nitrogen Oxide emissions discharged to the atmosphere. The CEM shall be operated and data collected as required under 40 CFR 60.48b(c), (d), (e) and (f), or use an approved alternative monitoring plan. The Nitrogen Oxide CEM is required to install a flow rate sensor per the requirements of 40 CFR Part 60 Appendix B: Performance Specification 6. The flow rate sensor is required to be installed within 90 days of the permit issuance date.

Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

NSPS and NESHAP Applicability

This emission point is subject to the requirements of NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. For this affected facility, a process unit is any components assembled to produce industrial grade ethanol.

The Heat Recovery Boiler (EU-B10) is subject to NSPS Subpart A – General Provisions and Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

This emission point is not of the source type subject to any subpart of the NESHAP at this time.

Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 125

Stack Opening, (inches, dia.): 84.63

Exhaust Flow Rate (dscfm): 38,174

Exhaust Temperature (°F): 329

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 01-A-521-S8

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

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

Stack Testing:

Global Ethanol LLC shall conduct stack testing for VOC, Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde at least once every 36 months with a minimum of six months between testing periods. Last performance test on EP-S10 was conducted on 04-07-2009.

Pollutant – VOC

Test Method – 40 CFR 60, Appendix A, Method 320 or Method 18

Authority for Requirement - Iowa DNR Construction Permit 01-A-521-S8

Pollutant – Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde

Test Method – According to IDNR Approved Method

Authority for Requirement - Iowa DNR Construction Permit 01-A-521-S8

Continuous Emissions Monitoring:

Pollutant – NO_x

Operational Specifications – 40 CFR Part 60, Appendix B

Date of Initial System Calibration and Quality Assurance – 02/17/2006

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60, Appendix B

Reporting & Record keeping – 40 CFR Part 60, Appendix B

Authority for Requirement – 567 IAC 25.1 (9)

Other Parameters

Pollutant – O₂

Operational Specifications – 40 CFR Part 60, Appendix B

Date of Initial System Calibration and Quality Assurance – 02/17/2006

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60, Appendix B

Reporting & Record keeping – 40 CFR Part 60, Appendix B

Authority for Requirement – 567 IAC 25.1 (9)

Pollutant – Flow Rate

Operational Specifications – 40 CFR Part 60, Appendix B

Date of Initial System Calibration and Quality Assurance – 02/17/2006

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60, Appendix B

Reporting & Record keeping – 40 CFR Part 60, Appendix B

Authority for Requirement – 567 IAC 25.1 (9)

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)

**Compliance Assurance Monitoring Plan for Global Ethanol, LLC - Lakota
EP S10 – Line 1 Thermal Oxidizer**

I. Background

A. Emissions Unit

Description: DDG Dryers A & B (EU P10a and EU P10b)
Facility: Global Ethanol, LLC - Lakota
Lakota, Iowa

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Construction Permit # 01-A-521-S8
VOC Emission Limit or Standard: 5.34 lbs/hr VOC
HAP Emission Limits (Plantwide): 9.4 tpy Single HAP / 24.4 tpy Total HAP

Current Monitoring Requirements: Maintain hourly records of combustion chamber temperature

C. Control Technology

Thermal Oxidizer/Heat Recovery Boiler

II. Thermal Oxidizer (C10) Monitoring Approach

A. Indicator

Combustion chamber temperature and annual internal inspection will be used as indicators.

B. Measurement Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table 1.

Table 1. Monitoring Approach

	Indicator No. 1	Indicator No. 2
I. Indicator	Combustion Chamber Temperature.	Work Practice/Inspection.
Measurement Approach	The temperature measured in the combustion chamber by the continuous temperature monitor (thermocouple).	Inspection and maintenance of the burner to ensure structural integrity and ensure proper operation.
II. Indicator Range	An excursion is defined as 3-hour rolling average temperature readings 50° F less than the average temperature in the most recent compliance performance test.	An excursion is defined as failure to perform annual inspection or any finding that the structural integrity of the incinerator has been jeopardized and it no longer operates as designed.
Corrective Action	Each excursion triggers an inspection, corrective action, and a reporting requirement.	Each excursion triggers an assessment of the problem, corrective action, and a reporting requirement.
QIP Threshold	An accumulation of excursions below the indicator range exceeding 5 percent of operating time for a reporting period excluding periods of startup, shutdown and malfunction.	Not applicable.

	Indicator No. 1	Indicator No. 2
III. Performance Criteria		
A. Data Representativeness	The sensor is located in the incinerator combustion chamber as an integral part of the incinerator design. The minimum tolerance of the thermocouple is ± 4 degrees F.	Not applicable.
B. Verification of Operational Status	Temperatures recorded electronically.	Inspection records.
C. QA/QC Practices and Criteria	Calibrate, maintain, and operate instrumentation in accordance with manufacturer's recommendation.	Not applicable.
D. Monitoring Frequency	The combustion temperature is measured continuously.	Annual internal inspection of the burner.
Data Collection Procedures	Record chamber temperature continuously on electronic media.	Record results of inspections.
Averaging period	Three (3) hour rolling average.	Not applicable.
E. Record Keeping	Maintain for a period of 2 years records of electronic media and corrective actions taken in response to excursions.	Maintain for a period of 2 years records of inspections and corrective actions taken in response to excursions.
F. Reporting	Number, duration, and cause of any excursion and the corrective action taken.	Number, duration, and cause of any excursion and the corrective action taken.
Frequency	Semiannually.	Semiannually.

III. Justification

A. Background

VOC emissions from Line 1 Dryers A and B (P10a and P10b) are controlled by the Line 1 Thermal Oxidizer.

B. Rationale for Selection of Performance Indicator

The control efficiency achieved by a thermal oxidizer is a function of the combustion chamber temperature. It is expected that by maintaining the operating temperature at or above the minimum chamber temperature, the required level of VOC control efficiency can be expected to be achieved. The work practice of an annual inspection and tuning of the incinerator burner was selected because an inspection verifies equipment integrity and periodic tuning will maintain proper burner operation and efficiency.

C. Rationale for Selection of Indicator Level

The minimum operating temperature of the Line 1 thermal oxidizer is based on the average temperature recorded during the most recent VOC performance testing that demonstrated compliance with permit limits.

Emission Point ID Number: EP-S10b

Associated Equipment

Associated Emission Unit ID Numbers: EU-P10c, EU-P40b

Emissions Control Equipment ID Number: CE-C10, CE-C40b

Emissions Control Equipment Description: Regenerative Thermal Oxidizer/Fermentation Scrubber

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-S10b	EU-P10c	DDG Dryer C	Process Gas	90 MMBtu/hr
	EU-P40b	Fermentation & Distillation Process	Fermentation off-gas	150,000 lbs/hr
	CE-C10b	Regenerative Thermal Oxidizer	Natural Gas	20 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: Iowa DNR Construction Permit 04-A-989-S4
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 4.47 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 4.4 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4
567 IAC 23.4(7)

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 6.23 lb/hr; 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 13.8 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 6.50 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 9.36 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Acetaldehyde (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Acrolein (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Formaldehyde (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Methanol (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Pollutant: Total HAP
Emission Limit(s): 5.57 lb/hr; 24.4 ton/yr ⁽³⁾
Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

^{(2),(3)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall follow the applicable standards of NSPS 40 CFR Part 60 §60.480 to §60.489 Subpart VV.
- B. The thermal oxidizer shall maintain a temperature (3-hour average) during operation no less than 50 degrees Fahrenheit below the average temperature of the oxidizer recorded during the most recent performance test which demonstrated compliance with the emission limits and shall be operated at all times the dryers or distillation equipment is being operated.
- C. The dryers/thermal oxidizer shall combust only natural gas and/or process off-gasses.
- D. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Reporting and 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.

- A. The owner or operator shall keep hourly records of the operating temperature of the thermal oxidizer, and record all three-hour periods (during actual operations) during which the average temperature of the thermal oxidizer is more than 50 degrees Fahrenheit below the average temperature of the oxidizer during its most recent performance test which demonstrated compliance with the emission limits.
- B. The owner or operator shall keep records of the frequency and amount of time the thermal oxidizer malfunctions and estimate the emissions emitted during these malfunctions.
- C. The owner or operator shall keep records as required in 40 CFR Part 60 § 60.486, and reports as required in 40 CFR § 60.487.
- D. The owner or operator shall keep records of control equipment inspection and repairs.

Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

This emission point is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: Iowa DNR Construction Permit 04-A-989-S4

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 105

Stack Opening, (inches, dia.): 71.5

Exhaust Flow Rate (scfm): 52,475

Exhaust Temperature (°F): 323

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 04-A-989-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

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

Stack Testing:

Global Ethanol LLC shall conduct stack testing for NO_x, VOC, Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde at least once every 36 months with a minimum of six months between testing periods. Last performance test on EP-S10b was conducted on 04-06-2009.

Pollutant – NO_x

Test Method – 40 CFR 60, Appendix A, Method 7E

Authority for Requirement - Iowa DNR Construction Permit 04-A-989-S4

Pollutant – VOC

Test Method – 40 CFR 60, Appendix A, Method 320 or Method 18

Authority for Requirement - Iowa DNR Construction Permit 04-A-989-S4

Pollutant – Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde

Test Method – According to IDNR Approved Method

Authority for Requirement - Iowa DNR Construction Permit 04-A-989-S4

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)

**Compliance Assurance Monitoring Plan for Global Ethanol, LLC - Lakota
EP S10b – Line 2 Regenerative Thermal Oxidizer/Packed Bed Wet Scrubber**

I. Background

A. Emissions Unit

Description: Fermentation and Distillation (EU P40b)
DDG Dryer C (EU P10c)
Facility: Global Ethanol, LLC - Lakota
Lakota, Iowa

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Construction Permit # 04-A-989-S4
VOC Emission Limit or Standard: 6.50 lbs/hr VOC
HAP Emission Limits (Plantwide): 9.4 tpy Single HAP / 24.4 tpy Total HAP
Current Monitoring Requirements: Maintain hourly records of combustion chamber temperature

C. Control Technologies

Packed Bed Wet Scrubber
Regenerative Thermal Oxidizer

II. Packed Bed Wet Scrubber (C40b) Monitoring Approach

A. Indicator

Water flow rate to the scrubber will be used as an indicator.

B. Measurement Approach

The water flow rate will be measured using a flow meter.

C. Indicator Range

An excursion is defined as a 24-hour rolling average scrubber water flow rate recording of less than the average water flow rate recorded during the most recent compliance test demonstrating compliance. This minimum water flow rate is only applicable when the scrubber is venting to atmosphere during RTO bypass periods per the most recent revision of construction permit 08-A-531-S1. When the scrubber is routed to the RTO and not to atmosphere the water flow rate may be adjusted to any flow meeting process requirements. Excursions trigger an investigation of the occurrence, corrective action and reporting requirements.

D. QIP (Quality Improvement Plan) Threshold (Optional)

The QIP threshold is triggered when there are excursions more than 5% of the operating time while the scrubber is venting to atmosphere during RTO bypass in a semi-annual reporting period (January 1 to June 30, or July 1 to December 31), excluding periods of startup, shutdown and malfunction. A deviation shall be reported in the semi-annual report when the QIP threshold is triggered.

E. Performance Criteria

Data representativeness:

The water flow rate meter measures the inlet water flow rate to the scrubber. Water flow rates less than the average water flow rate recorded during the most recent compliance test demonstrating compliance during RTO bypass periods only indicate a potential decrease in VOC removal efficiency of the scrubber.

Verification of operational status:

The water flow rate meter was installed, calibrated, and is operated in accordance with manufacturer's recommendations.

QA/QC practices and criteria:

1. The water flow rate meter will be calibrated per manufacturer's recommendations.
2. The scrubber will be cleaned and inspected per manufacturer's recommendations.

Monitoring and data collection frequency:

The scrubber water flow rate will be measured and recorded continuously during RTO bypass periods using a data acquisition system.

Averaging period:

A 24-hour rolling average will be calculated and recorded during periods of RTO bypass only.

III. Justification

A. Background

VOC emissions from the Fermentation process (P40b) are controlled using a packed bed wet scrubber with single pass water flow. The exhaust from the scrubber is routed to the Line 2 Regenerative Thermal Oxidizer (C10b) for additional VOC control during normal operation. Occasionally the scrubber will vent to atmosphere during RTO downtime as allowed by the most recent revision of construction permit 08-A-531-S1.

B. Rationale for Selection of Performance Indicator

To comply with the applicable emission limit during RTO bypasses only, a minimum water flow rate must be supplied to the scrubber to absorb a given amount of VOC in the gas stream, given the size of the tower and height of

the packed bed. The liquid to gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, sufficient mass transfer of the pollutant from the gas phase to the liquid phase may not occur. The manufacturer recommends a minimum liquid flow required to maintain the proper L/G ratio at the maximum gas flow and vapor loading through the scrubber. Maintaining this minimum liquid flow, even during periods of reduced air flow, will help ensure that the ideal L/G ratio is achieved at all times.

- C. Rationale for Selection of Indicator Level
 The minimum water flow rate indicator level was chosen based on the rate recorded during performance testing.

IV. Regenerative Thermal Oxidizer (C10b) Monitoring Approach

- A. Indicator
 Combustion chamber temperature and an annual internal inspection will be used as indicators.
- B. Measurement Approach
 The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table 1.

Table 1. Monitoring Approach

	Indicator No. 1	Indicator No. 2
I. Indicator	Combustion Chamber Temperature.	Work Practice/Inspection.
Measurement Approach	The temperature measured in the combustion chamber by the continuous temperature monitor (thermocouple).	Inspection and maintenance of the burner to ensure structural integrity and ensure proper operation.
II. Indicator Range	An excursion is defined as 3-hour rolling average temperature readings 50° F less than the average temperature demonstrated in the most recent compliance performance test.	An excursion is defined as failure to perform annual inspection or any finding that the structural integrity of the incinerator has been jeopardized and it no longer operates as designed.
Corrective Action	Each excursion triggers an inspection, corrective action, and a reporting requirement.	Each excursion triggers an assessment of the problem, corrective action, and a reporting requirement.
QIP Threshold	An accumulation of excursions below the indicator range exceeding 5 percent of operating time for a reporting period excluding periods of startup, shutdown and malfunction.	Not applicable.
III. Performance Criteria		
A. Data	The sensor is located in the	Not applicable.

	Indicator No. 1	Indicator No. 2
Representativeness	incinerator combustion chamber as an integral part of the incinerator design. The minimum tolerance of the thermocouple is ± 4 degrees F.	
B. Verification of Operational Status	Temperatures recorded electronically	Inspection records.
C. QA/QC Practices and Criteria	Calibrate, maintain, and operate instrumentation in accordance with manufacturer's recommendation.	Not applicable.
D. Monitoring Frequency	The combustion temperature is measured continuously.	Annual internal inspection of the burner.
Data Collection Procedures	Record chamber temperature continuously on electronic media.	Record results of inspections.
Averaging period	Three (3) hour rolling average.	Not applicable.
E. Record Keeping	Maintain for a period of 2 years records of electronic media and corrective actions taken in response to excursions.	Maintain for a period of 2 years records of inspections and corrective actions taken in response to excursions.
F. Reporting	Number, duration, and cause of any excursion and the corrective action taken.	Number, duration, and cause of any excursion and the corrective action taken.
Frequency	Semiannually.	Semiannually.

V. Justification

A. Background

VOC emissions from the Fermentation process (P40b) are controlled using a packed bed wet scrubber (C40b) during periods of RTO bypass or with the Line 2 Regenerative Thermal Oxidizer (C10b) during normal operation. VOC emissions from Line 2 Dryer C (P10c) are controlled by the RTO.

B. Rationale for Selection of Performance Indicator

The control efficiency achieved by a regenerative thermal oxidizer is a function of the combustion chamber temperature. It is expected that by maintaining the operating temperature at or above the minimum chamber temperature, the required level of VOC control efficiency can be expected to be achieved.

The work practice of an annual inspection and tuning of the incinerator burner was selected because an inspection verifies equipment integrity and periodic tuning will maintain proper burner operation and efficiency.

C. Rationale for Selection of Indicator Level

The minimum operating temperature of the RTO is based on the average temperature recorded during the most recent VOC performance testing that demonstrated compliance with permit limits.

Emission Point ID Number: EP-S11b

Associated Equipment

Associated Emission Unit ID Numbers: EU-S11b
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: ME-M11b

Emission Unit vented through this Emission Point: EU-S11b
Emission Unit Description: Natural Gas Fired Boiler
Raw Material/Fuel: Natural Gas
Rated Capacity: 135 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: Iowa DNR Construction Permit 04-A-990-S3
567IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 1.03 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.03 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3
567 IAC 23.4(7)

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3
567 IAC 23.3(3)

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.1 lb/MMBtu; 7.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3
NSPS Subpart Db

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 1.50 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 4.73 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

Pollutant: Single HAP

Emission Limit(s): 9.4 ton/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

Pollutant: Total HAP

Emission Limit(s): 24.4 ton/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

^{(2),(3)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The boiler shall be limited to natural gas fuel only.

Reporting and 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.

- A. The owner or operator shall maintain records of the following information for each steam generating unit operating day, as required in 40 CFR 60.49b(g). This information shall also be submitted in a report, as required in 40 CFR 60.49b(i).
 - A1. Calendar date.
 - A2. Average hourly nitrogen oxides emission (as NO₂) rates measured.
 - A3. 30-day average nitrogen oxides emission rates calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
 - A4. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the emission standard, with the reason for such excess emissions as well as a description of corrective actions taken.
 - A5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.
 - A6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.
 - A7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
 - A8. Identification of the times when the pollutant concentrations exceeded the full span of the continuous monitoring system.

A9. Description of any modifications to the continuous monitoring system that could affect the ability of the CEMS to comply with Performance Specification 2 or 3.

A10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Appendix F, Procedure 1.

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and Subpart Db– Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

This emission point is not subject to NESHAP at this time.

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

Continuous Emission Monitoring

The owner or operator shall install, calibrate, maintain and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxide emissions discharged to the atmosphere. The CEM shall be operated and data collected as required under 40 CFR 60.48b(c), (d), (e) and (f), or use an approved alternative monitoring plan.

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 42.75

Stack Opening, (inches, dia.): 48

Exhaust Flow Rate (scfm): 23,550

Exhaust Temperature (°F): 350

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 04-A-990-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

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

Continuous Emissions Monitoring:

Pollutant – NO_x

Operational Specifications – 40 CFR Part 60, Appendix B

Date of Initial System Calibration and Quality Assurance – 02/18/2006

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60, Appendix B

Reporting & Record keeping – 40 CFR Part 60, Appendix B

Authority for Requirement – 567 IAC 25.1 (9)

Other Parameters

Pollutant – O₂

Operational Specifications – 40 CFR Part 60, Appendix B

Date of Initial System Calibration and Quality Assurance – 02/18/2006

Ongoing System Calibration/Quality Assurance – 40 CFR Part 60, Appendix B

Reporting & Record keeping – 40 CFR Part 60, Appendix B

Authority for Requirement – 567 IAC 25.1 (9)

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)

Emission Point ID Number: EP-SFX105

Associated Equipment

Associated Emission Unit ID Numbers: EP-P20
Emissions Control Equipment ID Number: CE-FX105
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P20
Emission Unit Description: Grain Receiving/Handling System
Raw Material/Fuel: Grain
Rated Capacity: 30,000 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: Iowa DNR Construction Permit 04-A-991-S1
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 1.372 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-991-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.372 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-991-S1
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Reporting and 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.

- A. The owner or operator shall keep records of control equipment inspections and maintenance.

Authority for Requirement: Iowa DNR Construction Permit 04-A-991-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 27

Stack Opening, (inches, dia.): 40

Exhaust Flow Rate (scfm): 32,000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 04-A-991-S1

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX110

Associated Equipment

Associated Emission Unit ID Numbers: EU-P20
Emissions Control Equipment ID Number: CE-FX110
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P20
Emission Unit Description: Grain Receiving/Handling System
Raw Material/Fuel: Grain
Rated Capacity: 30,000 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: Iowa DNR Construction Permit 02-A-825-S3
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-825-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-825-S3
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 23.6

Stack Opening, (inches, dia.): 11.5

Exhaust Flow Rate (acfm): 2000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-825-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX120

Associated Equipment

Associated Emission Unit ID Numbers: EU-P20
Emissions Control Equipment ID Number: CE-FX120
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P20
Emission Unit Description: Grain Handling
Raw Material/Fuel: Grain
Rated Capacity: 30,000 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: Iowa DNR Construction Permit 02-A-826-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-826-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.17 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-826-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Reporting and 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.

- A. The owner or operator shall keep records of control equipment inspections and maintenance.

Authority for Requirement: Iowa DNR Construction Permit 02-A-826-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 23'7"

Stack Opening: 5.6"×8.25"

Exhaust Flow Rate (scfm): 2000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-826-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX146

Associated Equipment

Associated Emission Unit ID Numbers: EU-P20
Emissions Control Equipment ID Number: CE-FX146
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P20
Emission Unit Description: Grain Handling
Raw Material/Fuel: Grain
Rated Capacity: 30,000 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: Iowa DNR Construction Permit 04-A-995-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.069 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-995-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.069 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-995-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 35

Stack Opening, (inches): 4x7

Exhaust Flow Rate (acfm): 800

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 04-A-995-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX147

Associated Equipment

Associated Emission Unit ID Numbers: EU-P20
Emissions Control Equipment ID Number: CE-FX147
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P20
Emission Unit Description: Grain Handling
Raw Material/Fuel: Grain
Rated Capacity: 30,000 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: Iowa DNR Construction Permit 02-A-827-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.069 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-827-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.069 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-827-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall keep records of control equipment inspections and maintenance.

Reporting and 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.

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Authority for Requirement: Iowa DNR Construction Permit 02-A-827-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 27

Stack Opening, (inches): 5 5/8x7

Exhaust Flow Rate (scfm): 800

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-827-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX165

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30
Emissions Control Equipment ID Number: CE-FX165
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P30
Emission Unit Description: Milling/Hammermill: Corn Day Bin
Raw Material/Fuel: Corn
Rated Capacity: 70 ton/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: Iowa DNR Construction Permit 01-A-523-S3
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 0.069 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 01-A-523-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.069 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 01-A-523-S3
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall keep records of control equipment inspections and maintenance.

Reporting and 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.

The owner or operator shall keep records of control equipment inspections and maintenance.

Authority for Requirement: Iowa DNR Construction Permit 01-A-523-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 73'8"

Stack Opening, (inches): 5 5/8x7

Exhaust Flow Rate (scfm): 800

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 01-A-523-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX190

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30
Emissions Control Equipment ID Number: CE-FX190
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P30
Emission Unit Description: Hammermill
Raw Material/Fuel: Corn
Rated Capacity: 70 ton/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: Iowa DNR Construction Permit 02-A-828-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.386 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-828-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.386 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-828-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall keep records of control equipment inspections and maintenance.

Reporting and 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.

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Authority for Requirement: Iowa DNR Construction Permit 02-A-828-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 32'1"

Stack Opening, (inches): 12 3/8x15

Exhaust Flow Rate (scfm): 4500

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-828-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX191

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30
Emissions Control Equipment ID Number: CE-FX191
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P30
Emission Unit Description: Hammermill
Raw Material/Fuel: Corn
Rated Capacity: 70 ton/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: Iowa DNR Construction Permit 02-A-829-S3
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 0.386 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-829-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.386 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-829-S3
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 24.75

Stack Opening, (inches, dia.): 19.5

Exhaust Flow Rate (acfm): 4500

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-829-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX150

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30b
Emissions Control Equipment ID Number: CE-FX150
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P30b
Emission Unit Description: Hammermill
Raw Material/Fuel: Corn
Rated Capacity: 70 ton/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: Iowa DNR Construction Permit 04-A-996-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.068 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-996-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.068 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-996-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 80

Stack Opening, (inches): 8x8

Exhaust Flow Rate (scfm): 800

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 04-A-996-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX151

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30b
Emissions Control Equipment ID Number: CE-FX151
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P30b
Emission Unit Description: Hammermill
Raw Material/Fuel: Corn
Rated Capacity: 70 ton/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: Iowa DNR Construction Permit 04-A-997-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.39 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-997-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.39 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-997-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 37

Stack Opening, (inches): 12.375×15

Exhaust Flow Rate (acfm): 4500

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 04-A-997-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX152

Associated Equipment

Associated Emission Unit ID Numbers: EU-P30b
Emissions Control Equipment ID Number: CE-FX152
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P30b
Emission Unit Description: Hammermill
Raw Material/Fuel: Corn
Rated Capacity: 70 ton/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: Iowa DNR Construction Permit 04-A-998-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.39 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-998-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.39 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-998-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 37

Stack Opening, (inches, dia.): 12.375×15

Exhaust Flow Rate (acfm): 4500

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 04-A-998-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-S40b

Associated Equipment

Associated Emission Unit ID Numbers: EU-P40b
Emissions Control Equipment ID Number: CE-C40b
Emissions Control Equipment Description: Fermentation Scrubber
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P40b
Emission Unit Description: Fermentation & Distillation Process RTO By-pass Stack
Raw Material/Fuel: Fermentation Off-Gas
Rated Capacity: 150,000 lb/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: Iowa DNR Construction Permit 08-A-531-S1
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 0.25 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.25 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1
567 IAC 23.4(7)

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 75.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 21.2 lb/hr; 9.4 ton/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

Pollutant: Acrolein (HAP)

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

Pollutant: Formaldehyde (HAP)

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

Pollutant: Methanol (HAP)

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

Pollutant: Total HAP

Emission Limit(s): 23.6 lb/hr; 24.4 ton/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

^{(2),(3)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall follow the applicable standards of NSPS 40 CFR Part 60 §60.480 to §60.489 Subpart VV.
- B. Use of the bypass stack shall not exceed 250 hours per twelve-month rolling period. The dryer shall not operate when the bypass stack is utilized.
- C. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Reporting and 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.

- A. The owner or operator shall maintain hourly records for the use of the bypass stack. Records shall be maintained per twelve-month rolling period.
- B. The owner or operator shall keep records as required in 40 CFR Part 60 § 60.486, and reports as required in 40 CFR § 60.487.
- C. The owner or operator shall keep records of control equipment inspection and repairs.

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provision and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 56.1

Stack Opening, (inches, dia.): 30

Exhaust Flow Rate (scfm): 12,944

Exhaust Temperature (°F): 65

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 08-A-531-S1

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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

CAM plan included with EP-S10b

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: EP-SFX810

Associated Equipment

Associated Emission Unit ID Numbers: EU-P60
Emissions Control Equipment ID Number: CE-FX810
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P60
Emission Unit Description: DDGS Loadout
Raw Material/Fuel: DDGS
Rated Capacity: 281 ton/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: Iowa DNR Construction Permit 02-A-830-S3
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 0.215 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-830-S3

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.215 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 02-A-830-S3
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 37.25

Stack Opening, (inches, dia.): 11.5

Exhaust Flow Rate (acfm): 2500

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-830-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX825

Associated Equipment

Associated Emission Unit ID Numbers: EU-P60
Emissions Control Equipment ID Number: CE-FX825
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P60
Emission Unit Description: DDGS Loadout
Raw Material/Fuel: DDGS
Rated Capacity: 281 ton/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: Iowa DNR Construction Permit 02-A-831-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.086 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-831-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.086 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-831-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall keep records of control equipment inspections and maintenance.

Reporting and 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.

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Authority for Requirement: Iowa DNR Construction Permit 02-A-831-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 33

Stack Opening, (inches, dia.): 8

Exhaust Flow Rate (scfm): 1000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 02-A-831-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-S70

Associated Equipment

Associated Emission Unit ID Numbers: EU-P70
Emissions Control Equipment ID Number: CE-C70
Emissions Control Equipment Description: Cyclone
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P70
Emission Unit Description: DDGS Cooler
Raw Material/Fuel: DDGS
Rated Capacity: 20 ton/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: Iowa DNR Construction Permit 01-A-526-S10
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 1.50 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.50 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10
567 IAC 23.4(7)

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 3.94 lb/hr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

⁽²⁾Emission limit used to minimize emissions.

Pollutant: Acetaldehyde

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

Pollutant: Acrolein

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

Pollutant: Formaldehyde

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

Pollutant: Methanol

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

Pollutant: Total HAP

Emission Limit(s): 5.57 lb/hr; 24.4 ton/yr ⁽⁴⁾

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

^{(3), (4)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- B. DDGS production for this emission unit shall not exceed 164,700 tons per twelve-month rolling period.

Reporting and 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.

- A. The owner or operator shall keep records of control equipment inspection and repairs.
- B. The facility shall calculate on a monthly basis the amount of DDGS produced. The facility shall calculate and update monthly, the 12-month rolling total amount of DDGS produced.

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 45

Stack Opening, (inches, dia.): 37

Exhaust Flow Rate (acfm): 28,744

Exhaust Temperature (°F): 112

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 01-A-526-S10

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

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

Stack Testing:

Global Ethanol LLC shall conduct stack testing for VOC, Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde at least once every 36 months with a minimum of six months between testing periods. Last performance test on EP-S70 was conducted on 04-08-2009.

Pollutant – VOC

Test Method – 40 CFR 60, Appendix A, Method 320 or Method 18

Authority for Requirement - Iowa DNR Construction Permit 01-A-526-S10

Pollutant – Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde

Test Method – According to IDNR Approved Method

Authority for Requirement - Iowa DNR Construction Permit 01-A-526-S10

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-S70b

Associated Equipment

Associated Emission Unit ID Numbers: EU-P70b
Emissions Control Equipment ID Number: CE-C70b
Emissions Control Equipment Description: Cyclone
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P70b
Emission Unit Description: DDGS Cooler
Raw Material/Fuel: DDGS
Rated Capacity: 20 ton/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: Iowa DNR Construction Permit 05-A-227-S6
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 1.50 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.50 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6
567 IAC 23.4(7)

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 3.94 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

Pollutant: Acetaldehyde (HAP)

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

Pollutant: Acrolein (HAP)

Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

Pollutant: Formaldehyde (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

Pollutant: Methanol (HAP)
Emission Limit(s): 2.14 lb/hr; 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

Pollutant: Total HAP
Emission Limit(s): 5.57 lb/hr; 24.4 ton/yr ⁽³⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

^{(2),(3)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.
- B. DDGS production for this emission unit shall not exceed 164,700 tons per twelve-month rolling period.

Reporting and 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.

- A. The owner or operator shall keep records of control equipment inspection and repairs.
- B. The facility shall calculate on a monthly basis the amount of DDGS produced. The facility shall calculate and update monthly, the 12-month rolling total amount of DDGS produced.

Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 45
Stack Opening, (inches, dia.): 30
Exhaust Flow Rate (acfm): 29,287
Exhaust Temperature (°F): 103
Discharge Style: Vertical, Unobstructed
Authority for Requirement: Iowa DNR Construction Permit 05-A-227-S6

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

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

Stack Testing:

Global Ethanol LLC shall conduct stack testing for VOC, Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde at least once every 36 months with a minimum of six months between testing periods. Last performance test on EP-S70b was conducted on 04-08-2009.

Pollutant – VOC

Test Method – 40 CFR 60, Appendix A, Method 320 or Method 18

Authority for Requirement - Iowa DNR Construction Permit 05-A-227-S6

Pollutant – Total HAP, Acetaldehyde, Acrolein, Methanol and Formaldehyde

Test Method – According to IDNR Approved Method

Authority for Requirement - Iowa DNR Construction Permit 05-A-227-S6

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-S110 (S80)

Associated Equipment

Associated Emission Unit ID Numbers: EU-P110 (P80)
Emissions Control Equipment ID Number: CE-C110 (C80)
Emissions Control Equipment Description: Flare
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P110 (P80)
Emission Unit Description: Biomethanator Flare
Raw Material/Fuel: Waste Gas
Rated Capacity: 3.2 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: Iowa DNR Construction Permit 01-A-533-S1
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.25 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 01-A-533-S1

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.25 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 01-A-533-S1
567 IAC 23.3(2) "a"

Operational Limits & Requirements

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

Operating Limits

- A. The flare shall combust waste gases only. No other fuel shall be used, i.e. natural gas or propane.

Authority for Requirement: Iowa DNR Construction Permit 01-A-533-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 21.5

Stack Opening, (inches, dia.): 17

Exhaust Flow Rate (scfm): 232

Exhaust Temperature (°F): 1500

Discharge Style: Vertical w/o rain cap or with unobstructing rain cap

Authority for Requirement: Iowa DNR Construction Permit 01-A-533-S1

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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-S80a, EP-S80b

Associated Equipment

Associated Emission Unit ID Numbers: EU-P80a, EU-P80b
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-S80a	EU-P80a	Cooling Tower	Cooling Water	1,200,000 gal/hr
EP-S80b	EU-P80b			1,200,000 gal/hr

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.

Pollutant: Opacity

Emission Limit(s): 40% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 04-A-1003, 04-A-1004
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 1.00 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-1003, 04-A-1004

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 1.00 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-1003, 04-A-1004
567 IAC 23.3(2) "a"

Operational Limits & Requirements

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

Operating Limits

- A. The circulating water in the cooling tower shall not exceed 2000 parts per million (ppm) total dissolved solids (TDS). Monitoring of the TDS shall be conducted on a monthly schedule.
- B. The cooling tower shall be operated and maintained per the manufacturer’s specifications and instructions.

Reporting and 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.

The owner/operator shall maintain the following records:

- A. Maintain records on-site of the TDS concentration in the cooling tower circulating water. Records shall also be kept of the dates of measurement and the methods used to determine the concentration of the TDS in the cooling water.
- B. Maintain records of all maintenance and repair to the cooling tower.

Authority for Requirement: Iowa DNR Construction Permit 04-A-1003, 04-A-1004

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): NA

Stack Opening, (inches, dia.): NA

Exhaust Flow Rate (scfm): 409,091

Exhaust Temperature (°F): 90

Discharge Style: Vertical

Authority for Requirement: Iowa DNR Construction Permit 04-A-1003, 04-A-1004

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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-T870 (T61), EP-T872 (T62)

Associated Equipment

Associated Emission Unit ID Numbers: EU-T870 (T61), EU-T872 (T62)

Emissions Control Equipment ID Number: None

Emissions Control Equipment Description: Internal Floating Roof

Continuous Emissions Monitors ID Numbers: None

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-T870(T61)	EU-T870(T61)	Denatured Ethanol Storage Tank	Denatured Ethanol	750,000 gallons capacity
EP-T872(T62)	EU-T872(T62)			750,000 gallons capacity

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.

Emission limits are not required at this time.

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall follow the applicable standards of Subpart Kb, 40 CFR 60.112b (a)(1), and inspect as required in 40 CFR 60.113b(a).

Reporting and 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.

- A. The owner or operator shall keep records as required in 40 CFR 60.115b (a) and 40 CFR 60.116b.
- B. The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the source.

Authority for Requirement: Iowa DNR Construction Permit 01-A-527, 01-A-528

NSPS and NESHAP Applicability

These emission points are subject to the requirements of NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. For this affected facility, a process unit is any components assembled to produce industrial grade ethanol.

The emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: Iowa DNR Construction Permit 01-A-527, 01-A-528

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 52

Stack Opening, (inches, dia.): 6

Exhaust Flow Rate (scfm): NA

Exhaust Temperature (°F): Ambient

Discharge Style: Vent

Authority for Requirement: Iowa DNR Construction Permit 01-A-527, 01-A-528

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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-T860 (T63), EP-T855 (T65)

Associated Equipment

Associated Emission Unit ID Numbers: EU-T860 (T63), EU-T855 (T65)

Emissions Control Equipment ID Number: None

Emissions Control Equipment Description: Internal Floating Roof

Continuous Emissions Monitors ID Numbers: None

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-T860(T63)	EU-T860(T63)	Ethanol Process Tank	200 Proof Ethanol	100,000 gallons capacity
EP-T855(T65)	EU-T855(T65)		190 Proof Ethanol	100,000 gallons capacity

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.

Emission limits are not required at this time.

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall not allow ethanol to be directly loaded out for distribution from T63 (200 proof process tank) or T65 (190 proof process tank).

Authority for Requirement: Iowa DNR Construction Permit 01-A-529-S1, 01-A-531-S2

NSPS and NESHAP Applicability

These emission points are of the type of source subject to 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. However, the subject tanks are by definition a process tank and therefore are not subject to NSPS Subpart Kb at this time.

These emission points are subject to the requirements of NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. For this affected facility, a process unit is any components assembled to produce industrial grade ethanol.

The emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: Iowa DNR Construction Permit 01-A-529-S1, 01-A-531-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 32

Stack Opening, (inches, dia.): 6

Exhaust Flow Rate (scfm): NA

Exhaust Temperature (°F): Ambient

Discharge Style: Vent

Authority for Requirement: Iowa DNR Construction Permit 01-A-529-S1, 01-A-531-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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-T865 (T64)

Associated Equipment

Associated Emission Unit ID Numbers: EU-T865 (T64)
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: Internal Floating Roof
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-T865 (T64)
Emission Unit Description: Denaturant Tank
Raw Material/Fuel: Denaturant
Rated Capacity: 100,000 gallons capacity

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.

Emission limits are not required at this time.

Operational Limits & Requirements

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

Operating Limits

- A. The owner or operator shall follow the applicable standards of Subpart Kb, 40 CFR 60.112b (a)(1), and inspect as required in 40 CFR 60.113b(a).

Reporting and 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.

- A. The owner or operator shall keep records as required in 40 CFR 60.115b (a) and 40 CFR 60.116b.
- B. The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the source.

Authority for Requirement: Iowa DNR Construction Permit 01-A-530-S1

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and 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.

These emission points are subject to the requirements of NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. For this affected facility, a process unit is any components assembled to produce industrial grade ethanol.

The emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: Iowa DNR Construction Permit 01-A-530-S1

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-T2874 (T66)

Associated Equipment

Associated Emission Unit ID Numbers: EU-T2874 (T66)

Emissions Control Equipment ID Number: None

Emissions Control Equipment Description: Internal Floating Roof

Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-T2874 (T66)

Emission Unit Description: Denatured Ethanol Storage Tank

Raw Material/Fuel: Denatured Ethanol

Rated Capacity: 1,000,000 gallons capacity

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.

Emission limits are not required at this time.

Operational Limits & Requirements

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

The owner or operator shall follow the applicable standards of Subpart Kb, 40 CFR 60.112b (a)(1), and inspect as required in 40 CFR 60.113b(a).

Reporting and 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.

The owner or operator shall keep records as required in 40 CFR 60.115b (a) and 40 CFR 60.116b.

The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the source.

Authority for Requirement: 567 IAC 23.1(2) "ddd
40 CFR 60 Subpart Kb

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and 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.

These emission points are subject to the requirements of NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. For this affected facility, a process unit is any components assembled to produce industrial grade ethanol.

The emission unit is **not** of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: Iowa DNR Construction Permit 04-A-1005-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 54

Stack Opening, (inches, dia.): 12

Exhaust Flow Rate (scfm): Working and Breathing Losses

Exhaust Temperature (°F): Ambient

Discharge Style: Downward

Authority for Requirement: Iowa DNR Construction Permit 04-A-1005-S1

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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-SFX130

Associated Equipment

Associated Emission Unit ID Numbers: EU-T130
Emissions Control Equipment ID Number: CE-FX130
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-T130
Emission Unit Description: Grain Silo
Raw Material/Fuel: Grain
Rated Capacity: Maximum Capacity 237,500 bushels

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: Iowa DNR Construction Permit 03-A-1372-S4
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.086 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 03-A-1372-S4

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.086 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 03-A-1372-S4
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 158.75

Stack Opening, (inches): 5.6x7

Exhaust Flow Rate (scfm): 1000

Exhaust Temperature (°F): Ambient

Discharge Style: Horizontal

Authority for Requirement: Iowa DNR Construction Permit 03-A-1372-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX131, EP-SFX141

Associated Equipment

Associated Emission Unit ID Numbers: EU-T131, EU-T141
Emissions Control Equipment ID Number: CE-FX131, CE-FX141
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit Descriptions, Raw Material/Fuel and Rated Capacity are listed in the following table:

EP=Emission Point, EU=Emission Unit

EP	EU	Emission Unit Description	Raw Material	Rated Capacity
EP-SFX131	EU-T131	Grain Silo	Grain	Max. 500,000 bushels
EP-SFX141	EU-T141			Max. 500,000 bushels

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: Iowa DNR Construction Permit 04-A-1001-S2, 04-A-1002-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)

Emission Limit(s): 0.086 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-1001-S2, 04-A-1002-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf; 0.086 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 04-A-1001-S2, 04-A-1002-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operational limits are not required at this time.

NSPS and NESHAP Applicability

This emission unit is not of the source type subject to any subpart of the New Source Performance Standards (NSPS).

This emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 135

Stack Opening, (inches): 8x8

Exhaust Flow Rate (scfm): 1000

Exhaust Temperature (°F): Ambient

Discharge Style: Downward

Authority for Requirement: Iowa DNR Construction Permit 04-A-1001-S2, 04-A-1002-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-SFX140

Associated Equipment

Associated Emission Unit ID Numbers: EU-T140
Emissions Control Equipment ID Number: CE-FX140
Emissions Control Equipment Description: Fabric Filter
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-T140
Emission Unit Description: Grain Silo
Raw Material/Fuel: Grain
Rated Capacity: Maximum Capacity 237,500 bushels

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: Iowa DNR Construction Permit 04-A-340-S2
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.086 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-340-S2

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.086 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 04-A-340-S2
567 IAC 23.4(7)

Operational Limits & Requirements

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

Operating Limits

- A. The control equipment shall be inspected and maintained according to manufacturer's recommendations.

Reporting and 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.

- A. The owner or operator shall keep records of control equipment inspections and maintenance.

Authority for Requirement: Iowa DNR Construction Permit 04-A-340-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 158.75

Stack Opening, (inches): 5.6x7

Exhaust Flow Rate (scfm): 1000

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical, Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 04-A-340-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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-S50 (SEP22)

Associated Equipment

Associated Emission Unit ID Numbers: EU-F50
Emissions Control Equipment ID Number: CE-C50 (SEP22)
Emissions Control Equipment Description: Flare with vapor recovery system
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-F50
Emission Unit Description: Truck & Rail Loadout
Raw Material/Fuel: Natural Gas
Rated Capacity: 3.2 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: Iowa DNR Construction Permit 02-A-832-S5
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 0.25 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 0.25 lb/hr
Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5
567 IAC 23.3(2) "a"

Pollutant: Nitrogen Oxides (NO_x)
Emission Limit(s): 0.32 ton/yr
Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

Pollutant: Volatile Organic Compounds (VOC)
Emission Limit(s): 24.88 ton/yr
Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 1.73 ton/yr
Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

Pollutant: Single HAP
Emission Limit(s): 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

Pollutant: Total HAP
Emission Limit(s): 24.4 ton/yr ⁽³⁾
Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

^{(2), (3)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. Plant-wide the total amount of denatured ethanol loaded out by truck or rail shall not exceed 127,000,000 gallons per twelve-month rolling period.
- B. Switch-loading is not allowed at the Rail Loadout. (NOTE: Switch loading occurs when ethanol is loaded into railcars previously containing gasoline).
- C. The owner or operator shall follow the applicable standards of Subpart VV, 40 CFR §60.480 through §60.489.
- D. The flare shall be inspected and maintained according to manufacturer's recommendations.
- E. The vapor recovery system (VRS) flare shall be in operation during all times of final product loading to trucks (NOTE: The Truck Loadout is controlled with a VRS & Flare. The Rail Loadout is not controlled with a VRS & flare).
- F. The flare shall be operated per the requirements of NSPS Subpart A - §60.18.

Reporting and 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.

- A. Record the total amount of denatured ethanol transported through the Truck & Rail Loadout per twelve-month rolling period.
- B. The owner or operator shall keep records as required in 40 CFR §60.486, and reports as required in 40 CFR §60.487.
- C. The owner or operator shall keep records of control equipment inspections and repairs.

Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

This emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): 32

Stack Opening, (inches, dia.): 42

Exhaust Flow Rate (scfm): 3280

Exhaust Temperature (°F): 950

Discharge Style: Vertical w/o rain cap or w/ unobstructing rain cap

Authority for Requirement: Iowa DNR Construction Permit 02-A-832-S5

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 any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

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.

Facility operation and maintenance plans are to be developed by the facility within six (6) months of the issuance date of this permit and the data pertaining to the plan 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: EP-F60

Associated Equipment

Associated Emission Unit ID Numbers: EU-F60
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-F60
Emission Unit Description: DDGS Auxiliary Loadout
Raw Material/Fuel: DDGS
Rated Capacity: Maximum Capacity 40,000 ton/yr

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: Iowa DNR Construction Permit 05-A-802-S1
567 IAC 23.3(2) "d"

⁽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 (PM₁₀)
Emission Limit(s): 2.15 lb/hr; 0.57 ton/yr
Authority for Requirement: Iowa DNR Construction Permit 05-A-802-S1

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf; 2.15 lb/hr; 0.57 ton/yr
Authority for Requirement: Iowa DNR Construction Permit 05-A-802-S1
567 IAC 23.3(2) "a"

Pollutant: Single HAP
Emission Limit(s): 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-802-S1

Pollutant: Total HAP
Emission Limit(s): 24.4 ton/yr ⁽³⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-802-S1

^{(2), (3)}Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. The total amount of DDGS loaded out through the Auxiliary DDGS Loadout shall not exceed 40,000 tons of DDGS per 12-month rolling period.

Reporting and 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.

- A. Record monthly, the total amount of DDGS loaded out through the Auxiliary DDGS Loadout each month. Calculate and record 12-month rolling totals.

Authority for Requirement: Iowa DNR Construction Permit 05-A-802-S1

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-F90

Associated Equipment

Associated Emission Unit ID Numbers: EU-F90
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: Leak Detection and Repair (LDAR)
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-F90
Emission Unit Description: VOC Emissions from Equipment Leaks
Raw Material/Fuel: VOC Leaks
Rated Capacity: 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: Volatile Organic Compounds (VOC)
Emission Limit(s): 8.83 ton/yr ⁽¹⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-803

⁽¹⁾The TPY emission rate is the predicted maximum fugitive LDAR controlled VOC emissions from 658 light liquid valves, 264 gas valves, 36 light liquid pumps and 270 flanges and or connectors.

Pollutant: Single HAP
Emission Limit(s): 9.4 ton/yr ⁽²⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-803

Pollutant: Total HAP
Emission Limit(s): 24.4 ton/yr ⁽³⁾
Authority for Requirement: Iowa DNR Construction Permit 05-A-803

^{(2),(3)} Plant-wide limit imposed to keep the facility synthetic minor for any applicable NESHAP.

Operational Limits & Requirements

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

Operating Limits

- A. 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.
- B. The applicable standards of NSPS 40 CFR Part 60 §60.480 to §60.489 Subpart VV shall be followed.

Reporting and 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.

- A. Calculate and record the VOC emissions based on the documented component count. Update the VOC emission calculations as the component count varies. Emission factors shall be based on EPA document 453/R-95-017 titled Protocol for Equipment Leak Emission Estimates. The facility will use best LDAR methodology.
- B. The owner or operator shall follow the applicable recordkeeping and reporting standards of Subpart VV, 40 CFR §60.486 and §60.487.

Authority for Requirement: Iowa DNR Construction Permit 05-A-803

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

This emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: Iowa DNR Construction Permit 05-A-803

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-F100

Associated Equipment

Associated Emission Unit ID Numbers: EU-F100
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-F100
Emission Unit Description: Truck Traffic
Raw Material/Fuel: NA
Rated Capacity: 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: Particulate Matter (PM₁₀)

Emission Limit(s): 3.13ton/yr

Authority for Requirement: Iowa DNR Construction Permit 05-A-805-S2

Pollutant: Particulate Matter (PM)

Emission Limit(s): 16.10 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 05-A-805-S2

Operational Limits & Requirements

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

Operating Limits

- A. The haul road shall be paved prior to the receipt of any grain.
- B. Truck traffic on the haul road shall not exceed 10 mph. The speed limit shall be posted on the haul road.
- C. Any spills on the road shall be cleaned up immediately.
- D. Truck traffic emissions on the paved road shall be controlled by water flushing and sweeping once per day. The water spray rate shall be a minimum of 0.23 gallons per square yard.
 1. If water flushing followed by sweeping cannot be accomplished because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35 °F (1.7 °C) only sweeping is required. Water flushing and/or sweeping is not required for days of inclement weather.
 2. Water flushing and 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-hr time period or the paved road(s) will not be used on a given day.

3. Water flushing and sweeping need not occur if the plant does not receive any truck traffic that day (i.e. on a weekend).
 4. Daily water flushing need not occur provided that the haul road emissions do not exceed 11.3 tons PM (70% of PM PTE based on 0.4 g/m^2) for the last twelve months. This shall be calculated using the formula in section "Reporting and Recordkeeping" of this permit. Provided emissions as calculated in section "Reporting and Recordkeeping" remain below 11.3 tons for the last twelve months only daily sweeping is required. In the event that emissions exceed 11.3 tons for the last twelve months the plant shall be required to commence daily water flushing with daily sweeping until PM emissions fall below 11.3 tons for the last twelve months.
- E. Silt load performance testing shall be completed once every calendar quarter. Testing shall be completed prior to water flushing and/or sweeping for that day. Provided the results demonstrate compliance with the PM & PM₁₀ ton per year emission limits, reduced frequency of testing may be requested after 4 performance tests have been completed.
- F. The owner/operator shall record the number of trucks that load/unload material on a monthly basis. Based on the number of trucks the total Vehicle Miles Traveled (VMT) shall be calculated for that month.

Reporting and 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.

- A. Record the frequency of sweeping performed on the haul roads. If the roads are not swept due to weather, a written record must be kept on site outlining the conditions.
- B. Performance testing on the haul road surface silt loading shall be once every calendar quarter starting in January. For each performance test, silt loading sampling shall be done for at least 3 different locations. Performance testing shall be completed prior to water flushing and/or sweeping.
- C. The plant shall maintain a log for the haul roads that show the following:
 1. The silt content of the road for that month based on testing;
 2. The date of performance testing;
 3. The vehicle miles traveled (VMT) for that month;
 4. Each day record whether or not water flushing and sweeping was accomplished. For days w/o water flushing and/or sweeping record the circumstances (i.e. weather condition, equipment malfunction);
 5. The amount of water applied and the areas treated;
 6. The operator's initials.
- D. The owner or operator shall calculate and record the monthly haul road emissions according to the following formulas, which uses the equations from AP-42 Section 13.2.1, the empirical constants, and assumes a mean vehicle weight of 27.7 tons. (NOTE: silt load testing is required on a quarterly basis. The "sL" value determined during silt load testing shall be used for each successive month that testing is not required. For example, the tested sL value for January would be used in the equations for February and

March, and the tested sL value for April would be used in the equations for May and June etc.).

$$E_{PM} = \frac{[(2.135 \times (sL/2)^{0.65}) - 0.00044] \times VMT}{2000}$$

Where E = tons PM per month
sL = road surface silt loading (g/m²) for each performance test
VMT = Vehicle miles traveled

$$E_{PM10} = \frac{[(0.416 \times (sL/2)^{0.65}) - 0.00044] \times VMT}{2000}$$

Where E = tons PM₁₀ per month
sL = road surface silt loading (g/m²) for each performance test
VMT = Vehicle miles traveled

- E. The owner or operator shall update monthly the twelve-month rolling total of PM and PM₁₀ emissions by adding up the calculated monthly emissions for the previous twelve months. The plant shall notify DNR immediately if the twelve-month rolling total exceeds 16.10 tons PM or 3.13 tons of PM₁₀.

Authority for Requirement: Iowa DNR Construction Permit 05-A-805-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: EP-G1916

Associated Equipment

Associated Emission Unit ID Numbers: EU-G1916
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-G1916
Emission Unit Description: Emergency Diesel Generator
Raw Material/Fuel: Diesel
Rated Capacity: 269 hp; Maximum 500 hr/yr

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)

Emission Limit(s): 0.15 g/HP-hr

Authority for Requirement: 40 CFR Part 60 Subpart III
567 IAC 23.1(2) "yyy"

Pollutant: Nitrogen Oxides (NO_x) and non-Methane Hydrocarbons (NMHC)

Emission Limit(s): 3.00 g/HP-hr

Authority for Requirement: 40 CFR Part 60 Subpart III
567 IAC 23.1(2) "yyy"

Pollutant: Carbon Monoxide (CO)

Emission Limit(s): 2.6 g/HP-hr

Authority for Requirement: 40 CFR Part 60 Subpart III
567 IAC 23.1(2) "yyy"

Operational Limits & Requirements

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

Operating Limits

- A. This emission unit is limited to 500 hours of operation per 12-month rolling period.

Reporting and 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.

- A. Record the operating hours of the Emergency Generator on a monthly basis and calculate the twelve-month rolling total.

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and NSPS Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

This emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(2) "yyy"

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-P1916

Associated Equipment

Associated Emission Unit ID Numbers: EU-P1916
Emissions Control Equipment ID Number: None
Emissions Control Equipment Description: None
Continuous Emissions Monitors ID Numbers: None

Emission Unit vented through this Emission Point: EU-P1916
Emission Unit Description: Emergency Fire Pump
Raw Material/Fuel: Diesel
Rated Capacity: 252 hp; Maximum 500 hr/yr

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)
Emission Limit(s): 0.40 g/HP-hr
Authority for Requirement: 40 CFR Part 60 Subpart III
567 IAC 23.1(2) "yyy"

Pollutant: Nitrogen Oxides (NO_x) & non-Methane Hydrocarbons (NMHC)
Emission Limit(s): 7.8 g/HP-hr
Authority for Requirement: 40 CFR Part 60 Subpart III
567 IAC 23.1(2) "yyy"

Pollutant: Carbon Monoxide (CO)
Emission Limit(s): 2.6 g/HP-hr
Authority for Requirement: 40 CFR Part 60 Subpart III
567 IAC 23.1(2) "yyy"

Operational Limits & Requirements

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

Operating Limits

- A. This emission unit is limited to 500 hours of operation per 12-month rolling period.

Reporting and 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.

A. Record the operating hours of the Fire Pump on a monthly basis and calculate the twelve-month rolling total.

NSPS and NESHAP Applicability

This emission point is subject to NSPS Subpart A – General Provisions and NSPS Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

This emission unit is not of the source type subject to any subpart of the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Authority for Requirement: 567 IAC 23.1(2) "yyy"

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"*

G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *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 present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, 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 EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. 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 reation 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. 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. Oral 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 oral 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 oral report may be made 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 oral 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 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 must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *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.
 - e. The changes comply with all applicable requirements.
 - f. For such a 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 is required to do 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 Permit Modification.

a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:

i. Do not violate any applicable requirements

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 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.

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 a 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, existing permit terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant 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, and those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113* 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 22.105(1)"a"(4)*

G19. Duty to Obtain Construction Permits

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *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, training fires and controlled burning of a demolished building. *567 IAC 23.1(3)"a", and 567 IAC 23.2*

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"h"; 567 IAC 23.2(3)"h" - 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. Exceedances 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)*

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 to determine transferability of the permit. *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. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. 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. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. 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
Urbandale, IA 50322
(515) 242-6001

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
EPA Region 7
Air Permits and Compliance Branch
901 N. 5th Street
Kansas City, KS 66101
(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
Urbandale, IA 50322
(515) 242-5100

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

909 West Main – Suite 4
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

Field Office 6

401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

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

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

Linn County Public Health Dept.
Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

V. Appendices

- A. 40 CFR Part 60 Subpart A – General Provisions
<http://www.tceq.state.tx.us/permitting/air/rules/federal/60/a/ahp.html>
- B. 40 CFR Part 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
<http://www.epa.gov/ttn/atw/combust/boiler/cfrdb02.pdf>
- C. 40 CFR Part 60 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
<http://www.tceq.state.tx.us/permitting/air/rules/federal/60/kb/kbhp.html>
- D. 40 CFR Part 60 Subpart VV –Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry
<http://www.tceq.state.tx.us/permitting/air/rules/federal/60/vv/vvhp.html>
- E. 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
<http://www.epa.gov/ttn/atw/nsps/cinsps/fr11jy06.pdf>