

Via eForms & UPS [1Z 413 827 01 5043 3581]

April 16, 2026

Kentucky Department for Environmental Protection
Division of Air Quality
Permit Support Section
300 Sower Boulevard
Frankfort, Kentucky 40601

**Subject: Application to Renew Conditional Major Operating Permit
Darling Ingredients Inc., Russellville, Kentucky
Conditional Major Operating Permit No.: F-21-020
AI No.: 2753**

To Whom It May Concern,

Darling Ingredients Inc. (Darling) herein provides an application to the Kentucky Department for Environmental Protection (KDEP) for renewal of the subject Conditional Major Operating Permit for the Darling facility located in Russellville, Kentucky.

Included in the attached application package is a supporting narrative that provides:

1. a recapitulation of permitting history,
2. combustion and process emission factors used for unlimited potential to emit (PTE) calculations,
3. PTE emission calculations, and
4. KDEP application forms.

If you should have any questions concerning this information, please call me at your convenience at the address or telephone number listed at the top of the page or you may contact me by email at MSmith@darlingii.com.

Sincerely,

DARLING INGREDIENTS INC.



Matthew Smith
Manager of Environmental Affairs

cc: Kelly Horne, Senior Vice President (email only)
Brandon Lachner, Regional Vice President (email only)
Tim O'Connor, General Manager (email only)
Kelly Thomas, Director of Environmental Affairs (email only)



darlingii.com
(859) 781-2010

4221 Alexandria Pike
Cold Spring, KY 41076

DARLING INGREDIENTS INC.

3080 Concord Road

Russellville, Kentucky 42276

Application to Renew Conditional Major Operating Permit

Conditional Major Operating Permit No.: F-21-020

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AIR PERMIT INFORMATION

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KDEP Air Permit Application Forms

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I. History of Permitting

On April 27, 2021, Darling Ingredients Inc. (Darling) submitted an application to renew the Conditional Major Air Operating Permit F-16-011 R1 for the subject Darling facility located in Russellville, Kentucky (Facility). In addition to the renewal of the permit, Darling requested the removal of the decommissioned Boilers #1 and #2. The Kentucky Department for Environmental Protection (KDEP) issued the renewed Conditional Major Air Operating Permit No. F-21-020 on October 17, 2021.

II. Facility Operations and Emission Units/Emission Points

Table I reflects the current and proposed emission unit (EU) inventory permitting at the Facility.

Table I
Emission Units/Emission Points Currently Permitted

Emission Unit ID	Emission Point ID	Description
04	04	50.235 mmBtu/hr Boiler (Boiler #3)
05	05	50.235 mmBtu/hr Boiler (Boiler #4)
06	06	50.235 mmBtu/hr Boiler (Boiler #5)
07	07, 08, 09	Rendering Process #2 and #3, Feather Process, and Finish Product Handling
08	10	Emergency RICE

III. Combustion Emissions Calculations

All of the emission factors (EFs) presented below for Facility combustion units have been previously presented to and accepted by the KDEP in previous permitting iterations for the Facility; Darling therefore simply recapitulates for the KDEP.

TABLE II
Facility Combustion Units

Equipment	Manufacturer	Permitted Heat Input
Boiler #3 (EU 04)	Hurst	50.235 mmBtu/hr
Boiler #4 (EU 05)	Hurst	50.235 mmBtu/hr
Boiler #5 (EU 06)	Hurst	50.235 mmBtu/hr
RTO Burner (EU 07)	Combustion Controls	4 mmBtu/hr
Emergency RICE (EU 08)	Generac	0.1 mmBtu/hr

Boilers #3, #4, and #5 (EU 04, EU 05, EU 06) are currently permitted to combust natural gas, processed fats, and low sulfur diesel fuel oil (LSD) (0.05% sulfur or less). The RTO (EU 07) burner and Emergency RICE (EU 08) are permitted to combust only natural gas.

The combustion PTE from Boilers #3, #4, and #5 (EU 04, EU 05, EU 06) have been calculated using U.S. Environmental Protection Agency's (EPA) AP-42¹ EFs for low NO_x combustion technology /flue gas recirculation external combustion sources with less than 100 mmBtu/hr heat input, and recent actual compliance performance emissions testing data conducted by Darling on similar low NO_x boiler equipment. The AP-42 EFs for Volatile Organic Compounds (VOC), SO₂, and PM species emissions from natural gas combustion (Chapter 1, Tables 1.4-1 and 1.4-2) were last updated in July 1998. According to footnote "c" to Table 1.4-2, all PM (total, condensable, and filterable) from natural gas combustion is assumed to be less than one micron (PM₁); and therefore, used to estimate PM less than ten microns (PM₁₀), less than 2.5 microns (PM_{2.5}), or PM₁ emissions. The EFs for Carbon Monoxide (CO) and NO_x emissions from natural gas combustion were obtained during an actual July 2011 compliance performance emissions test conducted at the Darling Jackson, Mississippi, facility on a new boiler equipped with a low NO_x burner.

Darling utilized AP-42 EFs from Chapter 1.3 – Fuel Oil Combustion (last updated in May of 2010) for PM, VOC, SO₂, CO, NO_x, emissions for fuel oil fired units (Tables 1.3-1, 1.3-2, and 1.3-5) as well as PM_{2.5} and PM₁₀ from Table 1.3-6 to calculate the boilers' LSD fuel-derived PTE emissions. Note: PM_{2.5} and PM₁₀ emissions are a combination of condensable emissions from Table 1.3-2 and specific particle size EF from Table 1.3-6.

Darling developed the processed fats combustion EFs based on engineering test conducted at another Darling facility on a 1,200 HP 50.219 mmBtu/hr boiler equipped with low NO_x burner. This engineering testing did not include delineation of PM_{2.5}/PM₁₀ emissions; however, Darling believes that all PM emissions from the combustion of processed fats fuel are PM₁₀, and that PM_{2.5} emissions are negligible as the processed fats fuel does not contain any metals, or toxic/hazardous constituents, and contain only negligible VOC and sulfur content.

The RTO burner (EU 07) is not equipped with low NO_x equipment technology, and combustion emissions PTE are therefore calculated using AP-42 CO and NO_x EFs for natural gas combustion in external combustion sources

¹ US EPA AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources Chapter 1, Tables 1.4-1 and 1.4-2, last updated in July 1998

with less than 100 mmBtu/hr heat input (for not low NO_x burners) (Chapter 1, Tables 1.4-1 and 1.4-2), last updated in July 1998. RTO burner VOC, SO₂, PM_{2.5}, PM₁₀, and PM combustion emission rates and PTE are included in the process emissions (see Process Emissions section below); they were derived from RTO emissions testing conducted at RTO exhausts at similar operating Darling facilities (SO₂ testing at the East Dublin and Ellenwood, Georgia facilities and PM species and VOC testing at the Butler, Kentucky, facility).

Darling utilized AP-42 EFs from Chapter 3.2 – Natural Gas-Fired Reciprocating Engines (last updated in August of 2000) in lb/mmBtu for PM, PM₁₀, VOC, SO₂, CO, NO_x emissions for 4-stroke lean-burn engines (Table 3.2-2) to calculate PTE emissions. While there is no limit on the use of the unit during emergency situations, Darling does not anticipate the annual usage to exceed 500 hours; therefore, PTE emissions are calculated using 500 hours per year.

A summary of the EFs used for the Facility boilers and the RTO burner on a fuel unit basis, is provided in Table III.

TABLE III
Combustion Emission Factors – Fuel Unit Based

	Natural Gas (Low NO _x Boilers EU 04, EU 05, & EU 06)	Natural Gas (Not Low NO _x EU 07 Burner)	Low Sulfur Diesel Fuel (Boilers Only)	Processed Fats Fuel (Boilers Only)
Fuel HHV	1,000 Btu/scf	1,000 Btu/scf	133,650 Btu/gal	125,900 Btu/gal
VOC	5.50 lb/10 ⁶ scf	5.50 lb/10 ⁶ scf	0.20 lb/10 ³ gal	0.000 lb/10 ³ gal
SO₂	0.60 lb/10 ⁶ scf	0.60 lb/10 ⁶ scf	142(S) lb/10 ³ gal	0.038 lb/10 ³ gal
NO_x	19.0 lb/10 ⁶ scf	100.0 lb/10 ⁶ scf	20 lb/10 ³ gal	20 lb/10 ³ gal
CO	0.60 lb/10 ⁶ scf	84 lb/10 ⁶ scf	5 lb/10 ³ gal	2.81 lb/10 ³ gal
PM_{2.5}	7.6 lb/10 ⁶ scf	7.6 lb/10 ⁶ scf	0.25 lb/10 ³ gal +1.3 lb/10 ³ gal condensables	negligible
PM₁₀	7.6 lb/10 ⁶ scf	7.6 lb/10 ⁶ scf	1 lb/10 ³ gal +1.3 lb/10 ³ gal condensables	1.259 lb/10 ³ gal
PM	7.6 lb/10 ⁶ scf	7.6 lb/10 ⁶ scf	2 lb/10 ³ gal	1.259 lb/10 ³ gal

(S) = Sulfur content in %

For comparison purposes (for worst case fuels), the different fuel unit-based (e.g. scf, gallon [gal]) EFs in Table III have been converted to the common unit of pounds per mmBtu (lbs/mmBtu) in Table IV using the fuel higher heating values (HHVs) from Table III. An example calculation (SO₂) of the conversion from pounds of criteria pollutant per unit of fuel to lbs/mmBtu is provided as follows for LSD fuel oil at the maximum 0.05% sulfur content:

$$\frac{142(\%S) \text{ lb}}{1,000 \text{ gallons}} \times \frac{\text{gallon}}{133,650 \text{ Btu}} \times \frac{1,000,000 \text{ Btu}}{\text{mmBtu}} = 0.053 \text{ lbs/mmBtu}$$

TABLE IV
Combustion Emission Factors – HHV (lbs/mmBtu) Based

	Natural Gas (Low NO _x Boilers EU 04, EU 05, & EU 06)	Natural Gas (Not Low NO _x EU 07 Burner)	Natural Gas (EU 08)	Low Sulfur Diesel (Boilers Only)	Processed Fats (Boilers Only)
VOC	<u>0.0055</u>	<u>0.0055</u>	1.18 ^E -01	0.001	0.000
SO ₂	0.0006	0.0006	5.88 ^E -04	<u>0.053</u>^a	0.0003
NO _x	0.019	0.1000	4.08	0.150	<u>0.159</u>
CO	0.0006	<u>0.0840</u>^b	3.17 ^E -01	<u>0.037</u>^b	0.022
PM _{2.5}	0.0076	0.0076	Negligible	<u>0.012</u>	Negligible
PM ₁₀	0.0076	0.0076	9.99 ^E -03	<u>0.017</u>	0.010
PM	0.0076	0.0076	9.99 ^E -03	<u>0.015</u>	0.010

^a (S) = 0.05%

^b CO emissions are highest for #3, #4, and #5 (EU 04, EU 05, EU 06) when combusting LSD and highest for the RTO burner (EU 07) and Emergency RICE (EU 08) when combusting natural gas.

The EFs from the fuel resulting in the highest emissions per unit of heat input are highlighted in **bold** and underlined text in Table IV for use in the boiler PTE determinations (only the boilers are proposed for alternate backup liquid fuels). For example, for PM, the highest HHV based emission rate will occur when the boilers are fired with LSD fuel oil, for VOC when fired with natural gas, and so forth. Please note that natural gas (not low NO_x) and LSD fuel oil EFs for CO have both been highlighted. CO emissions are highest when combusting natural gas in the RTO burner and Emergency RICE as these are not equipped with low NO_x combustion technology/flue gas recirculation. For Boilers #3, #4, and #5 (EU 04, EU 05, EU 06) (equipped with low NO_x combustion technology/flue gas recirculation), CO emissions are highest when combusting LSD fuel oil.

The maximum unrestricted PTE (in pounds per hour [lbs/hr]) for each criteria pollutant by fuel are calculated below and tabulated in Table V using the maximum rated heat input for the boilers and RTO burner and worst case (highest) EFs identified in Table IV. The maximum restricted PTE (lbs/hr) for each criteria pollutant as calculated below for the Emergency RICE is tabulated in Table VI.

Boilers EU 04, EU 05, & EU 06 at 50.235 mmBtu/hr Each (Low NO_x burners)

VOC	= 0.0055 lbs/mmBtu x 50.235 mmBtu/hr	= 0.28 lbs/hr (Natural Gas)
SO ₂	= 0.053 lbs/mmBtu x 50.235 mmBtu/hr	= 2.67 lbs/hr (LSD Fuel Oil)
NO _x	= 0.159 lbs/mmBtu x 50.235 mmBtu/hr	= 7.98 lbs/hr (Processed Fats)
CO	= 0.037 lbs/mmBtu x 50.235 mmBtu/hr	= 1.88 lbs/hr (LSD Fuel Oil)
PM _{2.5}	= 0.012 lbs/mmBtu x 50.235 mmBtu/hr	= 0.58 lbs/hr (LSD Fuel Oil)
PM ₁₀	= 0.017 lbs/mmBtu x 50.235 mmBtu/hr	= 0.86 lbs/hr (LSD Fuel Oil)
PM	= 0.015 lbs/mmBtu x 50.235 mmBtu/hr	= 0.75 lbs/hr (LSD Fuel Oil)

RTO EU 07 Burner at 4 mmBtu/hr (Not Low NO_x burner)

VOC = NA*

SO₂ = NA*

NO_x = 0.1000 lbs/mmBtu x 4.0 mmBtu/hr = 0.400 lbs/hr (Natural Gas)

CO = 0.0840 lbs/mmBtu x 4.0 mmBtu/hr = 0.336 lbs/hr (Natural Gas)

PM_{2.5} = NA*

PM₁₀ = NA*

PM = NA*

*VOC, SO₂ and PM combustion emissions from EU 07 included in process emissions from EU 07.

Emergency RICE EU 08 at 0.1 mmBtu/hr (Not Low NO_x burner)

VOC = 0.118 lbs/mmBtu x 0.1 mmBtu/hr = 0.0153 lbs/hr (Natural Gas)

SO₂ = 5.88E-04 lbs/mmBtu x 0.1 mmBtu/hr = 0.0001 lbs/hr (Natural Gas)

NO_x = 4.08 lbs/mmBtu x 0.1 mmBtu/hr = 0.5304 lbs/hr (Natural Gas)

CO = 0.317 lbs/mmBtu x 0.1 mmBtu/hr = 0.0412 lbs/hr (Natural Gas)

PM₁₀ = 9.99E-03 lbs/mmBtu x 0.1 mmBtu/hr = 0.0013 lbs/hr (Natural Gas)

PM = 9.99E-03 lbs/mmBtu x 0.1 mmBtu/hr = 0.0013 lbs/hr (Natural Gas)

TABLE V
Maximum Total Combustion PTE Summary
Boilers EU 04, EU 05, and EU 06 and EU 07 Burner
Maximum Combined Emission Rates and
Unconstrained (Worse Case Fuel) Annual Emissions

	EU 04, EU 05, EU 06, EU 07 Burner	
Pollutant	lbs/hr	tpy
VOC	0.83	3.63
SO ₂	8.01	35.07
NO _x	24.34	106.61
CO	5.97	26.17
PM _{2.5}	1.75	7.66
PM ₁₀	2.59	11.36
PM	2.26	9.88

TABLE VI
Maximum Restricted Combustion PTE Summary
Emergency RICE EU 08
Maximum Emission Rates and Annual Emissions

EU08 @ 500 hrs/yr each		
Pollutant	lbs/hr	tpy
VOC	0.0153	0.0038
SO ₂	0.0001	0.00002
NO _x	0.5304	0.1326
CO	0.0412	0.0103
PM ₁₀	0.0013	0.0003
PM	0.0013	0.0003

IV. Process Emissions Calculations

The maximum potential process weight-rate of finished meal production for each of the Protein Conversion Plan Cooker Lines (Rendering Process #2 and #3) and Feather Process Line at the Facility have been presented and technically supported to, and accepted by, the KDEP in previous permitting iterations. Therefore, Darling recapitulates for the KDEP. The potential weight-rates have been provided below in Table VII.

The Protein Conversion Plant Cooker Line process is rate restricted solely by the water evaporative capacity of the cooker equipment; therefore, the ultimate actual raw material processing line input (throughput) rate is dependent upon raw material moisture content. As identified in the 2021 renewal Application, Cooker Line #2 (Dupps 440U cooker) has a design process capacity to remove (evaporate) 33,000 lbs/hr of water from the raw materials, and Cooker Line #3 (Dupps 200U cooker) has design process capacity to evaporate 14,768 lbs/hr of water.

Both Cooker Lines process poultry by-products. These products are very consistent in moisture content. For the purpose of this application, Darling is herein using the known and very consistent average moisture content of 65% for the composite meat/bone/offal raw materials fed to both Cooker Line #2 and Cooker Line #3. Therefore, the raw materials input rate will average 50,770 lbs/hr for Cooker Line #2 and 22,720 lbs/hr for Cooker Line #3 and a total Plant Cooker Line design process capacity of 73,490 lbs/hr of raw materials.

The finished products produced by the Cooker Lines are protein meals and fats. The finished protein meal production rate for Cooker Line #2 is derived from known and very consistent averaged protein yields of 18.8% protein solids and a fats yield of 16.2% (with the balance being water at 65%). The 18.8% protein yield equates to finished protein meal solids production rate of 9,545 lbs/hr (or 4.77 tons per hour [tons/hr]).

The finished protein meal production rate for Cooker Line #3 is derived from known and very consistent averaged protein yields of 18% protein solids and a fats yield of 17% (with the balance being water at 65%). The 18% protein yield equates to finished protein meal solids production rate of 4,090 lbs/hr (or 2.04 tons/hr).

The Feather Line process is rate restricted solely by the capacity of the hydrolyzer, to 22,000 lbs/hr of feathers. The feather material is also very consistent in moisture content and protein (fat content of feathers is negligible). For the purpose of this application, Darling is herein using the known and very consistent average moisture content of 73% for feathers to the Feather Line. The finished protein meal solids production rate from the Feather Line is also derived from known and very consistent protein solids yields of 27% protein solids from feathers (no fat content). The 27% protein yield equates to a finished feather meal solids production rate of 6,160 lbs/hr (or 3.08 tons/hr).

Thus, the total Plant Cooker Lines and Feather Line protein meal yield design capacity is 9.89 tons/hr. The protein meal yield rates discussed above are a very important point for the KDEP to understand; because, instead of process emissions presented herein below in this narrative being weight-rate based on raw material input rates, they are instead weight-rate based on finished meal output rates. This is because the yield of finished protein meals from the raw materials is considered to be more consistent, is easily and routinely measured (for purposes of sales and therefore also actual emissions calculations, as needed), and moreover, because EPA's process EFs (AP-42) are finished meal weight-rate based (and accordingly, Darling's actual emissions testing data has been reduced to finished meal weight-rate based). Therefore, it would be inappropriate to incur any PCs limiting raw material inputs; any permitting rate limitations or monitoring requirements must be based on finished meal rates.

All of EFs presented below have been previously presented to and accepted by the KDEP in previous permitting iterations for the facility; Darling therefore simply recapitulates for the KDEP.

PM Species

Darling developed EFs for filterable and condensable PM process emissions using data from engineering emissions testing that were conducted July 8, 2015, on the exhaust of an essentially identical process controlled by an RTO at the Butler, Kentucky facility. As has been done with other emissions test results, Darling utilized the controlled PM (filterable and condensable) emissions test results from the Butler facility test and calculated weight-rate based controlled EFs. Darling divided the PM emissions rate of 0.395 lb/hr by the finished meal production rate of 5.3 tph measured during that test ($0.395 \text{ lb/hr} \div 5.3 \text{ tph}$), which resulted in a controlled total PM (filterable and condensable) weight-rate based EF of 0.075 lb PM/ton of finished meal (lb/ton). Condensable emissions were observed to be 0.372 lb/hr, which resulted in a weight-rate based controlled EF of 0.07 lb/ton ($0.372 \text{ lb/hr} \div 5.3 \text{ tph}$). Darling has used this emissions test as the basis for the $\text{PM}_{2.5}$, PM_{10} , and total PM (or total PM_{10}) EFs for purposes of this Narrative discussion, for emissions when the process will be controlled by the RTO. Darling proposes to use the 0.075 lb/ton EF for PM_{10} and total PM due to its understanding that condensable emissions are to be counted as $\text{PM}_{2.5}$ and PM_{10} and that all filterable PM emissions are filterable PM_{10} emissions. Darling proposes to use the 0.07 lb/ton EF for $\text{PM}_{2.5}$ emissions as $\text{PM}_{2.5}$ is limited to only condensable emissions. Darling has populated Table VII below with these PM species EFs.

With respect to emissions when the process is controlled by the contingency backup Scrubber system (when the RTO is down), Darling asserts that any incremental controlled PM, PM_{10} , and $\text{PM}_{2.5}$ emissions PTE would be de minimis considering the backup Scrubber system would be in operation for an anticipated very limited time, as

discussed above, due to the reliability of the RTO technology. It should also and again be noted that the contingency backup Scrubber system consists of a packed tower scrubber exhausting to the room-air scrubber, and assuming an additional 80% control efficiency (commonly accepted industry standard control efficiency for wet packed bed scrubbers), any incremental PM species emissions from the contingency backup Scrubbers, in comparison to those calculated from the RTO at full potential (8,760 hr/yr), would be de minimus. Thus, Darling has populated Table VII with PM species PTE emissions based on the PM species EFs presented above for the RTO.

As provided in the 2021 renewal Application, a baghouse (Emission Point [EP] 08) is used to minimize particulate matter emissions from the meal pneumatic transfer operations. Stored finished meal product is then moved from the storage silos by covered screw conveyor for sale load-out onto tractor trailers. Darling identified the PM emissions from the pneumatic transfer of finished meal as producing only 0.12 tpy of emissions. As these emissions have not changed, and this operation has been identified as an insignificant source, Darling has not detailed these PM emissions in this application.

With respect to fugitive captured room air emissions controlled by the room-air scrubber, Darling asserts that PM species would be de minimis considering the large particulate size of finished meal that would not be expected to be significantly air-borne. This approach has been proposed to and always accepted by agencies for PM relative to room air. Therefore, Darling has not included any fugitive PM species emissions in Table VII.

SO₂

Similar to PM emissions, Darling developed Total Reduced Sulfur (TRS), as mostly H₂S, and TRS/H₂S combustion product SO₂ emissions data from compliance performance testing conducted at the Ellenwood, Georgia facility (poultry rendering process) and the East Dublin facility (feather processing).

Controlled (RTO exhaust) TRS/H₂S emissions were essentially nil (demonstrating complete combustion conversion to SO₂ emissions). Darling monitored the production rate during both tests and converted the SO₂ emission rates into a finished protein meal weight-rate based controlled EFs (pursuant to EPA's AP-42 document that also provides EFs on a finished meal weight-rate basis). The resulting EFs for these compliance tests were 0.34 lbs SO₂/ton of finished poultry meal and 1.76 lbs SO₂/ton of finished feather meal. Darling has calculated the SO₂ PTE emissions based on these EFs and has continued to assume that TRS/H₂S emissions are nil.

The controlled process PM species, TRS/H₂S, and SO₂ weight-rate EFs and the maximum potential finished meal process capacities at the Facility have been used to determine weight-rate based process emissions in lbs/hr and PTE in tpy in Table VII.

TABLE VII

Unrestricted/Controlled H₂S, SO₂, and PM Species Process PTE

Process Line	Finished Meal Max Potential	H ₂ S/TRS PTE (nil)		SO ₂ PTE (RP-0.34 lbs/ton) (FP-1.76 lbs/ton)		PM _{2.5} PTE (0.07 lbs/ton)		PM ₁₀ PTE (0.075 lbs/ton)		PM PTE (0.075 lbs/ton)	
	tph	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
Cooker Line #2	4.77	0.00	0.00	1.62	7.11	0.33	1.46	0.36	1.57	0.36	1.57
Cooker Line #3	2.04	0.00	0.00	0.70	3.05	0.14	0.63	0.15	0.67	0.15	0.67
Feather Line	3.08	0.00	0.00	5.42	23.74	0.22	0.94	0.23	1.01	0.23	1.01
Process Totals	9.89	0.00	0.00	7.74	33.90	0.69	3.03	0.74	3.25	0.74	3.25

Process Emissions- VOC

Darling also developed EFs for VOC emissions using data from engineering emissions testing conducted at the Butler, Kentucky facility on July 8, 2015. As has been done with other emissions test results, Darling utilized the controlled VOC emissions test results from the Butler facility and calculated a weight-rate based controlled EF. Darling divided the VOC emissions rate of 0.940 lbs/hr by the finished meal production rate of 5.3 tph measured during the test (0.940 lbs/hr ÷ 5.3 tph), which resulted in a controlled VOC weight-rate based EF of 0.177 lbs/ton. Darling has used this emissions test as basis for the VOC EFs for purposes of this application.

The controlled process VOC weight-rate EFs and the maximum potential finished meal process capacities at the facility have been used to determine weight-rate based process emissions in lbs/hr and PTE in tpy in Table VIII.

TABLE VIII

Unrestricted/Controlled Process VOC PTE

Process Line	Finished Meal Max Potential	PM PTE (0.177 lbs/ton)	
		lbs/hr	tpy
Cooker Line #2	4.77	0.84	3.70
Cooker Line #3	2.04	0.36	1.58
Feather Line	3.08	0.55	2.39
Process Totals	9.89	1.75	7.67

V. FACILITY-WIDE TOTAL (COMBUSTION AND PROCESS) EMISSIONS

Facility-wide process emission rates and PTE (from Tables VII and VIII) combined with facility-wide combustion emission rates and PTE (from Tables VI and IV) are summarized in Table IX.

GREENHOUSE GAS (GHG) EMISSIONS

No GHG emissions from process emissions were calculated, as none are known. Darling has developed the combustion GHG PTE calculations based on 12-month rolling total synthetic limits for NO_x of 90 tpy. As noted in Section III of this document, *Combustion Emissions Calculations*, the total combustion heat input is 154.8 mmBtu/hr. Darling has determined that the worse case scenario for combustion GHG PTE is achieved by maximizing the combustion of processed fats until NO_x emissions are maximized to 90 tpy since NO_x is the limiting pollutant for combustion emissions. Since the process NO_x PTE is 106.61 tpy, the processing hours were reduced to 7,395 hours (by using the ratio of the 90 tpy synthetic limit versus the NO_x PTE of 106.61 tpy) for calculation. The 7,395 processing hours were taken into consideration during the combustion GHG PTE (boilers and RTO burner); meaning, combustion GHG emissions were based on 7,395 hours. The GHG PTE from all combustion sources (including the RTO) is 105,371.3 metric ttpy CO₂e.

HAZARDOUS AIR POLLUTANTS

Darling has also evaluated potential HAP emissions that may be emitted from the PC Plant. AP-42 Chapter 9.5.3 – Meat Rendering Plants, states “Of the specific constituents (VOC) listed, (from the protein conversion process) only Quinoline is classified as a hazardous air pollutant (HAP).”, and goes on to state “No emissions data quantifying VOC, HAP, or PM emissions from the rendering process are available for use in developing emission factors.” However, there are published HAP EFs for fuel combustion in AP-42. Darling compared the Speciated Organic Compounds from Table 1.3-9 for fuel oil combustion and Table 1.4-3 for natural gas combustion to the chemicals and compounds identified on the *Hazardous Air Pollutant List* in 401 KAR 63:060 and tabulated those HAPs from the HAPs list that were identified in AP-42 with EFs.

Darling has calculated the maximum HAP PTE using the worst case EFs and the maximum potential usage rate for each permitted fuel. As expected, the maximum PTE for any one HAP is less than 10 tpy (calculated to be 1.22 tpy) and the maximum PTE for all HAPs combined is less than 25 tpy (1.28 tpy). The Facility is therefore considered to be a True Minor Source of HAP emissions (calculations for HAP emissions are attached in Appendix A).

TABLE IX – Maximum Facility-Wide Potential (Controlled) Emissions Totals^a

	VOC		SO ₂		NO _x		CO		PM _{2.5}		PM ₁₀		PM	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
Boiler EU 04	0.28	1.21	2.67	11.69	7.98	34.95	1.88	8.23	0.58	2.55	0.86	3.79	0.75	3.29
Boiler EU 05	0.28	1.21	2.67	11.69	7.98	34.95	1.88	8.23	0.58	2.55	0.86	3.79	0.75	3.29
Boiler EU 06	0.28	1.21	2.67	11.69	7.98	34.95	1.88	8.23	0.58	2.55	0.86	3.79	0.75	3.29
EU 07 Burner	NA	NA	NA	NA	0.40	1.75	0.34	1.47	NA	NA	NA	NA	NA	NA
EU 08	0.0153	0.0038	0.0001	0.00002	0.5304	0.1326	0.0412	0.0103	NA	NA	0.0013	0.0003	0.0013	0.0003
Total Combustion Emissions	0.84	3.63	8.01	35.07	24.87	106.74	6.02	26.18	1.75	7.66	2.59	11.36	2.26	9.88
Cooker Line #2	0.84	3.70	1.62	7.11	NA	NA	NA	NA	0.33	1.46	0.36	1.57	0.36	1.57
Cooker Line #3	0.36	1.58	0.70	3.05	NA	NA	NA	NA	0.14	0.63	0.15	0.67	0.15	0.67
Feather Line	0.55	2.39	5.40	23.74	NA	NA	NA	NA	0.22	0.94	0.23	1.01	0.23	1.01
Total Process Emissions	1.75	7.67	7.74	33.90	NA	NA	NA	NA	0.69	3.03	0.74	3.25	0.74	3.25
Unrestricted Totals (Unlimited)	2.59	11.30	15.75	68.97	24.87	90 ^a	6.02	26.18	2.44	10.69	3.33	14.61	3.00	13.13

^a Sum of all unlimited combustion and process PTE over 90 tpy are synthetically limited to 90 tpy (for NO_x)

DARLING INGREDIENTS INC.

APPLICATION TO RENEW

CONDITIONAL MAJOR OPERATING PERMIT

RUSSELLVILLE, KENTUCKY

KDEP APPLICATION FORMS

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007AI

Administrative Information

- ☐ Section AI.1: Source Information
☐ Section AI.2: Applicant Information
☐ Section AI.3: Owner Information
☐ Section AI.4: Type of Application
☐ Section AI.5: Other Required Information
☐ Section AI.6: Signature Block
☐ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

☐ Additional Documentation attached

Source Name: Darling Ingredients Inc.

KY EIS (AFS) #: 21- 141-00026

Permit #: F-21-020

Agency Interest (AI) ID: 2753

Date: 4/16/2026

Section AI.1: Source Information

Physical Location	Street:	3080 Concord Road		
Address:	City:	Russellville	County:	Logan
			Zip Code:	42276
Mailing Address:	Street or P.O. Box:	3080 Concord Road		
	City:	Russellville	State:	KY
			Zip Code:	42276

Standard Coordinates for Source Physical Location

Longitude: 36.901745 (decimal degrees) Latitude: -86.874121 (decimal degrees)

Primary (NAICS) Category: Rendering and Meat Byproducts

Primary NAICS #: 311613

Classification (SIC) Category:		Animal and Marine Fats and Oils		Primary SIC #:		2077	
Briefly discuss the type of business conducted at this site:		Darling Ingredients Inc. collects and processes raw materials consisting of restaurant and food grease, poultry offal, and feathers to produce animal and vegetable (processed fats) and protein supplements for animal feed customers.					
Description of Area Surrounding Source:	☒ Rural Area	☐ Industrial Park	☐ Residential Area	Is any part of the source located on federal land?	☐ Yes	Number of Employees:	81
	☐ Urban Area	☐ Industrial Area	☐ Commercial Area		☒ No		
Approximate distance to nearest residence or commercial property:		1,100 feet		Property Area:	600 acres		Is this source portable? ☐ Yes ☒ No
What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?							
NPDES/KPDES:		☒ Currently Hold	☐ Need	☐ N/A			
Solid Waste:		☒ Currently Hold	☐ Need	☐ N/A			
RCRA:		☐ Currently Hold	☐ Need	☒ N/A			
UST:		☐ Currently Hold	☐ Need	☒ N/A			
Type of Regulated Waste Activity:		☐ Mixed Waste Generator	☐ Generator	☐ Recycler	☒ Other: _____		
		☐ U.S. Importer of Hazardous Waste	☐ Transporter	☐ Treatment/Storage/Disposal Facility	☐ N/A		

Section AI.2: Applicant Information

Applicant Name: Darling Ingredients Inc.

Title: (if individual) _____

Mailing Address: **Street or P.O. Box:** 3080 Concord Road

City: Russellville **State:** Kentucky **Zip Code:** 42276

Email: (if individual) tim.oconnor@darlingii.com

Phone: (270) 726-7605

Technical Contact

Name: Matthew Smith

Title: Manager of Environmental Affairs

Mailing Address: **Street or P.O. Box:** 4221 Alexandria Pike

City: Cold Spring **State:** Kentucky **Zip Code:** 41076

Email: cteastenv@darlingii.com

Phone: (859) 781-2010

Air Permit Contact for Source

Name: Tim O'Connor

Title: General Manager

Mailing Address: **Street or P.O. Box:** 3080 Concord Road

City: Russellville **State:** Kentucky **Zip Code:** 41076

Email: tim.oconnor@darlingii.com

Phone: (270) 726-7605

Section AI.3: Owner Information☒ **Owner same as applicant****Name:** _____**Title:** _____

Mailing Address: **Street or P.O. Box:** _____

City: _____ **State:** _____ **Zip Code:** _____

Email: _____**Phone:** _____**List names of owners and officers of the company who have an interest in the company of 5% or more.****Name****Position**

The latest annual report for Darling Ingredients Inc. is always

available at www.darlingii.com and lists all major stockholders.

Section AI.4: Type of Application**Current Status:**

☐ Title V ☒ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action:

(check all that apply)

☐ Name Change ☐ Initial Registration ☐ Significant Revision ☐ Administrative Permit Amendment
☒ Renewal Permit ☐ Revised Registration ☐ Minor Revision ☐ Initial Source-wide Operating Permit
☐ 502(b)(10) Change ☐ Extension Request ☐ Addition of New Facility ☐ Portable Plant Relocation Notice
☐ Revision ☐ Off Permit Change ☐ Landfill Alternate Compliance Submittal ☐ Modification of Existing Facilities
☐ Ownership Change ☐ Closure

Requested Status:

☐ Title V ☒ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions?

☒ Yes ☐ No

Pollutant:**Requested Limit:**☐ Particulate Matter

☐ Volatile Organic Compounds (VOC)

☐ Carbon Monoxide

☒ Nitrogen Oxides

90 tpy

☐ Sulfur Dioxide

☐ Lead

Pollutant:**Requested Limit:**☐ Single HAP

☐ Combined HAPs

☐ Air Toxics (40 CFR 68, Subpart F)

☐ Carbon Dioxide

☐ Greenhouse Gases (GHG)

☐ Other

For New Construction:**Proposed Start Date of Construction:**

(MM/YYYY)

Proposed Operation Start-Up Date: (MM/YYYY)

For Modifications:**Proposed Start Date of Modification:**

(MM/YYYY)

Proposed Operation Start-Up Date: (MM/YYYY)

Applicant is seeking coverage under a permit shield.

☐ Yes ☒ No

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- | | |
|--|---|
| ☒ DEP7007A Indirect Heat Exchangers and Turbines | ☐ DEP7007CC Compliance Certification |
| ☒ DEP7007B Manufacturing or Processing Operations | ☒ DEP7007DD Insignificant Activities |
| ☐ DEP7007C Incinerators and Waste Burners | ☒ DEP7007EE Internal Combustion Engines |
| ☐ DEP7007F Episode Standby Plan | ☐ DEP7007FF Secondary Aluminum Processing |
| ☐ DEP7007J Volatile Liquid Storage | ☒ DEP7007GG Control Equipment |
| ☐ DEP7007K Surface Coating or Printing Operations | ☐ DEP7007HH Haul Roads |
| ☐ DEP7007L Mineral Processes | ☐ Confidentiality Claim |
| ☐ DEP7007M Metal Cleaning Degreasers | ☐ Ownership Change Form |
| ☒ DEP7007N Source Emissions Profile | ☐ Secretary of State Certificate |
| ☐ DEP7007P Perchloroethylene Dry Cleaning Systems | ☒ Flowcharts or diagrams depicting process |
| ☐ DEP7007R Emission Offset Credit | ☐ Digital Line Graphs (DLG) files of buldings, roads, etc. |
| ☐ DEP7007S Service Stations | ☐ Site Map |
| ☐ DEP7007T Metal Plating and Surface Treatment Operations | ☐ Map or drawing depicting location of facility |
| ☒ DEP7007V Applicable Requirements and Compliance Activities | ☐ Safety Data Sheet (SDS) |
| ☐ DEP7007Y Good Engineering Practice and Stack Height Determination | ☐ Emergency Response Plan |
| ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units | ☐ Other: _____ |
| ☐ DEP7007BB Certified Progress Report | |

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.



Authorized Signature

Brandon Lachner
Type or Printed Name of Signatory

4/16/26

Date

Regional Vice President
Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Section AL.7: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007A

Indirect Heat Exchangers and Turbines

- ___ Section A.1: General Information
___ Section A.2: Operating and Fuel Information
___ Section A.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N,
DEP7007V, and DEP7007GG.

___ Manufacturer's specifications

Source Name: Darling Ingredients Inc.

KY EIS (AFS) #: 21-141-00026

Permit #: F-21-020

Agency Interest (AI) ID: 2753

Date: 4/16/2026

Section A.1: General Information

Emission Unit #	Emission Unit Name	Process ID	Process Name	Identify General Type: Indirect Heat Exchanger, Gas Turbine, or Combustion Turbine	Indirect Heat Exchanger Configuration	Manufacturer	Model No./Serial No.	Proposed/Actual Date of Construction Commencement (MM/YYYY)	SCC Code	SCC Units	Control Device ID	Stack ID
EU-04	Boiler #3	EU-04	Boiler #3	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10200602	lb/10 ³ cf natural gas burned	NA	EP-04
EU-04	Boiler #3	EU-04	Boiler #3	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10200501	lb/1000 gal	NA	EP-04
EU-04	Boiler #3	EU-04	Boiler #3	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10201303	lb/1000 gal	NA	EP-04
EU-05	Boiler #4	EU-05	Boiler #4	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10200602	lb/10 ³ cf natural gas burned	NA	EP-05
EU-05	Boiler #4	EU-05	Boiler #4	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10200501	lb/1000 gal	NA	EP-05
EU-05	Boiler #4	EU-05	Boiler #4	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10201303	lb/1000 gal	NA	EP-05
EU-06	Boiler #5	EU-06	Boiler #5	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10200602	lb/10 ³ cf natural gas burned	NA	EP-06
EU-06	Boiler #5	EU-06	Boiler #5	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10200501	lb/1000 gal	NA	EP-06
EU-06	Boiler #5	EU-06	Boiler #5	Indirect Heat Exchanger	Firetube	Hurst	S4X-GA2-1200-150	Aug-06	10201303	lb/1000 gal	NA	EP-06

Section A.2: Operating and Fuel Information

Emission Unit #	If multipurpose unit, identify the percentage of use by purpose				Rated Capacity Heat Input (MMBTU/hr)	Rated Capacity Power Output		Describe Operating Scenario (only if this unit will be used in different configurations)	Classify Fuel as Primary or Secondary	Identify Fuel Type: Coal, Natural Gas, Wood, Biomass, Landfill/Digester Gas, Fuel Oil # (specify 1-6), or Other	Heat Content (HHV)		Maximum Operating Hours	Ash Content (%)	Sulfur Content (%)
	Space Heat	Process Heat	Power	Emergency			(Specify units: hp, MW, or lb steam/hr)					(Specify units: Btu/lb, Btu/gal, or Btu/scf)			
EU-04		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Primary	Natural Gas	1000	Btu/scf	8760	0	neg
EU-04		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Secondary	Processed Fats	125900	Btu/gal	8760	0.5	0.00
EU-04		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Secondary	Distillate Fuel Oil	133650	Btu/gal	8760	0.6	0.05
EU-05		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Primary	Natural Gas	1000	Btu/scf	8760	0	neg
EU-05		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Secondary	Processed Fats	125900	Btu/gal	8760	0.5	0.00
EU-05		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Secondary	Distillate Fuel Oil	133650	Btu/gal	8760	0.6	0.05
EU-06		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Primary	Natural Gas	1000	Btu/scf	8760	0	neg
EU-06		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Secondary	Processed Fats	125900	Btu/gal	8760	0.5	0.00
EU-06		100			50.235	1,200	HP	Classified as Natural Gas-Fired Boiler under 40 CFR 63, Subpart JJJJ,	Secondary	Distillate Fuel Oil	133650	Btu/gal	8760	0.6	0.05

Section A.3: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007B

Manufacturing or Processing Operations

- ☐ Section B.1: Process Information
☐ Section B.2: Materials and Fuel Information
☐ Section B.3: Notes, Comments, and Explanations

Additional Documentation

☐ Complete DEP7007AI, DEP7007N,
DEP7007V, and DEP7007GG.

☐ Attach a flow diagram

☐ Attach SDS

Source Name:

Darling Ingredients Inc.

KY EIS (AFS) #:

21- 141-00026

Permit #:

F-21-020

Agency Interest (AI) ID:

2753

Date:

4/16/2026

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement (MM/YYYY)	Is the Process Continuous or Batch?	Number of Batches per 24 Hours (if applicable)	Hours per Batch (if applicable)
EU 07	Rendering Processes	**See Narrative	EU 07	Rendering Processes	Custom designed by Darling Ingredients Inc.	Custom designed by Darling Ingredients Inc.	08/2006	Continuous	NA	NA
EU 07	Finished Product Handling	**See Narrative	EU 07	Finished Product Handling	Custom designed by Darling Ingredients Inc.	Custom designed by Darling Ingredients Inc.	08/2006	Continuous	NA	NA

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input		Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output		Fuel Type	Maximum Hourly Fuel Usage Rate		Maximum Yearly Fuel Usage Rate		Sulfur Content (%)	Ash Content (%)
				(Specify Units/hr)				(Specify Units/hr)			(Specify Units)		(Specify Units)		
EU 07	Rendering Process	Inedible animal by products and restaurant food grease	**See B.3.		**See B.3.	Meat Meal	6.81	tons	NA	NA	NA	NA	NA	NA	NA
EU 07	Rendering Process	Inedible animal by products and restaurant food grease	**See B.3.		**See B.3.	Feather Meal	3.08	tons	NA	NA	NA	NA	NA	NA	NA
EU 07	Rendering Process	Inedible animal by products and restaurant food grease	**See B.3.		**See B.3.	Processed Fats	**See B.3.		NA	NA	NA	NA	NA	NA	NA
EU 07	Finished Product Handling	NA	NA			Meat Meal	100000	lbs	NA	NA	NA	NA	NA	NA	NA

Section B.3: Notes, Comments, and Explanations

Production of finished products (meat meal, feather meal and processed fats) is accomplished by removing moisture from raw materials. Accordingly, raw material moisture content is the "limiting factor" for production. As moisture content varies greatly depending on the raw material being utilized, it is not feasible to set a specific maximum quantity input potential for the raw materials.

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007N

Source Emissions Profile

- ___ Section N.1: Emission Summary
___ Section N.2: Stack Information
___ Section N.3: Fugitive Information
___ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: Darling Ingredients Inc.KY EIS (AFS) #: 21- 141-00026Permit #: F-21-020Agency Interest (AI) ID: 2753Date: 4/16/2026

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units hour)	Pollutant	Uncontrolled Emission Factor (lb SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb hr)	Controlled Potential (lb hr)	Uncontrolled Potential (tons yr)	Controlled Potential (tons yr)
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.050235	PM	7.6	AP-42	0.00%	0.00%	0.38		1.67	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.050235	PM ₁₀	7.6	AP-42	0.00%	0.00%	0.01		0.03	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.050235	PM _{2.5}	7.6	AP-42	0.00%	0.00%	0.01		0.03	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.050235	VOC	5.5	AP-42	0.00%	0.00%	0.003		0.01	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.050235	SO ₂	0.6	AP-42	0.00%	0.00%	0.0002		0.001	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.050235	NO _x	19	AP-42	0.00%	0.00%	0.05		0.22	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.050235	CO	0.6	AP-42	0.00%	0.00%	0.005		0.02	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.375870	PM	2	AP-42	0.00%	0.00%	0.75		3.29	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.375870	PM ₁₀	2.3	AP-42	0.00%	0.00%	0.01		0.06	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.375870	PM _{2.5}	1.55	AP-42	0.00%	0.00%	0.01		0.04	

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units hour)	Pollutant	Uncontrolled Emission Factor (lb SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb hr)	Controlled Potential (lb hr)	Uncontrolled Potential (tons yr)	Controlled Potential (tons yr)
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.375870	VOC	0.2	AP-42	0.00%	0.00%	0.001		0.004	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.375870	SO ₂	7.1**	AP-42	0.00%	0.00%	0.01		0.06	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.375870	NO _x	20	AP-42	0.00%	0.00%	0.40		1.75	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.375870	CO	5	AP-42	0.00%	0.00%	0.30		1.31	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.399007	PM	1.259	Stack Test	0.00%	0.00%	0.50		2.20	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.399007	PM ₁₀	1.259	Stack Test	0.00%	0.00%	0.01		0.03	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.399007	VOC	0	Stack Test	0.00%	0.00%	0.00		0.00	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.399007	SO ₂	0.038	Stack Test	0.00%	0.00%	0.0001		0.0004	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.399007	NO _x	20	Stack Test	0.00%	0.00%	0.42		1.86	
EU04	Boiler #3	EU04	Boiler #3	NA	NA	EP04	0.399007	CO	2.81	Stack Test	0.00%	0.00%	0.18		0.78	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.050235	PM	7.6	AP-42	0.00%	0.00%	0.38		1.67	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.050235	PM ₁₀	7.6	AP-42	0.00%	0.00%	0.01		0.03	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.050235	PM _{2.5}	7.6	AP-42	0.00%	0.00%	0.01		0.03	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.050235	VOC	5.5	AP-42	0.00%	0.00%	0.003		0.01	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.050235	SO ₂	0.6	AP-42	0.00%	0.00%	0.0002		0.001	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.050235	NO _x	19	AP-42	0.00%	0.00%	0.05		0.22	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.050235	CO	0.6	AP-42	0.00%	0.00%	0.005		0.02	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.375870	PM	2	AP-42	0.00%	0.00%	0.75		3.29	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.375870	PM ₁₀	2.3	AP-42	0.00%	0.00%	0.01		0.06	

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units hour)	Pollutant	Uncontrolled Emission Factor (lb SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb hr)	Controlled Potential (lb hr)	Uncontrolled Potential (tons yr)	Controlled Potential (tons yr)
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.375870	PM _{2.5}	1.55	AP-42	0.00%	0.00%	0.01		0.04	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.375870	VOC	0.2	AP-42	0.00%	0.00%	0.001		0.004	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.375870	SO ₂	7.1**	AP-42	0.00%	0.00%	0.01		0.06	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.375870	NO _x	20	AP-42	0.00%	0.00%	0.40		1.75	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.375870	CO	5	AP-42	0.00%	0.00%	0.30		1.31	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.399007	PM	1.259	Stack Test	0.00%	0.00%	0.50		2.20	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.399007	PM ₁₀	1.259	Stack Test	0.00%	0.00%	0.01		0.03	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.399007	VOC	0	Stack Test	0.00%	0.00%	0.00		0.00	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.399007	SO ₂	0.038	Stack Test	0.00%	0.00%	0.0001		0.0004	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.399007	NO _x	20	Stack Test	0.00%	0.00%	0.42		1.86	
EU05	Boiler #4	EU05	Boiler #4	NA	NA	EP05	0.399007	CO	2.81	Stack Test	0.00%	0.00%	0.18		0.78	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.050235	PM	7.6	AP-42	0.00%	0.00%	0.38		1.67	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.050235	PM ₁₀	7.6	AP-42	0.00%	0.00%	0.01		0.03	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.050235	PM _{2.5}	7.6	AP-42	0.00%	0.00%	0.01		0.03	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.050235	VOC	5.5	AP-42	0.00%	0.00%	0.003		0.01	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.050235	SO ₂	0.6	AP-42	0.00%	0.00%	0.0002		0.001	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.050235	NO _x	19	AP-42	0.00%	0.00%	0.05		0.22	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.050235	CO	0.6	AP-42	0.00%	0.00%	0.005		0.02	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.375870	PM	2	AP-42	0.00%	0.00%	0.75		3.29	

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units hour)	Pollutant	Uncontrolled Emission Factor (lb SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.375870	PM ₁₀	2.3	AP-42	0.00%	0.00%	0.01		0.06	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.375870	PM _{2.5}	1.55	AP-42	0.00%	0.00%	0.01		0.04	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.375870	VOC	0.2	AP-42	0.00%	0.00%	0.001		0.004	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.375870	SO ₂	7.1**	AP-42	0.00%	0.00%	0.01		0.06	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.375870	NO _x	20	AP-42	0.00%	0.00%	0.40		1.75	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.375870	CO	5	AP-42	0.00%	0.00%	0.30		1.31	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.399007	PM	1.259	Stack Test	0.00%	0.00%	0.50		2.20	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.399007	PM ₁₀	1.259	Stack Test	0.00%	0.00%	0.01		0.03	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.399007	VOC	0	Stack Test	0.00%	0.00%	0.00		0.00	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.399007	SO ₂	0.038	Stack Test	0.00%	0.00%	0.0001		0.0004	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.399007	NO _x	20	Stack Test	0.00%	0.00%	0.42		1.86	
EU06	Boiler #5	EU06	Boiler #5	NA	NA	EP06	0.399007	CO	2.81	Stack Test	0.00%	0.00%	0.18		0.78	
EU07	Rendering Process Line	EU07	Cooker Line #2	RTO	NA	EP09	4.77	SO ₂	NA	Stack Test	0.00%	0.00%		1.62		7.11
EU07	Rendering Process Line	EU07	Cooker Line #2	RTO	NA	EP09	4.77	PM _{2.5}	NA	Stack Test	0.00%	0.00%		0.33		1.46
EU07	Rendering Process Line	EU07	Cooker Line #2	RTO	NA	EP09	4.77	PM ₁₀	NA	Stack Test	0.00%	0.00%		0.36		1.57
EU07	Rendering Process Line	EU07	Cooker Line #2	RTO	NA	EP09	4.77	PM	NA	Stack Test	0.00%	0.00%		0.36		1.57
EU07	Rendering Process Line	EU07	Cooker Line #2	RTO	NA	EP09	4.77	VOC	NA	Stack Test	0.00%	98.00%		0.84		3.70
EU07	Rendering Process Line	EU07	Cooker Line #3	RTO	NA	EP09	2.04	SO ₂	NA	Stack Test	0.00%	0.00%		0.7		3.05
EU07	Rendering Process Line	EU07	Cooker Line #3	RTO	NA	EP09	2.04	PM _{2.5}	NA	Stack Test	0.00%	0.00%		0.14		0.63

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units hour)	Pollutant	Uncontrolled Emission Factor (lb SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb hr)	Controlled Potential (lb hr)	Uncontrolled Potential (tons yr)	Controlled Potential (tons yr)
EU07	Rendering Process Line	EU07	Cooker Line #3	RTO	NA	EP09	2.04	PM ₁₀	NA	Stack Test	0.00%	0.00%		0.15		0.67
EU07	Rendering Process Line	EU07	Cooker Line #3	RTO	NA	EP09	2.04	PM	NA	Stack Test	0.00%	0.00%		0.15		0.67
EU07	Rendering Process Line	EU07	Cooker Line #3	RTO	NA	EP09	2.04	VOC	NA	Stack Test	0.00%	98.00%		0.36		1.58
EU07	Rendering Process Line	EU07	Feather Line	RTO	NA	EP09	3.08	SO ₂	NA	Stack Test	0.00%	0.00%		5.42		23.74
EU07	Rendering Process Line	EU07	Feather Line	RTO	NA	EP09	3.08	PM _{2.5}	NA	Stack Test	0.00%	0.00%		0.22		0.94
EU07	Rendering Process Line	EU07	Feather Line	RTO	NA	EP09	3.08	PM ₁₀	NA	Stack Test	0.00%	0.00%		0.23		1.01
EU07	Rendering Process Line	EU07	Feather Line	RTO	NA	EP09	3.08	PM	NA	Stack Test	0.00%	0.00%		0.23		1.01
EU07	Rendering Process Line	EU07	Feather Line	RTO	NA	EP09	3.08	VOC	NA	Stack Test	0.00%	98.00%		0.55		2.39
EU07	RTO	EU07	RTO	RTO	NA	EP09	0.004	NO _x	100	AP-42	0.00%	0.00%	0.4		1.75	
EU07	RTO	EU07	RTO	RTO	NA	EP09	0.004	CO	84	AP-42	0.00%	0.00%	0.34		1.47	
EU07	Pneumatic System Baghouse	EU07	Pneumatic System Baghouse	Pneumatic System Baghouse	NA	EP08	11	PM ₁₀	0.025	AP-42	0.00%	90.00%	0.275	0.028	1.20	0.12
EU07	Pneumatic System Baghouse	EU07	Pneumatic System Baghouse	Pneumatic System Baghouse	NA	EP08	11	PM	0.0063	AP-42	0.00%	90.00%	0.069	0.007	0.30	0.03
EU08	Emergency RICE	EU08	Emergency Rice EU08	NA	NA	EP10	0.00013	PM	9.99	AP-42	0.00%	0.00%	0.0013		0.0003*	
EU08	Emergency RICE	EU08	Emergency Rice EU08	NA	NA	EP10	0.00013	PM ₁₀	9.99	AP-42	0.00%	0.00%	0.0013		0.0003*	
EU08	Emergency RICE	EU08	Emergency Rice EU08	NA	NA	EP10	0.00013	VOC	118	AP-42	0.00%	0.00%	0.0153		0.0038*	
EU08	Emergency RICE	EU08	Emergency Rice EU08	NA	NA	EP10	0.00013	SO ₂	0.6	AP-42	0.00%	0.00%	0.0001		0.00002*	
EU08	Emergency RICE	EU08	Emergency Rice EU08	NA	NA	EP10	0.00013	NO _x	4080	AP-42	0.00%	0.00%	0.5304		0.1326*	

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units hour)	Pollutant	Uncontrolled Emission Factor (lb SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
EU08	Emergency RICE	EU08	Emergency Rice EU08	NA	NA	EP10	0.00013	CO	317	AP-42	0.00%	0.00%	0.0412		0.0103*	
* S=0.05													*Based on 500 hours of operation			

Section N.2: Stack Information**UTM Zone:**

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter (ft)	Height (ft)	Base Elevation (ft)	Northing (m)	Easting (m)	Flowrate (acfm)	Temperature (° F)	Exit Velocity (ft/sec)
EP04	EU04 (Boiler #3)	2.66	32		16S 4083995.84	511024.65	19,640	350-410	58.6
EP05	EU05 (Boiler #4)	2.66	32		16S 4083995.84	511024.65	19,640	350-410	58.6
EP06	EU06 (Boiler #5)	2.66	32		16S 4083995.84	511024.65	19,640	350-410	58.6
EP07	EU07 (Rendering Process #2 and #3, Feather Process, and Finished Product Handling), Venturi scrubber, and packed tower scrubber	52	5.5		16S 4083995.84	511024.65	100,000	Ambient	70.15
EP08	Pneumatic Transfer Baghouse	72	0.583x0.583		16S 4083995.84	511024.65	950	Ambient	46.59
EP09	EU07 (Rendering Process #2 and #3, Feather Process, and Finished Product Handling), Venturi scrubber, and packed tower scrubber	3	75		16S 4083995.84	511024.65	15,000	230	35
EP10	EU08 (Emergency RICE)	0.02	4		16S 4083995.84	511024.65	300	1075	102

Section N.3: Fugitive Information**UTM Zone:**

Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side (ft)	Length of the Y Side (ft)	Northing (m)	Easting (m)	Release Temperature (°F)	Release Height (ft)
NA								

Section N.4: Notes, Comments, and Explanations

NA

<div style="text-align: center;"> Division for Air Quality 300 Sower Boulevard Frankfort, KY 40601 (502) 564-3999 </div>	DEP7007V Applicable Requirements and Compliance Activities ☐ Section V.1: Emission and Operating Limitation(s) ☐ Section V.2: Monitoring Requirements ☐ Section V.3: Recordkeeping Requirements ☐ Section V.4: Reporting Requirements ☐ Section V.5: Testing Requirements ☐ Section V.6: Notes, Comments, and Explanations	<div style="border: 1px solid black; padding: 5px;"> Additional Documentation ☐ Complete DEP7007AI </div>
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Source Name: Darling Ingredients Inc.

KY EIS (AFS) #: 21- 141-00026

Permit #: F-21-020

Agency Interest (AI) ID: 2753

Date: 4/16/2026

Section V.1: Emission and Operating Limitation(s)							
Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
EU04	Boiler #3	402 KAR 60:005, Section 2(2)(d) (Subpart Dc)	SO ₂	NA	NA	NA	Monitoring/Recordkeeping/Reporting Requirements in current Permit
EU04	Boiler #3	402 KAR 52:030	SO ₂	NA	Low Sulfur Diesel sulfur content ≤ 0.05 weight %	Low Sulfur Diesel sulfur content ≤ 0.05% weight	Fuel supplier certification
EU04	Boiler #3	40 CFR 63, Subpart JJJJ	NA	NA	Use of liquid fuels restricted to times of natural gas curtailment, gas supply interruption, startups, or periodic testing	Unit classified as natural gas-fired boiler & exempt from requirements	Maintain records of time periods when & reason why liquid fuel is fired

EU04	Boiler #3	40 CFR 60.42c(d)	SO ₂	0.50 lb/MMBtu when burning liquid fuels	NA	NA	Sulfur concentration (ppm) and heat content testing, fuel supplier certification,
EU04	Boiler #3	401 KAR 59:015, Section 5(1)(c)(2)	SO ₂	0.76 lb/MMBtu when burning natural gas	NA	NA	Compliance is assumed while burning natural gas
EU04	Boiler #3	40 CFR 60.43c	PM	NA	NA	Low Sulfur Diesel sulfur content $\leq$ 0.5 weight %, or mixture of 0.5 weight % with other fuels	Sulfur concentration (ppm) and heat content testing, fuel supplier certification,
EU04	Boiler #3	401 KAR 59:015, Section 4	PM	0.26 lb/MMBtu based on 3-hr avg	NA	NA	Compliance is assumed while burning natural gas, low sulfur diesel, or processed fats
EU04	Boiler #3	401 KAR 59:015, Section 4(2)(b) and (c)	Opacity	20%	NA	NA	Compliance is assumed while burning natural gas; Weekly Method 22 observation while burning processed fats
EU04	Boiler #3	40 CFR 60.43c(c)	Opacity	20%, except one 6-min period per hour of not more than 27%	NA	NA	Method 9 observation
EU05	Boiler #4	402 KAR 60:005, Section 2(2)(d) (Subpart Dc)	SO ₂	NA	NA	NA	Monitoring/Recordkeeping/Reporting Requirements in current Permit
EU05	Boiler #4	402 KAR 52:030	SO ₂	NA	Low Sulfur Diesel sulfur content $\leq$ 0.05 weight %	Low Sulfur Diesel sulfur content $\leq$ 0.05% weight	Fuel supplier certification
EU05	Boiler #4	40 CFR 63, Subpart JJJJ	NA	NA	Use of liquid fuels restricted to times of natural gas curtailment, gas supply interruption, startups, or periodic testing	Unit classified as natural gas-fired boiler & exempt from requirements	Maintain records of time periods when & reason why liquid fuel is fired
EU05	Boiler #4	40 CFR 60.42c(d)	SO ₂	0.50 lb/MMBtu when burning liquid fuels	NA	NA	Sulfur concentration (ppm) and heat content testing, fuel supplier certification,

EU05	Boiler #4	401 KAR 59:015, Section 5(1)(c)(2)	SO ₂	0.76 lb/MMBtu when burning natural gas	NA	NA	Compliance is assumed while burning natural gas
EU05	Boiler #4	40 CFR 60.43c	PM	NA	NA	Low Sulfur Diesel sulfur content $\leq$ 0.5 weight %, or mixture of 0.5 weight % with other fuels	Sulfur concentration (ppm) and heat content testing, fuel supplier certification,
EU05	Boiler #4	401 KAR 59:015, Section 4	PM	0.26 lb/MMBtu based on 3-hr avg	NA	NA	Compliance is assumed while burning natural gas, low sulfur diesel, or processed fats
EU05	Boiler #4	401 KAR 59:015, Section 4(2)(b) and (c)	Opacity	20%	NA	NA	Compliance is assumed while burning natural gas; Weekly Method 22 observation while burning processed fats
EU05	Boiler #4	40 CFR 60.43c(c)	Opacity	20%, except one 6-min period per hour of not more than 27%	NA	NA	Method 9 observation
EU06	Boiler #5	402 KAR 60:005, Section 2(2)(d) (Subpart Dc)	SO ₂	NA	NA	NA	Monitoring/Recordkeeping/Reporting Requirements in current Permit
EU06	Boiler #5	402 KAR 52:030	SO ₂	NA	Low Sulfur Diesel sulfur content $\leq$ 0.05 weight %	Low Sulfur Diesel sulfur content $\leq$ 0.05% weight	Fuel supplier certification
EU06	Boiler #5	40 CFR 63, Subpart JJJJ	NA	NA	Use of liquid fuels restricted to times of natural gas curtailment, gas supply interruption, startups, or periodic testing	Unit classified as natural gas-fired boiler & exempt from requirements	Maintain records of time periods when & reason why liquid fuel is fired
EU06	Boiler #5	40 CFR 60.42c(d)	SO ₂	0.50 lb/MMBtu when burning liquid fuels	NA	NA	Sulfur concentration (ppm) and heat content testing, fuel supplier certification,
EU06	Boiler #5	401 KAR 59:015, Section 5(1)(c)(2)	SO ₂	0.76 lb/MMBtu when burning natural gas	NA	NA	Compliance is assumed while burning natural gas

EU06	Boiler #5	40 CFR 60.43c	PM	NA	NA	Low Sulfur Diesel sulfur content $\leq$ 0.5 weight %, or mixture of 0.5 weight % with other fuels	Sulfur concentration (ppm) and heat content testing, fuel supplier certification,
EU06	Boiler #5	401 KAR 59:015, Section 4	PM	0.26 lb/MMBtu based on 3-hr avg	NA	NA	Compliance is assumed while burning natural gas, low sulfur diesel, or processed fats
EU06	Boiler #5	401 KAR 59:015, Section 4(2)(b) and (c)	Opacity	20%	NA	NA	Compliance is assumed while burning natural gas; Weekly Method 22 observation while burning processed fats
EU06	Boiler #5	40 CFR 60.43c(c)	Opacity	20%, except one 6-min period per hour of not more than 27%	NA	NA	Method 9 observation
EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	401 KAR 59:010, Section 3(1)	Opacity	20% based on 6-min avg	NA	NA	None
EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	401 KAR 59:010, Section 3(2)	PM	2.34 lb/hr when operating at 1,000 lbs/hr or less	NA	NA	Compliance demonstrated by operation of scrubber system at all times
EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	401 KAR 53:010	Odor	Detectable odor when 1 unit of ambient air mixed with 7 units of odorless air	NA	NA	None

EU08	Emergency RICE	40 CFR 60, Subpart JJJJ	NA	NA	NA	Operate for maintenance and or testing less than 100 hours per year	Monitor monthly hours of operation
EU08	Emergency RICE	40 CFR 60, Subpart JJJJ	NA	NA	NA	Operate in non-emergency situations up to 50 hours per year	Monitor monthly hours of operation
EU08	Emergency RICE	40 CFR 60, Subpart JJJJ	NO _x + HC = 10 g/HP-hr; CO= 387g/HP-hr	NA	NA	NA	Purchase an engine certified according to procedures specified in 40 CFR 60, Subpart JJJJ, or conduct testing.
EU08	Emergency RICE	40 CFR 63, Subpart ZZZZ	NA	NA	NA	NA	Meet requirements of 40 CFR 60, Subpart JJJJ
Facility wide	Facility wide	401 KAR 52:020	NO _x	90 tpy	90 tpy	Monitor fuel usage	Calculate monthly and 12-month rolling emissions

Section V.2: Monitoring Requirements					
Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
EU04	Boiler #3	SO ₂	401 KAR 52:030, Section 10	Sulfur (weight percent) and heat content (MMBtu/hr)	Each shipment received of low sulfur diesel. May also use fuel supplier certification
EU04	Boiler #3	SO ₂	401 KAR 52:030, Section 10	Sulfur (weight percent) and heat content (MMBtu/hr)	Once every 12 months monitoring of processed fats, if burned.
EU04	Boiler #3	NO _x	401 KAR 52:030, Section 10	Fuel Usage	Monthly type and amount of fuel usage
EU04	Boiler #3	Opacity	401 KAR 52:030, Section 10	Opacity	Weekly Method 22 observation when burning processed fats. If VE observed, opacity should be determined by Method 9 observation.
EU05	Boiler #4	SO ₂	401 KAR 52:030, Section 10	Sulfur (weight percent) and heat content (MMBtu/hr)	Each shipment received of low sulfur diesel. May also use fuel supplier certification
EU05	Boiler #4	SO ₂	401 KAR 52:030, Section 10	Sulfur (weight percent) and heat content (MMBtu/hr)	Once every 12 months monitoring of processed fats, if burned.
EU05	Boiler #4	NO _x	401 KAR 52:030, Section 10	Fuel Usage	Monthly type and amount of fuel usage
EU05	Boiler #4	Opacity	401 KAR 52:030, Section 10	Opacity	Weekly Method 22 observation when burning processed fats. If VE observed, opacity should be determined by Method 9 observation.
EU06	Boiler #5	SO ₂	401 KAR 52:030, Section 10	Sulfur (weight percent) and heat content (MMBtu/hr)	Each shipment received of low sulfur diesel. May also use fuel supplier certification
EU06	Boiler #5	SO ₂	401 KAR 52:030, Section 10	Sulfur (weight percent) and heat content (MMBtu/hr)	Once every 12 months monitoring of processed fats, if burned.

EU06	Boiler #5	NOx	401 KAR 52:030, Section 10	Fuel Usage	Monthly type and amount of fuel usage
EU06	Boiler #5	Opacity	401 KAR 52:030, Section 10	Opacity	Weekly Method 22 observation when burning processed fats. If VE observed, opacity should be determined by Method 9 observation.
EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	NA	401 KAR 52:030, Section 10	Hours of operation and amount of materials processed	Monthly hours of operation and amount of materials processed
EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	NOx	401 KAR 52:030, Section 10	Fuel Usage	Monthly RTO fuel usage
EU08	Emergency RICE	NA	40 CFR 63.6625(f)	Non-resettable hour meter	Install a non-resettable hour meter by installation date.
EU08	Emergency RICE	NOx	401 KAR 52:030, Section 10	Fuel Usage	Monthly fuel usage
EU08	Emergency RICE	NA	401 KAR 52:030, Section 10	Hours of operation	Monthly hours of operation

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
EU04	Boiler #3	Opacity	40 CFR 60.48c(c), and 401 KAR 52:030, Section 10	Opacity	Method 9 and Method 22 observations while burning liquid fuels
EU04	Boiler #3	NOx	401 KAR 52:030, Section 10	Fuel Usage	Monthly type and amount of fuel usage
EU04	Boiler #3	PM, NOx, SO ₂	40 CFR 60.48c(i)	NA	Maintain records as required by Permit
EU05	Boiler #4	Opacity	40 CFR 60.48c(c), and 401 KAR 52:030, Section 10	Opacity	Method 9 and Method 22 observations while burning liquid fuels
EU05	Boiler #4	NOx	401 KAR 52:030, Section 10	Fuel Usage	Monthly type and amount of fuel usage
EU05	Boiler #4	PM, NOx, SO ₂	40 CFR 60.48c(i)	NA	Maintain records as required by Permit
EU06	Boiler #5	Opacity	40 CFR 60.48c(c), and 401 KAR 52:030, Section 10	Opacity	Method 9 and Method 22 observations while burning liquid fuels
EU06	Boiler #5	NOx	401 KAR 52:030, Section 10	Fuel Usage	Monthly type and amount of fuel usage
EU06	Boiler #5	PM, NOx, SO ₂	40 CFR 60.48c(i)	NA	Maintain records as required by Permit
EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	NA	401 KAR 52:030, Section 10	Hours of operation and amount of materials processed	Monthly hours of operation and amount of materials processed

EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	NA	401 KAR 52:030, Section 10	Maintenance records	Maintain records of the maintenance conducted on the scrubbers.
EU07	Rendering Process #2 and #3, Feather Process, and Finished Product Handling	NOx	401 KAR 52:030, Section 10	Fuel Usage	Monthly RTO fuel usage
EU08	Emergency RICE	NOx	401 KAR 52:040, Section 10	Fuel Usage	Monthly fuel usage
EU08	Emergency RICE	NA	401 KAR 52:040, Section 10	Hours of operation	Monthly hours of operation
EU08	Emergency RICE	NA	40 CFR 60.4243(b)(2)(ii), 40 CFR 60.4245(a)(2)	Maintenance plan and records	Maintain records of the maintenance conducted on the engine.
EU08	Emergency RICE	NA	40 CFR 60.4245(a)(1)	Notifications	Maintain records of the notifications submitted to comply with the engine's requirements.
EU08	Emergency RICE	NA	40 CFR 60.4243(a)(3)	Engine Certification	If the engine is certified, maintain manufacturer documentation that the engine is certified to meet emission standards and information required in 40 CFR parts 90, 1048, and 1060, as applicable.
EU08	Emergency RICE	NA	40 CFR 60.4243(a)(4)	Engine Certification	If the engine is not certified or is a certified engine operation in a non-certified manner, maintain documentation that the engine meets emission standards.
EU08	Emergency RICE	NA	40 CFR 60.4245(b)	Hours of operation	If not certified to the standards applicable to non-emergency engines, maintain records of the hours of operation spent in emergency and non-emergency situations.
Facility Wide	Facility Wide	NOx	401 KAR 52:030, Section 10	NOx emissions	Calculate monthly facility wide NOx emissions

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
EU04	Boiler #3	NA	401 KAR 52:030, Section 10	Opacity, SO ₂ , PM, NO _x	Excess emissions
EU05	Boiler #4	NA	401 KAR 52:030, Section 10	Opacity, SO ₂ , PM, NO _x	Excess emissions
EU06	Boiler #5	NA	401 KAR 52:030, Section 10	Opacity, SO ₂ , PM, NO _x	Excess emissions
EU08	Emergency RICE	NA	40 CFR 60.6640(b)	Deviation of operational limitation	Each instance in which operating limitation have not been met.
Facility wide	Facility wide	NA	401 KAR 52:030, Section 26	NA	Semi-Annual Reports due by January 30th and July 30th for the previous 6-month monitoring period.
Facility wide	Facility wide	NA	401 KAR 52:030, Section 21	NA	Annual Compliance Certification due by January 30th for the previous 12-month monitoring period.
Facility wide	Facility wide	All	401KAR 52:030, Section 3(1)(d)	Total fuel usage and amount of materials processed	Information necessary to determine previous 12-month monitoring period facility wide emissions.

Section V.5: Testing Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
EU04	Boiler #3	NO _x	401 KAR 50:045	Stack emissions	Method 7 performance test within 6 months of burning processed fats or low sulfur diesel
EU04	Boiler #3	SO ₂	401 KAR 50:055, 40 CFR 60.44c(g) and 40 CFR 60.46c(d)(2)	Sulfur (weight percent) and heat content (MMBtu/hr)	Each shipment received of low sulfur diesel. May also use fuel supplier certification
EU04	Boiler #3	SO ₂	401 KAR 50:055	Sulfur (weight percent) and heat content (MMBtu/hr)	Once every 12 months monitoring of processed fats, if burned.
EU05	Boiler #4	NO _x	401 KAR 50:045	Stack emissions	Method 7 performance test within 6 months of burning processed fats or low sulfur diesel
EU05	Boiler #4	SO ₂	401 KAR 50:055, 40 CFR 60.44c(g) and 40 CFR 60.46c(d)(2)	Sulfur (weight percent) and heat content (MMBtu/hr)	Each shipment received of low sulfur diesel. May also use fuel supplier certification
EU05	Boiler #4	SO ₂	401 KAR 50:055	Sulfur (weight percent) and heat content (MMBtu/hr)	Once every 12 months monitoring of processed fats, if burned.
EU06	Boiler #5	NO _x	401 KAR 50:045	Stack emissions	Method 7 performance test within 6 months of burning processed fats or low sulfur diesel
EU06	Boiler #5	SO ₂	401 KAR 50:055, 40 CFR 60.44c(g) and 40 CFR 60.46c(d)(2)	Sulfur (weight percent) and heat content (MMBtu/hr)	Each shipment received of low sulfur diesel. May also use fuel supplier certification
EU06	Boiler #5	SO ₂	401 KAR 50:055	Sulfur (weight percent) and heat content (MMBtu/hr)	Once every 12 months monitoring of processed fats, if burned.

Section V.6: Notes, Comments, and Explanations	
	NA

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007DD

Insignificant Activities

___ Section DD.1: Table of Insignificant Activities

___ Section DD.2: Signature Block

___ Section DD.3: Notes, Comments, and Explanations

Source Name:

Darling Ingredients Inc.

KY EIS (AFS) #:

21- 141-00026

Permit #:

F-21-020

Agency Interest (AI) ID:

2753

Date:

4/16/2026

Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3... etc.

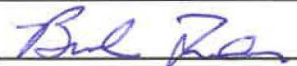
Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
1	Storage vessels associated with fuel oil storage and vehicle refilling operations	NA	NA	0
2	Storage vessels containing inorganic acids with boiling points below the maximum temperature at atmospheric temperature.	NA	NA	0
3	Wastewater treatment activities less than 1 percent oil and grease content.	NA	NA	0
4	Laboratory fume hood and vents used exclusively for chemical or physical analysis.	NA	NA	0
5	Degreaser operations (parts washer used in routine maintenance) which do not exceed 145 gallons per month.	NA	NA	0

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
6	Boiler and cooling tower blow down	NA	NA	0
7	#2 oil fired space heater rated < 2 mmBtu/hr	NA	NA	<5 tons/yr
8	Paved haul roads and parking lots	NA	401 KAR 63:010	0
9	Cooling Tower	NA	401 KAR 59:010	NA
10	Storage Silo Vents Baghouse	NA	401 KAR 63:010	Included in emissions calculations
11	Finished product load out	NA	401 KAR 63:010	Included in emissions calculations

Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

By:


 Authorized Signature

Brandon Lachner

Type/Print Name of Signatory

4/16/26

Date

Regional Vice President

Title of Signatory

Section DD.3: Notes, Comments, and Explanations

NA

<p style="text-align: center;">Division for Air Quality</p> <p style="text-align: center;">300 Sower Boulevard Frankfort, KY 40601 (502) 564-3999</p>	<h2 style="margin: 0;">DEP7007EE</h2> <h3 style="margin: 5px 0;">Internal Combustion Engines</h3> <p>___ Section EE.1: General Information</p> <p>___ Section EE.2: Operating Information</p> <p>___ Section EE.3: Design Information</p> <p>___ Section EE.4: Fuel Information</p> <p>___ Section EE.5: Emission Factor Information</p> <p>___ Section EE.6: Notes, Comments, and Explanations</p>	<p style="text-align: center;">Additional Documentation</p> <p>___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG</p> <p>___ Attach EPA certification of the engine</p>
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Source Name:	<u>Darling Ingredients Inc.</u>
KY EIS (AFS) #:	<u>21- 141-00026</u>
Permit #:	<u>F-21-020</u>
Agency Interest (AI) ID:	<u>2753</u>
Date:	<u>4/16/2026</u>

Section EE.1: General Information										
Emission Unit #	Emission Unit Name	Control Device ID	Stack ID	Manufacturer	Model Number	Model Year	Date of Manufacture	Proposed/Actual Date of Construction Commencement (MM/YYYY)	Date Reconstructed/Modified	List Applicable Regulations
EU08	Emergency RICE	NA	EP10	Generac	EGENX32KNAN	2017	1/31/2017	04/2020	NA	40 CFR 60, Subpart JJJJ; 40 CFR 63, Subpart ZZZZ

Section EE.2: Operating Information

Emission Unit #	Engine Purpose (Identify if Non-Emergency, Emergency, Fire/Water Pump, Black-start engine for combustion turbine, Engine Testing)	Hours Operated	Is this engine a rental? <i>(Yes/No)</i>	Rental Time Period <i>(hrs)</i>	Alternate Operating Scenarios (Describe any operating scenarios in which the engine may be used in a different configuration)
EU08	Emergency	500 maximum	No	NA	NA

Section EE.3: Design Information

Emission Unit #	Engine Type (Identify all that apply: Commercial, Institutional, Stationary, Non-Road)	Ignition Type (Identify if either Compression or Spark Ignition)	Engine Family (Identify all that apply: 2-stroke, 4-stroke, Rich Burn, Lean Burn)	Maximum Engine Power (bhp)	Maximum Engine Speed (rpm)	Total Displacement (L)	Number of Cylinders
EU08	Stationary	Spark Ignition	4-Stroke	132	1800	2.4	4

Section EE.4: Fuel Information

Emission Unit #	Identify if Primary, Secondary, or Tertiary Fuel	Fuel Type (Identify if Diesel, Gasoline, Natural Gas, Liquefied Petroleum Gas (LPG), Landfill/Digester Gas, or Other)	Fuel Grade	Percent Time Used (%)	Maximum Fuel Consumption	Heat Content	Sulfur Content (%)	SCC Code	SCC Units
EU08	Primary	Natural Gas	NA	100%	375 cf/hr	1000 BTU/cf	0	20100207	10 ⁶ cf natural gas burned

Section EE.5: Emission Factor Information

Emission factors expressed here are based on the potential to emit.

Emission Unit #	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
EU08	Natural Gas	VOC	1.18E-01	lb/mmBtu	AP-42 Chapter 3.2 - Table 3.2-2
EU08	Natural Gas	SO ₂	5.88E-04	lb/mmBtu	AP-42 Chapter 3.2 - Table 3.2-2
EU08	Natural Gas	NO _x	4.08	lb/mmBtu	AP-42 Chapter 3.2 - Table 3.2-2
EU08	Natural Gas	CO	3.17E-01	lb/mmBtu	AP-42 Chapter 3.2 - Table 3.2-2
EU08	Natural Gas	PM ₁₀	9.99E-03	lb/mmBtu	AP-42 Chapter 3.2 - Table 3.2-2
EU08	Natural Gas	PM	9.99E-03	lb/mmBtu	AP-42 Chapter 3.2 - Table 3.2-2

Section EE.6: Notes, Comments, and Explanations	
	NA

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007GG

Control Equipment

Additional Documentation

- ___ Complete Sections GG.1 through GG.12, as applicable
- ___ Attach manufacturer's specifications for each control device
- ___ Complete DEP7007AI

Source Name: Darling Ingredients Inc.KY EIS (AFS) #: 21- 141-00026Permit #: F-21-020Agency Interest (AI) ID: 2753Date: 4/16/2026

Section GG.1: General Information - Control Equipment

Control Device ID #	Control Device Name	Cost	Manufacturer	Model Name/ Serial #	Date Installed	Inlet Gas Stream Data For <u>All</u> Control Devices					Inlet Gas Stream Data For Condensers, Adsorbers, Afterburners, Incinerators, Oxidizers <u>Only</u>			Equipment Operational Data For <u>All</u> Control Devices		
						Temperature (^o F)	Flowrate (scfm @ 68 ^o F)	Average Particle Diameter (μm)	Particle Density (lb/ft ³) or Specific Gravity	Gas Density (lb/ft ³)	Gas Moisture Content (%)	Gas Composition	Fan Type	Pressure Drop Range (in. H ₂ O)	Pollutants Collected/ Controlled	Pollutant Removal (%)
NA	RTO	1,000,000	Combustion Controls Solutions	CCSWS-2014019	4/24/2020	135	15,000	<10	Unknown	Unknown	10	Unknown	Centrifugal	5	H2S / VOC / PM	100% / 95% / 85%
NA	Venturi	Unknown	AC Corporation	VS-12	8/1/2006	130	10,080	Unknown	Unknown	0.063	NA	NA	NA	6.0-9.0	PM / Odors	Unknown
NA	Packed Tower	Unknown	AC Corporation	MEF-PT-12	8/1/2006	130	10,080	Unknown	Unknown	0.063	NA	NA	NA	2.0-5.0	Odors	Unknown
NA	Room Air	Unknown	AC Corporation	RDS 100	8/1/2006	130	100,000	Unknown	Unknown	0.067	NA	NA	NA	2.0-3.0	Odors	Unknown

Section GG.2: Flare Source Information

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Flare	Type of Flare (e.g. steam-assisted, air- assisted, nonassisted)	Process Gas Flowrate (<i>acfm</i>)	Net Heating Value of Stream(s) (Btu/scf)	Removal Efficiency (%)	Flare Rated Capacity (MMBtu/hr)
NA						

Section GG.3: Cyclone

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Cyclone	Identify Number of Cyclones: Single <u>or</u> Multiple	Identify Type: High-Efficiency, Conventional, <u>or</u> High-Throughput	Inlet Height (ft)	Inlet Width (ft)	Bottom Cone Height (ft)	Body Height (ft)	Body Diameter (ft)	Dust Outlet Tube Diameter (ft)	Gas Outlet Tube Diameter (ft)	Vortex Finder Height (ft)
NA											

Section GG.4: Electrostatic Precipitator (ESP)

Control Device ID #	Identify all Emission Units and Control Devices that Feed to ESP	Identify Type: Dry negative corona, Wet negative corona or Wet positive corona	Number of Stages	Number of Plates per Stage	Plate Spacing (in)	ESP Total Width (ft)	ESP Total Height (ft)	Collection Plate Height (ft)	Length of Collection Plate (ft)	Particle Migration (Drift) Velocity (specify units)	Particle Resistivity (specify units)	Primary and Secondary Voltage Across Plates (volts)	Primary and Secondary Current (amperes)
NA													

Section GG.5: Scrubber																		
Control Device ID #	Identify all Emission Units and Control Devices that Feed to Scrubber	Identify Type of Scrubber: Venturi, Packed Bed, Spray Tower, or Other (specify)	For Venturi Scrubbers:	For Packed Bed Scrubbers:		For Spray Towers:		Identify Type of Flow: Concurrent, Countercurrent, or Crossflow	Length in Direction of Gas Flow (ft)	Cross-Sectional Area (ft ²)	Venturi Throat Velocity (ft/s)	Mist Eliminator			Scrubbing Liquid			
			Identify Throat Type: Fixed or Adjustable	Identify Packing Type	Packing Height (in)	Number of Nozzles	Nozzle Pressure (psig)					Identify Type: Mesh or Vane	Cross-Sectional Area (ft ²)	Pressure Drop (in. H ₂ O)	Chemical Composition	Flowrate (gal/min)	Fresh Liquid Makeup Rate (gal/min)	Describe Disposal Method of Scrubber Effluent
NA	EU 07	Venturi	Fixed	NA	NA	NA	NA	Concurrent	1.167	1.07	185	NA	NA	NA	Water	60	8-10	On-site Wastewater Lagoons
NA	EU 07, Venturi Scrubber	Packed Bed	NA	PolyPro	120	1	3	Countercurrent	10	23.75	NA	PolyPro Chevron	23.75	0.5-1.5	Water with Sodium Hypochlorite or Caustic	120	8-15	On-site Wastewater Lagoons
NA	EU 07, Venturi scrubber, and packed tower scrubber	Cross Flow	NA	NA	NA	720	14-16	Crossflow	33.33	49	NA	(2) Chevron Type	49	0.5-1.5	Water with Sodium Hypochlorite or Caustic	700	Unknown	On-site Wastewater Lagoons

Section GG.6: Filter														
Control Device ID #	Identify all Emission Units and Control Devices that Feed to Filter	Identify Type of Filter Unit: Baghouse, Cartridge Collector, or Other (specify)	Identify Type of Filtering Material: Fabric, Paper, Synthetic, or Other (specify)	Total Filter Area (ft ²)	Effective Air-to-Filter Ratio (acfm/ft ²)	Continuous Monitoring Instrumentation (e.g. COMS, BLDS, none)	Additional Materials Introduced into the Control System (e.g. lime, carbon)		Identify Cleaning Method: Shaker, Pulse Air, Reverse Air, Pulse Jet, or Other (specify)	Identify Gas Cooling Method: Ductwork, Heat Exchanger, Bleed-in Air, Water Spray, or Other (specify)	For Ductwork:		For Bleed-in Air:	For Water Spray:
							Material	Injection Rate (lb/hr)			Length (ft)	Diameter (ft)	Flowrate (scfm @ 68°F)	Flowrate (gal/min)
Baghouse	EU 07	Baghouse												

Section GG.7: Afterburner/Incinerator/Oxidizer

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Afterburner/Incinerator/Oxidizer	Identify Type: Afterburner, Incinerator, Oxidizer, or Other (specify)	Number of Burners	Burner Rating (BTU/hr)	Dimensions of Combustion Chamber (specify units)	Residence Time (sec)	Combustion Chamber Temperature (°F)	Type of Catalyst (if applicable)	Type of Heat Exchanger (if applicable)	Auxiliary Fuel							Composition and Quantities of Combusted Waste
										Identify Fuel Type	Higher Heating Value (MMBtu scf)	Hourly Fuel Usage (scf/hr)	% Sulfur (Maximum)	% Sulfur (Average)	% Ash (Maximum)	% Ash (Average)	
RTO	EU 07, Venturi scrubber, and packed tower scrubber	Regenerative Thermal Oxidizer	1	4,000,000	26' x 5'	4	1,100	NA	NA	Natural gas	0.001	4,000	0	0	0	0	NA

Section GG.8: Adsorber

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Adsorber	Identify Adsorbate	Identify Adsorbent: Activated carbon, Activated alumina, Silica Gel, Synthetic Polymers, Zeolite, or Other (specify)	Dimensions of Each Bed				Type of Regeneration: Replacement, Steam, or Other (specify)	Regeneration Time (minutes)	Method of Regeneration: Alternate Use of Beds, Source Shutdown, or Other (specify)	Time On-line Before Regeneration (minutes)
				Thickness in Direction of Gas Flow (in)	Cross-Sectional Area (in ²)	Weight of Adsorbent per Bed (lb)	Number of Beds				
NA											

Section GG.9: Condenser

[illegible]

Section GG.10: Selective Catalytic Reduction (SCR) / Selective Non-catalytic Reduction (SNCR)

Control Device ID #	Identify all Emission Units and Control Devices that Feed to SCR/SNCR	Type (SCR/SNCR)	Gas Composition	Injection Grid Design (e.g. honeycomb)	Design Temperature Range		Reagent			Maximum Design Ammonia Slip (ppm)	SCR Only			
					Min (°F)	Max (°F)	Type	Injection Rate			Catalyst			
								Min (lb/hr)	Max (lb/hr)		Composition	Volume (ft ³)	Weight (lb)	Replacement Schedule
NA														

Section GG.11: Other Control Equipment

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Control Equipment	Type of Control Equipment (provide description and a diagram with dimensions)
NA		

Section GG.12: Notes, Comments, and Explanations	
	NA

DARLING INGREDIENTS INC.
APPLICATION TO RENEW
CONDITIONAL MAJOR OPERATING PERMIT
RUSSELLVILLE, KENTUCKY
APPENDIX A
AIR TOXIC EMISSIONS CALCULATIONS

Russellville, Kentucky Air Toxic Emissions Calculations

154,705,000 = rated heat input of natural gas-fired units in Btu/hr
1,000 = heat content of Natural Gas (Btu/scf)
133,650 = heat content of LSD fuel oil (Btu/gal)
100,000 = rated heat input of natural gas-fired units in Btu/hr

Pollutant	Natural Gas			
	Emission Factor* (lbs/10 ⁴ scf)	Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (tpy)
2-Methylnaphthalene	2.40E-05	2.40E-08	3.71E-06	1.63E-05
3-Methylchloranthrene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
7,12-Dimethylbenz(a)anthracene	1.60E-05	1.60E-08	2.48E-06	1.08E-05
Acenaphthene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
Acenaphthylene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
Anthracene	2.40E-06	2.40E-09	3.71E-07	1.63E-06
Arsenic	2.00E-04	2.00E-07	3.09E-05	1.36E-04
Barium	4.40E-03	4.40E-06	6.81E-04	2.98E-03
Benz(a)anthracene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
Benzene	2.10E-03	2.10E-06	3.25E-04	1.42E-03
Benzo(a)pyrene	1.20E-06	1.20E-09	1.86E-07	8.13E-07
Benzo(b)fluoranthene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
Benzo(g,h,i)perylene	1.20E-06	1.20E-09	1.86E-07	8.13E-07
Benzo(k)fluoranthene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
Beryllium	1.20E-05	1.20E-08	1.86E-06	8.13E-06
Butane	2.10E+00	2.10E-03	3.25E-01	1.42E+00
Cadmium	1.10E-03	1.10E-06	1.70E-04	7.45E-04
Chromium	1.40E-03	1.40E-06	2.17E-04	9.49E-04
Chrysene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
Cobalt	8.40E-05	8.40E-08	1.30E-05	5.69E-05
Copper	8.50E-04	8.50E-07	1.31E-04	5.76E-04
Dibenzo(a,h)anthracene	1.20E-05	1.20E-08	1.86E-06	8.13E-06
Dichlorobenzene	1.20E-03	1.20E-06	1.86E-04	8.13E-04
Ethane	3.10E+00	3.10E-03	4.80E-01	2.10E+00
Fluoranthene	3.00E-06	3.00E-09	4.64E-07	2.03E-06
Fluorene	2.80E-06	2.80E-09	4.33E-07	1.90E-06
Formaldehyde	7.50E-02	7.50E-05	1.16E-02	5.08E-02
Heptane	1.80E+00	1.80E-03	2.78E-01	1.22E+00
Indeno(1,2,3-cd)pyrene	1.80E-06	1.80E-09	2.78E-07	1.22E-06
Lead	5.00E-04	5.00E-07	7.74E-05	3.39E-04
Manganese	3.90E-04	3.90E-07	5.88E-05	2.57E-04
Mercury	2.80E-04	2.80E-07	4.02E-05	1.76E-04
Molybdenum	1.10E-03	1.10E-06	1.70E-04	7.45E-04
Naphthalene	6.10E-04	6.10E-07	9.44E-05	4.13E-04
Nickel	2.10E-03	2.10E-06	3.25E-04	1.42E-03
Pentane	2.60E+00	2.60E-03	4.02E-01	1.76E+00
Phenanthrene	1.70E-05	1.70E-08	2.63E-06	1.15E-05
Propane	1.60E+00	1.60E-03	2.48E-01	1.08E+00
Pyrene	5.00E-06	5.00E-09	7.74E-07	3.39E-06
Selenium	2.40E-05	2.40E-08	3.71E-06	1.63E-05
Toluene	3.40E-03	3.40E-06	5.26E-04	2.30E-03
Vanadium	2.30E-03	2.30E-06	3.56E-04	1.56E-03
Zinc	2.90E-02	2.90E-05	4.49E-03	1.97E-02
Sum of KDEP HAPs				1.28E+00

* All emission factors from AP-42 Natural Gas Combustion
KDEP identified HAPs

Benzene
Toluene
Xylene
Formaldehyde
1,3-Butadiene
Acetaldehyde
Acrolein
Naphthalene

* All emission factors from AP-42 Natural Gas-fired Reciprocating Engines
KDEP identified HAPs

Natural Gas for RICE (500 hours)		
Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (tpy)
4.40E-04	4.40E-05	1.10E-05
4.08E-04	4.08E-05	1.02E-05
1.84E-04	1.84E-05	4.60E-06
5.28E-02	5.28E-03	1.32E-03
6.63E-04	6.63E-05	1.66E-05
8.36E-03	8.36E-04	2.09E-04
5.14E-05	5.14E-04	1.29E-04
7.44E-05	7.44E-05	1.86E-06

Sum of KDEP HAPs 1.70E-03 tpy PTE

DARLING INGREDIENTS INC.

APPLICATION TO RENEW

CONDITIONAL MAJOR OPERATING PERMIT

RUSSELLVILLE, KENTUCKY

APPENDIX B

PROCESS FLOW DIAGRAM

Darling Ingredients Inc. Russellville, Kentucky Process Flow Diagram

