Appendix A

AIRS Information

T2-050413

AIRS/AFS[a] FACILITY-WIDE CLASSIFICATION[b] DATA ENTRY FORM

Facility Name: **Glanbia, Incorporated**
Facility Location: **Richfield, Idaho**
AIRS Number: **063-00003**

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO_2	B		B					U
NO_x	B							U
CO	B							U
PM_{10}	B							U
PT (Particulate)	B		B					U
VOC	B							U
THAP (Total HAPs)	B							U
			APPLICABLE SUBPART					
			Dc					

[a] Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

[b] AIRS/AFS Classification Codes:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).

Appendix B

Emissions Inventory

T2-050413

Equipment Type	Equipment Name	Emission Rate (ton/year)						
		PM	PM_{10}	NOx	SO_2	CO	VOC	Lead
Baghouse-Dryer	Blau Knox	0.13	0.13	-	-	-	-	-
Baghouse-Dryer	Niro 125	0.26	0.26	-	-	-	-	-
Baghouse-Dryer	Niro 50	0.07	0.07	-	-	-	-	-
Baghouse-Dryer	Niro - R&D Dryer	0.01	0.01	-	-	-	-	-
Baghouse-Dryer	Phoenix	0.88	0.88	-	-	-	-	-
Baghouse-Conveyor	Niro 125	0.03	0.03	-	-	-	-	-
Baghouse-Conveyor	Phoenix	0.53	0.53	-	-	-	-	-
Baghouse-Conveyor	Phoenix	0.53	0.53	-	-	-	-	-
Baghouse-Conveyor	Niro 50	0.11	0.11	-	-	-	-	-
Baghouse-Conveyor	Blau Knox	0.11	0.11	-	-	-	-	-
Baghouse-Conveyor	Blau Knox	0.15	0.15	-	-	-	-	-
Baghouse	Nuisance Dust	0.00	0.00	-	-	-	-	-
Baghouse	Lamsen Vacuum	0.00	0.00	-	-	-	-	-
Boiler	Cleaver Brooks	0.73	0.73	23.11	1.91	3.89	0.36	
Boiler	Kewanee Classic III	0.73	0.73	23.11	1.91	3.89	0.36	
Dryer element	Phoenix	0.15	0.15	5.36	0.60	0.73	0.11	-
Heater - On Ground	Milling Room	0.003	0.003	0.101	0.011	0.014	0.002	-
Heater - Roof Mounted	Chemical Room	0.008	0.008	0.268	0.030	0.036	0.006	-
Heater - Roof Mounted	Provon T-3 Room	0.005	0.005	0.168	0.019	0.023	0.004	-
Heater - Roof Mounted	Alcove Room	0.002	0.002	0.056	0.006	0.008	0.001	-
Heater - Roof Mounted	Alcove Room	0.003	0.003	0.090	0.010	0.012	0.002	-
Heater - Roof Mounted	Milling Compr Rm	0.002	0.002	0.084	0.009	0.011	0.002	-
Heater - Roof Mounted	Office/Conference	0.003	0.003	0.094	0.011	0.013	0.002	-
Heater - Roof Mounted	Packaging Room	0.004	0.004	0.137	0.015	0.019	0.003	-
Propane Vaporizer	Vaporizer - Ransome	0.017	0.017	0.610	0.068	0.083	0.013	-
Propane Vaporizer	Vaporizer - Ransome	0.017	0.017	0.610	0.068	0.083	0.013	-
Propane Vaporizer	Vaporizer - SamDick	0.011	0.011	0.369	0.041	0.050	0.008	-
TOTALS		4.49	4.49	54.16	4.71	9.86	0.90	0.00

Equipment Type	Equipment Name	Emission Rate (lb/hr)						
		PM	PM_{10}	NOx	SO_2	CO	VOC	Lead
Baghouse-Dryer	Blau Knox	0.03	0.03	-	-	-	-	-
Baghouse-Dryer	Niro 125	0.06	0.06	-	-	-	-	-
Baghouse-Dryer	Niro 50	0.01	0.01	-	-	-	-	-
Baghouse-Dryer	Niro - R&D Dryer	0.00	0.00	-	-	-	-	-
Baghouse-Dryer	Phoenix	0.20	0.20	-	-	-	-	-
Baghouse-Conveyor	Niro 125	0.01	0.01	-	-	-	-	-
Baghouse-Conveyor	Phoenix	0.12	0.12	-	-	-	-	-
Baghouse-Conveyor	Phoenix	0.12	0.12	-	-	-	-	-
Baghouse-Conveyor	Niro 50	0.03	0.03	-	-	-	-	-
Baghouse-Conveyor	Blau Knox	0.03	0.03	-	-	-	-	-
Baghouse-Conveyor	Blau Knox	0.04	0.04	-	-	-	-	-
Baghouse	Nuisance Dust	0.00	0.00	-	-	-	-	-
Baghouse	Lamsen Vacuum	0.00	0.00	-	-	-	-	-
Boiler	Cleaver Brooks	0.17	0.17	5.28	0.44	0.89	0.08	
Boiler	Kewanee Classic III	0.17	0.17	5.28	0.44	0.89	0.08	
Dryer element	Phoenix	0.03	0.03	1.22	0.14	0.17	0.03	-
Heater - On Ground	Milling Room	0.001	0.001	0.023	0.003	0.003	0.000	-
Heater - Roof Mounted	Chemical Room	0.002	0.002	0.061	0.007	0.008	0.001	-
Heater - Roof Mounted	Proven T-3 Room	0.001	0.001	0.038	0.004	0.005	0.001	-
Heater - Roof Mounted	Alcove Room	0.000	0.000	0.013	0.001	0.002	0.000	-
Heater - Roof Mounted	Alcove Room	0.001	0.001	0.021	0.002	0.003	0.000	-
Heater - Roof Mounted	Milling Compr Rm	0.001	0.001	0.019	0.002	0.003	0.000	-
Heater - Roof Mounted	Office/Conference	0.001	0.001	0.021	0.002	0.003	0.000	-
Heater - Roof Mounted	Packaging Room	0.001	0.001	0.031	0.004	0.004	0.001	-
Propane Vaporizer	Vaporizer - Ransome	0.004	0.004	0.139	0.016	0.019	0.003	-
Propane Vaporizer	Vaporizer - Ransome	0.004	0.004	0.139	0.016	0.019	0.003	-
Propane Vaporizer	Vaporizer - SamDick	0.002	0.002	0.084	0.009	0.011	0.002	-
TOTALS		1.03	1.03	12.37	1.08	2.02	0.21	5.00

Glanbia Foods Inc., Richfield Idaho Facility
Boiler Potential to Emit Calculations

Assumptions

Fuel and Hours Allocation		
Unit	Cleaver Brooks Boiler	Kewanee Classic III Boiler
Boiler Heat Input Rating (MM Btu/hr)	25.13	25.13
Theoretical Max Propane Usage[a] (gal/yr)	2,432,473	2,432,473
Potential Hours on Propane (hr/yr)	8,760	8,760

Criteria Pollutants

Pollutant	EF	Cleaver Brooks Boiler			Kewanee Classic III Boiler		
	(lb/1000 gal)[b]	(lb/hr)	(lb/yr)	(ton/yr)	(lb/hr)	(lb/yr)	(ton/yr)
PM	0.6	0.17	1,459.5	0.73	0.17	1,459.5	0.73
SO_2[c]	1.57	0.436	3,819.0	1.91	0.436	3,819.0	1.91
NOx	19	5.28	46,217.0	23.11	5.28	46,217.0	23.11
CO	3.2	0.89	7,783.9	3.89	0.89	7,783.9	3.89
VOC[d]	0.3	0.08	729.7	0.36	0.08	729.7	0.36

[a] *Propane heat value of 90,500 Btu/gal, EPA AP-42, Section 1.5.1 (Air CHIEF 2004)*

[b] *Propane emission factors from EPA AP-42, Section 1.5 Liquefied Gas Combustion, Table 1.5-1, (Air CHIEF 2004)*

Propane conversion to lb/MMBtu, divide by a heating values of 90,500 gal

[c] *See calculation sheet for SO_2 emission factor.*

[d] *VOCs based on non-methane total organic compounds*

Glanbia Foods Inc., Richfield Idaho Facility
Baghouse Potential to Emit Calculations

Equipment Type	Equipment Name	Baghouse Type	Date Installed	Dry Solids Output (lb/hr)	Cyclone Upstream of Baghouse	Calculated Throughput to Baghouse[a]	Baghouse PM Fractional Efficiency[a]	PM[b] Emissions (lb/hr)	PM Emissions (tpy)	IDAPA Exemptions
Baghouse-Dryer	Blau Knox	Polyester membrane	1972	300	No	300.0	99.99	0.030	0.13	NA[c]
Baghouse-Dryer	Niro 125 (Proven Dryer)	P-84 membrane	1996	600	No	600.0	99.99	0.060	0.26	58.01.01.221.01
Baghouse-Dryer	Niro 50	P-84 membrane	1994	150	No	150.0	99.99	0.0150	0.07	58.01.01.220-221.01, IDEQ 11-16-94
Baghouse-Dryer	Niro - R&D Dryer	Polyester membrane	2004	20	No	20.0	99.99	0.002	0.01	58.01.01.221.01
Baghouse-Dryer	Phoenix	Polyester membrane	1990	2,000	No	2000.0	99.99	0.20	0.88	NA[c]
Baghouse-Conveyor	Niro 125 (Proven) - Conveying line to Bin	Polyester membrane	1996	700	Yes	70.0	99.99	0.0070	0.03	NA[c]
Baghouse-Conveyor	Phoenix (WPC) - Conveying line to Bin	Polyester membrane	1999	1,200	No	1200.0	99.99	0.1200	0.53	NA[c]
Baghouse-Conveyor	Phoenix (WPC) - Conveying line to Receiver	Polyester membrane	1999	1,200	No	1200.0	99.99	0.1200	0.53	NA[c]
Baghouse-Conveyor	Niro 50 - Conveying Line to Receiver	Polyester membrane	1999	250	No	250.0	99.99	0.0250	0.11	58.01.01.221.01
Baghouse-Conveyor	Blau Knox - Conveying Line to D50 Receiver (Calcium)	Polyester membrane	2003	250	No	250.0	99.99	0.0250	0.11	58.01.01.221.01
Baghouse-Conveyor	Blau Knox - Conveying Line to D7 Receiver (Calcium)	Polyester membrane	2004	350	No	350.0	99.99	0.0350	0.15	58.01.01.221.01
Baghouse	Nutsenna Dust Collector	Polyester membrane	1990	10	No	10.0	99.99	0.0010	0.004	NA[c]
Baghouse	Lumson Vacuum system	Polyester membrane	2002	10	No	10.0	99.99	0.0010	0.004	58.01.01.221.01
PTE Totals									2.81	

Cyclone Efficiency (%): 90

Notes:

[a] *Throughput to baghouse = (1-CE/100)x100x(Dry Solids Output)/ (CE +BE*(100-CE)), where CE and BE are collection efficiencies for cyclone and baghouse, respectively.*

[b] *Efficiencies provided by bag supplier; Bay Area Industrial Filtration*

[c] *PM is assumed to equal to particulate matter less than 10 microns in diameter (PM_{10})*

[d] *Not Applicable (NA) based on date installed or over the 1.5 tpy emission estimate.*