

Golder Associates Inc.

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BUREAU OF AIR REGULATION

March 1, 2001

0037603

Florida Department of Environmental Protection
New Source Review Section
2600 Blair Stone Road MS 5505
Tallahassee, FL 32399-2400

Attention: Mr. Al Linero

RE: CARGILL CITRO PURE, L. P.
(FORMERLY SUNPURE LTD./INDIAN RIVER FOODS)
TITLE V PERMIT NO. 1110018-003-AV
NEW OIL STRIPPER

Dear Mr. Linero:

Cargill Citro Pure, L. P. (CCP), formerly SunPure Ltd./Indian River Foods, is proposing to make changes to the feedmill at the Indian River Foods citrus processing plant located in Fort Pierce, St. Lucie County, Florida. The purpose of this letter is to inform FDEP of these changes, to request approval of these changes, and verify that no air construction permit is required. Details of these changes are presented below.

CCP is proposing to install a new oil stripper in the existing feedmill. A flow diagram of the modified feedmill is presented in Figure 1. The oil stripper will receive press liquor from the waste-heat evaporator. In the stripper, citrus oils are removed by indirect steam heating followed by condensing. The recovered oils are sent to storage. The oil stripper is a closed vessel and has no atmospheric vents and, therefore, is not a source of air emissions. After the press liquor has been processed in the oil stripper, it is returned to the waste-heat evaporator for further processing. This oil stripper will use steam from Boiler Nos. 1, 3A, and/or 4 to operate. The oil stripper will use an estimated 25,000 pounds of steam per hour (lb-steam/hr).

The Indian River Foods facility is a major source under the federal and state prevention of significant deterioration (PSD) regulations. To determine the potential increase in actual emissions due to the new oil stripper, the potential emissions resulting from the production of 25,000 lb-steam/hr in the boilers were calculated and compared to the PSD rate.

The future potential emissions resulting from the additional 25,000 lb-steam/hr used in the new oil stripper are presented in Table 1. The emission factors used in these calculations are based on the factors for natural gas combustion from Chapter 1.4 of AP-42, fifth edition. The activity factor is based on 25,000 lb-steam/hr with a heat input requirement of 1,045 British thermal units per pound of steam (Btu/lb). The heat input requirement is based on the steam production of Boiler No. 3A [40,080 pounds per hour (lb/hr)] and the maximum heat input for Boiler No. 3A (42.0 MMBtu/hr). This results in the maximum heat input rate to generate the additional steam. The annual hours of operation are based on the maximum permitted hours of operation for the peel dryer/waste-heat evaporator (4,000 hours per 12 consecutive months). Based on these calculations, the expected emissions are as follows: 0.39 tons per year (TPY) of particulate matter, 0.031 TPY of sulfur dioxide,

5.12 TPY nitrogen oxides, 4.30 TPY carbon monoxide, 0.28 TPY of volatile organic compounds (VOCs), and significantly less than 1 TPY for sulfuric acid mist, mercury, and beryllium.

These emission rates are compared to the PSD rates in Table 1. All of the potential emissions are much less than the PSD rates. Therefore, PSD review is not triggered for any of the regulated pollutants.

Please confirm in writing that the proposed oil stripper (not an emission source itself with associated emission increases less than the PSD emission rates) does not require an air construction permit.

Thank you for consideration of this request. Please call if you have any questions concerning this submittal.

Sincerely,

GOLDER ASSOCIATES INC.



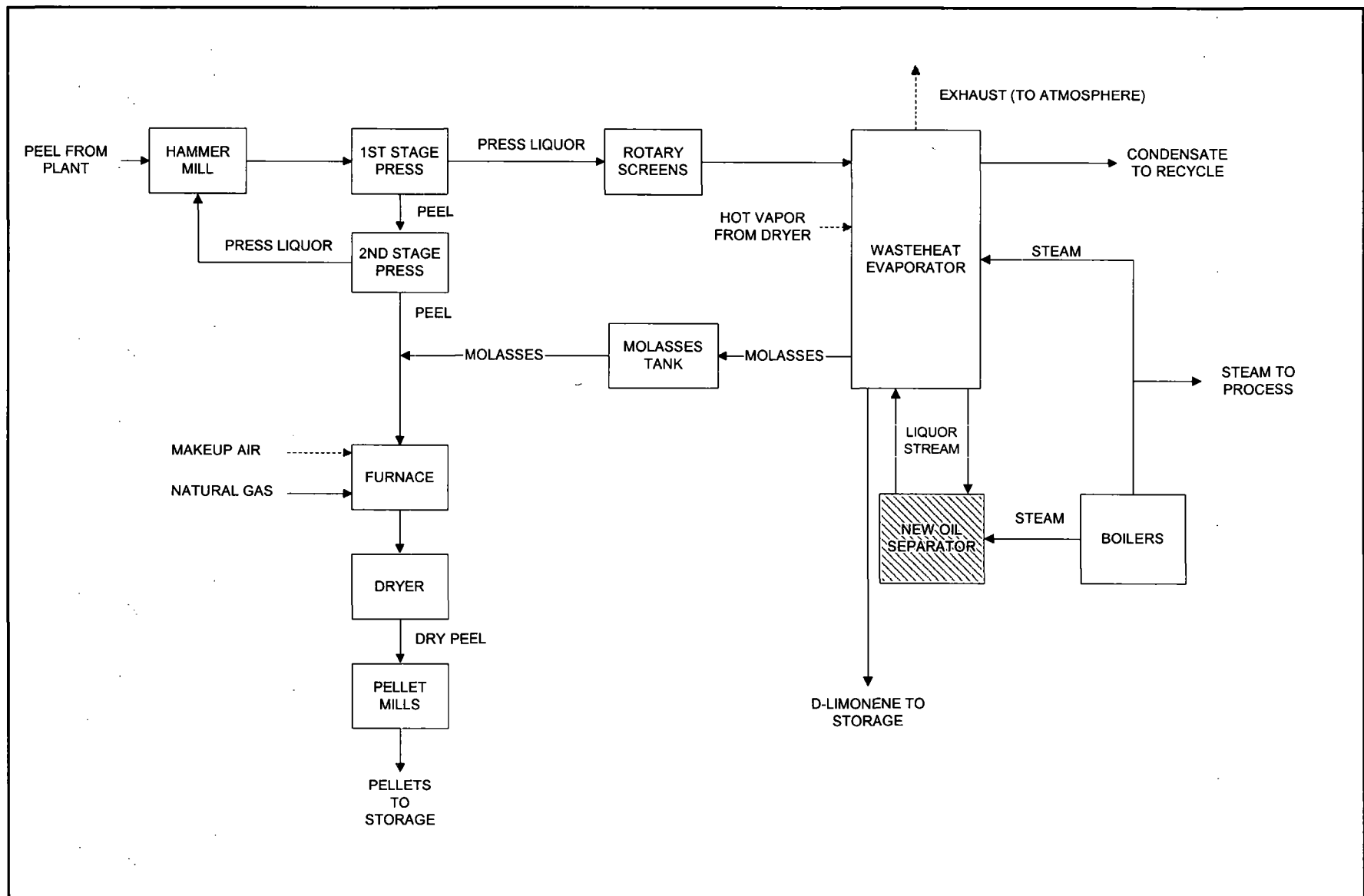
David A. Buff
Principal Engineer
Florida P.E. #19011

DB/SLW/nav

Enclosures

cc: Glenda Ellis
Larry Hadden
Todd Matthiesen

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**Figure 1. Feedmill Flow Diagram
CCP, Ft. Pierce**

Source: Gulfcoast Engineering, Inc., 1997
Golder Associates Inc., 2000.

Process Flow Legend

Solid/Liquid ———→
Gas - - - - -→

Filename: 0037603A\02\FIGURE1.VSD

Date: 02/26/01



Table 1. Potential Emissions Associated with the New Oil Stripper, CCP Ft. Pierce

Regulated Pollutant	Emission Factor (lb/MMBtu)	Ref.	Activity Factor ^a (MMBtu/hr)	Hourly Emissions (lb/hr)	Annual Emissions ^b (TPY)	PSD Significant Rate (TPY)	PSD Review Applies?
Particulate (PM/PM ₁₀)	7.45E-03	1	26.1	0.19	0.39	15	No
Sulfur dioxide (SO ₂)	5.88E-04	1	26.1	0.015	0.031	40	No
Nitrogen oxides (NO _x)	9.80E-02	1	26.1	2.56	5.12	40	No
Carbon monoxide (CO)	8.24E-02	1	26.1	2.15	4.30	100	No
Volatile organic compounds (VOC)	5.39E-03	1	26.1	0.14	0.28	40	No
Sulfuric acid mist (SAM)	3.60E-05	2	26.1	9.40E-04	1.9E-03	7	No
Lead (Pb)	4.90E-07	1	26.1	1.28E-05	2.6E-05	0.6	No
Mercury (Hg)	2.55E-07	1	26.1	6.65E-06	1.3E-05	0.1	No
Beryllium (Be)	1.18E-08	1	26.1	3.07E-07	6.1E-07	4.00E-04	No
Fluorides (F)	--	1	--	--	--	3	No

References:

- Factors for natural gas combustion from AP-42, Tables 1.4-1, 1.4-2 and 1.4-4 (7/98). The reported factors were converted from lb/10⁶ scf to lb/MMBtu by dividing by 1,020. The reported values are as follows:

PM/PM ₁₀ : 7.6 lb/10 ⁶ scf	VOC: 5.5 lb/10 ⁶ scf
SO ₂ : 0.6 lb/10 ⁶ scf	Pb: 0.0005 lb/10 ⁶ scf
NO _x : 100 lb/10 ⁶ scf	Hg: 2.6E-04 lb/10 ⁶ scf
CO: 84 lb/10 ⁶ scf	Be: <1.2E-05 lb/10 ⁶ scf
- Based on similar derivation of sulfuric acid mist from AP-42 for fuel oil. 5% of SO₂ becomes SO₃ then take into account the ratio of sulfuric acid mist and gaseous sulfate molecular weights (98/80).

Footnotes:

^a Based on 25,000 lb steam per hour and a heat capacity of 1,045 Btu/lb of steam. The heat capacity is based on the 40,080 lb steam/hr production of Boiler Nos. 3A at its maximum heat input of 42.0 MMBtu/hr.

^b Based on 4,000 hours, the maximum permitted operating hours for the peel dryer/wasteheat evaporator.