

Method 2A and 2B Application Form

I. Application Submission Date: November 5, 2010

II. Company Contact Information

a. Company Name: Green Plains Holdings II LLC

b. Mailing Address:

Address Line 1	Lakota Plant Division
Address Line 2	9420 Underwood Ave, Suite 100
City	Omaha
State/Province	Nebraska
Zip/Postal Code	68114

c. Main Company Phone Number: (402) 884-8700

d. Secondary Company Phone Number:

e. Fax number: (402) 884-8776

f. Company Web Site URL: www.gpreinc.com

g. Primary Method 2A/2B Contact Person:

Name: Jay Beckel

Position/Title: Director, EHSS

Email Address: jay.beckel@gpreinc.com

Office Phone Number: (712) 246-2932

Mobile Phone Number:

Fax Number: (712) 246-3995

h. Consultant/Third Party Application Preparer:

Name: Patrick J. Hirl

Position/Title: Senior Project Manager

Affiliation/Firm: Burns & McDonnell

Email Address: phirl@burnsmcd.com

Office Phone Number: (952) 656-6003, ext. 3634

Mobile Phone Number: (612) 600-2881

Fax Number:

Consulting entity's web site URL: www.burnsmcd.com

- i. LCFS Reporting Tool Organization ID code (if known):
- j. U.S. Environmental Protection Agency (U.S. EPA) Company ID (if known):
- k. U.S. EPA Facility ID (if known):

III. Pathway Information

- a. Pathway application type. Applicants are encouraged to discuss their pathway application types with ARB staff before proceeding. Please check one box only.

Method 2A: Sub-pathway Method 2B: New Pathway

- b. Brief description of proposed pathway. Please emphasize the important innovations and/or distinctive characteristics associated with the proposed pathway or sub-pathway

This application proposes no new pathway but presents site specific values for the Green Plains Holdings Lakota facility. The uniqueness of this approach is that it allows the facility to benefit from its energy efficient operations. The data provided clearly shows that the Green Plains Holdings Lakota facility uses 7% less natural gas and 15% less electricity. The facility also produces 4% more ethanol per bushel of corn. A statistical evaluation of the facility operational data is presented as the basis for setting the values for use in the CaGREET model to calculate the carbon intensity.

c. For Method 2A Applications only:

1. Reference pathway (Existing fuel pathway to which the proposed new sub-pathway is most closely related). The carbon intensity of the reference pathway must be higher by at least 5 gCO₂e/MJ than the carbon intensity of the proposed pathway described in this application. Show all pathway information exactly as it appears in the LCFS Lookup Table:

Fuel: Natural Gas

Pathway Description: Midwest, Dry Mill, Dry DGS

Carbon Intensity Values (gCO₂e/MJ):

Direct Emissions: 68.4

Land Use or Other Indirect Effect: 30

Total: 98.4

2. Compositional differences (if any) between the fuel produced by the new sub-pathway and the reference pathway identified in item c, 1, above).

Total Energy use – 33,236 BTU/gal compared to the reference pathway energy use of 36,000 BTU/gal

Electricity use – 6.7% of 33,236 BTU/gal which is 2,227 BTU/gal compared to the reference pathway electricity use of 7.3% of 36,000 BTU/gal which is 2,628 BTU/gal.

Ethanol Yield – 2.82 gal/bu compared to the reference pathway yield of 2.72 gal/bu.

- d. Final carbon Intensity of the proposed pathway or sub-pathway: **91.6 gCO₂e/MJ**
- e. Annual volume of fuel that would be produced using the proposed new pathway (millions of gallons per year [MGY]): **98.4**
- f. Annual volume of fuel produced using the proposed new pathway that would enter the California market: **98.4**

1. This production volume is expected to be achieved within how many years from the start of production? Currently operating at this capacity
2. Does the applicant expect this volume to be achieved by a single or by multiple facilities?

A single facility Multiple facilities

3. If the applicant expects this volume to be achieved by multiple facilities, would all facilities be owned by a single firm?

Single firm Multiple firms

- g. Lower Heating Value of the fuel to be produced from the new pathway (megajoules per gallon): **80.5**
- h. The range of production volumes over which the proposed pathway carbon intensity value is valid. The values reported below must be supported in the documentation accompanying this application.

	Fuel Volume	Units (gallons; litres; joules,etc.)
Lower bound of production volume range	87,500,000	Gallons per year
Upper bound of production volume range	98,400,000	Gallons per year

- i. Please provide any information that may be helpful in determining the land use change impacts (if any) of the proposed pathway. Although it is ARB's responsibility to perform all land use change impact analyses, the applicant may provide any information that may be useful to the ARB in completing that analysis.

The county wide average corn yield data is provided in the attached report for your review. The weighted average corn yield for the 2009 crop year was 198.9 bu/ac. This is a 26% increase over the reference pathway average. This increase in corn yield reduces the land required for growing corn for ethanol production.

IV. Application Submittal Checklist. Listed below are the documents and files that may be submitted in support of a method 2A/2B application. Check the box to the left of each document or file type included in your submittal. After each submittal category is a check box labeled “includes trade secrets.” Check that box if the submittal category contains any information the applicant considers to be a trade secret. In the actual submittal, the specific information falling into the trade secret category must be clearly marked. Additional information regarding the submission of trade secrets can be found in the Instructions above.

- Pathway life cycle analysis report (required).
 - Includes trade secrets*
- CA-GREET model results (please submit the full CA-GREET spreadsheet) (required).
 - Includes trade secrets*
- All operating permits issued by the local air pollution control authority (required)
- One or more process flow diagrams covering the complete production process, including all inputs (feedstocks, process energy, etc.) and outputs (finished fuel, co-products, wastes, etc.) (required).
 - Includes trade secrets*
- A comprehensive list of all stationary combustion-powered equipment associated with the production facility. List entries should name the equipment, briefly describe its function, identify the fuel or fuels used, and quantify fuel use on a per-gallon-of-finished-fuel-produced basis (required)
 - Includes trade secrets*
- Equipment technical specifications
 - Includes trade secrets*
- Production process schematics, technical drawings flow diagrams, maps, or other graphical representations (other than/in addition to the required process flow diagram)
 - Includes trade secrets*
- Engineering reports
 - Includes trade secrets*
- Technical papers or journal articles
 - Includes trade secrets*

- Emissions monitoring data or emissions modeling results
 - Includes trade secrets*
- Spreadsheets, data files, and similar files documenting the calculations behind the fuel life cycle analysis
 - Includes trade secrets*
- Other: In the space below, describe any additional submittals. Rationales for documents submitted or omitted may also be provided.
 - Includes trade secrets*

V. ARB Method 2A and 2B Application Process Contacts

Name	Phone Number	E-mail Address
John Courtis	916-323-2661	jcourtis@arb.ca.gov
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