

STATE OF MISSOURI



**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI AIR CONSERVATION COMMISSION

**PERMIT TO CONSTRUCT**

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **122013-010**

Project Number: 2013-11-008  
Installation Number: 510-3022

Parent Company: International Food Products Corporation

Parent Company Address: 150 Larkin Williams Industrial Court, Fenton, MO 63026

Installation Name: International Food Products Corporation - Prairie Street Station

Installation Address: 165 East Prairie Avenue, St. Louis, MO 63147

Location Information: St. Louis City

Application for Authority to Construct was made for:

Installation of a sugar processing facility for the conversion of dry granulated sugar to liquid sucrose. This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*.

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Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

DEC 31 2013

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EFFECTIVE DATE

A handwritten signature in cursive script, reading "Kyril L. Moore".  
\_\_\_\_\_  
DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060(12)(A)10. "Conditions required by permitting authority."*

International Food Products Corporation - Prairie Street Station  
St. Louis City

1. Paved Haul Road
  - A. International Food Products Corporation - Prairie Street Station shall maintain and/or repair EP-05 Paved Haul Road. Maintenance of the paved road surface shall be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions while the installation is operating.
  - B. International Food Products Corporation – Prairie Street Station shall periodically water, wash, and/or otherwise clean the paved haul road surface as necessary to achieve control of fugitive emissions while the installation is operating.
2. Control Device Requirement – Bin Vent Filter
  - A. International Food Products Corporation - Prairie Street Station shall control emissions from EP-02 Storage Bin using a bin vent filter as specified in the permit application.
  - B. The bin vent filter shall be operated and maintained in accordance with the manufacturer's specifications.
  - C. Replacement filters shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
  - D. International Food Products Corporation - Prairie Street Station shall conduct weekly Method 22 opacity observations on the bin vent filter while the storage bin is being filled. If visible emissions are observed, the permittee shall inspect the bin vent filter for rips, tears, and/or leaks.

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**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

- E. International Food Products Corporation - Prairie Street Station shall maintain a copy of the bin vent filter manufacturer's performance warranty on site.
- F. International Food Products Corporation - Prairie Street Station shall maintain an operating and maintenance log for the bin vent filter which shall include the following:
  - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
  - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 3. **Fuel Limitations**  
International Food Products Corporation - Prairie Street Station shall exclusively combust natural gas in EP-06 Boiler and EP-07 Space Heaters. These combustion sources may not use any other fuel without prior written authorization from the Air Pollution Control Program.
- 4. **Record Keeping and Reporting Requirements**  
International Food Products Corporation - Prairie Street Station shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (6) REVIEW

Project Number: 2013-11-008  
Installation ID Number: 510-3022  
Permit Number:

International Food Products Corporation - Prairie Street Station  
165 East Prairie Avenue  
St. Louis, MO 63147

Parent Company:  
International Food Products Corporation  
150 Larkin Williams Industrial Court  
Fenton, MO 63026

Complete: November 14, 2013

St. Louis City

REVIEW SUMMARY

- International Food Products Corporation - Prairie Street Station has applied for authority to install a sugar processing facility for the conversion of dry granulated sugar to liquid sucrose.
- HAPs are emitted from the combustion of natural gas. The primary HAP of concern is Hexane (110-54-3). Installation potential Hexane emissions were calculated to be 0.13 tpy.
- 40 CFR Part 60, Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* applies to EP-06 Boiler. As a natural gas-fired boiler the boiler is only subject to recordkeeping at §60.48c(g).
- 40 CFR Part 60, Subpart Kb – *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984* is not applicable to the installation. The installation's two 27,000 gallon liquid sucrose tanks and two 30,000 gallon high fructose corn syrup tanks are large enough to be subject to this regulation; however, liquid sucrose and high fructose corn syrup are not volatile organic liquids as defined at §60.111b. Changing the contents of the storage tanks may result in these tanks becoming subject to this regulation.
- 40 CFR Part 63, Subpart JJJJJJ – *National Emission Standards for HAPs for Industrial, Commercial, and Institutional Boilers Area Sources* is not applicable to EP-06 Boiler. EP-06 is required by Special Condition 3 to exclusively combust natural gas and is; therefore, a gas-fired boiler exempt from this regulation per §63.11195(e).
- The installation is required by Special Condition 2 to operate a bin vent filter on EP-02 Storage Bin to control particulate emissions.

- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*. Potential emissions of PM exceed the de minimis level but are below the major source level requiring a Section (6) permit. Potential emissions of all other pollutants are below de minimis levels.
- This installation is located in St. Louis City, a nonattainment area for the 1997 and 2008 eight-hour ozone NAAQS and for the 1997 PM<sub>2.5</sub> NAAQS and an attainment area for all other pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed as there is currently no NAAQS for PM.
- Emissions testing are not required for this installation.
- A Basic Operating Permit application is required for this installation within 30 days after the issuance date of this permit.
- Approval of this permit is recommended with special conditions.

#### INSTALLATION/PROJECT DESCRIPTION

International Food Products Corporation began operation of the Prairie Street Station in 1987. The installation receives dry granulated sugar by truck (EP-01B), railcar (EP-01A), or tote (EP-03). The dry granulated sugar is stored in a storage bin (EP-02) which is equipped with a bin vent filter to reduce particulate emissions. The truck (EP-01B) and railcar (EP-01A) receiving both use the same conveyor (EP-01) to transport the dry granulated sugar into the storage bin (EP-02). The conveyor (EP-01) bottlenecks the installation's dry granulated sugar receiving and storage to 36.66 tph. A natural gas-fired boiler heats water which is combined with dry granulated sugar in a melt tank to produce liquid sucrose or corn syrup. Liquid sucrose is stored onsite in two 27,000 gallon storage tanks. High fructose corn syrup is stored onsite in two 30,000 gallon storage tanks. Corn syrup is stored onsite in two 19,000 gallon tanks. The installation also contains a 4,500 gallon liquid blend tank. Some dry granulated sugar is shipped offsite (EP-04) by truck rather than converted into liquid sucrose. The installation also contains a paved haul road (EP-05) and natural gas-fired space heaters (EP-07). Table 1 contains an equipment list for the installation.

**Table 1: Installation Equipment List**

Emission Unit	Description	MHDR
EP-01	Conveyor	36.66 tph
EP-01A	Railcar Receiving	36.66 tph
EP-01B	Truck Receiving	25 tph
EP-02	Storage Bin	36.66 tph
EP-03	Tote Receiving	4 tph
EP-04	Truck Loadout	33.3 tph
EP-05	0.1 mile Paved Haul Road	36.66 tph
EP-06	Natural gas-fired Boiler	16.74 MMBtu/hr
EP-07	Natural gas-fired Space Heaters	0.5 MMBtu/hr total
-	(2) 27,000 gallon liquid sucrose Storage Tanks	-
-	(2) 19,000 gallon corn syrup Storage Tanks	-
-	(2) 30,000 gallon high fructose corn syrup Storage Tanks	-
-	4,500 gallon liquid Blend Tank	-

No permits have been issued to International Food Products Corporation - Prairie Street Station by the Air Pollution Control Program. The installation was unaware that a permit was needed in 1987 for the construction of the plant. Upon becoming aware a permit was necessary in 2013, the installation submitted the Application for Authority to Construct upon which this permit is based.

#### EMISSIONS/CONTROLS EVALUATION

As no emission factors are currently available for the handling of sugar, emissions were conservatively calculated using grain emission factors. Emission factors for the following emission units were obtained from EPA's *Factor Information Retrieval System (FIRE)* on November 15, 2013 for the listed process SCC:

**Table 2: FIRE Process SCCs**

Emission Unit	Description	Process SCC
EP-01	Conveyor	30200530
EP-01A	Railcar Receiving and Conveyor	30200553
EP-01B	Truck Receiving	30200551
EP-02	Storage Bin	30200540 <sup>1</sup>
EP-04	Truck Loadout	30200560
EP-06	Natural gas-fired Boiler	10200602
EP-07	Natural gas-fired Space Heaters	10200603

<sup>1</sup>EP-02 Storage Bin was given 99 percent control of PM, PM<sub>10</sub>, and PM<sub>2.5</sub> due to the operation of a bin vent filter required by Special Condition 2.

Emissions from Tote Receiving (EP-03) were calculated using Equation 1 of EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.4 "Aggregate Handling and Storage Piles" (November 2006).

Emissions from Haul Road (EP-05) were calculated using equations from AP-42, Section 13.2.1 "Paved Haul Roads" (January 2011).

The following table provides an emissions summary for this project. As the installation was previously unaware of permitting requirements, the installation has no documented existing potential or actual emissions. Potential emissions of the application represent the potential of the entire installation, assuming continuous operation (8,760 hours per year).

**Table 3: Emissions Summary (tons per year)**

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions	Controlled Installation Bottlenecked Potential
PM	25.0	N/A	N/A	44.35
PM <sub>10</sub>	15.0	N/A	N/A	12.33
PM <sub>2.5</sub>	10.0	N/A	N/A	3.40
SO <sub>x</sub>	40.0	N/A	N/A	0.04
NO <sub>x</sub>	40.0	N/A	N/A	7.35
VOC	40.0	N/A	N/A	0.40
CO	100.0	N/A	N/A	6.17
GHG (CO <sub>2</sub> e)	100,000	N/A	N/A	8,835.01
HAPs	25.0	N/A	N/A	0.14
Hexane (110-54-3)	10.0	N/A	N/A	0.13

N/A = Not Applicable

### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*. Potential emissions of PM exceed the de minimis level, but are below the major source level requiring a Section (6) permit. Potential emissions of all other pollutants are below de minimis levels.

### APPLICABLE REQUIREMENTS

International Food Products Corporation - Prairie Street Station shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

### GENERAL REQUIREMENTS

- 10 CSR 10-6.065 *Operating Permits*
  - The installation is required to submit a Basic Operating Permit within 30 days after the effective date of this permit.

- 10 CSR 10-6.110 *Submission of Emission Data, Emission Fees and Process Information*
  - The installation is required to submit a full EIQ for the 2014 calendar year.
- 10 CSR 10-6.165 *Restriction of Emission of Odors*
- 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*
- 10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants*

#### SPECIFIC REQUIREMENTS

- 10 CSR 10-6.070 *New Source Performance Regulations*
  - 40 CFR Part 60, Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*
- 10 CSR 10-6.400 *Restriction of Emission of PM From Industrial Processes*
  - This regulation applies to EP-01, EP-01A, EP-01B, EP-03, and EP-04.

#### STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060 *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Alana L. Rugen, P.E.  
New Source Review Unit

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Date

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 28, 2013, received November 14, 2013, designating International Food Products Corporation as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- U.S. EPA *Factor Information Retrieval System (FIRE)*.

## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....	percent	<b>m/s</b> .....	meters per second
<b>°F</b> .....	degrees Fahrenheit	<b>Mgal</b> .....	1,000 gallons
<b>acfm</b> .....	actual cubic feet per minute	<b>MW</b> .....	megawatt
<b>BACT</b> .....	Best Available Control Technology	<b>MHDR</b> .....	maximum hourly design rate
<b>BMPs</b> .....	Best Management Practices	<b>MMBtu</b> ....	Million British thermal units
<b>Btu</b> .....	British thermal unit	<b>MMCF</b> .....	million cubic feet
<b>CAM</b> .....	Compliance Assurance Monitoring	<b>MSDS</b> .....	Material Safety Data Sheet
<b>CAS</b> .....	Chemical Abstracts Service	<b>NAAQS</b> ...	National Ambient Air Quality Standards
<b>CEMS</b> .....	Continuous Emission Monitor System	<b>NESHAPs</b>	
<b>CFR</b> .....	Code of Federal Regulations	.....	National Emissions Standards for Hazardous Air Pollutants
<b>CO</b> .....	carbon monoxide	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>NSPS</b> .....	New Source Performance Standards
<b>CO<sub>2e</sub></b> .....	carbon dioxide equivalent	<b>NSR</b> .....	New Source Review
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PM</b> .....	particulate matter
<b>CSR</b> .....	Code of State Regulations	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>dscf</b> .....	dry standard cubic feet	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>EQ</b> .....	Emission Inventory Questionnaire	<b>ppm</b> .....	parts per million
<b>EP</b> .....	Emission Point	<b>PSD</b> .....	Prevention of Significant Deterioration
<b>EPA</b> .....	Environmental Protection Agency	<b>PTE</b> .....	potential to emit
<b>EU</b> .....	Emission Unit	<b>RACT</b> .....	Reasonable Available Control Technology
<b>fps</b> .....	feet per second	<b>RAL</b> .....	Risk Assessment Level
<b>ft</b> .....	feet	<b>SCC</b> .....	Source Classification Code
<b>GACT</b> .....	Generally Available Control Technology	<b>scfm</b> .....	standard cubic feet per minute
<b>GHG</b> .....	Greenhouse Gas	<b>SIC</b> .....	Standard Industrial Classification
<b>gpm</b> .....	gallons per minute	<b>SIP</b> .....	State Implementation Plan
<b>gr</b> .....	grains	<b>SMAL</b> .....	Screening Model Action Levels
<b>GWP</b> .....	Global Warming Potential	<b>SO<sub>x</sub></b> .....	sulfur oxides
<b>HAP</b> .....	Hazardous Air Pollutant	<b>SO<sub>2</sub></b> .....	sulfur dioxide
<b>hr</b> .....	hour	<b>tph</b> .....	tons per hour
<b>hp</b> .....	horsepower	<b>tpy</b> .....	tons per year
<b>lb</b> .....	pound	<b>VMT</b> .....	vehicle miles traveled
<b>lbs/hr</b> .....	pounds per hour	<b>VOC</b> .....	Volatile Organic Compound
<b>MACT</b> .....	Maximum Achievable Control Technology		
<b>µg/m<sup>3</sup></b> .....	micrograms per cubic meter		

Mr. Mark Warren  
Vice President of Manufacturing  
International Food Products Corporation - Prairie Street Station  
165 East Prairie Avenue  
St. Louis, MO 63147

RE: New Source Review Permit - Project Number: 2013-11-008

Dear Mr. Warren:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application, and submittal of a Basic operating permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Alana Rugen, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp  
New Source Review Unit Chief

SH:arl

Enclosures

c: St. Louis Regional Office  
PAMS File: 2013-11-008

Permit Number: