From: Lang, Liudmyla A
To: bpetersmeyer@floridafood.com
Subject: IDEM OAQ Contact Information for Application No. 097-48166-00782 for Javo Beverage Company, Inc
Date: Monday, August 12, 2024 11:52:00 AM
Attachments: image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
image009.png

Dear Joshua Price, Brad Petersmeyer,:

I am the permit writer assigned to the current applicationNo. 097-48166-00782 for Javo Beverage Company, Inc. I would like to extend to you my contact information so that we may have continued communication until your new permit is issued. Please keep this information at hand. It is common for questions to arise, and oftentimes, further clarification is needed during the permit review process.

To expedite the review process, please e-mail me the electronic copy of your calculations (preferably in excel format).

Based on my preliminary review of the application, *please email me applicability (or non-applicability) of the Federal rules – FED-1 form*: 40 CFR 60, Subpart Dc, 40 CFR 63, Subpart JJJJJJ, etc.

IDEM, OAQ will notify you when a draft permit has been submitted for public notice and/or when a final permit has been issued. As part of the notification, IDEM, OAQ will provide information on how to access the draft and/or final permit electronically on IDEM's website. If Javo Beverage Company, Inc would prefer to receive paper copies of the entire draft and/or final permit, please let me know prior to the end of the applicant review period. If you prefer to receive paper copies of the entire permit, IDEM, OAQ will mail a paper copy of the draft permit and/or original signed final permit to the source contact. If you do not request to receive paper copies of the entire permit, IDEM, OAQ will only mail a paper copy of the original signed final permit signature page to the source contact.

Please feel free to contact me at any time if you have questions, concerns, or important information regarding your permit. For your convenience, my section chief (Madhurima Moulik) may be contacted at 317-233-6663 or MMoulik@idem.IN.gov.

Thank you in advance for your time and assistance. I look forward to working with you.

Sincerely,
Luda

Indiana Department of
Environmental Management
Liudmyla (Luda) Lang

Senior Environmental Manager
• (317) 233-0863 • LLang@idem.IN.gov

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www.idem.IN.gov

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From: Lang, Liudmyla A
To: bpetersmeyer@floridafood.com
Subject: Applicant Review for FESOP AA No. 097-48166-00782 for Javo Beverage Company, Inc
Date: Monday, August 26, 2024 3:34:00 PM
Attachments: Copy of 48166calcs.xlsx
48166let.docx
48166per.docx
48166tsd.docx
image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
image009.png
Importance: High

Dear Joshua Price, Brad Petersmeyer:

Attached please find the draft FESOP AA and supporting documents for review. As a courtesy, this draft is being provided to you for an opportunity to review and provide comments prior to the issuance of the permit approval.

The time clock for FESOP AA permit No. 097-48166-00782 will be stopped during your review until you either provide comments or indicate that you do not have any comments. Due to permit accountability and IDEM's intention to issue the permit in a timely manner, you are being allotted 7 days to provide comments in writing. If you have any conflicts or special circumstances that would impede your review process during the time allotted, please notify me directly at the email address or phone number listed below as soon as possible. If you have not responded on or before*September 3, 2024*, IDEM will assume that you have no comments pertaining to this draft and all files will be forwarded for issuance.

During this review period, I will be available to address your concerns, answer any questions that you may have, or make necessary revisions to this draft.

Pursuant to 326 IAC 2-1.1-7, the fee for this permitting action is expected to be $793, which is based on the following:

$0	TV/FESOP/SSOA Administrative Amendment
$793	NSPS Review: $793 (Subpart Dc)

Please note: This is not a bill. This represents the anticipated fee and is subject to change if additional review is required or the permit level changes for some reason (e.g. an additional NESHAP review is required). You will receive a final bill from the OAQ Permits Administration and Support Section.

Sincerely,
Luda

Indiana Department of
Environmental Management
Liudmyla (Luda) Lang

Senior Environmental Manager
• (317) 233-0863 • LLang@idem.IN.gov

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From: Justin Musloe
To: Lang, Liudmyla A
Cc: Josh Price
Subject: RE: Applicant Review for FESOP AA No. 097-48166-00782 for Javo Beverage Company, Inc
Date: Tuesday, August 27, 2024 2:01:28 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
46293calcs FESOP_New Permit_Boiler.xlsx

Hi Luda!

I received your email from Brad and wanted to introduce myself. I am the EHS Director for FFP and a few months into role now.

Josh Price (cc'd) and I were reviewing the documents and noticed a few changes from the existing permit that I wanted to double check with you:

- Our current Appendix A document (attached) has a "Blending" tab that appears to be omitted from the one you sent over (Copy of 48166calcs). Was this intentional? Please see the attached document for reference.
- Also, I'm thinking about making the following changes to the Emission Units/Processes in the Source Summary page:
  - Changing the "Natural Gas Combustion" Emission Unit to read "Boiler 1 (B1)" for consistency
  - Changing the "Boiler 2" Emission Unit to read "Boiler 2 (B2)" for consistency

Please let us know what you think. Josh is currently reviewing the other documents in the meantime.

Thank you!

Justin Musloe, CSP
Director of Environmental, Health and Safety

FFP BECAUSE REAL WORKS™

- jmusloe@floridafood.com
- M: 724-316-7181
- www.floridafood.com

From: Lang, Liudmyla A <LLang@idem.IN.gov>
Sent: Monday, August 26, 2024 12:34 PM
To: Brad Petersmeyer <bpetersmeyer@floridafood.com>
Subject: Applicant Review for FESOP AA No. 097-48166-00782 for Javo Beverage Company, Inc
Importance: High

Dear Joshua Price, Brad Petersmeyer:

Attached please find the draft FESOP AA and supporting documents for review. As a courtesy, this draft is being provided to you for an opportunity to review and provide comments prior to the issuance of the permit approval.

The time clock for FESOP AA permit No. 097-48166-00782 will be stopped during your review until you either provide comments or indicate that you do not have any comments. Due to permit accountability and IDEM's intention to issue the permit in a timely manner, you are being allotted 7 days to provide comments in writing. If you have any conflicts or special circumstances that would impede your review process during the time allotted, please notify me directly at the email address or phone number listed below as soon as possible. If you have not responded on or before*September 3, 2024*, IDEM will assume that you have no comments pertaining to this draft and all files will be forwarded for issuance.

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Pursuant to 326 IAC 2-1.1-7, the fee for this permitting action is expected to be $793, which is based on the following:

$0	TV/FESOP/SSOA Administrative Amendment
$793	NSPS Review: $793 (Subpart Dc)

Please note: This is not a bill. This represents the anticipated fee and is subject to change if additional review is required or the permit level changes for some reason (e.g. an additional NESHAP review is required). You will receive a final bill from the OAQ Permits Administration and Support Section.

Sincerely,
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Appendix A: Emission Calculations
Emission Summary

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana 46241
Permit Number: F097-46293-00782
Reviewer: Natalie Moore

Unlimited Potential to Emit (tons/yr)										
Emission Unit/ Process	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	Total HAPs	Single Worst HAP	
Green Coffee Bean Feed System (FS1)	5.17	5.17	5.17	-	-	-	-	-	-	
Green Coffee Bean Feed System (FS2)	5.17	5.17	5.17	-	-	-	-	-	-	
Coffee Roasting Process (CR1)	10.51	10.51	10.51	-	-	4.12	48.18	4.12	4.12	Formaldehyde
Coffee Roasting Process (CR2)	10.51	10.51	10.51	-	-	4.12	48.18	4.12	4.12	Formaldehyde
Coffee Cooling and Separating Process (CL1)	2.45	2.45	2.45	-	-	-	-	-	-	
Coffee Cooling and Separating Process (CL2)	2.45	2.45	2.45	-	-	-	-	-	-	
Roasted Coffee Bean Storage Area (ST1)*	-	-	-	-	-	-	-	-	-	
Self Contained Industrial Coffee Grinders (G1 and G2)**	-	-	-	-	-	-	-	-	-	
Self Contained Industrial Coffee Grinders (G3 and G4)**	-	-	-	-	-	-	-	-	-	
Ground Coffee Ribbon Blender (R1)	1.57	1.57	1.57	-	-	-	-	-	-	
Ground Coffee Ribbon Blender (R2)	1.57	1.57	1.57	-	-	-	-	-	-	
Coffee Extraction Process (CEP1) and Liquid Mixing Area	1.57	1.57	1.57	-	-	0.37	-	-	-	
Solid Dryer (SD1)	48.44	48.44	48.44	-	-	12.11	-	-	-	
Solid Dryer (SD2)	21.90	21.90	21.90	-	-	3.29	-	-	-	
Natural Gas Combustion	0.28	1.11	1.11	0.12	20.46	0.80	12.26	0.39	0.37	Hexane
Total Ducted Emissions	**111.58**	**112.42**	**112.42**	**0.12**	**20.46**	**24.81**	**108.62**	**8.62**	**8.23**	**Formaldehyde**
Paved Roads	0.31	0.06	0.02	-	-	-	-	-	-	
Total Emissions	**111.89**	**112.48**	**112.43**	**0.12**	**20.46**	**24.81**	**108.62**	**8.62**	**8.23**	**Formaldehyde**

Potential to Emit after Issuance (tons/yr)										
Emission Unit/ Process	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	Total HAPs	Single Worst HAP	
Green Coffee Bean Feed System (FS1)	5.17	5.17	5.17	-	-	-	-	-	-	
Green Coffee Bean Feed System (FS2)	5.17	5.17	5.17	-	-	-	-	-	-	
Coffee Roasting Process (CR1)****	10.51	10.51	10.51	-	-	4.12	21.90	4.12	4.12	Formaldehyde
Coffee Roasting Process (CR2)****	10.51	10.51	10.51	-	-	4.12	21.90	4.12	4.12	Formaldehyde
Coffee Cooling and Separating Process (CL1)	2.45	2.45	2.45	-	-	-	-	-	-	
Coffee Cooling and Separating Process (CL2)	2.45	2.45	2.45	-	-	-	-	-	-	
Roasted Coffee Bean Storage Area (ST1)*	-	-	-	-	-	-	-	-	-	
Self Contained Industrial Coffee Grinders (G1 and G2)**	-	-	-	-	-	-	-	-	-	
Self Contained Industrial Coffee Grinders (G3 and G4)**	-	-	-	-	-	-	-	-	-	
Ground Coffee Ribbon Blender (R1)	1.57	1.57	1.57	-	-	-	-	-	-	
Ground Coffee Ribbon Blender (R2)	1.57	1.57	1.57	-	-	-	-	-	-	
Coffee Extraction Process (CEP1) and Liquid Mixing Area	1.57	1.57	1.57	-	-	0.37	-	-	-	
Solid Dryer (SD1)***	48.44	21.90	21.90	-	-	12.11	-	-	-	
Solid Dryer (SD2)	21.90	21.90	21.90	-	-	3.29	-	-	-	
Natural Gas Combustion	0.28	1.11	1.11	0.12	20.46	0.80	12.26	0.39	0.37	Hexane
Total Ducted Emissions	**111.58**	**85.87**	**85.87**	**0.12**	**20.46**	**24.81**	**56.06**	**8.62**	**8.23**	**Formaldehyde**
Paved Roads	0.31	0.06	0.02	-	-	-	-	-	-	
Total Emissions	**111.89**	**85.93**	**85.89**	**0.12**	**20.46**	**24.81**	**56.06**	**8.62**	**8.23**	**Formaldehyde**

*The Roasted Coffee Bean Storage Area (ST1) is assumed to have no particulate (PM/PM10/PM2.5) emissions, since the coffee beans processed in Roasted Coffee Bean Storage Area (ST1) will be previously cooled using water in the Coffee Cooling and Separating Process.
**The Self Contained Industrial Coffee Grinders (G1 through G4) are assumed to have no particulate (PM/PM10/PM2.5) emissions, since the grinders are self contained using no controls and having no exhaust. Ground coffee is conveyed in a totally enclosed system to the coffee extraction process.
The packaging units P1 and P2 fill containers with liquid coffee. Emissions are assumed to be negligible.
***PM10 and PM2.5 emissions from the solid dryer (SD1) are both limited to 5.0 lbs/hr.
****CO emissions from the coffee roasting processes (CR1 and CR2) are both limited to 5.0 lbs/hr, each.

Appendix A: Emission Calculations
Extract & Liquid Mixing Area

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana
Permit Number: F097-46293-00782
Reviewer: Natalie Moore

Particulate (PM/PM10/PM2.5) Emissions										
Ground Coffee Ribbon Blender (R1)										
Mixer loading (central mix) (SCC 3-05-011-09) AP-42 Chapter 11.12 Concrete Batching Table 11.12-2										
uncontrolled	0.572 lb/ton	x	0.625 ton/hr	=	**0.36 lb/hr**	x	8760 hrs/yr	x	1 ton/	2000 lbs
Ground Coffee Ribbon Blender (R2)										
Mixer loading (central mix) (SCC 3-05-011-09) AP-42 Chapter 11.12 Concrete Batching Table 11.12-2										
uncontrolled	0.572 lb/ton	x	0.625 ton/hr	=	**0.36 lb/hr**	x	8760 hrs/yr	x	1 ton/	2000 lbs

46241

= 1.57 tons/yr
= 1.57 tons/yr

20MM lbs/yr = 10,000 t
8760 hrs/year
10,000 tons/ year / 876

0.164286

1.141553 tons/hr

Appendix A: Emission Calculations
Modification Summary

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana 46241
Permit Number: F097-46293-00782
Reviewer: Natalie Moore

PTE of Each New Emissions Unit (tons/yr)								
Emission Unit	**PM**	**PM10**	**PM2.5 ***	**SO_2**	**NOx**	**VOC**	**CO**	**Total HAPs**
Solid Dryer (SD1)	48.44	48.44	48.44	-	-	12.11	-	-
Solid Dryer (SD2)	21.90	21.90	21.90	-	-	3.29	-	-
Green Coffee Bean Feed System (FS2)	5.17	5.17	5.17	-	-	-	-	-
Coffee Roasting Process (CR2)	10.51	10.51	10.51	-	-	4.12	48.18	4.12
Coffee Cooling and Separating Process (CL2)	2.45	2.45	2.45	-	-	-	-	-
Self Contained Industrial Coffee Grinders (G3 and G4)**	-	-	-	-	-	-	-	-
Natural Gas Combustion	0.10	0.39	0.39	0.03	5.15	0.28	4.33	0.10
New Natural Gas Combustion	0.10	0.39	0.39	0.03	5.15	0.28	4.33	0.10
	40.23	**40.81**	**40.81**	**0.06**	**10.30**	**7.97**	**56.84**	**4.31**

**The Self Contained Industrial Coffee Grinders (G3 and G4) are assumed to have no particulate (PM/PM10/PM2.5) emissions, since the grinders are self contained using no controls and having no exhaust. Ground coffee is conveyed in a totally enclosed system to the coffee extraction process.

Appendix A: Emission Calculations
Roasting & Cooling

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana 46241
Permit Number: F097-46293-00782
Reviewer: Natalie Moore

Particulate (PM/PM10/PM2.5) Emissions												PM tons/yr	PM10 tons/yr	PM2.5 tons/yr
Enclosed and Connected Green Coffee Bean Feed System (FS1)														
Green Coffee bean screening, handling, and storage system with fabric filter (SCC 3-02-002-08)														
controlled	0.059	lb/ton		control efficiency =		95%		Controlled Emissions =	0.06	lb/hr	=	0.26	0.26	0.26
uncontrolled	1.18	lb/ton	x	1	ton/hr	= **1.18 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	5.17	5.17	5.17
Enclosed and Connected Green Coffee Bean Feed System (FS2)														
Green Coffee bean screening, handling, and storage system with fabric filter (SCC 3-02-002-08)														
controlled	0.059	lb/ton		control efficiency =		95%		Controlled Emissions =	0.06	lb/hr	=	0.26	0.26	0.26
uncontrolled	1.18	lb/ton	x	1	ton/hr	= **1.18 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	5.17	5.17	5.17
Coffee Roasting Process (CR1)														
Batch Roaster with Thermal Oxidizer SCC 3-02-002-20														
controlled	0.12	lb/ton		control efficiency =		95%		Controlled Emissions =	0.12	lb/hr	=	0.53	0.53	0.53
uncontrolled	2.4	lb/ton	x	1	ton/hr	= **2.4 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	10.51	10.51	10.51
Coffee Roasting Process (CR2)														
Batch Roaster with Thermal Oxidizer SCC 3-02-002-20														
controlled	0.12	lb/ton		control efficiency =		95%		Controlled Emissions =	0.12	lb/hr	=	0.53	0.53	0.53
uncontrolled	2.4	lb/ton	x	1	ton/hr	= **2.4 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	10.51	10.51	10.51
Coffee Cooling and Separating Process (CL1) [one (1) Cooler/ Stoner Unit using one (1) cyclone (CE2) to draw ambient air														
Continuous cooler with cyclone (SCC 3-02-002-28)														
controlled	0.028	lb/ton		control efficiency =		95%		Controlled Emissions =	0.03	lb/hr	=	0.12	0.12	0.12
uncontrolled	0.56	lb/ton	x	1	ton/hr	= **0.56 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	2.45	2.45	2.45
Coffee Cooling and Separating Process (CL2) [one (1) Cooler/ Stoner Unit using one (1) cyclone (CE4) to draw ambient air														
Continuous cooler with cyclone (SCC 3-02-002-28)														
controlled	0.028	lb/ton		control efficiency =		95%		Controlled Emissions =	0.03	lb/hr	=	0.12	0.12	0.12
uncontrolled	0.56	lb/ton	x	1	ton/hr	= **0.56 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	2.45	2.45	2.45

PM Emission factors are from EPA AP-42, Chapter 9.13. Uncontrolled Batch Roaster PM emission factor is derived from the controlled emission factor with an oxidizer and an 95% by weight control efficiency. PM10 and PM2.5 emissions assumed equal to PM emissions.

VOC Emissions												
Coffee Roasting Process (CR1)												
Batch Roaster with Thermal Oxidizer SCC 3-02-002-20												
controlled	0.047	lb/ton		control efficiency =		95%		Controlled Emissions =	0.05	lb/hr	=	**0.21 tons/yr**
uncontrolled	0.94	lb/ton	x	1	ton/hr	= **0.94 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	**4.12 tons/yr**
Coffee Roasting Process (CR2)												
Batch Roaster with Thermal Oxidizer SCC 3-02-002-20												
controlled	0.047	lb/ton		control efficiency =		95%		Controlled Emissions =	0.05	lb/hr	=	**0.21 tons/yr**
uncontrolled	0.94	lb/ton	x	1	ton/hr	= **0.94 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	**4.12 tons/yr**

The uncontrolled emission factor is derived assuming that the thermal oxidizer can achieve a minimum control efficiency of 95%.

CO Emissions												
Coffee Roasting Process (CR1)												
Batch Roaster with Thermal Oxidizer SCC 3-02-002-20												
controlled	0.55	lb/ton		control efficiency =		95%		Controlled Emissions =	0.55	lb/hr	=	**2.41 tons/yr**
uncontrolled	11	lb/ton	x	1	ton/hr	= **11 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	**48.18 tons/yr**
Coffee Roasting Process (CR2)												
Batch Roaster with Thermal Oxidizer SCC 3-02-002-20												
controlled	0.55	lb/ton		control efficiency =		95%		Controlled Emissions =	0.55	lb/hr	=	**2.41 tons/yr**
uncontrolled	11	lb/ton	x	1	ton/hr	= **11 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	**48.18 tons/yr**

The uncontrolled emission factor is derived assuming that the thermal oxidizer can achieve a minimum control efficiency of 95%.

HAP Emissions (Formaldehyde)												
Coffee Roasting Process (CR1)												
VOC = 100% HAP (formaldehyde)												
controlled	0.047	lb/ton		control efficiency =		95%		Controlled Emissions =	0.05	lb/hr	=	**0.21 tons/yr**
uncontrolled	0.94	lb/ton	x	1	ton/hr	= **0.94 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	**4.12 tons/yr**
Coffee Roasting Process (CR2)												
VOC = 100% HAP (formaldehyde)												
controlled	0.047	lb/ton		control efficiency =		95%		Controlled Emissions =	0.05	lb/hr	=	**0.21 tons/yr**
uncontrolled	0.94	lb/ton	x	1	ton/hr	= **0.94 lb/hr**	x	8760 hrs/yr x 1 ton/	2000	lbs	=	**4.12 tons/yr**

Based on the Sacramento Metropolitan Air Quaility Management District's Coffee Roasting Operations Policy Manual (November 24, 2008)
The roasting of coffee beans results in the emission of particulate matter, volatile organic compounds, organic acids, and natural gas combustion products. Green coffee beans contain a wide variety of chemical compounds including proteins, fats, sugars, dextrine, cellulose, caffeine, and organic acids. Some of these compounds volatize, oxidize, or decompose as part of the roasting process. Consequently, toxic compounds such as aldehydes (as formaldehyde), organic acids (as acetic acid) and acrolein are emitted as a result of the coffee roasting process." In a 1972 Emission Study by the Food and Ag. Industry provided by Puget Sound CAA, as well as emission rates derived from stack testing performed at a Starbucks having a batch roaster controlled by a thermal oxidizer, which can achieve a minimum control effieciency of 90%, stack testing results indicate that the emission rate of formaldehyde to acrolein is 99.35% formaldehyde. Therefore, IDEM assumes that all VOC emitted from the coffee roasting process is formaldehyde. See https://www.scribd.com/document/104416904/Coffee-Roasting-Manual for more information.

Methodology:
Emission factors from controlled processes = Controlled Emission Factor (lb/ton) x (1 - Control Efficiency)
Emissions (tons/yr) = Uncontrolled Emission Factor (lb/ton) x Maximum Capacity (ton/hr) x 8760 hours/yr x 1 ton/ 2000 lbs

Appendix A: Emission Calculations
Extract & Liquid Mixing Area

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana 46241
Permit Number: F097-46293-00782
Reviewer: Natalie Moore

Particulate (PM/PM10/PM2.5) Emissions														
Ground Coffee Ribbon Blender (R1)														
Mixer loading (central mix) (SCC 3-05-011-09) AP-42 Chapter 11.12 Concrete Batching Table 11.12-2														
	uncontrolled	0.572	lb/ton	x	0.63	ton/hr	=	**0.36 lb/hr**	x	8760 hrs/yr	x	1 ton/	2000 lbs	= **1.57 tons/yr**
Ground Coffee Ribbon Blender (R2)														
Mixer loading (central mix) (SCC 3-05-011-09) AP-42 Chapter 11.12 Concrete Batching Table 11.12-2														
	uncontrolled	0.572	lb/ton	x	0.63	ton/hr	=	**0.36 lb/hr**	x	8760 hrs/yr	x	1 ton/	2000 lbs	= **1.57 tons/yr**
Liquid Mixer (M1)**														
Mixer loading (central mix) (SCC 3-05-011-09) AP-42 Chapter 11.12 Concrete Batching Table 11.12-2														
	uncontrolled	0.572	lb/ton	x	0.63	ton/hr	=	**0.36 lb/hr**	x	8760 hrs/yr	x	1 ton/	2000 lbs	= **1.57 tons/yr**

Methodology:
Emissions (tons/yr) = Emission Factor (lb/ton) x Maximum Capacity (ton/hr) x 8760 hours/yr x 1 ton/ 2000 lbs
*The particluate (PM/PM10/PM2.5) emissions from the Ground Coffee Ribbon Blenders (R1 and R2) are from the loading and mixing of ground coffee into the ribbon blenders. As a conservative estimate, particulate emissions from the loading and mixing of ground coffee into the ribbon blenders were calculating using emission factors from loading raw materials into a batch concrete mixer.
**The particluate (PM/PM10/PM2.5) emissions from the liquid mixer are from the addition of dry powders such as creamers to the mixer. As a conservative estimate, particulate emissions from the loading of dry powders into the liquid mixer were calculating using emission factors from loading raw materials into a batch concrete mixer.

VOC Emissions*														
Coffee Extraction Process (CEP1) and Liquid Mixer (M1)														
Deep fat fryer - other snack chips (SCC 3-02-036-02)														
	uncontrolled	0.085	lb/ton	x	1	ton/hr	=	0.085 lbs/hr	x	8760 hrs/yr	x	1 ton/	2000 lbs	= **0.372 tons/yr**

Methodology:
Emissions (tons/yr) = Emission Factor (lb/ton) x Maximum Capacity (ton/hr) x 8760 hours/yr x 1 ton/ 2000 lbs
*During the Coffee Extraction and Liquid Mixer (M1) processes, volatile organic compounds (VOC) are potentially emitted from the coffee extract (e.g., alcohols, aldehydes, ketones, carboxylic acids, esters, pyrazines, pyrroles, pyridines, furans, indoles, phenols, oxazoles, etc.). As a conservative estimate, VOC emissions from the Coffee Extraction and Liquid Mixer (M1) processes were calculating using VOC emission factors from AP42 Chapter 9.13.3 Snack Chip Deep Fat Frying, since both coffect extraction and deep fat frying involve volatilization of organic compounds at high temperature.

Appendix A: Emission Summary
Solid Dryers

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana 46241
Permit Number: F097-46293-00782
Reviewer: Natalie Moore

					Uncontrolled Potential $PM/PM_{10}/PM_{2.5}$ Emissions				
Unit ID	Control	Control Efficiency	Maximum Production Rate (lb/hr)	Hours/Year	Emission Factor	lb/hr	lb/day	ton/yr	Controlled $PM/PM_{10}/PM_{2.5}$ (tons/yr)
Dryer SD1*	AD1	90.00%	553	8760	2.00%	11.06	265.44	48.44	4.84
Dryer SD2	AD1	90.00%	250	8760	2.00%	5.00	86.50	21.90	2.19
							Total Dryers	**70.34**	**7.03**

Unit ID	Maximum Production Rate (lb/hr)	% Volatile Material	% VOC Emitted	Hours/Year	VOC (lb/hr)	VOC (lb/day)	Uncontrolled VOC (ton/yr)
Dryer SD1*	553	1.00%	50.00%	8760	2.77	66.36	12.11
Dryer SD2	150	1.00%	50.00%	8760	0.75	12.98	3.29
				Total	**3.52**	**79.34**	**15.40**

There are no established emission factors for this type of source. % PM emitted is based on engineering judgement. All PM is assumed to equal PM10/PM2.5.

*Dryers SD1 and SD2 are drying tea.

Methodology

Potential to emit (PTE) $PM/PM_{10}/PM_{2.5\,in}$ (lb/hr) = Maximum Production Rate (lb/hr) * Emission Factor

Potential to emit (PTE) $PM/PM_{10}/PM_{2.5}$ in (lb/day) = Maximum Production Rate (lb/hr) * Emission Factor * 24 (hr/day)

Potential to emit (PTE) $PM/PM_{10}/PM_{2.5}$ in (ton/yr) = Maximum Production Rate (lb/hr) * Emission Factor * Hours/Year * (1 ton/2000 lbs)

Controlled $PM/PM_{10}/PM_{2.5}$ (tons per year) = Maximum Production Rate (lb/hr) * Emission Factor * Hours/Year * (1 ton/2000 lbs) * (1 - control efficiency)

Potential VOC lbs per hour = Maximum Production Rate (lbs/hr) * % Volatile Material * % VOC Emitted
Potential VOC lbs per day = Maximum Production Rate (lbs/hr * Volatile * % VOC Emitted * 24 (hr/day)
Potential VOC tons per year = Maximum Production Rate (lbs/hr) * % Volatile Material * % VOC Emitted * Hours/Year * (1 ton/2000 lbs)

Appendix A: Emissions Calculations
Natural Gas Combustion (≤ 100 MMBtu/hr)

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana 46241
Permit Number: F097-46293-00782
Reviewer: Natalie Moore

Emission Unit ID	Heat Input Capacity (MMBtu/hr)
Roaster (R1)	1.65
Thermal Afterburner (AB1)	5.175
Roaster (R2)	1.65
Thermal Afterburner (AB2)	5.175
Boiler (B1)	10.46
Air Heater (AH1)	0.88
Air Heater (AH2)	1.65
Boiler (B2)	21
	47.64

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
47.64	1020	409.1
Heat Input Capacity to Roasting***		
13.65	1020	117.2

	Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Total Potential Emission in tons/yr	0.39	1.55	1.55	0.12	20.46	1.13	17.18
Potential Roasting Emissions in tons/yr***	0.11	0.45	0.45	NA	NA	0.32	4.92
Potential Emissions Less Duplicate Roasting	0.28	1.11	1.11	0.12	20.46	0.80	12.26

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

***PM, PM10, PM2.5, VOC, and CO emissions from the roasters (R1 and R2) and the thermal afterburners (AB1 and AB2) are already accounted for under the roasting and cooling calculations. Therefore, these emissions have been subtracted from the natural gas combustion calculations to prevent double-counting.

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu; MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Potential Emission (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.3E-04	2.5E-04	1.5E-02	3.7E-01	7.0E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.0E-04	2.3E-04	2.9E-04	7.8E-05	4.3E-04

Potential Emission of Combined HAPs (tons/yr)	**3.9E-01**	
Potential Emission of Highest Single HAP (tons/yr)	**3.7E-01**	**Hexane**

Methodology
Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Source Name: Javo Beverage Company, Inc.
Source Address: 5600 W Raymond Street, Indianapolis, Indiana 46241
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Reviewer: Natalie Moore

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip) Receiving	2.0	2.0	4.0	50.0	200.0	225	0.043	0.2	62.2
Vehicle (leaving plant) (one-way trip) Shipping	4.0	2.0	8.0	32.5	260.0	225	0.043	0.3	124.4
		Totals	**12.0**		**460.0**			**0.5**	**186.6**

Average Vehicle Weight Per Trip = 38.3 tons/trip
Average Miles Per Trip = 0.04 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	38.3	38.3	38.3	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	3.586	0.717	0.1760	lb/mile
Mitigated Emission Factor, Eext =	3.279	0.656	0.161	lb/mile

Process	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.10	0.02	0.01
Vehicle (leaving plant) (one-way trip)	0.20	0.04	0.01
Totals	**0.31**	**0.06**	**0.02**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

From: Lang, Liudmyla A
To: Justin Musloe
Cc: Josh Price
Subject: RE: Applicant Review for FESOP AA No. 097-48166-00782 for Javo Beverage Company, Inc
Date: Wednesday, August 28, 2024 9:39:00 AM
Attachments: image011.png
image012.png
image013.png
image014.png
image015.png
image016.png
image017.png
image018.png
image002.png

Good morning, Justin.

Thank you for your comments. See my responses below, marked in red. Please let me know if you have any comments regarding the TSD and the Permit document.

Sincerely,
Luda

Indiana Department of
Environmental Management
Liudmyla (Luda) Lang
Senior Environmental Manager
• (317) 233-0863 • LLang@idem.IN.gov

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From: Justin Musloe <jmusloe@floridafood.com>
Sent: Tuesday, August 27, 2024 2:00 PM
To: Lang, Liudmyla A <LLang@idem.IN.gov>
Cc: Josh Price <jprice@environmentalworks.com>
Subject: RE: Applicant Review for FESOP AA No. 097-48166-00782 for Javo Beverage Company, Inc

---

Hi Luda!

I received your email from Brad and wanted to introduce myself. I am the EHS Director for FFP and a few months into role now.

Josh Price (cc'd) and I were reviewing the documents and noticed a few changes from the existing permit that I wanted to double check with you:

1. Our current Appendix A document (attached) has a "Blending" tab that appears to be omitted from the one you sent over (Copy of 48166calcs). Was this intentional? Please see the attached document for reference. I double checked the last issued calculations and could not find the separate "Blending" tab. Looks like the emissions from Blenders R1 and R2 are both included in the "Extract Liquid Mixing Area" tab, and they are duplicated from the "Blending" tab. Please let me know if you agree.

- Also, I'm thinking about making the following changes to the Emission Units/Processes in the Source Summary page:
    - Changing the "Natural Gas Combustion" Emission Unit to read "Boiler 1 (B1)" for consistency "Natural Gas Combustion" includes several combustion units, including Boiler 1, please refer to the "NG" tab for the list of the units.
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Please let us know what you think. Josh is currently reviewing the other documents in the meantime.

Thank you!

Justin Musloe, CSP
Director of Environmental, Health and Safety

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- jmusloe@floridafood.com
- M: 724-316-7181
- www.floridafood.com

From: Lang, Liudmyla A <LLang@idem.IN.gov>
Sent: Monday, August 26, 2024 12:34 PM
To: Brad Petersmeyer <bpetersmeyer@floridafood.com>
Subject: Applicant Review for FESOP AA No. 097-48166-00782 for Javo Beverage Company, Inc
Importance: High

> You don't often get email from llang@idem.in.gov. Learn why this is important

Dear Joshua Price, Brad Petersmeyer:

Attached please find the draft FESOP AA and supporting documents for review. As a courtesy, this draft is being provided to you for an opportunity to review and provide comments prior to the issuance of the permit approval.

The time clock for FESOP AA permit No. 097-48166-00782 will be stopped during your review until you either provide comments or indicate that you do not have any comments. Due to permit accountability and IDEM's intention to issue the permit in a timely manner, you are being allotted 7 days to provide comments in writing. If you have any conflicts or special circumstances that would impede your review process during the time allotted, please notify me directly at the email address or phone number listed below as soon as possible. If you have not responded on or before*September 3, 2024*, IDEM will assume that you have no comments pertaining to this draft and all files will be forwarded for issuance.

During this review period, I will be available to address your concerns, answer any questions that you may have, or make necessary revisions to this draft.

Pursuant to 326 IAC 2-1.1-7, the fee for this permitting action is expected to be $793, which is based on the following:

$0	TV/FESOP/SSOA Administrative Amendment
$793	NSPS Review: $793 (Subpart Dc)

Please note: This is not a bill. This represents the anticipated fee and is subject to change if additional review is required or the permit level changes for some reason (e.g. an additional NESHAP review is required). You will receive a final bill from the OAQ Permits Administration and Support Section.

Sincerely,
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Date: Wednesday, August 28, 2024 1:44:08 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
image009.png

Ok great, thank you for the feedback. All looks good on our end to proceed. Thanks!

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