V#44571 $1,000.00
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OCT 29 2013
DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A.Q. PROGRAM

Application for Pre-Permit Construction Approval

New Gas-Fired Boiler, New Gas-Fired Product Dryer, and Refurbished Gas-Fired Product Dryer
at the
Commercial Creamery Company
Jerome, Idaho, Plant

to

Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706
Attn: William Rogers
Stationary Source Permit Program Coordinator

by

Commercial Creamery Company
218 South Birch Street
Jerome, Idaho 83338
Attn: Earl Gilmartin, Vice President

October 22, 2013

MEAS, Inc.

Industrial Project Assurance Services

Sept 23, 2013

Air Quality Program Office – Application Processing
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706

Attn: Mr. Bill Rogers, Stationary Source Permit Program Coordinator

Subject: **Application for an Air Quality Pre-Permit Construction Approval**

Dear Mr. Rogers :

On behalf of Commercial Creamery Company, Jerome, Idaho, this letter transmits the application for a *Pre- Permit Construction Approval* for Commercial Creamery Company's processing facility, in accordance requirements of IDAPA 58.01.01.213 *et seq*.

One hard copy of the application, supported by a CD data disk with 1) a pdf file of the application, 2) Calculation spreadsheets (MS Excel) supporting the emissions inventory and receptor array, and 3) modeling files including AERMOD 7.7.3 [EPA 12345] input and output files, meteorological data files, BPIP input and output files, and DEQ PTC Forms, are included. *The Application Fee check* is in an envelope in the Application.

We acknowledge access to the *Pre- Permit Construction Approval Guidance Document*, the *Minor Source PTC Application Completion Checklist*, and the guidance of the *Air Quality Permits Applicant and DEQ Responsibilities*, and believe that the application is complete and accurate.

Please contact myself and Mr. Earl Gilmartin, the Owner's Responsible Official, at the addresses provided in the initial page of the Application.

Thank you for the chance to work together. We will look forward to receiving your 15-day Approval and your separate Completeness Determination.

With best regards,
FOR COMMERCIAL CREAMERY COMPANY

Norman Ricks

Norman R. Ricks
Permitting Lead

3654 Ellendale Circle, Idaho Falls, ID 83406 / 208-351-7466 / normanricks@cableone.net

Points of Contact

Technical / Regulatory Point of Contact :
Questions and comments related to this document should be forwarded to the project's Permitting Lead :

Norman R. Ricks
Permitting Lead / Dispersion Meteorologist
MEAS, Inc.
3654 Ellendale Circle
Idaho Falls, ID 83406
(208) 351-7466
normanricks@cableone.net

Owner's Responsible Official
Official correspondence related to this permit application should be directed to :

Mr. Earl Gilmartin
Vice President
Commercial Creamery Company
218 South Birch Street
Jerome, ID 83338
(208) 324-5868
earlg@cheesepowder.com

with a copy to the Regulatory Point of Contact noted above.

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Appendix A: Plots and Tables

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Arsenic	Annual AACC
Cadmium	Annual AACC
Formaldehyde	Annual AACC
Nickel	Annual AACC

Appendix A2 Plots & Summary Tables, ALL MODELED SOURCES

NO2	1-hr Standard
NO2	Annual Standard
PM-10	24-hr Standard
PM-2.5	24-hr Standard
PM-2.5	Annual Standard
Arsenic	Annual AACC
Cadmium	Annual AACC
Formaldehyde	Annual AACC
Nickel	Annual AACC

Appendix B: Emissions Work-Up Sheets

Appendix B1 Emission Work-Up Sheets, All Pollutants, SOURCES B2 AND D1 ONLY

Appendix B2 Emission Work-Up Sheets, All Pollutants, ALL SOURCES

Emissions Unit	Stack ID
Boiler 150 hp York Shipley	B1
Boiler **Pending** New 125 hp YS	B2
Dryer **Pending** New Rogers	D1
Dryer Existing 1960 Rogers	D2
Dryer Existing Blaw Knox Spray	D3
Dryer, Drum	D4
Tote-Dump Dust Collector 2	P1
Tote-Dump Dust Collector 1	P2
Clothes Dryer 1	NR3a
Clothes Dryer 2	NR3b

Water Heater 1	NR5a
Water Heater 3	NR5b
Proc'B - Carrier HVAC	**NR4A**
Blend'C - Carrier HVAC	**NR4B**
QA - Carrier HVAC	**NR4C**
QC - Carrier HVAC	**NR4D**
E Side - Carrier HVAC Office	**NR4E**
E Side - Carrier HVAC Bartelt	**NR4F**
Littleford - Carrier HVAC-1	**NR4G**
E Side - Modine Unit Heater Down	**NR7A**
E Side - Modine Unit Heater Up	**NR7B**
Ph I ADP Unit Heater 1	**NR7C**
Ph I ADP Unit Heater 2	**NR7D**
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Break Room - Carrier HVAC	**NR4H**
Blend Room - Carrier HVAC-1	**NR4I**
Blend Room - Carrier HVAC-2	**NR4J**
Blend Room - Carrier HVAC-3	**NR4K**
Blend Room - Carrier HVAC-4	**NR4L**
Shop - Carrier HVAC	**NR4M**
E Shop- Modine Unit Heater 1	**NR7K**
E Shop- Modine Unit Heater 2	**NR7L**

0.2 Owner's Letter Requesting Pre-Permit Construction

October 22, 2013

Idaho Department of Environmental Quality
Air Quality Division
1410 North Hilton Street
Boise, Idaho 83706

Attn: Mr. Bill Rogers, Stationary Source Program Permit Coordinator

Subject: ***Request to Construct Before Obtaining a PTC***
Commercial Creamery Company, Jerome, ID Site-Wide- PTC

Dear Mr. Rogers :

Please accept this letter as our formal request to begin construction activities related to installation of one new gas-fired boiler and one new gas-fired product dryer, followed by refurbishment of an existing gas-fired product dryer before the PTC for this project is issued. This request is made under terms of IDAPA 58.01.01.213.

Obtaining a pre-permit construction clearance for this work will allow us to take advantage of our manufacturer-installer's crew availability in early January. We acknowledge that no start-up or operation of the sources will occur until the actual PTC is issued.

In making this request, we certify to the following :

- We are not a new PSD major facility, a PSD major modification, or a major NSR source in a non-attainment area.
- We are not proposing emission offsets (netting)
- We are willing to commence construction at our own risk without a Permit to Construct

We understand that

- DEQ will follow a 15-day schedule on their decision
- The technical review of the Pre-Permit PTC application follows the same 60-day review schedule after completeness determination as a conventional PTC application
- DEQ may not finish their completeness review within 15-days.

Commercial Creamery Company does not seek limitations on our PTE to remain below major source levels or significant emissions increases per Section 213.01.01.d.. However, we do propose 16-hr per day operation of certain sources (Dryers D1, D2, D3, and filters PP1 and PP2) and 8-hr per day operation of Dryer D4 to provide assurance of achieving NAAQS. In that regard, we are pleased to certify per Section 213.01.01.d that we will comply with issued restrictions, including any applicable monitoring and reporting requirements.

I am the owner's representative for this project, and may be contacted at the letterhead address and by phone at 208.324.5868 or via e-mail to earlg@cheesepowder.com.

Thank you for the opportunity to work together.

With best regards,
COMMERCIAL CREAMERY COMPANY

Earl Gilmartin
Vice President

0.3 Documentation of Actions

Documentation of Pre-Application Actions

Refer to the Rule -- completed
Refer to DEQ's Pre-Permit Construction Approval Guidance --completed

0.3.1 Consult with DEQ Representatives.

From: William.Rogers@deq.idaho.gov [William.Rogers@deq.idaho.gov]
Sent: Thursday, October 10, 2013 2:10 PM
To: Norman Ricks
Cc: Kevin.Schilling@deq.idaho.gov
Subject: Consultation with DEQ - Commercial Creamery Pre-Permit Construction Process

Norm,

Our telephone conversation this afternoon and your previous conversations with Kevin Schilling, DEQ Modeling Coordinator, satisfies the requirement to consult with DEQ prior to submitting a pre-permit construction application pursuant to IDAPA 58.01.01.213.01.b. To summarize our conversation, the modeling protocol required by IDAPA 58.01.01.213.01.c, has been submitted and approved by DEQ; the informational meeting required by IDAPA 58.01.01.213.02.a, is scheduled for October 23, 2013; and the pre-permit construction application will be submitted on or around October 22, 2013.

Please call me if you have any further questions or if I can be of further assistance.

Regards, Bill

Bill Rogers, Stationary Source Program Permit Coordinator
Idaho DEQ - Air Quality Division
1410 N. Hilton, Boise, ID 83706-1255
(Tel.) 208-373-0437
(Fax) 208-373-0340
(E-mail) william.rogers@deq.idaho.gov

0.3.2 Schedule Informational Meeting.

Affidavit of Publication

STATE OF IDAHO)
COUNTY OF TWIN FALLS) SS.

I, Ruby Aufderheide, being first duly sworn upon oath, depose and say that I am Legal Clerk of the TIMES-NEWS,published daily at, Twins Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for one ~~consecutive~~ publication, commencing with the issue dated 10th day of October, 2013 and ending with the issue dated 10th day of October, 2013

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterrupted.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho to be issued thereof Thursday is announced as the day on which said legal will be published.

Ruby Aufderheide
Ruby Aufderheide, Legal Clerk

STATE OF IDAHO
COUNTY OF TWIN FALLS

On this 10th day of October, 2013, before me,

a Notary Public, personally appeared Ruby Aufdeheide,
known or identified to me to be the person whose name subscribed to the within instrument, and being by me first duly sworn, declared that the statements therein are true, and acknowledged to me that he executed the same.

Norma DeVoe
Notary Public for Idaho
Residing at Twin Falls, Idaho.

My commision expires: 3/7/19

PUBLIC NOTICE
INFORMATIONAL MEETING
Commercial Creamery Company Plans
to add Boiler and Dryer Capacity

Interested members of the Public are invited to a 30 min INFORMATIONAL MEETING regarding planned expansion of Commercial Creamery Company's Jerome Idaho production facility, including new gas fired boilers and production dryers. The meeting will be held on Wednesday, October 23, 2013 at 7pm at the Jerome City Council Chamber. We welcome your participation.

Commercial Creamery Company
218 South Birch Street
Jerome, Idaho 83338
PUBLISH: October 10, 2013

NORMA DE VOE
NOTARY PUBLIC
STATE OF IDAHO

0.3.3 Submit Ambient Air Quality Modeling Protocol

Page 1 of 1

normanricks@cableone.net

From: <Kenneth.Hanna@deq.idaho.gov>
Date: Thursday, October 17, 2013 16:20
To: <normanricks@cableone.net>
Subject: Modeling Protocol copy

Norman: A printed copy of the modeling protocol does not need to be submitted with the permit application. However, please be sure to include a copy of the protocol along with the other files that are on the CD computer disc submitted with the permit application. Thank you, Ken.

A copy of the *Modeling Plan* is provided in the CD that accompanies this Application.

Modeling Plan R2 August 16, 2013
Site-Wide PTC – Commercial Creamery Company, Jerome, Idaho

MODELING PLAN

for atmospheric dispersion modeling supporting a

PERMIT TO CONSTRUCT

for the

Commercial Creamery Company
Jerome, Idaho

submitted for approval to

IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY BRANCH
BOISE, IDAHO

August 16, 2013

Document 1241.1 R2
Prepared for Commercial Creamery Company by

Norman R. Ricks
Dispersion Meteorologist
MEAS, Inc.
3654 Ellendale Circle
Idaho Falls, Idaho 83406
(208) 351-7466

0.3.4 Approval of Modeling Protocol p 1 of 4

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 NORTH HILTON, BOISE, ID 83706 · (208) 373-0502

C. L. "BUTCH" OTTER, GOVERNOR
CURT FRANSEN, DIRECTOR

September 12, 2013

Norman Ricks
MEAS, Inc.
Idaho Falls, ID

RE: Modeling protocol for the Commercial Creamery Company Permit to Construct application for proposed changes to their dairy processing facility in Idaho.

Norman:

DEQ received your dispersion modeling protocol submitted via email on August 16, 2013. The modeling protocol was submitted on behalf of Commercial Creamery Company (Commercial Creamery). The modeling protocol proposes methods and data for use in the ambient impact analyses of a PTC application for proposed modifications to the Commercial Creamery facility.

The modeling protocol has been reviewed and DEQ has the following comments:

- Comment 1: The submitted application must provide clear, thorough, and complete justification and documentation of release parameters of all sources included in the modeling analyses. As results approach applicable standards, DEQ will demand a greater degree of stack parameter justification. Documentation must be providing with the current application submitted.

- Comment 2: The protocol indicates receptors will be positioned at a height of 2 meters from ground level to represent breathing height. Compliance with air quality standards for the purpose of permitting is based on ground level concentrations, so please use the ground surface as the receptor height.

- Comment 3: It is somewhat unclear whether overall goal of the modeling demonstration is to establish a baseline of compliance, addressing unpermitted sources, or to address the compliance of the proposed modification. If it is to accomplish both, I suggest assessing modeling applicability on facility-wide emissions, and modeling facility-wide emissions for those pollutants and averaging periods that exceed Level 1 modeling thresholds.

- Comment 4: Note that modeling applicability of toxic air pollutants (TAPs) is based on total TAP emissions for the proposed project. If previous projects should have been permitted, then TAP emissions from those projects should also be included in the TAP summation and compared to emissions screening levels (ELs).

0.3.4 Approval of Modeling Protocol p 2 of 4

- Comment 5: Table 2.2-1 lists exempt non-regulated sources that will presumably be excluded from the modeling analyses. IDAPA 58.01.01.222 provides a list of actions that do not require permitting; however, once a permit is required for a project all sources are on the table, especially for the cumulative impact analysis. However, certain sources may be excluded from the modeling analyses based on their emissions rates of specific pollutants. Note that just because a source vents to the inside of building or is otherwise enclosed, does not automatically exempt it from modeling. The control efficiency granted for a building or other enclosure is the responsibility of the DEQ permit writer and was not addressed in the review of this modeling protocol.

- Comment 6: Table 2.2-2 and 2.2-4 list PM2.5 as a non-criteria pollutant. PM2.5 is a criteria pollutant.

- Comment 7: Table 2.2-1 and 2.2-4 list whether the emissions for the specific source are BRC. BRC is evaluated on a project-wide basis, not source-by-source. The same is true for TAPs modeling applicability as indicated in Table 2.2-3 and 2.2-5. Project-wide TAP emissions are compared to the ELs.

- Comment 8: On page 25 of the protocol, there is a discussion on calculating stack-bas exit velocities based on source scaling. If the source is a combustion source, you can most accurately account for the exit velocity by using a combustion evaluation based on the fuel use rate and excess air.

- Comment 9: Modeling thresholds are discussed in the submitted protocol on Page 26. Note that the lb/hr values are thresholds for the short-term standards (1-hour through 24-hour averaged) and the ton/yr values are thresholds for annual averages. The modeling thresholds are designed to ensure that impacts are below the SILs. The thresholds could be modified to assure compliance with the NAAQS when modeling facility-wide emissions by the following equation:

  Level 1 threshold for NAAQS = (Level 1 Threshold) (NAAQS – (background value * 1.25) / (SIL)

  The background value is multiplied by 1.25 to account for uncertainty and co-contributing sources.

- Comment 10: Section 3.1 of the protocol states that AERMOD version 7.7 will be used. I suspect this is the version of the AERMOD GUI you use rather than the EPA version of the AERMOD model. The current version of AERMOD is version 12345.

0.3.4 Approval of Modeling Protocol p 3 of 4

- Comment 11: Section 3.2.5 of the protocol states that the Tier 2 approach for NO_2 modeling involves multiplying Tier 1 results by an in-stack NO_2/NOx ratio. Rather than multiplying results by an in-stack ratio, this method is designed to use an ambient equilibrium value. The default ambient ratio has been established at 0.8 for analyses demonstrating compliance with the 1-hour NO_2 standard. An in-stack ratio is not appropriate because of atmospheric conversion of NO to NO_2. In-stack ratios are only to be used for specific emissions sources in a Tier 3 analysis, and they are to be applied in the AERMOD model rather than to results obtained by the model.

- Comment 12: Section 3.2.7 discusses how receptor elevations will be determined. DEQ has frequently received analyses where digital terrain data from multiple sources, using different datums, were used for defining elevations of buildings, sources, and receptors. This resulted in inconsistencies and incorrect locations and elevations of buildings, sources, and receptors. It is advised to special attention be directed to assuring all locations and elevations in the model are correct for the datum used (typically NAD27 or NAD83). The protocol also states that flat terrain will be assumed for the first 200 meters from the plant. This is only acceptable if there is no terrain extruding above a 2% slope. It is acceptable and may be easier to simply model the facility using the actual receptor elevations as determined by DEM or NED digital files.

- Comment 13: Section 3.2.10 of the protocol states that where the wall of a building is along the property boundary, the receptor will be placed 2 meters away from the wall. It is DEQ's understanding that the placement and dimensions of buildings only affects the downwash calculations and has no impact on other impacts on concentrations at receptors. Therefore, concentrations along a building wall should be predicted in a reasonably accurate manner. If you have documentation to the contrary please provide this with the application.

- Comment 14: Section 3.2.12 of the protocol lists background concentrations that were provided by DEQ for the project. Since then, a background concentration tool has been developed for Washington, Oregon, and Idaho and made available through NWAIRQUEST at http://lar.wsu.edu/nw-airquest/lookup.html. This background concentration tool provided the following values for the Jerome area: $PM_{2.5}$ 24-hour = 22 $\mu g/m^3$, $PM_{2.5}$ annual = 7.2 $\mu g/m^3$, PM_{10} 24-hour = 78 $\mu g/m^3$, NO_2 annual = 4.1 $\mu g/m^3$, NO_2 1-hour = 24.4 $\mu g/m^3$ (no hour-by-hour values – DEQ would also accept the previously provided hour-by-hour background values), O_3 for PVMRM or OLM = 51 ppb (DEQ would also accept the previously provided hour-by-hour O_3 values).

- Comment 15: If co-contributing sources are identified, there may be a concern that background values are already accounting for the sources, depending on the specific source and the proximity of the source to the proposed permitting action.

0.3.4 Approval of Modeling Protocol p 4 of 4

DEQ's modeling staff considers the submitted dispersion modeling protocol, with resolution of the additional items noted above, to be approved. It should be noted, however, that the approval of this modeling protocol is not meant to imply approval of a completed dispersion modeling analysis. Please refer to the *State of Idaho Air Quality Modeling Guideline*, which is available on the Internet at http://www.deq.state.id.us/air/permits_forms/permitting/modeling_guideline.pdf, for further guidance.

To ensure a complete and timely review of the final analysis, our modeling staff requests that electronic copies of all modeling input and output files (including BPIP and AERMAP input and output files) are submitted with an analysis report. A copy of this protocol approval notice should also be included with the submitted application. If DEQ provided model-ready meteorological data files, then these do not need to be resubmitted to DEQ with the application. If you have any further questions or comments, please contact me at (208) 373-0112.

Sincerely,

Kevin Schilling

Kevin Schilling
Stationary Source Air Modeling Coordinator
Idaho Department of Environmental Quality
208 373-0112

Documentation of Application Actions

0.3.5 Pre-Permit Construction Eligibility and Proof of Eligibility

Commercial Creamery Company's Proof of Eligibility for Pre-Permit Construction is provided in ***Section 0.4.1 Certified Proof of Pre-Permit Construction Eligibility***

0.3.6 Request to Construct Before Obtaining a Permit to Construct – See 0.2

Commercial Creamery Company's **Request** is provided in ***Section 0.2 Request to Construct Before Obtaining a Permit to Construct***

0.3.7 Apply for a Permit to Construct.

Commercial Creamery Company's Application for a Permit to Construct is encompassed in this Request to Construct Before Obtaining a Permit to Construct.

0.3.8 Permit to Construct Application Fee.

Commercial Creamery Company's Application Fee is provided in a sealed envelope at the front of this Application.

0.3.9 Notice of Informational Meeting --- see 0.3.2

Commercial Creamery Company's Notice and proof of publication is provided in in ***Section 0.3.2*** **Notice of Informational Meeting**

0.3.10 Process Description(s).

Commercial Creamery Company's Process Description is provided in in ***Section 2.0*** **Process Description and Section 3.0 Process Flow Diagrams**

0.3.11 Equipment List.

Commercial Creamery Company's description of equipment for which Pre-Permit Construction Approval is requested is provided in in ***Section 2.5*** **Equipment List.**

0.3.12 Scaled Plot Plan.

Commercial Creamery Company's Scaled Plot Plan is provided in in ***Section 7.4.11*** **Facility Plot Plan, Property Boundaries, and Ambient Air**

0.3.13 Schedule for Construction.

Commercial Creamery Company's Schedule is provided in in **Section 7.5 Schedule for Construction**

0.3.14 Proposed Emissions Limits and Modeled Ambient Concentration for all Regulated Air Pollutants.

Commercial Creamery Company's proposed **Emission Limits for all Regulated Air Pollutants** is provided in **Table 5.2.9-1.**

Commercial Creamery Company's **Modeled Ambient Concentrations** for all Regulated Air Pollutants is provided in **Table 7.1-1 .**

0.3.15 Restrictions on a Source's Potential to Emit.

Commercial Creamery Company does not seek limitations on our PTE to remain below major source levels or significant emissions increases per Section 213.01.01.d.. However, we do propose 16-hr per day operation of certain sources (Dryers D1, D2, D3, and filters PP1 and PP2) and 8-hr per day operation of Dryer D4 to provide assurance of achieving NAAQS. In that regard, we are pleased to certify per Section 213.01.01.d that we will comply with issued restrictions, including any applicable monitoring and reporting requirements. Commercial Creamery Company's list of proposed limitations on our PTE is provided in Section **5.3 Limitations on Potential to Emit**

0.3.16 List all Applicable Air Quality Rules and Regulations.

Commercial Creamery Company's List all Applicable Air Quality Rules and Regulations is provided in **Section 4 Applicable Requirements**

0.3.17 Certification of Pre-Permit Construction Approval Application

Commercial Creamery Company's Certification of Pre-Permit Construction Approval Application is provided in **Section 0.4.2 Certification of Responsible Official**

0.3.18 Submit the Pre-Construction Approval Application

Commercial Creamery Company's Pre-Construction Approval Application package contains

- Transmittal Letter
- One paper hard copy of the application
- The Application Fee check inside the cover of the Application
- One data CD containing

  1.1 One pdf file of this Pre-Construction Approval Application
  1.2 Input /output files of all AERMOD modeling runs supporting the application, including associated BPIP and AERMAP files
  1.3 One MS Excel file containing the emissions inventory work-up sheets for all pollutants and sources

1.4 MS Word and MS Excel files for all DEQ Forms associated with this application
1.5 One pdf copy of the Modeling Plan

This application is sent to DEQ via FedEx using FedEx Airbill No 7970 0694 7140

0.4 Certifications

October 11, 2013

0.4.1 Certified Proof of Pre-Permit Construction Eligibility

Commercial Creamery Company, Jerome, Idaho Plant

1) I certify that I am the official Owner's Representative for this project, am familiar with plant equipment and operations, and their emissions, and am authorized to make the certifications presented here.

2) I certify the truth of the following statements :

   a. The Commercial Creamery Company, Jerome, ID Plant is an existing facility. The largest emitted criteria pollutant (PM-10) has site-wide total annual emissions less than 250 tpy and less than 100,000 tpy CO2e for all emitted Greenhouse gasses. Therefore this facility is not a new Prevention of Significant Deterioration (PSD) Major Source.

   b. The Commercial Creamery Company, Jerome, ID Plant is not a PSD Major Source, therefore the project proposed in this application is not a proposed PSD major modification.

   c. The Commercial Creamery Company, Jerome, ID Plant is located in Jerome, Idaho, which is designated as "attainment or unclassified" by EPA and DEQ. The facility-wide PTE emissions inventory for the existing plant plus proposed new sources is less than a) 100 tpy for any criteria pollutant and b) less than 10 tpy of any Toxic Air Pollutant (TAP) and less than 25 tpy for any combination of HAPs, and c) less than 100,000 tpy CO2e for all emitted Greenhouse gasses. The proposed project is therefore not a "proposed major NSR project in a non-attainment area".

   d. The Commercial Creamery Company, Jerome, ID Plant does not now have, nor does it propose to utilize in the future, permitted emissions netting or emissions offsets.

3) On the basis of these certifications, I assert that pre-permit construction approval is available for this project.

FOR COMMERCIAL CREAMERY COMPANY

Earl Gilmartin

Earl Gilmartin
Vice President

0.4.2 Certification of Responsible Official

"Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this application are true, accurate, and complete."

For the Owner / Operator :

October 22, 2013

_____ _____ date

Mr. Earl Gilmartin
Vice President
Commercial Creamery Company

"I have reviewed this document, with supporting technical data and analyses, to ensure that it conforms to current DEQ guidance on Applications for Pre-Permit Construction Approval, and on Applications for Permits to Construct ."

Permitting Lead, Air Quality Meteorologist / Modeler :

October 22, 2013

_____ _____ date

Norman R. Ricks
MEAS, Inc.

0.5 Acronyms and Abbreviations

AAC	[IDAPA58.01.01 §585] Acceptable Ambient Concentration, 24-hr average
AACC	[IDAPA58.01.01 §586] AAC for Carcinogen, annual average
AERMOD	[Breeze Software] AMS)/EPA Regulatory Model, V 7.7.1, July 2013
AMS	American Meteorological Society
AP-42	[EPA's] *Compilation of Air Pollutant Emission Factors*, 5th Ed.
BPIP	Building Profile Input Program
CAA	Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CTAP	[Idaho] Toxic Air Pollutant, Carcinogenic
DEM	Digital Elevation Model
DEQ	Idaho Department of Environmental Quality
EL	[Idaho Toxic Air Pollutant] Screening Emission Level
EPA	US Environmental Protection Agency
GEP	[Clean Air Act] Good Engineering Practice [e.g., stack height]
GPS	Global Positioning System
HAP	[Clean Air Act] Hazardous Air Pollutant
IDAPA	Idaho Administrative Procedures Act
NAAQS	[Clean Air Act] National Ambient Air Quality Standards
NAD 83	1983 North American Datum
NOAA-ARL	National Oceanic & Atmospheric Administration – Air Resources Laboratory
NOx, NO2	Nitrogen Oxides, Nitrogen Dioxide
NWS	US National Weather Service, NOAA
PM-2.5	Particulate Matter less than 2.5 microns effective aerodynamic diameter
PM-10	Particulate Matter less than 10 microns effective aerodynamic diameter
ppmv	parts per million, volume basis
PSD	[Clean Air Act] Prevention of Significant Deterioration
SOx, SO2	Sulfur Oxides, Sulfur Dioxide
TAP	[Idaho] Toxic Air Pollutant
tpy	tons per year
UTM	Universal Transverse Mercator [mapping coordinates]

Section 1 Application Checklists, Approvals and Forms

CHECKLISTS

C.1 Form AQ-CH-P004 -- 15-Day Pre-Permit Construction Approval Application Completeness Checklist

I. **Actions Needed Before Submitting Application**

✓ Refer to the Rule. Read the Pre-Permit Construction requirements contained in IDAPA 58.01.01.213, Rules for the Control of Air Pollution in Idaho.

The authors of this Application have performed this action.

✓ Refer to DEQ's Pre-Permit Construction Approval Guidance Document. DEQ has developed a guidance document to aid applicants in submitting a complete pre-permit construction approval application. The guidance document is located on DEQ's website (go to http://www.deq.idaho.gov/air/permits_forms/permitting/ptc_prepermit_guidance.pdf

The authors of this Application have performed this action.

✓ Consult with DEQ Representatives. Schedule a pre-application meeting with DEQ to discuss application requirements before submitting the pre-permit construction approval application. Schedule the meeting by contacting the DEQ Air Permit Hotline at 877-5PERMIT. The meeting can be in person or on the phone. Refer to IDAPA 58.01.01.213.01b.

This consultation occurred in a telecom with Mr. Bill Rogers on October 10, 2013. See Section 0.3.1

✓ Schedule Informational Meeting. Schedule an informational meeting before submitting the pre-permit construction approval application for the purposes of satisfying IDAPA 58.01.01.213.02.a. The purpose for the informational meeting is to provide information about the proposed project to the general public. Refer to IDAPA 58.01.01.213.01.c.

The Informational Meeting was scheduled and announced in a legal notice published October 10, 2013. See Section 0.3.2

✓ Submit Ambient Air Quality Modeling Protocol. It is required that an ambient air quality modeling protocol be submitted to DEQ at least two (2) weeks before the pre-permit construction approval application is submitted. Contact DEQ's Air Quality Hotline at **877-5PERMIT** for information about the protocol.

The modeling protocol for this project was submitted on August 16, 2013. A copy of the Protocol is provided in the Data CD provided with this Application.

✓ Written DEQ Approved Protocol. Written DEQ approval of the modeling protocol must be received before the pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.213.01.c.

DEQ's conditional approval of the modeling protocol for this project was issued September 12, 2013. See Section 0.3.4.

II. **Application Content**

Application content should be prepared using the checklist below. The checklist is based on the requirements contained in IDAPA 58.01.01.213 and DEQ's Pre-Permit Construction Approval Guidance Document.

✓ Pre-Permit Construction Eligibility and Proof of Eligibility. Pre-permit construction approval is not available for any new Prevention of Significant Deterioration (PSD) major source, any proposed PSD major modification, or any proposed major NSR project in a non-attainment area. Emissions netting and emissions offsets are not allowed to be used. A certified proof of pre-permit construction eligibility must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.

The Proof of Eligibility and the Certification of Pre-Permit Construction Eligibility is provided in the Application. See Section 0.4.1

✓ Request to Construct Before Obtaining a Permit to Construct. A letter requesting the ability to construct before obtaining the required permit to construct must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.c.

The Request to Construct Before Obtaining a Permit to Construct is provided in the Application. See Section 0.2.

✓ Apply for a Permit to Construct. Submit a Permit to Construct application using forms available on DEQ's website at http://www.deq.idaho.gov. Refer to IDAPA 58.01.01.213.01.a.

The DEQ forms supporting the PTC Application are provided in the Application, Section 1.

✓ Permit to Construct Application Fee. The permit to construct application fee of $1000 must be submitted at the time the original pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.224. If the pre-permit construction approval is denied and a new application is submitted, a new $1,000 application fee will be required to be submitted. The application fee is not transferable or refundable. The application fee can be paid by check, credit card or Electronic Funds Transfer (EFT). If you choose to pay by credit card or EFT, contact DEQ's Fiscal Office at (208) 373-0502 to complete the necessary paper work. If you choose to pay by check, enclose the check with your pre-permit construction approval application.

The check paying the PTC Application Fee is provided in the Application.

✓ Notice of Informational Meeting. Within 10 days after the submittal of the pre-permit construction approval application, an informational meeting must be held in at least one location in the region where the stationary source will be located. The information meeting must be made known by notice published at least 10 days before the informational meeting in a newspaper of general circulation in the county in which the stationary source will be located. A copy of this notice, as published, must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.02.a. Additional information regarding the informational meeting is included in DEQ's Pre-Permit Construction Approval Guidance Document. (go to http://www.deq.idaho.gov/air/permits_forms/permitting/ptc_prepermit_guidance.pdf)

A copy of the publisher's Notice of Informational Meeting is provided in the Application. See Section 0.3.2

✓ Process Description(s). The process or processes for which pre-permit construction approval is requested must be described in sufficient detail and clarity such that a member of the general public not familiar with air quality can clearly understand the proposed project. A process flow diagram is required for each process for which pre-permit construction approval is requested.

The Process Description and Process Flow Diagrams are provided in Sections 2.0 and 3.0 of the Application, respectively.

✓ Equipment List. All equipment that will be used for which pre-permit construction approval is requested must be described in detail. Such description includes, but is not limited to, manufacturer, model number or other descriptor, serial number, maximum process rate, proposed process rate, maximum heat input capacity, stack height, stack diameter, stack gas flowrate, stack gas temperature, etc. All equipment that will be used for which pre-permit construction approval is requested must be clearly labeled on the process flow diagram.

The Equipment List is provided in Sections 2.5 of the Application.

✓ Scaled Plot Plan. A scaled plot plan is required, with the location of each proposed process and the equipment that will be used in each process clearly labeled.

A scaled Plot Plan that conforms to DEQ Form PP Revision 3 07/17/08 is provided in the Application. See Section 7.4.1 or Form F7. Positions of all stacks are provided in Section 7.4.1.

✓ Schedule for Construction. A schedule for construction is required, including proposed dates for commencement and for completion of the project. For phased projects, proposed dates are required for each phase of the project.

A Construction Schedule is provided in the Application. See Section 7.5.

✓ Proposed Emissions Limits and Modeled Ambient Concentration for All Regulated Air Pollutants. All proposed emission limits and modeled ambient concentrations for all regulated air pollutants must demonstrate compliance with all applicable air quality rules and regulations. Regulated air pollutants include criteria air pollutants (PM_{10}, SO_x, NO_2, O_3, CO, lead), toxic air pollutants listed pursuant to IDAPA 58.01.01.585 and 586, and hazardous air pollutants listed pursuant to Section 112 of the 1990 Clean Air Act Amendments (go to http://www.epa.gov/ttn/atw/188polls.html). Describe in detail how the proposed emissions limits and modeled ambient concentrations demonstrate compliance with each applicable air quality rule and regulation. It is requested that emissions calculations, assumptions, and documentation be submitted with sufficient detail so DEQ can verify the validity of the emissions estimates. Refer to IDAPA 58.01.01.213.01.c.

Commercial Creamery Company's proposed Emission Limits for all Regulated Air Pollutants is provided in Table 5.2.9-1. Our Modeled Ambient Concentrations for all Regulated Air Pollutants is provided in Table 7.1-1 .

✓ Restrictions on a Source's Potential to Emit. Any proposed restriction on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must be described in detail in the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.d.

Commercial Creamery Company proposes 16-hr per day operation of certain sources (Dryers D1, D2, D3, and filters PP1 and PP2) and 8-hr per day operation of Dryer D4 to provide assurance of achieving NAAQS. See Section 5.3 .

✓ List all Applicable Air Quality Rules and Regulations. All applicable rules and regulations must be cited by the rule or regulation section/subpart that applies for each emissions unit. Refer to IDAPA 58.01.01.213.01.c.

The List of all Applicable Air Quality Rules and Regulations is provided in the Application. See Section 4.0.

✓ Certification of Pre-Permit Construction Approval Application. The pre-permit construction approval application must be signed by the Responsible Official and must contain a certification signed by the Responsible Official. The certification must state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Refer to IDAPA 58.01.01.213.01.d and IDAPA 58.01.01.123.

The Responsible Official's Certification is provided in the Application. See Section 0.4.2 .

✓ Submit the Pre-Construction Approval Application. Submit the pre-permit construction approval application and application fee to the following address :

Department of Environmental Quality
Air Quality Division
Stationary Source Program
1410 North Hilton
Boise, ID 83706-1255

The Pre-Construction Approval Application was sent via FedEx airbill # 7970 0694 7140 on October 26 , 2013 .

Department of Environmental Quality - Air Quality Division
Exemption Criteria and Reporting Requirements for Toxic Air Pollutant (TAP) Emissions Checklist

This checklist is designed to assist in documenting that a facility qualifies and complies with the *Exemption Criteria and Reporting Requirements for Toxic Air Pollutants*, IDAPA 58.01.01.223.

✓ Refer to the Rule. Read the *Exemption Criteria and Reporting Requirements for Toxic Air Pollutant Emissions,* IDAPA 58.01.01.223 (Section 223), Rules for the Control of Air Pollution in Idaho (Rules).

General Information

✓ Fugitive toxic air pollutant emissions shall not be considered in determining whether a source meets the applicable exemption criteria. A list of toxic air pollutants is given in Rules Section 585 and 586.

✓ Toxic air pollutants are regulated in accordance with Rules Section 210 only from emission units constructed or modified on or after July 1, 1995.

✓ Record Retention. In accordance with Rules Section 220 the source shall maintain documentation on site which shall identify the exemption determined to apply to the source and verify that the source qualifies for the identified exemption. Documentation shall be kept for the life of the source (but not less than five years) or until a permit to construct or operating permit is issued which covers operation of the source.

✓ Annual Report. Facilities that have exempted toxic air pollutant emissions in accordance with a Level I, Level II, or Level III exemption shall submit a report labeled "Toxic Air Pollutant Exemption Report" by May 1 each year for exemptions claimed during the previous 12 month period. The report shall state the date construction has or will commence and shall include copies of all exemption determinations by the owner or operator for Level I, Level II, or Level III exemptions (Rules Section 223.05).

Below Regulatory Concern (BRC) Exemption (Rules Section 223.01)

✓ Calculate the uncontrolled emissions (Rules Section 210.05) of each toxic air pollutant from new emissions units. Uncontrolled emission rates are emissions at maximum capacity without the effect of physical or operational limitations. See Quantification of Emission Rates (Rules Section 210.02). Show calculations and state all assumptions.

n/a Calculate the increase of TAP emissions from modified emissions units. Show calculations and state all assumptions. The increase in TAP emissions from modified emission units which are aggregated and compared to the exemption criteria is determined by subtracting the potential to emit the TAP before the modification from the uncontrolled potential to emit after the modification. In conducting this analysis please note the following for TAP emission increase determinations:

No increase of TAPs emissions from refurbished D2, since no increase in emissions of any type associated with that refurbishment.

✓ Aggregate the uncontrolled emissions increase of each TAP from new and modified emissions units.

☐ The source qualifies for a BRC exemption if the uncontrolled emission increase for all toxic air pollutants is less than or equal to 10% of the screening emission levels (EL) listed in Rules Section 585 & 586.

Uncontrolled Ambient Concentration is ***< AACC for As, Cd, CH2O, Ni, see Table 7.1-1, lower panel, where concentrations range from 0.7 to 9.9% of AACC. This is > 0.1 * BRC for As, Cd, CH2O, Ni.***

Level I Exemption (Rules Section 223.02)

✓ The uncontrolled emission rate from all new and modified emissions units shall be less than the applicable screening emission levels (EL) listed in Rules Section 585 & 586; or the uncontrolled ambient concentration for all toxic air pollutants shall be less than the applicable ambient concentration increment listed in Rules Sections 585 & 586. Calculate and document the uncontrolled emission rate from new and modified sources as described above.

✓ Aggregate the uncontrolled emissions increase of each TAP from new and modified emissions units.

☐ The source qualifies for a Level I exemption if the aggregated uncontrolled emissions from the new and modified emission units is less than or equal to all applicable screening emission levels (EL) listed in Rules Section 585 and 586. ***[≠ EL for As, Cd, CH2O, Ni)***

✓ Model the uncontrolled emissions for each TAP from new emissions units and the increase in emissions from all modified emissions units. Refer to Quantification of Ambient Concentrations (Rules Section 210.03) and the State of Idaho Air Quality Modeling Guideline (http://www.deq.idaho.gov/air/data_reports/publications.cfm#model). Maintain electronic input, output, and BPIP input modeling files.

✓ The source qualifies for a Level I exemption if the uncontrolled ambient concentration from each new and modified emission unit is less than or equal to all applicable acceptable ambient concentration increments listed in Rules Section 585 and 586.

Uncontrolled Ambient Concentration is ***< AACC for As, Cd, CH2O, Ni, see Table 7.1-1, lower panel, where concentrations range from 0.7 to 9.9% of AACC.***

Level II and Level III Exemptions (Rules Sections 223.03 & 223.04)

☐ A stationary source may choose to document a Level II or Level III exemption. However Level II and Level III exemption criteria are more stringent than Level I exemption criteria. Consequently there is little practical use for these levels of exemptions. Therefore, this checklist does not detail Level II or Level III exemption criteria.

C3 Form AQ-CH-P006 -- TAP Preconstruction Compliance Application Completeness Checklist

This checklist is designed to aid the applicant in submitting a complete preconstruction compliance demonstration for toxic air pollutants (TAPs) in permit to construct applications. The applicant must place a check mark in the box for each section below that applies.

I. Actions Needed Before Submitting Application

✓ Refer to the Rule. Read the Demonstration of Preconstruction Compliance with Toxic Standards contained in IDAPA 58.01.01.210 (Rules Section 210) Rules for the Control of Air Pollution in Idaho (Rules). Toxic air pollutants (TAPs) are regulated in accordance with Rules Section 210 only from emission units constructed or modified on or after July 1, 1995.

Determine if a new (constructed after June 30, 1995) emission unit has the potential to emit a TAP listed in IDAPA 58.01.01.585 (Rules Section 585) or IDAPA 58.0101.586 (Rules Section 586). Potential toxic air pollutants can be determined by reviewing commonly available emission factors, such as EPA's AP-42, or calculating emissions using a mass balance. For TAPs that are emitted but not listed in Rules Section 585 and 586, contact the Air Permit Hotline at 877-5PERMIT.

Determine if the proposed construction or modification is exempt from the need to obtain a permit to construct in accordance with IDAPA 58.01.01.220-223. Use the Exemption Criteria and Reporting Requirements for TAPs IDAPA 58.01.01.223 checklist to assist you in the exemption determination. If the source does not qualify for an exemption in accordance with IDAPA 58.01.01.220-223 complete the following checklist and submit it with the permit application. Please note that fugitive TAP emissions are not included in the IDAPA 58.01.01.223 exemption determination, but fugitive TAP emissions are included in the analysis if a permit is required. Stated another way: if a source is required to obtain a Permit to Construct because it does not meet the exemption criteria for any reason all TAP emissions, including fugitive TAPs, are included in the compliance demonstration in the application for the permit to construct. Should you have any questions regarding the fact that all TAPs, including fugitive TAPs, are included in the TAP preconstruction compliance demonstration submitted with a permit to construct application you may call the Air Permit Hotline at 877-5PERMIT.

Will the new or modified source result in new or increased potential emissions of TAPs?

✓ Yes. If yes, continue to section II.

☐ No. If no, no further action is required.

II. Application Content

If a new source has the potential to emit a TAP, or if a modification to an existing source increases the potential to emit of a TAP, then one of the following methods (A-J) of demonstrating TAP preconstruction compliance must be documented for each TAP. Standard methods are one of A-C. The applicant may also use one of the specialized methods in D-J. Fugitive TAP emissions shall be included in the analysis. The compliance methods are based on the requirements of Rules Section 210. Applicants are often able to demonstrate preconstruction TAP compliance using a combination of methods A and B.

Emission Calculations

Emissions calculation methodologies used are dependent on whether a specific TAP is a non-carcinogen or a carcinogen and whether the compliance method chosen from the list below calls

for controlled or uncontrolled emissions. Non-carcinogens are regulated based on a 24-hour averaging period and emission rates used for comparison to the non-carcinogen screening emissions level (EL) should be the maximum controlled or uncontrolled emissions quantity during any 24-hour period divided by 24. Carcinogens are regulated as a long term increment and emission rates used for comparison to the carcinogen EL should be the maximum controlled or uncontrolled emissions quantity during any 1 year period divided by 8760.

Modeling Analyses

Atmospheric dispersion modeling is required when controlled TAP emissions rates exceed ELs. Modeling analyses should be conducted in accordance with IDAPA 58.01.01.210.03. Quantification of Ambient Concentrations and the State of Idaho Air Quality Modeling Guideline (http;//www.deq.idaho.gov/air/data_reports/publications.cfm#model). For non-carcinogen 24-hour increments, compliance is demonstrated using the maximum modeled 24-hour-averaged concentration from available meteorological data (typically a five-year data set). For carcinogen long-term increments, compliance is demonstrated using the maximum modeled average concentration for the duration of the data set (one-year to five-year data set).

A submitted modeling report should clearly specify modeled emissions rates and results. All electronic model input files should be submitted, including BPIP input files.

Poly aromatic Hydrocarbons

Questions often arise regarding polyaromatic hydrocarbons as they are listed in Rules Section 586 of the Rules. The following two points are provided for clarification.

1) The following group of 7 PAH's (i.e. named POM), shall be combined and considered as one TAP equivalent in potency to benzo(a)pryrene:

   Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a, h) anthrancene, chrysene, indeno(1,2,3,-cd) pyrene, benzo (a) pyrene

2) All other PAH's are considered as a single pollutant and the emission of each is compared the PAH increment listed in Rules Section 586.

Compliance Methods

Fill in letter(s) (A-J) from the list below for TAP compliance demonstration method(s) used: A, B.

A. TAPs Compliance Using Uncontrolled Emissions (Rules Section 210.05)

✓ Calculate the uncontrolled emissions (Rules Section 210.05) of each TAP from new emissions units. Uncontrolled emission rates are emissions at maximum capacity without the effect of physical or operational limitations. See Quantification of Emission Rates (Rules Section 210.02). Show calculations and state all assumptions.

The uncontrolled emissions of each TAP from new emissions units B2 and D1, i.e., at maximum capacity without the effect of physical or operational limitations is provided in Appendix B2 for Sources B2 and D1. These emissions work up sheets provide the calculations and state the assumptions for these data.

n/a Calculate the increase of TAP emissions from modified emissions units. Show calculations and state all assumptions. The increase in emissions for a modified emission unit is determined by subtracting the potential to emit the TAP before the modification from the uncontrolled potential to emit after the modification. In conducting this analysis please note the following for TAP emission rate increase determinations:

Uncontrolled emission rates after the modification are emissions at maximum capacity without the effect of physical or operational limitations.

When determining the emissions increase from existing permitted emissions units the emission rate before the modification is equivalent to the emission limits contained in the permit for the TAPs or, if there no emission limits in the permit, by determining what the emission rate is under the physical or operational limitations contained in the permit.

No increase of TAPs emissions from refurbished D2, since no increase in emissions of any type is associated with that refurbishment.

✓ Aggregate the uncontrolled emissions for each TAP from all new emissions units with the increase in emissions from all modified emissions units.

✓ If the aggregated emissions increase for each TAP from the new and modified units, as determined above, are less than or equal to the respective TAP screening emissions level (EL) then preconstruction compliance with toxic standards has been demonstrated and no further analysis is required. Submit a table comparing the uncontrolled emissions rate to the applicable EL.

These are submitted in *see Tables 7.7-1 through 7.7.3.*

If aggregated emissions are greater than the respective screening emissions level (EL) for any pollutants, use another compliance demonstration method for those pollutants, such as methods B, C, or D.

Uncontrolled aggregate emissions are > ELs for *As, Cd, CH2O, Ni, see Tables 7.7-1 through 7.7.3.*

B. TAP Compliance Using Uncontrolled Ambient Concentration (Rules Section 210.06)

✓ Determine the uncontrolled emissions of each TAP from new emission units and the increase in emissions from all modified emissions units as described above in compliance Method A. Show calculations and state all assumptions.

✓ Model the uncontrolled emissions of each TAP from new emissions units and the increase in emissions from all modified emissions units.

✓ If the uncontrolled ambient concentration is less than or equal to the acceptable ambient concentration increment listed in Rules Section 585 and 586 no further procedures for demonstrating preconstruction compliance will be required for that TAP as part of the application process. Submit a table comparing uncontrolled ambient concentrations to the applicable acceptable ambient concentration.

Uncontrolled Ambient Concentration is *< AACC for As, Cd, CH2O, Ni, see Table 7.1-1, lower panel, where concentrations range from 0.7 to 9.9% of AACC.*

Note:
Sections C through J are not applicable, given that Sections A and B do apply.

C.4 Form AQ-CH-P007 -- Dispersion Modeling Protocol Checklist

Department of Environmental Quality
Dispersion Modeling Protocol Checklist

The following should be discussed in a dispersion modeling protocol:

1) General project description.
2) Describe the general modeling approach used. If the analyses include multiple operational scenarios, these should be thoroughly described.
3) Thoroughly describe the area where the project will be located, including the attainment status for all criteria pollutants.
4) Modeling applicability. Discuss how it will be determined what emissions sources and pollutants to include in the modeling analyses.
5) Describe the model proposed for the analyses, including the version number.
6) List the meteorological data proposed for the project and describe how those data are representative for the application site.
7) List the source of terrain data used in the modeling analyses. If terrain affects are not proposed for the analyses, a justification for this should be provided.
8) Provide a facility plot plan with emissions sources and buildings clearly identified, if available.
9) Describe the modeling domain and the receptor network used. Suggested receptor spacing provided in the Idaho Air Modeling Guideline are general suggestions. DEQ may require a different grid spacing to adequately resolve maximum modeled concentrations.
10) Provide justification for the ambient air boundary. The facility must prevent public access inside the ambient air boundary *using methods described in the Idaho Air Modeling Guideline.*
11) If known, emissions rates used in the modeling should be listed. This will give DEQ reviews an idea of the magnitude of the project. Describe how modeling emissions rates will be calculated for various averaging periods (exa. 1-hour, 24-hour, and annual for sources that do not operate continuously).
12) If known, emissions release parameters associated with emissions release points should be listed. Documentation and justification of these values should also be provided.
13) Describe what values will be used for background concentrations if a full impact analysis is required. DEQ may be consulted for assistance with determining background concentrations.
14) Describe what modeled values will be used to evaluate compliance with standards (highest, 1st high values; highest, 2nd high values; etc.)

Approved modeling protocol followed Modeling was performed in conformance with the Applicant's approved modeling protocol document. DEQ's approval letter is found in Section 0.3.4

C.5 Form AQ-CH-P008 -- Minor Source PTC Application Completeness Checklist

Modeling Checklist The *Air Dispersion Modeling Checklist* (Appendix B of the Idaho DEQ Modeling Guideline ID-AQ-011) for this project, follows.

1. Reviewed the Idaho Air Quality Modeling Guideline and have determined the appropriate methods and data for use in this permitting action, contacting DEQ as needed to provide clarification. **YES**

2. A modeling applicability analysis was performed for all criteria pollutants emitted by the new facility or modification, and modeling was performed for those pollutants having a total increase in emissions exceeding DEQ modeling thresholds. **YES See Table 5.2.4-1**

3. A TAPs modeling applicability analysis was performed for all TAPs emissions increases associated with the project, and TAPs modeling was performed for those TAPs having a project total emissions rate exceeding the emissions screening levels. **YES See Table 5.2.6-1**
4. Provided a description of the ambient air boundary and demonstrated how public access will be precluded from all areas excluded from ambient air. **YES**

5. The receptor grid used meets minimal requirements specified by DEQ AND is adequate to reasonably resolve the maximum modeled concentration and confidently demonstrate compliance with applicable standards. **YES**

6. The modeling domain used is sufficiently large to resolve the maximum impacts, accounting for impacts on distant elevated terrain. **YES**

7. A scaled site plot plan was included in the application, showing emissions sources, buildings, and the ambient air boundary. **YES**

8. Thoroughly documented all release parameters used in the model and provided justification for their use. **YES**

9. Emissions rates provided in the emissions inventory section of the application are identical to those used in the modeling analyses or, if emissions rates are not identical, thorough justification of modeled rates has been provided. **YES**

10. A cumulative NAAQS impact analysis was performed for all criteria pollutants for which modeled impacts from the significant impact analysis exceeded SILs. The cumulative NAAQS impact analysis included facility-wide emissions, emissions from any co-contributing sources, and a DEQ approved background concentration. Documentation of all emissions rates and release parameters used in the cumulative NAAQS impact analyses are provided in the application. **YES**

11. Included all input and output modeling files for all pollutants and averaging periods. **YES**

12. If a modeling protocol was prepared and submitted to DEQ prior to performing the air impact analyses, the protocol and DEQ's protocol approval notice is included with the application. **YES See Data CD for the Modeling Protocol, and Section 0.3.4for DEQ's approval.**

FORMS

The following Forms, with supporting attachments where required, are provided in this section, in the order shown here :

F.1 Form CSPTC -- Cover Sheet for Air Permit Application – PTC

F.2 Form GI -- General Information
Requires Signature of Responsible Official

F.3 D1 Emissions Source 579957-Form EU0 0808
F.4 D2 Emissions Source 579957-Form EU0 0808
F.5 D3 Emissions Source 579957-Form EU0 0808
F.6 D4 Emissions Source 579957-Form EU0 0808
F.7 NR3a Emissions Source 579957-Form EU0 0808
F.8 NR3b Emissions Source 579957-Form EU0 0808
F.9 NR5a Emissions Source 579957-Form EU0 0808
F.10 NR5b Emissions Source 579957-Form EU0 0808

F11 B1 Boiler 579977-Form EU5 0808
F12 B2 Boiler 579977-Form EU5 0808

F13 Baghouse D1 580009 Form BCE 0210
Question 8 Response Baghouse D1
F14 Baghouse D2 580009 Form BCE 0210
Question 8 Response Baghouse D2
F15 Baghouse D3 580009 Form BCE 0210
Question 8 Response Baghouse D3
F16 Baghouse P1 580009 Form BCE 0210
Question 8 Response Baghouse P1
F17 Baghouse P2 580009 Form BCE 0210
Question 8 Response Baghouse P2

F.18 Form MI1 – Modeling -- Impact Analysis
F.19 Form MI2 – Modeling -- Point Source Stack Parameters
F.20 Form MI3 – Modeling -- Fugitive Source Parameters
F.21 Form MI4 – Modeling – Buildings and Structures
Addendum to MI4 : Rows for Buildings 26 - 32

F.22 Form EI Facility Wide PTE Emissions Inventory
F.23 Form EI Proposed Modification at a Minor Facility Emissions Inventory
F.24 Form EI Ambient Impact Assessment Emissions Inventory
F.25 Form EI Toxic Air Pollutant Emissions Inventory
F.26 Form EI Hazardous Air Pollutant Emissions Inventory

F.27 Form FRA-- NSPS / NESHAP Regulation Review & Applicability

F.28 Form PP – Plot Plan

DEQ AIR QUALITY PROGRAM
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For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Cover Sheet for Air Permit Application – Permit to Construct **Form CSPTC**

Please see instructions on page 2 before filling out the form.

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	Commercial Creamery Company		
2. Facility Name	Jerome ID Plant	3. Facility ID No.	Pending
4. Brief Project Description - One sentence or less	Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer		

PERMIT APPLICATION TYPE

5. ☐ New Source ☒ New Source at Existing Facility ☐ PTC for a Tier I Source Processed Pursuant to IDAPA 58.01.01.209.05.c
☐ Unpermitted Existing Source ☐ Facility Emissions Cap ☐ Modify Existing Source: Permit No.:____ Date Issued:____
☐ Required by Enforcement Action: Case No.:____

6. ☒ Minor PTC ☐ Major PTC

FORMS INCLUDED

Included	N/A	Forms		DEQ Verify
☒	☐	Form CSPTC – Cover Sheet		☐
☒	☐	Form GI – Facility Information		☐
☒	☐	Form EU0 – Emissions Units General		☐
☐	☒	Form EU1-- Industrial Engine Information	Please specify number of EU1s attached: ____	☐
☐	☒	Form EU2-- Nonmetallic Mineral Processing Plants	Please specify number of EU2s attached: ____	☐
☐	☒	Form EU3-- Spray Paint Booth Information	Please specify number of EU3s attached: ____	☐
☐	☒	Form EU4-- Cooling Tower Information	Please specify number of EU3s attached: ____	☐
☒	☐	Form EU5 – Boiler Information	Please specify number of EU4s attached: 2	☐
☐	☒	Form CBP-- Concrete Batch Plant	Please specify number of CBPs attached: ____	☐
☐	☒	Form HMAP – Hot Mix Asphalt Plant	Please specify number of HMAPs attached: ____	☐
☐	☒	PERF – Portable Equipment Relocation Form		☐
☐	☒	Form AO – Afterburner/Oxidizer		☐
☐	☒	Form CA – Carbon Adsorber		☐
☐	☒	Form CYS – Cyclone Separator		☐
☐	☒	Form ESP – Electrostatic Precipitator		☐
☒	☐	Form BCE-- Baghouses Control Equipment	5 SOURCES x 1 per ATTACH	☐
☐	☒	Form SCE-- Scrubbers Control Equipment		☐
☐	☒	Form VSCE – Venturi Scrubber Control Equipment		☐
☐	☒	Form CAM – Compliance Assurance Monitoring		☐
☒	☐	Forms EI-- Emissions Inventory		☐
☒	☐	PP – Plot Plan		☐
☒	☐	Forms MI1 – MI4 – Modeling	(Excel workbook, all 4 worksheets)	☐
☒	☐	Form FRA – Federal Regulation Applicability		☐

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General Information **Form GI**
Revision 7
6/29/12

Please see instructions on back page before filling out the form. All information is required. If information is missing, the application will not be processed.

Identification

1. Facility name: Commercial Creamery Company Jerome ID Plant

2. Existing facility identification number:

☐ **Check if new facility (not yet operating)**

3. Brief project description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

Facility Information

4. Primary facility permitting contact name: Norman R. Ricks
Contact type: Facility permitting contact
Telephone number: 208 351 7466
E-mail: normanricks@cableone.net

5. Alternate facility permitting contact name: Earl Gilmartin, Vice President
Alternate contact type: Responsible official
Telephone number: 208 324 5868
E-mail: earlg@cheesepowder.com

6. Mailing address where permit will be sent (street/city/county/state/zip code): 218 South Birch Street, Jerome, ID 83338

7. Physical address of permitted facility (if different than mailing address) (street/ city/county/state/zip code): SAME

8. Is the equipment portable? ☐ **Yes*** ☒ **No** ***If yes, complete and attach PERF; see instructions.**

9. NAICS codes: Primary NAICS: 3115
Secondary NAICS: 311514

10. Brief business description and principal product produced: Dried cheese processing, et al.

11. Identify any adjacent or contiguous facility this company owns and/or operates: Warehousing & shipping from adjacent property opposite Birch Street

12. Specify type of application ☒ **Permit to construct (PTC); application fee of $1,000 required. See instructions.**

☐ **Tier I permit** ☐ **Tier II permit** ☐ **Tier II/Permit to construct**

For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.

☐ **Co-process Tier I modification and PTC** ☐ **Incorporate PTC at the time of Tier I renewal** ☐ **Administratively amend the Tier I permit to incorporate the PTC upon applicant's request (IDAPA 58.01.01.209.05.a, b, or c)**

Certification

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

13. Responsible official's name: Earl Gilmartin
Official's title: Vice President
Official's address: Commercial Creamery Company, 218 South Birch Street, Jerome, ID 83338
Telephone number: 208 324 5868
E-mail: earlg@cheesepowder.com
Official's signature: Earl Gilmartin
Date: 10-22-13

☒ **14. Check here to indicate that you want to review the draft permit before final issuance.**

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Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	ROGERS PRODUCT DRYER
6.	EU ID Number:	D1
7.	EU Type:	☒ New Source ☐ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8.	Manufacturer:	ROGERS
9.	Model:	5NPLE-2 NG MAXON BURNER
10..	Maximum Capacity:	12,000,000 BTU/HR
11.	Date of Construction:	2014
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	Integral Baghouse D1
15. Date of Installation:	2014 16. Date of Modification (if any):
17. Manufacturer and Model Number:	Rogers, Model Unknown
18. ID(s) of Emission Unit Controlled:	D1
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☒ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency	98%	98%	none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency. Attached to Form BCE for D1

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	5840 HRS/YR
23.	Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	5840 HRS/YR, 16 HRS/DAY
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	WORKABLE TYPICAL FACILITY OPS, THAT ACHIEVE PM-2.4 24-HR NAAQS

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Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	ROGERS PRODUCT DRYER
6. EU ID Number:	D2
7. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source – Previous Permit #: Date Issued:
8. Manufacturer:	ROGERS
9. Model:	3065 NORTH AMERICAN BURNER
10.. Maximum Capacity:	12,000,000 BTU/HR
11. Date of Construction:	UNK
12. Date of Modification (if any):	N/A
13. Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	Integral Baghouse D2
15. Date of Installation:	UNK 16. Date of Modification (if any):
17. Manufacturer and Model Number:	Rogers, Model Unknown
18. ID(s) of Emission Unit Controlled:	D2
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☒ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency	98%	98%	none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency. Attached to Form BCE for D2

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22. Actual Operation:	5840 HRS/YR
23. Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS

24. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
☒ Operation Hour Limit(s):	5840 HRS/YR, 16 HRS/DAY
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
☐ Other:	
25. Rationale for Requesting the Limit(s):	WORKABLE TYPICAL FACILITY OPS, THAT ACHIEVE PM-2.4 24-HR NAAQS

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Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	BLAW KNOX SPRAY PRODUCT DRYER
6. EU ID Number:	D3
7. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source – Previous Permit #: Date Issued:
8. Manufacturer:	BLAW KNOX
9. Model:	5NPLE-2 NG MAXON BURNER
10.. Maximum Capacity:	12,000,000 BTU/HR
11. Date of Construction:	UNK
12. Date of Modification (if any):	N/A
13. Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	Integral Baghouse D3
15. Date of Installation:	UNK 16. Date of Modification (if any):
17. Manufacturer and Model Number:	Rogers, Model Unknown
18. ID(s) of Emission Unit Controlled:	D3
19. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☒ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency	98%	98%	none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency. Attached to Form BCE for D3

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22. Actual Operation:	5840 HRS/YR
23. Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS

24. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
☒ Operation Hour Limit(s):	5840 HRS/YR, 16 HRS/DAY
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
☐ Other:	
25. Rationale for Requesting the Limit(s):	WORKABLE TYPICAL FACILITY OPS, THAT ACHIEVE PM-2.4 24-HR NAAQS

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Emissions Unit - General **Form EU0**
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Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	BLAW KNOX PRODUCT DRUM DRYER
6.	EU ID Number:	D4
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source – Previous Permit #: Date Issued:
8.	Manufacturer:	BLAW KNOX
9.	Model:	NOT SPECIFIED
10..	Maximum Capacity:	N/A STEAM-HEATED
11.	Date of Construction:	UNK
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:

15. Date of Installation: 16. Date of Modification (if any):

17. Manufacturer and Model Number:

18. ID(s) of Emission Unit Controlled:

19. Is operating schedule different than emission units(s) involved? ☐ Yes ☐ No

20. Does the manufacturer guarantee the control efficiency of the control equipment? ☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency			none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency. Attached to Form BCE for D1

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	320 HRS/YR
23.	Maximum Operation:	320 HRS/YR

REQUESTED LIMITS

24.	Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, indicate all that apply below)
	☒ Operation Hour Limit(s):	320 HRS/YR, 8 HRS/DAY
	☐ Production Limit(s):	
	☐ Material Usage Limit(s):	
	☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
	☐ Other:	
25.	Rationale for Requesting the Limit(s):	WORKABLE TYPICAL FACILITY OPS, THAT ACHIEVE PM-2.4 24-HR NAAQS

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Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	GAS FIRED CLOTHES DRYER
6. EU ID Number:	NR3A
7. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source – Previous Permit #: Date Issued:
8. Manufacturer:	UNSPECIFIED
9. Model:	UNSPECIFIED
10.. Maximum Capacity:	116,000 BTU/HR
11. Date of Construction:	UNK
12. Date of Modification (if any):	N/A
13. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:

15. Date of Installation: 16. Date of Modification (if any):

17. Manufacturer and Model Number:

18. ID(s) of Emission Unit Controlled:

19. Is operating schedule different than emission units(s) involved? ☐ Yes ☐ No

20. Does the manufacturer guarantee the control efficiency of the control equipment? ☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency			none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22. Actual Operation:	2920 HRS/YR
23. Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS

24. **Are you requesting any permit limits?** ☒ Yes ☐ No **(If Yes, indicate all that apply below)**

☒ Operation Hour Limit(s):	2920 HRS/YR, 8 HRS/DAY
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
☐ Other:	

25. Rationale for Requesting the Limit(s): WORKABLE TYPICAL FACILITY OPS, THAT ACHIEVE PM-2.4 24-HR NAAQS

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Emissions Unit - General **Form EU0**
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Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	GAS FIRED CLOTHES DRYER
6. EU ID Number:	NR3B
7. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
8. Manufacturer:	UNSPECIFIED
9. Model:	UNSPECIFIED
10.. Maximum Capacity:	116,000 BTU/HR
11. Date of Construction:	UNK
12. Date of Modification (if any):	N/A
13. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:

15. Date of Installation: 16. Date of Modification (if any):

17. Manufacturer and Model Number:

18. ID(s) of Emission Unit Controlled:

19. Is operating schedule different than emission units(s) involved? ☐ Yes ☐ No

20. Does the manufacturer guarantee the control efficiency of the control equipment? ☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency			none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22. Actual Operation:	2920 HRS/YR
23. Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS

24. Are you requesting any permit limits? ☒ Yes ☐ No (If Yes, indicate **all** that apply below)

☒ Operation Hour Limit(s):	2920 HRS/YR, 8 HRS/DAY
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
☐ Other:	

25. Rationale for Requesting the Limit(s): WORKABLE TYPICAL FACILITY OPS, THAT ACHIEVE PM-2.4 24-HR NAAQS

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Emissions Unit - General **Form EU0**
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Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	RGAS FIRED WATER HEATER
6.	EU ID Number:	NR5A
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source – Previous Permit #: Date Issued:
8.	Manufacturer:	AO SMITH
9.	Model:	100 GAL CAT 4
10..	Maximum Capacity:	75,000 BTU/HR
11.	Date of Construction:	UNK
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:

15. Date of Installation: 16. Date of Modification (if any):

17. Manufacturer and Model Number:

18. ID(s) of Emission Unit Controlled: D1

19. Is operating schedule different than emission units(s) involved? ☐ Yes ☐ No

20. Does the manufacturer guarantee the control efficiency of the control equipment? ☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency			none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	8760 HRS/YR
23.	Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS

24. Are you requesting any permit limits? ☐ Yes ☒ No (If Yes, indicate all that apply below)

- ☒ Operation Hour Limit(s):
- ☐ Production Limit(s):
- ☐ Material Usage Limit(s):
- ☐ Limits Based on Stack Testing: Please attach all relevant stack testing summary reports
- ☐ Other:

25. Rationale for Requesting the Limit(s):

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Air Permit Hotline – 1-877-5PERMIT

Emissions Unit - General **Form EU0**
Revision 4
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3. Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5.	Emissions Unit (EU) Name:	GAS FIRED WATER HEATER
6.	EU ID Number:	NR5B
7.	EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source – Previous Permit #: Date Issued:
8.	Manufacturer:	AO SMITH
9.	Model:	100 GAL CAT 4
10..	Maximum Capacity:	199,900 BTU/HR
11.	Date of Construction:	UNK
12.	Date of Modification (if any):	N/A
13.	Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:

15. Date of Installation: 16. Date of Modification (if any):

17. Manufacturer and Model Number:

18. ID(s) of Emission Unit Controlled: D1

19. Is operating schedule different than emission units(s) involved? ☐ Yes ☐ No

20. Does the manufacturer guarantee the control efficiency of the control equipment? ☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency			none	none	none	none

21. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

22.	Actual Operation:	8760 HRS/YR
23.	Maximum Operation:	8760 HRS/YR

REQUESTED LIMITS

24. **Are you requesting any permit limits?** ☐ Yes ☒ No **(If Yes, indicate all that apply below)**

- ☒ Operation Hour Limit(s):
- ☐ Production Limit(s):
- ☐ Material Usage Limit(s):
- ☐ Limits Based on Stack Testing: Please attach all relevant stack testing summary reports
- ☐ Other:

25. Rationale for Requesting the Limit(s):

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Emissions Units - Industrial Boiler Information **Form EU5**
Revision 5
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3 Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EXEMPTION

Please see IDAPA 58.01.01.222 for a list of industrial boilers that are exempt from Permit to Construct requirements.

BOILER (EMISSION UNIT) DESCRIPTION AND SPECIFICATIONS

5. Type of Request: ☐ New Unit ☒ Unpermitted Existing Unit ☐ Modification to a Unit with Permit #:

6. Use of Boiler: ☒ % Used For Process ☐ % Used For Space Heat ☐ % Used For Generating Electricity ☐ Other: 100% process heat

7. Boiler ID Number: B1	8. Rated Capacity: ☒ 6.1 Million British Thermal Units Per Hour (MMBtu/hr) ☐ 1,000 Pounds Steam Per Hour (1,000 lb steam/hr)	
9. Construction Date: 1979	10. Manufacturer: YORK SHIPLEY	11. Model: 560-SPHV-150-N2 (150 HP, 1979)
12. Date of Modification (if applicable): n/a	13. Serial Number (if available):	14. Control Device (if any): none **Note: Attach applicable control equipment form(s)**

FUEL DESCRIPTION AND SPECIFICATIONS

15. Fuel Type	☐ Diesel Fuel (#) (gal/hr)	☒ Natural Gas 5905 (cf/hr)	☐ Coal (unit: /hr)	☐ Other Fuels (unit: /hr)
16. Full Load Consumption Rate		5905		
17. Actual Consumption Rate		5905		
18. Fuel Heat Content (Btu/unit, LHV)		1033		
19. Sulfur Content wt%		0.0005		
20. Ash Content wt%		N/A		

STEAM DESCRIPTION AND SPECIFICATIONS

21. Steam Heat Content	NA	NA		
22. Steam Temperature (°F)	N/A	N/A		
23. Steam Pressure (psi)	N/A	N/A		
24 Steam Type	N/A	N/A	☐ Saturated ☐ Superheated	☐ Saturated ☐ Superheated

OPERATING LIMITS & SCHEDULE

25. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):	none
26. Operating Schedule (hours/day, months/year, etc.):	8760 hrs/yr
27. NSPS Applicability: ☐ Yes ☒ No	If Yes, which subpart: Subpart Dc is n/a since heat < 10 MM Btu/hr

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Emissions Units - Industrial Boiler Information **Form EU5**
Revision 5
08/28/08

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name:	2. Facility Name:	3 Facility ID No:
Commercial Creamery Company	Jerome ID Plant	Pending

4. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

EXEMPTION

Please see IDAPA 58.01.01.222 for a list of industrial boilers that are exempt from Permit to Construct requirements.

BOILER (EMISSION UNIT) DESCRIPTION AND SPECIFICATIONS

5. Type of Request: ☒ New Unit ☐ Unpermitted Existing Unit ☐ Modification to a Unit with Permit #:

6. Use of Boiler: ☒ % Used For Process ☐ % Used For Space Heat ☐ % Used For Generating Electricity ☐ Other: 100% process heat

7. Boiler ID Number: B2	8. Rated Capacity: ☒ 6.1 Million British Thermal Units Per Hour (MMBtu/hr) ☐ 1,000 Pounds Steam Per Hour (1,000 lb steam/hr)	
9. Construction Date: Pending (2014)	10. Manufacturer: YORK SHIPLEY	11. Model: 560-SPHV-150-N2 (125 HP, 1988)
12. Date of Modification (if applicable): n/a	13. Serial Number (if available):	14. Control Device (if any): n/a **Note: Attach applicable control equipment form(s)**

FUEL DESCRIPTION AND SPECIFICATIONS

15. Fuel Type	☐ Diesel Fuel (#) (gal/hr)	☒ Natural Gas 5905 (cf/hr)	☐ Coal (unit: /hr)	☐ Other Fuels (unit: /hr)
16. Full Load Consumption Rate		5905		
17. Actual Consumption Rate		5905		
18. Fuel Heat Content (Btu/unit, LHV)		1033		
19. Sulfur Content wt%		0.0005		
20. Ash Content wt%		N/A		

STEAM DESCRIPTION AND SPECIFICATIONS

21. Steam Heat Content	NA	NA		
22. Steam Temperature (°F)	N/A	N/A		
23. Steam Pressure (psi)	N/A	N/A		
24 Steam Type	N/A	N/A	☐ Saturated ☐ Superheated	☐ Saturated ☐ Superheated

OPERATING LIMITS & SCHEDULE

25. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):	none
26. Operating Schedule (hours/day, months/year, etc.):	8760 hrs/yr
27. NSPS Applicability: ☐ Yes ☒ No — If Yes, which subpart:	Subpart Dc is n/a since heat < 10 MM Btu/hr

DEQ AIR QUALITY PROGRAM
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Baghouse Control Equipment **Form BCE**
Revision 6
2/18/10

Complete this form for each baghouse. Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name
Commercial Creamery Company	Jerome ID Plan

3. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: Rogers Dryer INTEGRAL FILTER ASSY	5. Baghouse Model: not specified 5 oz woven poly eggshell finish	6. Baghouse Equipment ID: D1 NEW PROPOSED SOURCE (2014)

7 (a). Baghouse particulate matter emission concentration. **Note: Provide information in 7(a)-(c) or answer question #8 below.**	_____ gr/dscf	*Manufacturers typically provide guarantees in grains per dry standard cubic foot (gr/dscf). Provide a copy of the guarantee, or other documentation, with the application along with a description of the types of bags that must be used to achieve the emission concentration.* ***Emission concentrations less than 0.01 gr/dscf will receive additional scrutiny by DEQ and a source test of the baghouse may be required.*** *If a guarantee is not provided then you must document how you obtained the emission concentration. Without documentation the application is not complete.*
7 (b). Percentage PM_{10} Or Provide PM_{10} Emission Concentration	_____ % _____ gr/dscf	*What percentage of the PM concentration listed in question #7(a) is PM_{10}. You must provide documentation as to how the percentage was determined (i.e per the baghouse manufacturer). Without documentation the application is not complete.*
7 (c). Baghouse flow rate	41500 dscfm	*Provide the baghouse flow rate in dry standard cubic feet per minute. Actual cubic feet per minute may be given in lieu of dscfm* ***if it is documented*** *that moisture content is insignificant. You must provide documentation as to how this flow rate was determined (i.e. per the exhaust fan manufacturer, combustion evaluation, etc.). Without documentation the application is not complete.*
8. Baghouse particulate matter control efficiency. **Note: Not needed if section #7 is completed.**	98 % PM control 98 % PM_{10} control	*Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.*
9. Is the baghouse equipped with a bag leak detector?	☐ Yes ☒ No	*If a bag leak detector is installed provide documentation on the leak detector, including; how the leak detector functions and what level of the output signal indicates that a bag is leaking. Without documentation the application is not complete.*

Form BCE for Source D1: Response to Question 8

Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.

Table B.2-3. TYPICAL COLLECTION EFFICIENCIES OF VARIOUS PARTICULATE CONTROL DEVICES[a]
(%)

Table B.2-3 (cont.).

AIRS Code[b]	Type Of Collector	Particle Size (μm)		
		0 - 2.5	2.5 - 6	6 - 10
016	Fabric filter - high temperature	99	99.5	99.5
017	Fabric filter - med temperature	99	99.5	99.5
018	Fabric filter - low temperature	99	99.5	99.5
046	Process change	NA	NA	NA

[a] Data represent an average of actual efficiencies. Efficiencies are representative of well designed and well operated control equipment. Site-specific factors (e. g., type of particulate being collected, varying pressure drops across scrubbers, maintenance of equipment, etc.) will affect collection efficiencies. Efficiencies shown are intended to provide guidance for estimating control equipment performance when source-specific data are not available. NA = not applicable.

[b] Control codes in Aerometric Information Retrieval System (AIRS), formerly National Emissions Data Systems.

Applicant has assumed that **Baghouse D1 5 oz woven poly eggshell finish** filters are Equivalent to AP-42 Table B.2-3 **"fabric filter – med temperature"**, with a published efficiency of 99.5% for PM and PM-10 particle sizes.

No source testing data are currently available for this filter unit. **Applicant has assumed conservatively (estimates 4x high) a filter efficiency of 98% for both PM and PM-10.**

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Baghouse Control Equipment **Form BCE**
Revision 6
2/18/10

Complete this form for each baghouse. Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name:
Commercial Creamery Company	Jerome ID Plan

3. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: Rogers Dryer INTEGRAL FILTER ASSY	5. Baghouse Model: not specified 5 oz woven poly eggshell finish	6. Baghouse Equipment ID: D2 EXISTING SOURCE

7 (a). Baghouse particulate matter emission concentration. **Note: Provide information in 7(a)-(c) or answer question #8 below.**	_____ gr/dscf	*Manufacturers typically provide guarantees in grains per dry standard cubic foot (gr/dscf). Provide a copy of the guarantee, or other documentation, with the application along with a description of the types of bags that must be used to achieve the emission concentration.* ***Emission concentrations less than 0.01 gr/dscf will receive additional scrutiny by DEQ and a source test of the baghouse may be required.*** *If a guarantee is not provided then you must document how you obtained the emission concentration. Without documentation the application is not complete.*
7 (b). Percentage PM_{10} Or Provide PM_{10} Emission Concentration	_____ % _____ gr/dscf	*What percentage of the PM concentration listed in question #7(a) is PM_{10}. You must provide documentation as to how the percentage was determined (i.e per the baghouse manufacturer). Without documentation the application is not complete.*
7 (c). Baghouse flow rate	41500 dscfm	*Provide the baghouse flow rate in dry standard cubic feet per minute. Actual cubic feet per minute may be given in lieu of dscfm* ***if it is documented*** *that moisture content is insignificant. You must provide documentation as to how this flow rate was determined (i.e. per the exhaust fan manufacturer, combustion evaluation, etc.). Without documentation the application is not complete.*
8. Baghouse particulate matter control efficiency. **Note: Not needed if section #7 is completed.**	98 % PM control 98 % PM_{10} control	*Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.*
9. Is the baghouse equipped with a bag leak detector?	☐ Yes ☒ No	*If a bag leak detector is installed provide documentation on the leak detector, including; how the leak detector functions and what level of the output signal indicates that a bag is leaking. Without documentation the application is not complete.*

Form BCE for Source D2: Response to Question 8

Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.

Table B.2-3. TYPICAL COLLECTION EFFICIENCIES OF VARIOUS PARTICULATE CONTROL DEVICES[a]
(%)

Table B.2-3 (cont.).

AIRS Code[b]	Type Of Collector	Particle Size (μm)		
		0 - 2.5	2.5 - 6	6 - 10
016	Fabric filter - high temperature	99	99.5	99.5
017	Fabric filter - med temperature	99	99.5	99.5
018	Fabric filter - low temperature	99	99.5	99.5
046	Process change	NA	NA	NA

[a] Data represent an average of actual efficiencies. Efficiencies are representative of well designed and well operated control equipment. Site-specific factors (e. g., type of particulate being collected, varying pressure drops across scrubbers, maintenance of equipment, etc.) will affect collection efficiencies. Efficiencies shown are intended to provide guidance for estimating control equipment performance when source-specific data are not available. NA = not applicable.

[b] Control codes in Aerometric Information Retrieval System (AIRS), formerly National Emissions Data Systems.

Applicant has assumed that **Baghouse D2 5 oz woven poly eggshell finish** filters are Equivalent to AP-42 Table B.2-3 **"fabric filter – med temperature"**, with a published efficiency of 99.5% for PM and PM-10 particle sizes.

No source testing data are currently available for this filter unit. **Applicant has assumed conservatively (estimates 4x high) a filter efficiency of 98% for both PM and PM-10.**

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Baghouse Control Equipment **Form BCE**
Revision 6
2/18/10

Complete this form for each baghouse. Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name:
Commercial Creamery Company	Jerome ID Plan

3. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: HAMMERLUND	5. Baghouse Model: Pulse Type 10 oz seamless poly eggshell finish	6. Baghouse Equipment ID: D3 EXISTING SOURCE

7 (a). Baghouse particulate matter emission concentration. **Note: Provide information in 7(a)-(c) or answer question #8 below.**	_____ gr/dscf	*Manufacturers typically provide guarantees in grains per dry standard cubic foot (gr/dscf). Provide a copy of the guarantee, or other documentation, with the application along with a description of the types of bags that must be used to achieve the emission concentration.* ***Emission concentrations less than 0.01 gr/dscf will receive additional scrutiny by DEQ and a source test of the baghouse may be required.*** *If a guarantee is not provided then you must document how you obtained the emission concentration. Without documentation the application is not complete.*
7 (b). Percentage PM_{10} Or Provide PM_{10} Emission Concentration	_____ % _____ gr/dscf	*What percentage of the PM concentration listed in question #7(a) is PM_{10}. You must provide documentation as to how the percentage was determined (i.e per the baghouse manufacturer). Without documentation the application is not complete.*
7 (c). Baghouse flow rate	18000 dscfm	*Provide the baghouse flow rate in dry standard cubic feet per minute. Actual cubic feet per minute may be given in lieu of dscfm* ***if it is documented*** *that moisture content is insignificant. You must provide documentation as to how this flow rate was determined (i.e. per the exhaust fan manufacturer, combustion evaluation, etc.). Without documentation the application is not complete.*
8. Baghouse particulate matter control efficiency. **Note: Not needed if section #7 is completed.**	98 % PM control 98 % PM_{10} control	*Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.*
9. Is the baghouse equipped with a bag leak detector?	☐ Yes ☒ No	*If a bag leak detector is installed provide documentation on the leak detector, including; how the leak detector functions and what level of the output signal indicates that a bag is leaking. Without documentation the application is not complete.*

Form BCE for Source D3: Response to Question 8

Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.

Table B.2-3. TYPICAL COLLECTION EFFICIENCIES OF VARIOUS PARTICULATE CONTROL DEVICES[a]
(%)

Table B.2-3 (cont.).

AIRS Code[b]	Type Of Collector	Particle Size (μm)		
		0 - 2.5	2.5 - 6	6 - 10
016	Fabric filter - high temperature	99	99.5	99.5
017	Fabric filter - med temperature	99	99.5	99.5
018	Fabric filter - low temperature	99	99.5	99.5
046	Process change	NA	NA	NA

[a] Data represent an average of actual efficiencies. Efficiencies are representative of well designed and well operated control equipment. Site-specific factors (e. g., type of particulate being collected, varying pressure drops across scrubbers, maintenance of equipment, etc.) will affect collection efficiencies. Efficiencies shown are intended to provide guidance for estimating control equipment performance when source-specific data are not available. NA = not applicable.

[b] Control codes in Aerometric Information Retrieval System (AIRS), formerly National Emissions Data Systems.

Applicant has assumed that **Baghouse D3 10 oz seamless poly eggshell finish** filters are Equivalent to AP-42 Table B.2-3 **"fabric filter – med temperature"**, with a published efficiency of 99.5% for PM and PM-10 particle sizes.

No source testing data are currently available for this filter unit. **Applicant has assumed conservatively (estimates 4x high) a filter efficiency of 98% for both PM and PM-10.**

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Baghouse Control Equipment **Form BCE**
Revision 6
2/18/10

Complete this form for each baghouse. Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name:
Commercial Creamery Company	Jerome ID Plan

3. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: AZO	5. Baghouse Model: n/a Portable Filter Unit 16 ox felted poly	6. Baghouse Equipment ID: P1 EXISTING SOURCE

7 (a). Baghouse particulate matter emission concentration. **Note: Provide information in 7(a)-(c) or answer question #8 below.**	_____ gr/dscf	*Manufacturers typically provide guarantees in grains per dry standard cubic foot (gr/dscf). Provide a copy of the guarantee, or other documentation, with the application along with a description of the types of bags that must be used to achieve the emission concentration.* ***Emission concentrations less than 0.01 gr/dscf will receive additional scrutiny by DEQ and a source test of the baghouse may be required.*** *If a guarantee is not provided then you must document how you obtained the emission concentration. Without documentation the application is not complete.*
7 (b). Percentage PM_{10} Or Provide PM_{10} Emission Concentration	_____ % _____ gr/dscf	*What percentage of the PM concentration listed in question #7(a) is PM_{10}. You must provide documentation as to how the percentage was determined (i.e per the baghouse manufacturer). Without documentation the application is not complete.*
7 (c). Baghouse flow rate	130 dscfm	*Provide the baghouse flow rate in dry standard cubic feet per minute. Actual cubic feet per minute may be given in lieu of dscfm* ***if it is documented*** *that moisture content is insignificant. You must provide documentation as to how this flow rate was determined (i.e. per the exhaust fan manufacturer, combustion evaluation, etc.). Without documentation the application is not complete.*
8. Baghouse particulate matter control efficiency. **Note: Not needed if section #7 is completed.**	98 % PM control 98 % PM_{10} control	*Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.*
9. Is the baghouse equipped with a bag leak detector?	☐ Yes ☒ No	*If a bag leak detector is installed provide documentation on the leak detector, including; how the leak detector functions and what level of the output signal indicates that a bag is leaking. Without documentation the application is not complete.*

Form BCE for Source P1: Response to Question 8

Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.

Table B.2-3. TYPICAL COLLECTION EFFICIENCIES OF VARIOUS PARTICULATE CONTROL DEVICES[a]
(%)

Table B.2-3 (cont.).

AIRS Code[b]	Type Of Collector	Particle Size (μm)		
		0 - 2.5	2.5 - 6	6 - 10
016	Fabric filter - high temperature	99	99.5	99.5
017	Fabric filter - med temperature	99	99.5	99.5
018	Fabric filter - low temperature	99	99.5	99.5
046	Process change	NA	NA	NA

[a] Data represent an average of actual efficiencies. Efficiencies are representative of well designed and well operated control equipment. Site-specific factors (e. g., type of particulate being collected, varying pressure drops across scrubbers, maintenance of equipment, etc.) will affect collection efficiencies. Efficiencies shown are intended to provide guidance for estimating control equipment performance when source-specific data are not available. NA = not applicable.

[b] Control codes in Aerometric Information Retrieval System (AIRS), formerly National Emissions Data Systems.

Applicant has assumed that **Filter P1 [fabric type unknown]** filters are Equivalent to AP-42 Table B.2-3 **"fabric filter – med temperature"**, with a published efficiency of 99.5% for PM and PM-10 particle sizes.

No source testing data are currently available for this filter unit. **Applicant has assumed conservatively (estimates 4x high) a filter efficiency of 98% for both PM and PM-10.**

DEQ AIR QUALITY PROGRAM
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Baghouse Control Equipment **Form BCE**
Revision 6
2/18/10

Complete this form for each baghouse. Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name
Commercial Creamery Company	Jerome ID Plan

3. Brief Project Description: Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: AZO	5. Baghouse Model: n/a Portable Filter Unit 16 oz felted poly	6. Baghouse Equipment ID: P2 EXISTING SOURCE

7 (a). Baghouse particulate matter emission concentration. **Note: Provide information in 7(a)-(c) or answer question #8 below.**	_____ gr/dscf	*Manufacturers typically provide guarantees in grains per dry standard cubic foot (gr/dscf). Provide a copy of the guarantee, or other documentation, with the application along with a description of the types of bags that must be used to achieve the emission concentration.* ***Emission concentrations less than 0.01 gr/dscf will receive additional scrutiny by DEQ and a source test of the baghouse may be required.*** *If a guarantee is not provided then you must document how you obtained the emission concentration. Without documentation the application is not complete.*
7 (b). Percentage PM_{10} Or Provide PM_{10} Emission Concentration	_____ % _____ gr/dscf	*What percentage of the PM concentration listed in question #7(a) is PM_{10}. You must provide documentation as to how the percentage was determined (i.e per the baghouse manufacturer). Without documentation the application is not complete.*
7 (c). Baghouse flow rate	130 dscfm	*Provide the baghouse flow rate in dry standard cubic feet per minute. Actual cubic feet per minute may be given in lieu of dscfm* ***If it is documented*** *that moisture content is insignificant. You must provide documentation as to how this flow rate was determined (i.e. per the exhaust fan manufacturer, combustion evaluation, etc.). Without documentation the application is not complete.*
8. Baghouse particulate matter control efficiency. **Note: Not needed if section #7 is completed.**	98 % PM control 98 % PM_{10} control	*Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.*
9. Is the baghouse equipped with a bag leak detector?	☐ Yes ☒ No	*If a bag leak detector is installed provide documentation on the leak detector, including; how the leak detector functions and what level of the output signal indicates that a bag is leaking. Without documentation the application is not complete.*

Form BCE for Source P2: Response to Question 8

Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM_{10}. Provide a copy of the control efficiency documentation with the application. Documentation must include a description of the types of bags that must be used to achieve the control efficiency. Without documentation the application is not complete.

Table B.2-3. TYPICAL COLLECTION EFFICIENCIES OF VARIOUS PARTICULATE CONTROL DEVICES[a]
(%)

Table B.2-3 (cont.).

AIRS Code[b]	Type Of Collector	Particle Size (µm)		
		0 - 2.5	2.5 - 6	6 - 10
016	Fabric filter - high temperature	99	99.5	99.5
017	Fabric filter - med temperature	99	99.5	99.5
018	Fabric filter - low temperature	99	99.5	99.5
046	Process change	NA	NA	NA

[a] Data represent an average of actual efficiencies. Efficiencies are representative of well designed and well operated control equipment. Site-specific factors (e. g., type of particulate being collected, varying pressure drops across scrubbers, maintenance of equipment, etc.) will affect collection efficiencies. Efficiencies shown are intended to provide guidance for estimating control equipment performance when source-specific data are not available. NA = not applicable.

[b] Control codes in Aerometric Information Retrieval System (AIRS), formerly National Emissions Data Systems.

Applicant has assumed that **Filter P2 [fabric type unknown]** filters are Equivalent to AP-42 Table B.2-3 **"fabric filter – med temperature"**, with a published efficiency of 99.5% for PM and PM-10 particle sizes.

No source testing data are currently available for this filter unit. **Applicant has assumed conservatively (estimates 4x high) a filter efficiency of 98% for both PM and PM-10.**

Modeling Information - Impact Analysis **Form MI1**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline - 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION
Revision 3
2007-04-05

Please see instructions on page 2 before filling out the form.

Company Name:	Commercial Creamery Company
Facility Name:	Jerome, ID Plant
Facility ID No.:	not yet assiigned
Brief Project Description:	Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

SUMMARY OF AIR IMPACT ANALYSIS RESULTS - CRITERIA POLLUTANTS

		1.		2.	3.	4.		5.
Criteria Pollutants	**Averaging Period**	**Significant Impact Analysis Results (µg/m3)**	**Significant Contribution Level (µg/m3)**	**Full Impact Analysis Results (µg/m3)**	**Background Concentration (µg/m3)**	**Total Ambient Impact (µg/m3)**	**NAAQS (µg/m3)**	**Percent of NAAQS**
PM_{10}	24-hour	n/a	5	11.70	78.00	89.70	150	60%
PM-2.5	24-hr	n/a		7.40	22.00	29.40	35	84%
	Annual	n/a		0.70	7.20	7.90	12	66%
SO_2	3-hr	n/a	25	0.4			1300	
	24-hr	n/a	5	0.2			365	
	Annual	n/a	1	0.0459			80	
NO_2	1-hr	n/a		65.3000	24.40	89.70	188	48%
NO_2	Annual	n/a	1	2.60	4.10	6.70	100	7%
CO	1-hr	n/a	2000	83.3			10000	
	8-hr	n/a	500	58.6			40000	

Modeling Information - Point Source Stack Parameters **Form MI2**

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PERMIT TO CONSTRUCT APPLICATION
Revision 3
2007-03-27

Please see instructions on page 2 before filling out the form.

Company Name:	Commercial Creamery Company
Facility Name:	Jerome, ID Plant
Facility ID No.:	not yet assigned
Brief Project Description:	Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

POINT SOURCE STACK PARAMETERS

1.	2.	3a.	3b.	4.	5.	6.	7.	8.	9.	10.
Emissions units	**Stack ID**	**UTM Easting (m)**	**UTM Northing (m)**	**Base Elevation (m)**	**Stack Height (m)**	**Modeled Diameter (m)**	**Stack Exit Temperature (K)**	**Stack Exit Flowrate (acfm)**	**Stack Exit Velocity (m/s)**	**Stack orientation (e.g., horizontal, rain cap)**
Point Source(s)										
Boiler 150 hp York Shipley	B1	702793.2	4732969.3	1140.87	13.716	0.3479999	374.8167	2330.768	11.56497	
Boiler Pending New 125 hp YS	B2	702789.6	4732969.3	1140.81	13.716	0.3479999	374.8167	2330.768	11.56497	
Dryer Pending New Rogers	D1	702844.4	4732979.5	1141.59	17.6784	1.067	327.5945	41530.05	21.91984	
Dryer Existing 1960 Rogers	D2	702822.1	4732963.5	1141.27	14.63	1.266	327.5945	41530.05	15.57036	
Dryer Existing Blaw Knox Spray	D3	702818.5	4732976.2	1141.23	14.63	1.088	327.5945	18010.48	9.142632	
Clothes Dryer 1	NR3A	702856.3	4732975.7	1141.7	6.7056	0.3049999	344.2611	741.6072	4.790473	
Clothes Dryer 2	NR3B	702856.3	4732974.7	1141.7	6.7056	0.3049999	344.2611	741.6072	4.790473	
Water Heater 1	NR5A	702858.1	4732973.4	1141.72	6.7056	0.152	344.2611	487.3423	12.67508	
Water Heater 2	NR5B	702801.6	4733007.1	1141.07	10.3632	0.152	349.8167	1292.516	33.61652	
Dryer Existing Blaw Knox Drum	D4	702799.1	4732979.5	1140.99	6.1	0.001	322.0389	0.00000166	0.001	horizontal
Tote-Dump Dust Collector 2	P1	702808.4	4733000.1	1141.17	14.3256	0.07599999	327.5945	127.1327	13.22617	
Tote-Dump Dust Collector 1	P2	702856.6	4732975.7	1141.7	14.3256	0.2493438	327.5945	1368.445	13.22617	
(insert more rows as needed)										

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PERMIT TO CONSTRUCT APPLICATION

Revision 3
2007-04-05

Please see instructions on page 2 before filling out the form.

Company Name:	Commercial Creamery Company
Facility Name:	Jerome, ID Olant
Facility ID No.:	not yet assiigned
Brief Project Description:	Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

FUGITIVE SOURCE PARAMETERS

1.	2.	3a.	3b.	4.	5.	6.	7.	8.	9.	10.
Emissions units	**Stack ID**	**UTM Easting (m)**	**UTM Northing (m)**	**Base Elevation (m)**	**Release Height (m)**	**Easterly Length (m)**	**Northerly Length (m)**	**Angle from North (°)**	**Initial Vertical Dimension (m)**	**Initial Horizontal Dimension (m)**
Area Source(s)										
name of the emissions unit1	none									
name of the emissions unit2	none									
name of the emissions unit3	none									
name of the emissions unit4	none									
name of the emissions unit5	none									
name of the emissions unit6	none									
name of the emissions unit7	none									
name of the emissions unit8	none									
name of the emissions unit9	none									
name of the emissions unit10	none									
Volume Source(s)										
name of the emissions unit11	none									
name of the emissions unit12	none									
name of the emissions unit13	none									
name of the emissions unit14	none									
name of the emissions unit15	none									
name of the emissions unit16	none									
name of the emissions unit17	none									
name of the emissions unit18	none									
name of the emissions unit19	none									
(insert more rows as needed)										

Modeling Information - Buildings and Structures **Form MI4**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
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Air Permit Hotline - 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION
Revision 3
2007-04-05

Please see instructions on page 2 before filling out the form.

Company Name:	Commercial Creamery Company
Facility Name:	Jerome ID Plant
Facility ID No.:	not yet assigned
Brief Project Description:	Installation of one New Gas-Fired Boiler plus one new Gas-Fired product Dryer

BUILDING AND STRUCTURE INFORMATION

1. Building ID Number	2. Length (ft)	3. Width (ft)	4. Base Elevation (m)	5. Building Height (m)	6. Number of Tiers	7. Description/Comments
CCCo Building 1	75.5	89.6	1141.71	5.23	2	
CCCo Building 2	57.7	12.5	1141.75	6.1	1	
CCCo Building 3	29.5	16.4	1141.56	3.96	1	
CCCo Building 4	29.5	12.5	1141.61	4.27	1	
CCCo Building 5	79.1	48.2	1141.88	5.79	1	
CCCo Building 6	25.9	48.2	1141.63	7.62	1	
CCCo Building 7	35.8	52.5	1141.52	11.89	1	
CCCo Building 8	22.3	24.6	1141.4	16.76	1	
CCCo Building 9	22.3	27.9	1141.34	14.02	1	
CCCo Building 10	58.1	54.1	1141.45	6.71	2	2 penthouses of same height on one roof
CCCo Building 11	31.8	19.7	1141.38	13.11	1	
CCCo Building 12	7.2	26.2	1141.34	8.23	1	
CCCo Building 13	8.9	31.8	1141.41	8.23	1	
CCCo Building 14	91.9	37.7	1141.44	6.02	1	
CCCo Building 15	91.9	63.6	1141.08	6.02	1	
CCCo Building 16	33.8	54.1	1141.26	9.45	2	
CCCo Building 17	22.0	15.1	1141.28	10.67	1	
CCCo Building 18	33.8	49.2	1141.28	9.45	1	
CCCo Building 19	46.9	20.3	1141.14	5.79	1	
CCCo Building 20	55.4	48.9	1141.15	10.67	1	
CCCo Building 21	67.3	71.2	1140.88	8.84	1	
CCCo Building 22	38.1	59.7	1140.44	4.88	1	
CCCo Building 23	39.4	121.4	1142.98	4.88	1	
CCCo Building 24	177.2	82.0	1141.13	10.36	2	
CCCo Building 25	44.9	14.1	1141.1	14.33	1	

Commercial Creamery Company
Application for Pre-Permit Construction Approval

Addendum to Form MI4 (unable to add rows for Bldgs 26-32 to Form MI4)

Building ID Number	Length (ft)	Width (ft)	Base Elevation (m)	Building Height (m)	Number of Tiers	Description/Comments
BLDZ1	75.5	89.6	1141.71	5.23	2	
BLDZ2	57.7	12.5	1141.75	6.1	1	
BLDX3	29.5	16.4	1141.56	3.96	1	
BLDX4	29.5	12.5	1141.61	4.27	1	
BLDX5	79.1	48.2	1141.88	5.79	1	
BLDX6	25.9	48.2	1141.63	7.62	1	
BLDX7	35.8	52.5	1141.52	11.89	1	
BLDX8	22.3	24.6	1141.4	16.76	1	
BLDX9	22.3	27.9	1141.34	14.02	1	
BLD10	58.1	54.1	1141.45	6.71	2	2 penthouses of same height on one roof
BLD11	31.8	19.7	1141.38	13.11	1	
BLD12	7.2	26.2	1141.34	8.23	1	
BLD13	8.9	31.8	1141.41	8.23	1	
BLD14	91.9	37.7	1141.44	6.02	1	
BLD15	91.9	63.6	1141.08	6.02	1	
BLD16	33.8	54.1	1141.26	9.45	2	
BLD17	22.0	15.1	1141.28	10.67	1	
BLD18	33.8	49.2	1141.28	9.45	1	
BLD19	46.9	20.3	1141.14	5.79	1	
BLD20	55.4	48.9	1141.15	10.67	1	
BLD21	67.3	71.2	1140.88	8.84	1	
BLD22	38.1	59.7	1140.44	4.88	1	
BLD23	39.4	121.4	1142.98	4.88	1	
BLD24	177.2	82.0	1141.13	10.36	2	
BLD25	44.9	14.1	1141.1	14.33	1	
BLD26	295.3	59.1	1141.98	6.71	1	
BLD27	63.3	29.5	1141.96	11.89	1	
BLD28	28.5	29.5	1141.76	11.89	1	
BLD29	32.8	29.5	1142.81	4.88	1	
BLD30	278.9	124.7	1142.57	4.88	1	large building, 7 gables, assume 1 roof
BLD31	124.7	19.7	1142.18	4.88	1	
BLD32	45.9	118.1	1142.47	9.5	1	

F.22 Form EI -- Facility Wide PTE Emissions Inventory

The Facility Wide PTE Emissions Inventory for the Commercial Creamery Facility is presented and discussed in Section 5.2.3 of this Application, in the context of assumptions, calculations, and other background material on the dealing with the modeling analysis. This Section F.22 presents the summary table emissions inventory in the required format of Form EI Facility Wide PTE Emissions Inventory

Table 5.2.3-1 presents the *existing* facility-wide Potential to Emit for NSR Regulated Pollutants for the Commercial Creamery facility. Formatting is identical to the template provided as. *Facility Wide Hazardous Air Pollutant Potential to Emit Application Template* (DEQ, 2010f)

This table provides a basis for the existing facility classification with respect to the Major Facility threshold of 100 tpy for any Criteria Pollutant. It is shown that no Criteria Pollutant has facility-wide emissions in excess of 100 tpy, (much less 250 tpy) therefore the Commercial Creamery facility is a Minor Facility.

Emissions are calculated for each facility source, for each Criteria Pollutant separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***201308921 CC Emission Rate Calcs R4 AP42 All Sources*** and linked to the Table 5.2.3-1 summary that is included here.

Emission Increase

Emissions Unit	Stack ID	PM-10 lb/hr 24-hr Avg.	PM-2.5 lb/hr 24-hr Avg.	PM-2.5 lb/hr Annual Avg.	SO2 lb/hr Max	SO2 lb/hr 3-hr Avg.	NOx lb/hr 1-hr Avg.	NOx lb/hr Annual Avg.	CO lb/hr Max	CO lb/hr 8-hr Avg.	Pb lb/hr Month Avg.	Pb lb/hr Qtrly Avg.
Point Sources												
Boiler 150 hp York Shipley	B1	4.488E-02	4.488E-02	4.762E-02	3.543E-03	3.543E-03	4.724E-01	4.724E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Boiler Pending New 125 hp YS	B2	4.488E-02	4.488E-02	4.762E-02	3.543E-03	3.543E-03	4.724E-01	4.724E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Dryer Pending New Rogers	D1	3.754E+00	1.530E+00	1.530E+00	6.984E-03	6.970E-03	9.286E-01	7.778E-01	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing 1960 Rogers	D2	3.754E+00	1.530E+00	1.530E+00	6.984E-03	6.970E-03	9.286E-01	7.778E-01	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing Blaw Knox Spray	D3	5.960E-02	2.429E-02	2.429E-02	4.647E-03	4.647E-03	6.190E-01	5.159E-01	6.505E-01	6.505E-01	3.872E-06	3.872E-06
Dryer, Drum	D4	1.000E-01	1.000E-01	1.095E-02								
Tote-Dump Dust Collector 2	P1	6.000E-02	2.468E-02	2.468E-02								
Tote-Dump Dust Collector 1	P2	6.000E-02	2.468E-02	2.468E-02								
Clothes Dryer 1	NR3a	2.841E-04	2.841E-04	2.841E-04	6.738E-05	6.738E-05	3.516E-03	2.817E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Clothes Dryer 2	NR3b	2.841E-04	2.841E-04	2.841E-04	6.738E-05	6.738E-05	3.516E-03	2.817E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Water Heater 1	NR5a	5.518E-04	5.518E-04	5.518E-04	4.356E-05	4.356E-05	5.460E-03	5.460E-03	2.904E-03	2.904E-03	3.630E-08	3.630E-08
Water Heater 3	NR5b	1.471E-03	1.471E-03	1.471E-03	1.161E-04	1.161E-04	1.456E-02	1.456E-02	7.741E-03	7.741E-03	9.676E-08	9.676E-08
Proc'B - Carrier HVAC	NR4A	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
Blend'C - Carrier HVAC	NR4B	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
QA - Carrier HVAC	NR4C	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
QC - Carrier HVAC	NR4D	5.444E-04	5.444E-04	2.722E-04	4.298E-05	4.298E-05	6.734E-03	3.367E-03	2.865E-03	2.865E-03	3.582E-08	3.582E-08
E Side - Carrier HVAC Office	NR4E	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Carrier HVAC Bartelt	NR4F	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
Littleford - Carrier HVAC-1	NR4G	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Modine Unit Heater Down	NR7A	1.655E-03	1.655E-03	8.277E-04	1.307E-04	1.307E-04	2.047E-02	1.024E-02	8.712E-03	8.712E-03	1.089E-07	1.089E-07
E Side - Modine Unit Heater Up	NR7B	1.471E-03	1.471E-03	7.357E-04	1.162E-04	1.162E-04	1.820E-02	9.100E-03	7.744E-03	7.744E-03	9.681E-08	9.681E-08
Ph I ADP Unit Heater 1	NR7C	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph I ADP Unit Heater 2	NR7D	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph II ADP Unit Heater 1	NR7E	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph II ADP Unit Heater 2	NR7F	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph III ADP Unit Heater N-1	NR7G	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater N-2	NR7H	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater S-1	NR7I	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Ph III ADP Unit Heater S-2	NR7J	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Break Room - Carrier HVAC	NR4H	1.839E-03	1.839E-03	9.197E-04	1.452E-04	1.452E-04	2.275E-02	1.137E-02	9.681E-03	9.681E-03	1.210E-07	1.210E-07
Blend Room - Carrier HVAC-1	NR4I	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-2	NR4J	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-3	NR4K	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-4	NR4L	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Shop - Carrier HVAC	NR4M	3.311E-04	3.311E-04	1.655E-04	2.614E-05	2.614E-05	4.095E-03	2.047E-03	1.742E-03	1.742E-03	2.178E-08	2.178E-08
E Shop- Modine Unit Heater 1	NR7K	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
E Shop- Modine Unit Heater 2	NR7L	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
	lb/hr	7.918	3.363	3.261	0.029	0.029	3.916	3.276	3.813	3.813	0.000024	0.000024
	tpy	34.682	14.731	14.282	0.127	0.127		14.3	16.700	16.700	0.000106	0.000106
		PM-10	PM-2.5	PM-2.5	SO2	SO2	NOx	NOx	CO	CO	Pb	Pb

Fugitive Sources

No apparent fugitive sources are known at this facility

F.23 Form EI -- Proposed Modification at a Minor Facility Emissions Inventory

The Proposed Modification at a Minor Facility Emissions Inventory for the Commercial Creamery Facility is presented and discussed in Section 5.2.4 of this Application, in the context of assumptions, calculations, and other background material on the dealing with the modeling analysis. This Section F.23 presents the summary table emissions inventory in the required format of Form EI Proposed Modification at a Minor Facility Emissions Inventory

Tables 5.2.4-1, 5.2.4-2, and 5.2.4-3, which follow, present, respectively, the facility-wide

- Pre-Project Potential to Emit for NSR Regulated Pollutants
- Post-Project Potential to Emit for NSR Regulated Pollutants, and
- Changes in Potential to Emit for NSR Regulated Pollutants

for the Commercial Creamery facility. Formatting is identical to the template provided as. *Proposed Minor Modification to an Existing Minor Facility – Change in Potential to Emit* (DEQ, 2010c)

The primary purpose of these tables is to identify those pollutants that meet the *Method 1 criteria* for *de minimis* total facility-wide emissions that, under the graded modeling approach presented in DEQ, 2011a, are below the modeling thresholds listed in Table 2 of the *State of Idaho Air Quality Modeling Guideline ID-AQ-011* (DEQ 2011b). It is shown that SO2, CO, and Lead meet their corresponding *de minimis* criteria, and do not require modeling on the basis of this table. The remaining pollutants, PM-10, PM-2.5, NO2, and four TAPs (Arsenic, Cadmium, Formaldehyde, and Nickel, require modeling under terms of Method 3 of DEQ, 2011a.

All sources emitting any regulated pollutant to the atmosphere are represented, with emissions in units of lbs/hr for each source for each Criteria Pollutant and NAAQS. All point sources are addressed; however, the Applicant has not identified any fugitive sources at the facility. NOx (not NO2) emissions are provided, per template, and do not reflect the 0.8 ratio of NO2 /NOx that is used in the modeling.

Sources that have a non-continuous operating schedule are highlighted in green, which indicates an adjustment to their hourly emissions rate in those cases where a longer-term standard is being modeled. For example, a source operating only one 8-hr shift every day of the year with unit emissions per hour would be modeled with an emissions rate 1/3 of that unit rate on a per-hour basis when modeling a 24-hr standard, or an annual standard. Sources D4, P1 and P2 have particulate emissions only (no combustion), and do not have SO2, NOx, CO or Pb emissions. Emissions are calculated for each facility source, for each Criteria Pollutant separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***201308921 CC Emission Rate Calcs R4 AP42 All Sources*** and linked to the **Tables 5.2.4-1, 5.2.4-2, and 5.2.4-3,** summaries that are included here.

2013 PTC Application for New Boiler, New Dryer, Refurbished Dryer

Pre-Project Potential to Emit for NSR Regulated Pollutants

Commercial Creamery Company, Jerome, ID

Emissions Unit	Description	PM tpy	PM-10 tpy	PM-2.5 tpy	SO2 tpy	NO2 tpy	CO tpy	Pb tpy	O3 tpy	NSPS tpy	40 CFR 82 tpy	CH4 mass tpy	CO2 Mass tpy	N2O mass tpy	CH4 as CO2e tpy	CO2e tpy	N2O as CO2e tpy
	Point Sources																
B1	Boiler 150 hp York Shipley	1.966E-01	1.966E-01	1.966E-01	1.552E-02	2.069E+00	2.173E+00	1.293E-05	none	none	n/a	5.949E-02	3.104E+03	5.690E-02	1.249E+00	3.104E+03	1.997E+01
B2	Boiler Pending New 125 hp YS																
D1	Dryer Pending New Rogers	1.095E+01	2.628E-01	1.081E-01	3.053E-02	3.392E+00	2.849E+00	1.696E-05	none	none	n/a	7.802E-02	4.070E+03	7.500E-02	1.638E+00	4.070E+03	2.633E+01
D2	Dryer Pending 2014 Refubished 1960 Rogers																
D2a	Dryer Pending 2014 Refubished 1960 Rogers	1.095E+01	2.611E-01	1.064E-01	1.400E-02	2.261E+00	1.900E+00	1.696E-05	none	none	n/a	5.200E-02	2.713E+03	5.000E-02	1.092E+00	2.713E+03	1.755E+01
D3	Dryer Existing Blaw Knox Spray	1.000E-01	4.800E-02	4.800E-02													
D4	Dryer, Drum	5.820E-01	3.430E-01	1.005E-01													
P1	Tote-Dump Dust Collector 2	5.820E-01	3.434E-01	1.005E-01													
P2	Tote-Dump Dust Collector 1	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR3a	Clothes Dryer 1	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR3b	Clothes Dryer 2	2.000E-03	2.000E-03	2.000E-03	1.908E-04	2.391E-02	1.272E-02	1.590E-07	none	none	n/a	7.314E-04	3.816E+01	6.996E-04	1.536E-02	3.816E+01	2.456E-01
NR5a	Water Heater 1	6.000E-03	6.440E-03	6.440E-03	5.086E-04	6.374E-02	3.390E-02	4.238E-07	none	none	n/a	1.949E-03	1.017E+02	1.865E-03	4.094E-02	1.017E+02	6.545E-01
NR5b	Water Heater 3	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	69.961	0.001	0.028	69.961	0.450
NR4A	Proc'B - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	31.946	0.001	0.013	31.946	0.206
NR4B	Blend'C - Carrier HVAC	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4C	QA - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	1.833E-04	2.360E-02	1.255E-02	1.569E-07	none	none	n/a	0.000	18.826	0.000	0.008	18.826	0.121
NR4D	QC - Carrier HVAC	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4E	E Side - Carrier HVAC Office	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4F	E Side - Carrier HVAC Bartelt	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4G	Littleford - Carrier HVAC-1	4.000E-03	4.000E-03	4.000E-03	5.724E-04	7.174E-02	3.816E-02	4.770E-07	none	none	n/a	0.001	57.241	0.001	0.023	57.241	0.368
NR7A	E Side - Modine Unit Heater Down	3.000E-03	3.000E-03	3.000E-03	5.089E-04	6.377E-02	3.392E-02	4.240E-07	none	none	n/a	0.001	50.931	0.001	0.020	50.931	0.327
NR7B	E Side - Modine Unit Heater Up	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7C	Ph I ADP Unit Heater 1	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7D	Ph I ADP Unit Heater 2	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7E	Ph II ADP Unit Heater 1	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7F	Ph II ADP Unit Heater 2	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7G	Ph III ADP Unit Heater N-1	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7H	Ph III ADP Unit Heater N-2	3.000E-03	3.000E-03	3.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR7I	Ph III ADP Unit Heater S-1	3.000E-03	3.000E-03	3.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR7J	Ph III ADP Unit Heater S-2	6.000E-03	6.000E-03	6.000E-03	6.360E-04	7.971E-02	4.240E-02	5.300E-07	none	none	n/a	0.001	63.601	0.001	0.026	63.601	0.409
NR4H	Break Room - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4I	Blend Room - Carrier HVAC-1	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4J	Blend Room - Carrier HVAC-2	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4K	Blend Room - Carrier HVAC-3	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4L	Blend Room - Carrier HVAC-4	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4M	Shop - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	1.145E-04	1.435E-02	7.632E-03	9.540E-08	none	none	n/a	0.000	11.448	0.000	0.005	11.448	0.074
NR7K	E Shop- Modine Unit Heater 1	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
NR7L	E Shop- Modine Unit Heater 2	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
	TOTAL	23.5	1.5	0.8	0.1	9.5	7.9	0.000059	0.0	0.0	0.0	0.2	11335.8	0.2	4.6	11335.8	73.2
											Total GHG mass (tpy)=		11336		Total GHG CO2e (tpy)=		11414

Fugitive Sources

No apparent fugitive sources are known at this facility

Table 5.2.4-1
Pre-Project Potential to Emit for NSR Regulated Pollutants

2013 PTC Application for New Boiler, New Dryer, Refurbished Dryer

Commercial Creamery Company, Jerome, ID

Post-Project Potential to Emit for NSR Regulated Pollutants

Emissions Unit	Description	PM tpy	PM-10 tpy	PM-2.5 tpy	SO2 tpy	NOx tpy	CO tpy	Pb tpy	O3 tpy	NSPS tpy	40 CFR 82 tpy	CH4 mass tpy	CO2 Mass tpy	N2O mass tpy	CH4 as CO2e tpy	CO2e tpy	N2O as CO2e tpy
	Point Sources																
B1	Boiler 150 hp York Shipley	1.966E-01	1.966E-01	1.966E-01	1.552E-02	2.069E+00	2.173E+00	1.293E-05	none	none	n/a	5.949E-02	3.104E+03	5.690E-02	1.249E+00	3.104E+03	1.997E+01
B2	Boiler Pending New 125 hp YS	1.966E-01	1.966E-01	1.966E-01	1.552E-02	2.069E+00	2.173E+00	1.293E-05	none	none	n/a	5.949E-02	3.104E+03	5.690E-02	1.249E+00	3.104E+03	1.997E+01
D1	Dryer Pending New Rogers	1.095E+01	2.628E-01	1.081E-01	3.059E-02	3.392E+00	2.849E+00	1.696E-05	none	none	n/a	7.802E-02	4.070E+03	7.500E-02	1.638E+00	4.070E+03	2.633E+01
D2	Dryer Existing 1960 Rogers	1.095E+01	2.628E-01	1.081E-01	3.053E-02	3.392E+00	2.849E+00	1.696E-05	none	none	n/a	7.802E-02	4.070E+03	7.500E-02	1.638E+00	4.070E+03	2.633E+01
D2a	Dryer Pending 2014 Refubished 1960 Rogers	1.095E+01	2.611E-01	1.064E-01	1.400E-02	2.261E+00	1.900E+00	1.696E-05	none	none	n/a	5.200E-02	2.713E+03	5.000E-02	1.092E+00	2.713E+03	1.755E+01
D3	Dryer Existing Blaw Knox Spray	1.000E-01	4.800E-02	4.800E-02													
D4	Dryer, Drum	5.820E-01	3.430E-01	1.005E-01													
P1	Tote-Dump Dust Collector 2	5.820E-01	3.434E-01	1.005E-01													
P2	Tote-Dump Dust Collector 1	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR3a	Clothes Dryer 1	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR3b	Clothes Dryer 2	2.000E-03	2.000E-03	2.000E-03	1.908E-04	2.391E-02	1.272E-02	1.590E-07	none	none	n/a	7.314E-04	3.816E+01	6.996E-04	1.536E-02	3.816E+01	2.456E-01
NR5a	Water Heater 1	6.000E-03	6.440E-03	6.440E-03	5.086E-04	6.374E-02	3.390E-02	4.238E-07	none	none	n/a	1.949E-03	1.017E+02	1.865E-03	4.094E-02	1.017E+02	6.545E-01
NR5b	Water Heater 3	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	69.961	0.001	0.028	69.961	0.450
NR4A	Proc'B - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	31.946	0.001	0.013	31.946	0.206
NR4B	Blend'C - Carrier HVAC	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4C	QA - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	1.833E-04	2.360E-02	1.255E-02	1.569E-07	none	none	n/a	0.000	18.826	0.000	0.008	18.826	0.121
NR4D	QC - Carrier HVAC	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4E	E Side - Carrier HVAC Office	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4F	E Side - Carrier HVAC Bartelt	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4G	Littleford - Carrier HVAC-1	4.000E-03	4.000E-03	4.000E-03	5.724E-04	7.174E-02	3.816E-02	4.770E-07	none	none	n/a	0.001	57.241	0.001	0.023	57.241	0.368
NR7A	E Side - Modine Unit Heater Down	3.000E-03	3.000E-03	3.000E-03	5.043E-04	6.377E-02	3.392E-02	4.240E-07	none	none	n/a	0.001	50.931	0.001	0.020	50.931	0.327
NR7B	E Side - Modine Unit Heater Up	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7C	Ph I ADP Unit Heater 1	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7D	Ph I ADP Unit Heater 2	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7E	Ph II ADP Unit Heater 1	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7F	Ph II ADP Unit Heater 2	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7G	Ph III ADP Unit Heater N-1	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7H	Ph III ADP Unit Heater N-2	3.000E-03	3.000E-03	3.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR7I	Ph III ADP Unit Heater S-1	3.000E-03	3.000E-03	3.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR7J	Ph III ADP Unit Heater S-2	6.000E-03	6.000E-03	6.000E-03	6.360E-04	7.971E-02	4.240E-02	5.300E-07	none	none	n/a	0.001	63.601	0.001	0.026	63.601	0.409
NR4H	Break Room - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4I	Blend Room - Carrier HVAC-1	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4J	Blend Room - Carrier HVAC-2	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4K	Blend Room - Carrier HVAC-3	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.000	11.448	0.000	0.005	11.448	0.074
NR4L	Blend Room - Carrier HVAC-4	3.000E-03	3.000E-03	3.000E-03	1.145E-04	1.435E-02	7.632E-03	9.540E-08	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
NR4M	Shop - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
NR7K	E Shop- Modine Unit Heater 1	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
NR7L	E Shop- Modine Unit Heater 2	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
	TOTAL	34.6	2.0	1.1	0.1	15.0	12.9	0.0	0.0			0.4	18510.0	0.3	7.5	18810.0	119.5
											Total GHG mass (tpy)=	18511			Total GHG CO2e (tpy)=	18837	

Fugitive Sources

No apparent fugitive sources are known at this facility

Table 5.2.4-2

Post-Project Potential to Emit for NSR Regulated Pollutants

2013 PTC Application for New Boiler, New Dryer, Refurbished Dryer

Changes in Potential to Emit for NSR Regulated Pollutants

Commercial Creamery Company, Jerome, ID

Emissions Unit	Description	PM tpy	PM-10 tpy	PM-2.5 tpy	SO2 tpy	NOx tpy	CO tpy	Pb tpy	O3 tpy	NSPS tpy	40 CFR 82 tpy	CH4 mass tpy	CO2 Mass tpy	N2O mass tpy	CH4 as CO2e tpy	CO2e tpy	N2O as CO2e tpy
					Point Sources												
B1	Boiler 150 hp York Shipley	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
B2	Boiler Pending New 125 hp YS	0.197	0.197	0.197	0.016	2.069	2.173	1.293E-05	none	none	n/a	0.059	3103.737	0.057	1.249	3103.737	19.973
D1	Dryer Pending New Rogers	11	0.263	0.108	0.031	3.392	2.849	1.696E-05	none	none	n/a	0.078	4070.474	0.075	1.638	4070.474	26.325
D2	Dryer Existing 1960 Rogers	-16	-0.263	-0.108	-0.031	-3.392	-2.849	-1.696E-05	none	none	n/a	0.000	-4070.474	-0.075	-1.638	-4070.474	-26.325
D2a	Dryer Pending 2014 Refubished 1960 Rogers	16	0.263	0.108	0.031	3.392	2.849	1.696E-05	none	none	n/a	0.078	4070.474	0.075	1.638	4070.474	26.325
D3	Dryer Existing Blaw Knox Spray	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
D4	Dryer, Drum	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
P1	Tote-Dump Dust Collector 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
P2	Tote-Dump Dust Collector 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR3a	Clothes Dryer 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR3b	Clothes Dryer 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR5a	Water Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR5b	Water Heater 3	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4A	Proc'B - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4B	Blend'C - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4C	QA - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4D	QC - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4E	E Side - Carrier HVAC Office	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4F	E Side - Carrier HVAC Bartelt	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4G	Littleford - Carrier HVAC-1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7A	E Side - Modine Unit Heater Down	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7B	E Side - Modine Unit Heater Up	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7C	Ph I ADP Unit Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7D	Ph I ADP Unit Heater 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7E	Ph II ADP Unit Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7F	Ph II ADP Unit Heater 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7G	Ph III ADP Unit Heater N-1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7H	Ph III ADP Unit Heater N-2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7I	Ph III ADP Unit Heater S-1	0	0	0	0	0	0	0	none	none	n/a	0	-0	0	0	0	0
NR7J	Ph III ADP Unit Heater S-2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4H	Break Room - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4I	Blend Room - Carrier HVAC-1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4J	Blend Room - Carrier HVAC-2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4K	Blend Room - Carrier HVAC-3	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4L	Blend Room - Carrier HVAC-4	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4M	Shop - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7K	E Shop- Modine Unit Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7L	E Shop- Modine Unit Heater 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
	TOTAL	11.1	0.5	0.3	0.0	5.5	5.0	0.0				0.2	7174.2	0.1	2.9	7174.2	46.3
											Total GHG mass change (tpy)=		7175		Total GHG CO2e change (tpy)=		7223

Fugitive Sources

No apparent fugitive sources are known at this facility

Table 5.2.4-3
Changes in Potential to Emit for NSR Regulated Pollutants

F.24 Form EI -- Ambient Impact Assessment Emissions Inventory

The Ambient Impact Assessment Emissions Inventory for the Commercial Creamery Facility is presented and discussed in Section 5.2.5 of this Application, in the context of assumptions, calculations, and other background material on the dealing with the modeling analysis. This Section F.24 presents the summary table emissions inventory in the required format of Form EI-- Ambient Impact Assessment Emissions Inventory

Table 5.2.5-1, which follows, presents the Ambient Impact Assessment Emissions Inventory for the Commercial Creamery facility. Formatting is identical to the template provided as. *Ambient Impact Assessment Emission Inventory for New Minor Facilities and Minor Modifications* (DEQ, 2011a)

The primary purpose of this table is to identify those pollutants that meet the *Method 1 criteria* for *de minimis* total facility-wide emissions that, under the graded modeling approach presented in DEQ, 2011a, are below the modeling thresholds listed in Table 2 of the *State of Idaho Air Quality Modeling Guideline ID-AQ-011* (DEQ 2011b). **It is shown that SO2, CO, and Lead meet their corresponding *de minimis* criteria, and do not require modeling on the basis of this table.** The remaining pollutants, PM-10, PM-2.5, NO2, and four TAPs (Arsenic, Cadmium, Formaldehyde, and Nickel, require modeling under terms of Method 3 of DEQ, 2011a.

All sources emitting any regulated pollutant to the atmosphere are represented, with emissions in units of lbs/hr for each source for each Criteria Pollutant and NAAQS. All point sources are addressed; however, the Applicant has not identified any fugitive sources at the facility. NOx (not NO2) emissions are provided, per template, and do not reflect the 0.8 ratio of NO2 /NOx that is used in the modeling.

Sources that have a non-continuous operating schedule are highlighted in green, which indicates an adjustment to their hourly emissions rate in those cases where a longer-term standard is being modeled. For example, a source operating only one 8-hr shift every day of the year with unit emissions per hour would be modeled with an emissions rate 1/3 of that unit rate on a per-hour basis when modeling a 24-hr standard, or an annual standard. Sources D4, P1 and P2 have particulate emissions only (no combustion), and do not have SO2, NOx, CO or Pb emissions. Emissions are calculated for each facility source, for each Criteria Pollutant separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***201308921 CC Emission Rate Calcs R4 AP42 All Sources*** and linked to the **Table 5.2.5-1** summary that is presented here.

Table 5.2.5-1
Ambient Impact Assessment Emissions Inventory

Emission Increase

Emissions Unit	Stack ID	PM-10 lb/hr 24-hr Avg.	PM-2.5 lb/hr 24-hr Avg.	PM-2.5 lb/hr Annual Avg.	SO2 lb/hr Max	SO2 lb/hr 3-hr Avg.	NOx lb/hr 1-hr Avg.	NOx lb/hr Annual Avg.	CO lb/hr Max	CO lb/hr 8-hr Avg.	Pb lb/hr Month Avg.	Pb lb/hr Qtrly Avg.
Point Sources												
Boiler 150 hp York Shipley	B1	4.488E-02	4.488E-02	4.403E-02	3.543E-03	3.543E-03	5.905E-01	5.905E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Boiler Pending New 125 hp YS	B2	4.488E-02	4.488E-02	4.403E-02	3.543E-03	3.543E-03	5.905E-01	5.905E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Dryer Pending New Rogers	D1	3.838E+00	1.211E+00	1.211E+00	6.970E-03	6.970E-03	1.162E+00	1.162E+00	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing 1960 Rogers	D2	3.838E+00	1.211E+00	1.211E+00	6.970E-03	6.970E-03	1.162E+00	1.162E+00	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing Blaw Knox Spray	D3	1.934E+00	6.196E-01	6.196E-01	4.647E-03	4.647E-03	7.744E-01	7.744E-01	6.505E-01	6.505E-01	3.872E-06	3.872E-06
Dryer. Drum	D4	1.434E+00	5.737E-01	3.151E-02								
Tote-Dump Dust Collector 2	P1	2.000E-01	8.000E-02	8.000E-02								
Tote-Dump Dust Collector 1	P2	2.000E-01	8.000E-02	8.000E-02								
Clothes Dryer 1	NR3a	2.845E-04	2.845E-04	2.845E-04	6.738E-05	6.738E-05	1.056E-02	3.518E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Clothes Dryer 2	NR3b	2.845E-04	2.845E-04	2.845E-04	6.738E-05	6.738E-05	1.056E-02	3.518E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Water Heater 1	NR5a	5.518E-04	5.518E-04	5.518E-04	4.356E-05	4.356E-05	6.825E-03	6.825E-03	2.904E-03	2.904E-03	3.630E-08	3.630E-08
Water Heater 3	NR5b	1.471E-03	1.471E-03	1.471E-03	1.161E-04	1.161E-04	1.819E-02	1.819E-02	7.741E-03	7.741E-03	9.676E-08	9.676E-08
Prod'B - Carrier HVAC	NR4A	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
Blend'C - Carrier HVAC	NR4B	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
QA - Carrier HVAC	NR4C	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
QC - Carrier HVAC	NR4D	5.444E-04	5.444E-04	2.722E-04	4.298E-05	4.298E-05	6.734E-03	3.367E-03	2.865E-03	2.865E-03	3.582E-08	3.582E-08
E Side - Carrier HVAC Office	NR4E	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Carrier HVAC Bartelt	NR4F	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
Littleford - Carrier HVAC-1	NR4G	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Modine Unit Heater Down	NR7A	1.655E-03	1.655E-03	8.277E-04	1.307E-04	1.307E-04	2.047E-02	1.024E-02	8.712E-03	8.712E-03	1.089E-07	1.089E-07
E Side - Modine Unit Heater Up	NR7B	1.471E-03	1.471E-03	7.357E-04	1.162E-04	1.162E-04	1.820E-02	9.100E-03	7.744E-03	7.744E-03	9.681E-08	9.681E-08
Ph I ADP Unit Heater 1	NR7C	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph I ADP Unit Heater 2	NR7D	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph II ADP Unit Heater 1	NR7E	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph II ADP Unit Heater 2	NR7F	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph III ADP Unit Heater N-1	NR7G	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater N-2	NR7H	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater S-1	NR7I	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Ph III ADP Unit Heater S-2	NR7J	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Break Room - Carrier HVAC	NR4H	1.839E-03	1.839E-03	9.197E-04	1.452E-04	1.452E-04	2.275E-02	1.137E-02	9.681E-03	9.681E-03	1.210E-07	1.210E-07
Blend Room - Carrier HVAC-1	NR4I	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-2	NR4J	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-3	NR4K	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-4	NR4L	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Shop - Carrier HVAC	NR4M	3.311E-04	3.311E-04	1.655E-04	2.614E-05	2.614E-05	4.095E-03	2.047E-03	1.742E-03	1.742E-03	2.178E-08	2.178E-08
E Shop- Modine Unit Heater 1	NR7K	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
E Shop- Modine Unit Heater 2	NR7L	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
	lb/hr	11.575	9.905	3.844	0.029	0.029	4.793		3.813	3.813	0.000024	0.000024
	tpy	50.898	17.103	14.675	0.127	0.127		19.906	16.700	16.700	0.000106	0.000106
		PM-10	PM-2.5	PM-2.5	SO2	SO2	NOx	NOx	CO	CO	Pb	Pb
Table 2 Model Thrsld lb/hr		0.220	0.054		0.210	0.210	0.200		15.000	15.000	14.000	14.000
Table 2 Model Thrsld tpy		15.000		0.350	1.200			1.200				

Fugitive Sources

No apparent fugitive sources are known at this facility

F.25 Form EI -- Toxic Air Pollutant Emissions Inventory

The Toxic Air Pollutant Emissions Inventory for the Commercial Creamery Facility is presented and discussed in Section 5.2.6 of this Application, in the context of assumptions, calculations, and other background material on the dealing with the modeling analysis. This Section F.25 presents the summary table emissions inventory in the required format of Form EI-- Toxic Air Pollutant Emissions Inventory

Natural gas contains certain Toxics Air Pollutants (TAPs) that are naturally-occurring components of the gas, and are carried through the combustion process as air emissions. No TAPs occur in the ingredients or processed food at this facility.

This table provides a basis for the existing facility classification with respect to the Major Facility threshold of 25 tpy for the facility-wide sum of all TAPs. It is shown that facility-wide TAP emissions are 0.96 (for non-carcinogenic) + 0.02 (for carcinogenic) = 0.98 tpy. Which is less than 25 tpy, therefore the Commercial Creamery facility is a Minor Facility for TAPs.

Non-Carcinogenic TAPs that are evaluated in this emissions inventory are identified in the current IDAPA 58.01.01.585 list. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each Non-Carcinogenic TAP separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***201308921 CC Emission Rate Calcs R4 AP42 All Sources*** and linked to the **Table 8.6-1** summary that is included here.

Pre- and Post-Project Non-Carcinogenic TAP Emissions Summary
Potential to Emit

Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Post-Project 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emissions Level (lb/hr)	Exceeds Screening Level ? (Y / N)
	No permit-established allowable emissions rates specified				
Barium	0	2.12E-04	2.12E-04	3.30E-02	no
Chromium	0	6.76E-05	6.76E-05	3.30E-02	no
Cobalt	0	4.05E-06	4.05E-06	3.30E-03	no
Copper	0	4.10E-05	4.10E-05	3.33E-01	no
Dibutylphthalate	0	0.00E+00	0.00E+00	6.70E-02	no
Dichlorobenzene	0	5.79E-05	5.79E-05	2.00E+01	no
Ethylbenzene	0	0.00E+00	0.00E+00	2.90E+01	no
Fluorene	0	1.35E-07	1.35E-07	1.33E-01	no
Hexane	0	8.69E-02	8.69E-02	1.20E+01	no
Manganese	0	1.83E-05	1.83E-05	3.33E-01	no
Mercury	0	1.25E-05	1.25E-05	3.00E-03	no
Molybdenum	0	5.31E-05	5.31E-05	3.33E-01	no
Napthalene	0	2.94E-05	2.94E-05	3.33E+00	no
Pentane	0	1.25E-01	1.25E-01	1.18E+02	no
Phenol	0	0.00E+00	0.00E+00	1.27E+00	no
Selenium	0	8.79E-07	8.79E-07	1.30E-02	no
Toluene	0	1.64E-04	1.64E-04	2.50E+01	no
Vanadium	0	1.11E-04	1.11E-04	3.00E-03	no
o-Xylene	0	0.00E+00	0.00E+00	2.90E+01	no
Zinc	0	1.40E-03	1.40E-03	6.67E-01	no
TOTAL Non-Carcinogenic TAPs, tpy		**0.94**			

Table 5.2.6-1
Pre- and Post-Project Non-Carcinogenic TAP Emissions Summary

The highest ratio of TAP emissions to EL is vanadium at 3.67%. On the basis of this comparison, no uncontrolled Non-Carcinogenic TAP emissions require modeling.

Carcinogenic TAPs that are evaluated in this emissions inventory are identified in the current IDAPA 58.01.01.586 list. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each Carcinogenic TAP separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***201308921 CC Emission Rate Calcs R4 AP42 All Sources*** and linked to the **Table 8.6-2** summary that is included here.

Pre- and Post-Project Carcinogenic TAP Emissions Summary
Potential to Emit

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr) *No permit-established allowable emissions rates specified*	Post-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emissions Level (lb/hr)	Exceeds Screening Level ? (Y / N)
Arsenic	0	9.65E-06	9.65E-06	1.50E-06	yes
Benzene	0	1.01E-04	1.01E-04	8.00E-04	no
Beryllium	0	4.40E-07	4.40E-07	2.80E-05	no
Benzo(a)pyrene	0	4.40E-08	4.40E-08	2.00E-06	no
Bis (2-ethylhexyl)phthalate	0	0.00E+00	0.00E+00	2.80E-02	no
Cadmium	0	5.31E-05	5.31E-05	3.70E-06	yes
Formaldehyde	0	3.62E-03	3.62E-03	5.10E-04	yes
Nickel	0	1.01E-04	1.01E-04	2.70E-05	yes
TOTAL Carcinogenic TAPs, tpy		**0.02**			

Table 5.2.6-2
Pre- and Post-Project Carcinogenic TAP Emissions Summary

Table 5.2.6-2 shows that four Carcinogenic Toxic Air Pollutants were emitted in amounts large enough (i.e., > EL) that they require modeling. These were: arsenic, cadmium, formaldehyde and nickel. Arsenic, cadmium and formaldehyde each had one or more sources with emissions that individually exceeded the EL. Nickel emissions did not exceed the EL for any individual source; however the sum of all facility nickel emissions did exceed the EL.

F.26 Form EI -- Hazardous Air Pollutant Emissions Inventory

The Hazardous Air Pollutant Emissions Inventory for the Commercial Creamery Facility is presented and discussed in Section 5.2.7 of this Application, in the context of assumptions, calculations, and other background material on the dealing with the modeling analysis. This Section F.26 presents the summary table emissions inventory in the required format of Form EI-- Hazardous Air Pollutant Emissions Inventory

Natural gas contains certain Hazardous Air Pollutants (HAPs) that are naturally-occurring components of the gas, and are carried through the combustion process as air emissions. No HAPs occur in the ingredients or processed food at this facility.

HAPs that are evaluated in this emissions inventory are identified in the current EPA list (http://www.epa.gov/ttn/atw/orig189.html) of 1990 CAAA HAPs. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each HAP separately, in the Emissions Inventory Work-Up Sheets found in Appendix B. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***201308921 CC Emission Rate Calcs R4 AP42 All Sources*** and linked to the **Table 5.2.7-1** summary that is included here.

Commercial Creamery Company

HAP Potential to Emit EMISSIONS SUMMARY

HAP Pollutants	PTE (tpy)
Benzene	4.44E-04
Bis(2-ethylhexyl)phthalate (DEHP)	0.00E+00 [No EF]
1,4-DiChloroBenzene (p)	2.54E-04
Ethylbenzene	0.00E+00 [No EF]
Formaldehyde	1.59E-02
Hexane	3.80E-01
Napthalene	1.29E-04
Phenol	0.00E+00 [No EF]
Toluene	7.19E-04
o-Xylenes	0.00E+00 [No EF]
Arsenic Compounds	4.23E-05
Beryllium Compounds	1.93E-06
Cadmium Compounds	2.32E-04
Chromium Compounds	2.96E-04
Cobalt Compounds	1.78E-05
Lead Compounds	1.06E-04
Manganese Compounds	8.03E-05
Mercury Compounds	5.50E-05
Nickel Compounds	4.44E-04
Selenium Compounds	3.85E-06
TOTAL	**3.99E-01**

Table 5.2.7-1
HAP Potential to Emit EMISSIONS SUMMARY

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

AIR PERMIT APPLICATION

Revision 6
10/7/09

For each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
1. Company Name: Commercial Creamery Company	2. Facility Name: Jerome ID Plant
3. Brief Project Description:	Installation of one New Gas-Fired Boiler plus one new Gas-Fired Product Dryer

APPLICABILITY DETERMINATION	
4. List applicable subparts of the New Source Performance Standards (NSPS) (40 CFR Part 60). Examples of NSPS affected emissions units include internal combustion engines, boilers, turbines, etc. The applicant must thoroughly review the list of affected emissions units.	List of applicable subpart(s): 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units : **Does not apply**, since proposed new boiler B2 has a heat capacity of 6.1 MM Btu/hr., which is less than the 10 MMBtu/hr threshold of this Subpart. ☑ Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAP) found in 40 CFR Part 61 and 40 CFR Part 63. Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. EPA has a web page dedicated to NESHAP that should be useful to applicants.	List of applicable subpart(s): ** No operations occur at Applicant's facility that fall under industrial classifications encompassed in 40 CFR 61. ** The facility is not subject to any MACT standard in 40 CFR 63. [Gas-fired boiler, Not located at major Source of HAPs, No RICE on site.] ☑ Not Applicable
6. For each subpart identified above, conduct a complete a regulatory analysis using the instructions and referencing the example provided on the following pages. **Note** - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation applies. Regulatory reviews that are submitted with insufficient detail will be determined incomplete.	☑ A detailed regulatory review is provided (Follow instructions and example). ☐ DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

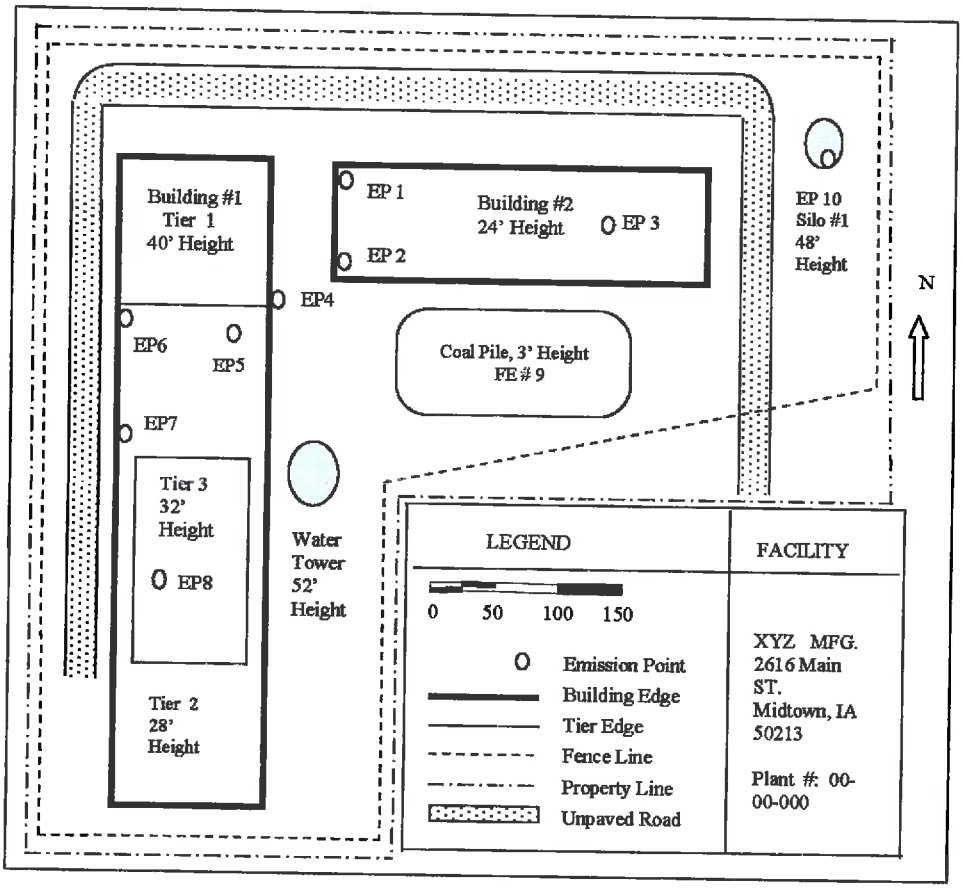
PLOT PLAN REQUIREMENTS

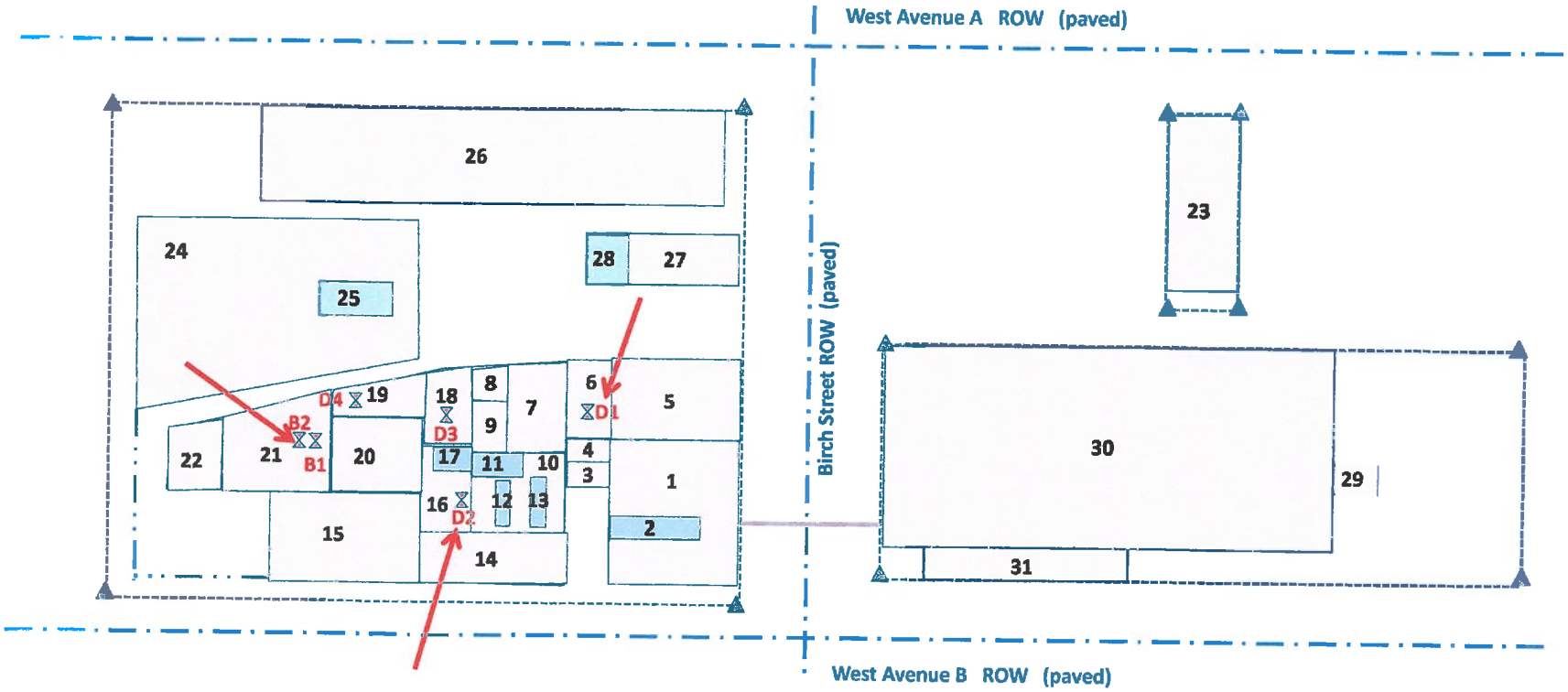
A scaled plot plan of the entire plant is required with your permit application. The plot plan must show:

1. A scale bar and a north arrow. The scale must be of sufficient size to allow drawings to be converted to electronic format.
2. Property lines.
3. If any, fence lines or any physical barriers precluding the public access.
4. Locations of all buildings **within the property lines**. Locations of tiers on multi-level buildings. Include the building and structure heights, and tier heights. A description of the buildings or structures is optional.
5. Locations of **ALL** emission points. Emission point symbols need not be to scale.
6. Locations of all structures **above ground level** and **within property lines**. Structures **above ground level** such as a gasoline storage tank, grain storage silos, etc., must be shown. Structures **at ground level,** such as concrete pads, paved parking lots, etc., should **not** be on the plot plan.
7. Locations of unpaved roads (need not be to scale) and area sources, such as coal piles must be shown, only if fugitive emissions must be included in the permit application.
8. Highlight or mark the emission point that is the subject of this permit application so that it is clearly distinguished from other emission points or labels on the plot plan.

- **All buildings and structures above ground level and all emission points must be marked with identification numbers, which MUST be consistent with all forms in the application.**
- AutoCAD or equivalent computer-aid drawings on paper and on disk are preferred.
- Sketches are acceptable.
- Aerial photographs are not acceptable.

SAMPLE PLOT PLAN





Building	Heights (m)
1	5.23
2	6.10
3	3.96
4	4.27
5	5.79
6	7.62
7	11.89
8	16.76
9	14.02
10	6.71
11	13.11
12	8.23
13	8.23
14	6.02
15	6.02
16	9.45
17	10.67
18	9.45
19	5.79
20	10.67
21	8.84
22	4.88
23	4.88
24	10.36
25	14.33
26	6.71
27	11.89
28	11.89
29	4.88
30	4.88
31	4.88

LEGEND

30 Building Number

Property Line

Fence Line

Buildings, above GL within Property lines

Building Tiers

Subject of this PTC

B2: New Source D1: New Source D2: Refurbish Existing Source

Note: For UTM Corners of property lines, sources, and buildings, see accompanying Tables

0 10 20 30 40 50 60 70 80 90 100

Meters

N

Facility Plot Plan

Commercial Creamery

PTC Application
Commercial Creamery Company
Jerome, ID

Scale : Equal across Dwg, As Shown

27 Sept 2013
Dwg MEAS 1417.1.0

Section 2 Process Description

2.1 Facility Process Overview

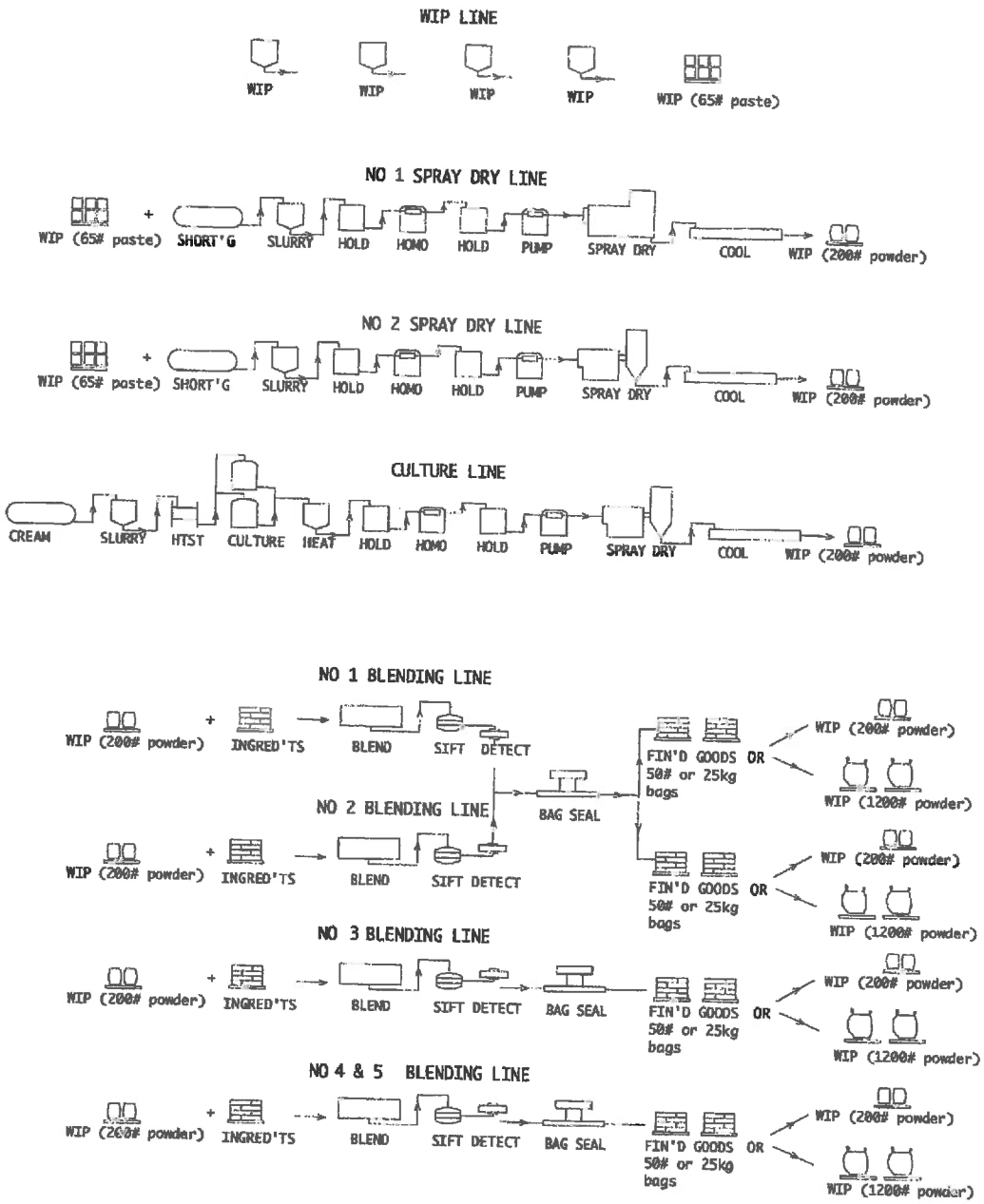
The Jerome Idaho facility addressed in this application is the primary dairy products manufacturing facility for Commercial Creamery Company, with corporate headquarters in Spokane, Washington.

History Commercial Creamery began in 1908 as a local creamery in Spokane, where its headquarters, research and development, and pilot plant are located today. Every town had a creamery in the early 1900s. But during the 1960s, family dairy farms started disappearing and factories and interstates blossomed. While most creameries went out of business, Commercial Creamery Company stood the test of time by adapting to new revenue streams – diversifying into cheese powder. Today, Commercial Creamery employs approximately 100 people and has annual sales of $25 – 30 MM dollars.

Products : Commercial Creamery produces dairy and cheese powders, snack seasonings, flavors, sauce and soup mixes, enzyme-modified dairy products, and shelf-stable cheese Chunkettes ™ and markets them to more than 30 countries and all of the contiguous United States.

Summary of Operation Within Commercial Creamery's 150,000 square foot manufacturing facility, enzyme modified cheese WIP (Work In Progress) is produced as a paste in individual vats. This is then often used as an ingredient, along with ground cheeses and other ingredients which are fed into the number 1 *spray-dry line,* which dries the cheese slurry into cheese powder, which, depending on the product desired, is blended with other ingredients in one of five *blending lines.* A separate *culture line* transforms liquid cream into sour cream, which is then dried on the number 2 *spray-dry line.* If uncultured, the liquid cream may be sent straight to the no 2 dryer to make sweet cream powder (up to 72% fat) on an as-needed basis (i.e. per customer orders). Butter powder is made in a similar manner, simply by substituting butter for cream as the main ingredient. Likewise, cheese flake is produced on a *drum dryer* on an as-needed basis (i.e. per customer order). The sole non-powder / non-flake product manufactured is a small cheese bit, which starts off as mostly ground cheese, and is then heated and mixed in a jacketed high shear mixer, then tempered in a freezer in ingots, and then cut on an extruding / cutting machine, then packaged for sale as a room temperature processed cheese bit. Occasionally the dried powders (especially the drum dried flake products) require milling to achieve a customer sieve specification, thus are processed on either of two *milling lines*, and from there proceed to one of five packing lines, not unlike any of the other un-milled cheese, cream, or butter powders. Some markets require that the product not be packaged in the standard 50 lb bag. For example, the Mac & Cheese powders are typically put up in small 1 oz packets. Then there are the institutional customers that want product in anywhere from a 100g to a 5 lb packet. This is handled on the vertical or horizontal packaging lines. The individual steps in these process lines are depicted in **Figures 2.1-1** *Production Lines* and **2.1-2** *Other Lines.*

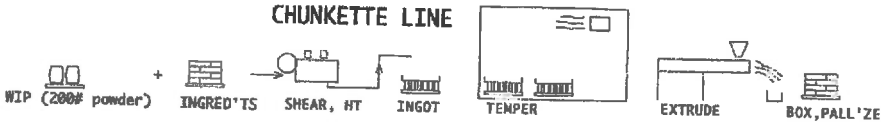
Production Lines



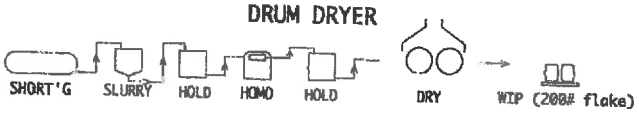
Figures 2.1-1
Production Lines

Other Lines

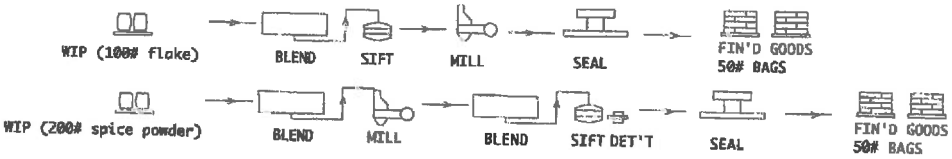
CHUNKETTE LINE



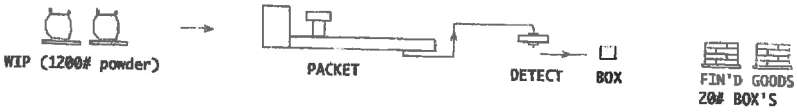
DRUM DRYER



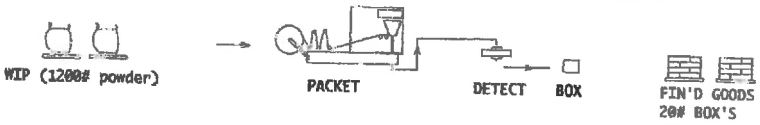
MILLING LINES



no 4 & 5 HORIZONTAL PACKAGING (1 - 3 OZ PACKET) LINES



no 6 VERTICAL PACKAGING (3 OZ - 5 LB PACKET) LINE



Figures 2.1-2
Other Lines

2.2 Process Description for Proposed New Boiler B2

This project encompasses installation of one new gas-fired boiler (B1). At completion, the facility will operate two parallel gas-fired Boilers (Existing Source B1 and Pending Source B2) that provide steam for direct injection into the enzymes and cheese, cream and butter slurries, and the processed cheese that is made into the cheese bits, and are also used to heat the drum dryer, a few hot water sets, and a few unit steam heaters throughout the facility.

2.3 Process Description for Proposed New Dryer D1

This project encompasses installation one Rogers dryer (D1). At completion, the facility will operate two gas-fired Rogers dryers (sources D1 & D2) and one Blaw Knox spray dryer (source D3) that serve the three separate continuous *spray-dry lines.* Dryer D4 is a steam fired drum dryer that produces flaked product.

2.4 Process Description for Proposed Dryer D2 to be Refurbished

This project encompasses refurbishment of one existing Rogers dryer (D2), following installation of new Dryer D1. The refurbished Dryer D2 will operate as the same make and model equipment and emission specifications as in the pre-refurbishment period.

2.5 Equipment List

This section describes the equipment that will be used for which pre-permit construction approval is requested

Applicant seeks pre-permit construction approval for the new Boiler B2.
The manufacturer, model number, and maximum heat input capacity are provided on the left-hand panel. No serial number is available at this time. The stack height, stack diameter, stack gas flow rate, and stack gas temperature are provided on the right-hand panel. This NEW source will be operated at the maximum continuous process rate 8760 hrs per year.

Source B2: Gas-Fired BOILER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	York Shipley
Model	560-SPHV-150-N2 (125 hp, 1988)
Input Heat Capacity (BTU/hr)	6,100,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (sct/hr)	5,905
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	8,760

Stack Data	Proposed Source
Stack Height (ft)	13.716 m
Stack Diameter (ft)	0.3048 m
Avg Exit Gas Temperature (°F)	215
Exit Gas Moisture Content	
Wet Actual Flow Rate (wacf/min)	
Wet Standard Flow Rate (wscf/min)	
Dry Standard Flow Rate (dscf/min)	2329
Stack Velocity (m/s)	15.1
F_d (dscf stack gas/BTU)	
F_w (wscf stack gas/BTU)	
Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

UTM North	UTM East
m	m
4732981.7	702789.60

Applicant seeks pre-permit construction approval for the new Spray Dryer D1.
The Dryer D1 manufacturer is Rogers. The burner model number, and maximum heat input capacity, design throughput and dry product throughput are provided on the left-hand panel. No serial number is available at this time. The stack height, stack diameter, stack gas flow rate, and stack gas temperature are provided on the right-hand panel. This NEW source will be operated at the maximum continuous process rate on a two-shift-per-day basis, or 5935 hours per year.

Source D1: Gas-Fired DRYER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics		
Burner Manufacturer		Maxon Corporation
Model		Model NPLE-2 NG Burner
Input Heat Capacity (BTU/hr)		12,000,000
Fuel		Natural Gas
Heating Value (BTU/scf)		1,033
Fuel Consumption (scf/hr)		11,617
	Baghouse:	5 oz woven poly eggshell finish
Process Characteristics		
Total PM-10 Emission Rate (lb/hr)		0.090
PM2.5 Emission Rate (lb/hr)		0.037
Design Throughput (lb wet feed/hr)		5935
Actual Hours of Operation (hr/yr)	ops: 365days/yr x2 shifts	5,840
tons dry product / hr		1.50
Fabric Filter Control		0.960

Stack Data		Proposed Source
Stack Height (m)		17.6784 m
Stack Diameter (ft)	3.5	1.0668 m
Avg Exit Gas Temperature (°F)		130
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		41500
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		22
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North m	UTM East m
	4732979.5	702844.40
Jerome Barometric Pressure (mm Hg)		663.93

Applicant seeks pre-permit construction approval for the refurbishment of the existing Spray Dryer D2. This work will be performed after the New Dryer D1 is operating. The Dryer D2 re-manufacturer is Rogers. The burner model number, and maximum heat input capacity, design throughput and dry product throughput are provided on the left-hand panel. No serial number is available at this time. The stack height, stack diameter, stack gas flow rate, and stack gas temperature are provided on the right-hand panel. This NEW source will be operated at the maximum continuous process rate on a two-shift-per-day basis, or 5840 hours per year.

Source D2: Gas-Fired DRYER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics			
Burner Manufacturer		North American	
Model		3065	(Rogers Dryer)
Input Heat Capacity (BTU/hr)		12,000,000	
Fuel		Natural Gas	
Heating Value (BTU/scf)		1,033	
Fuel Consumption (scf/hr)		11,617	
		Baghouse:	5 oz woven poly eggshell finish
Process Characteristics			
Total PM-10 Emission Rate (lb/hr)		0.090	
PM2.5 Emission Rate (lb/hr)		0.035	
Design Throughput (lb wet feed/hr)		5935	
Actual Hours of Operation (hr/yr)	ops: 365days/yr x2 shifts	5,840	
tons dry product / hr		1.50	
Fabric Filter Control		0.980	

Stack Data		Existing Source
Stack Height (m)		14.6304 m
Stack Diameter (ft)	4.15	1.266 m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content	100.00%	
Wet Actual Flow Rate (wacf/min)	41,500	
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)	16	
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North m	UTM East m
	4732956.1	702822.10
Jerome Barometric Pressure (mm Hg)		663.93

All equipment that will be used for which pre-permit construction approval is requested is clearly labeled on the process flow diagram **Figure 3.1-1** and **3.1-2.**

Because final procurement is contingent upon approval of this Application for Pre-Permit Construction, *it is possible that equivalent equipment components will used in the final installation.* This flexibility will not detract from the Owner's commitment to proceed with the equipment as it is accurately described in this permit application.

Section 3 Process Flow Diagram

3.1 Facility-Wide Process Flow Diagram

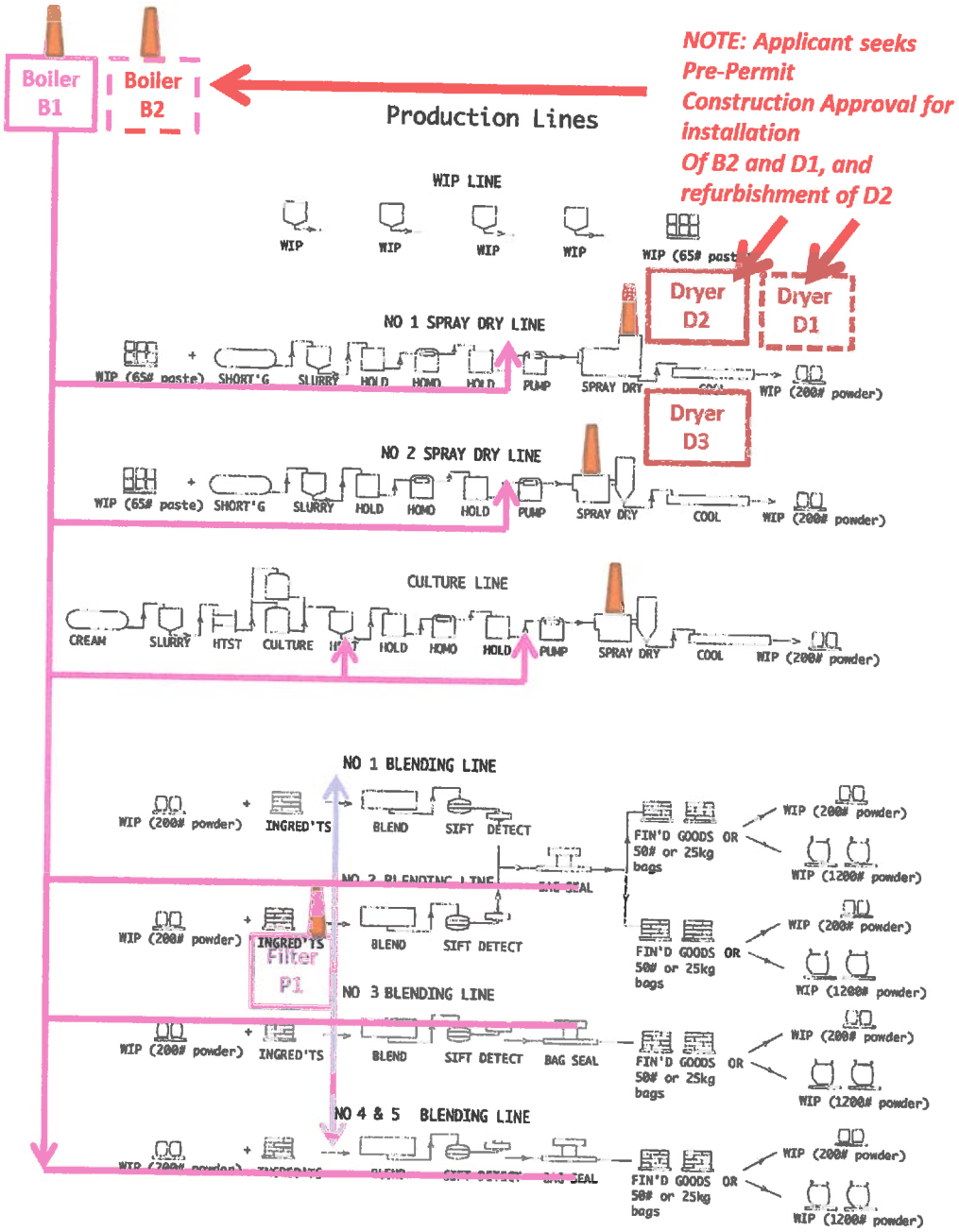


Figure 3.1-1
Production Lines

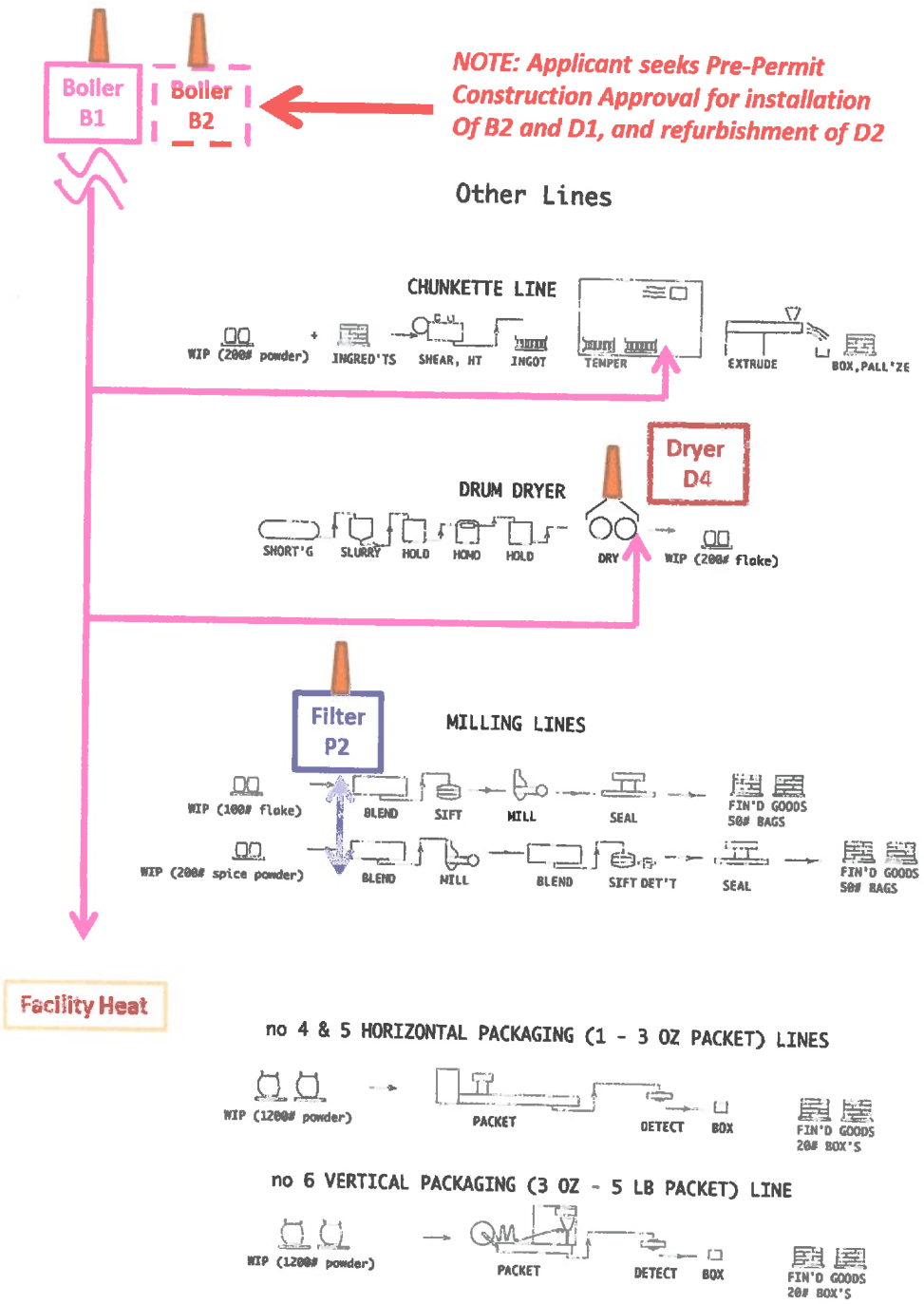
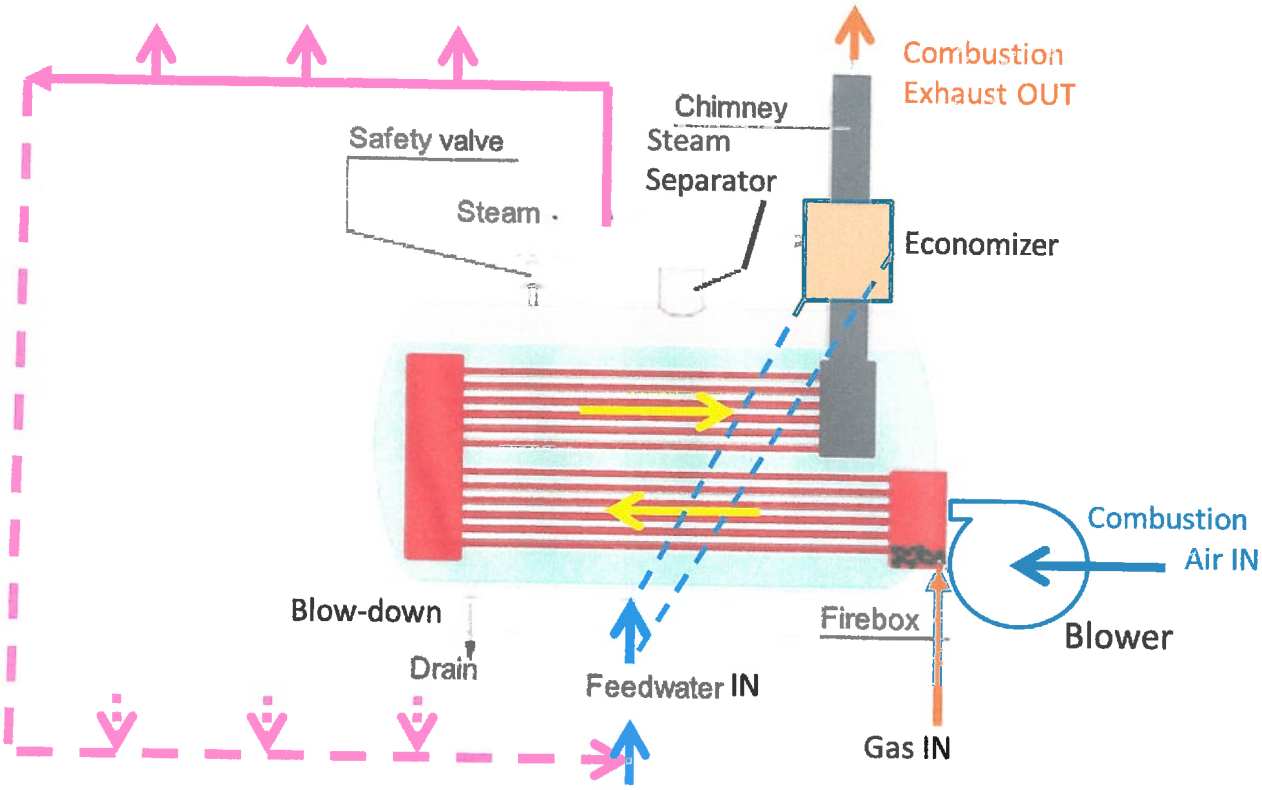


Figure 3.1-2
Other Lines.

3.2 Process Flow Diagram for Proposed New Boiler B2

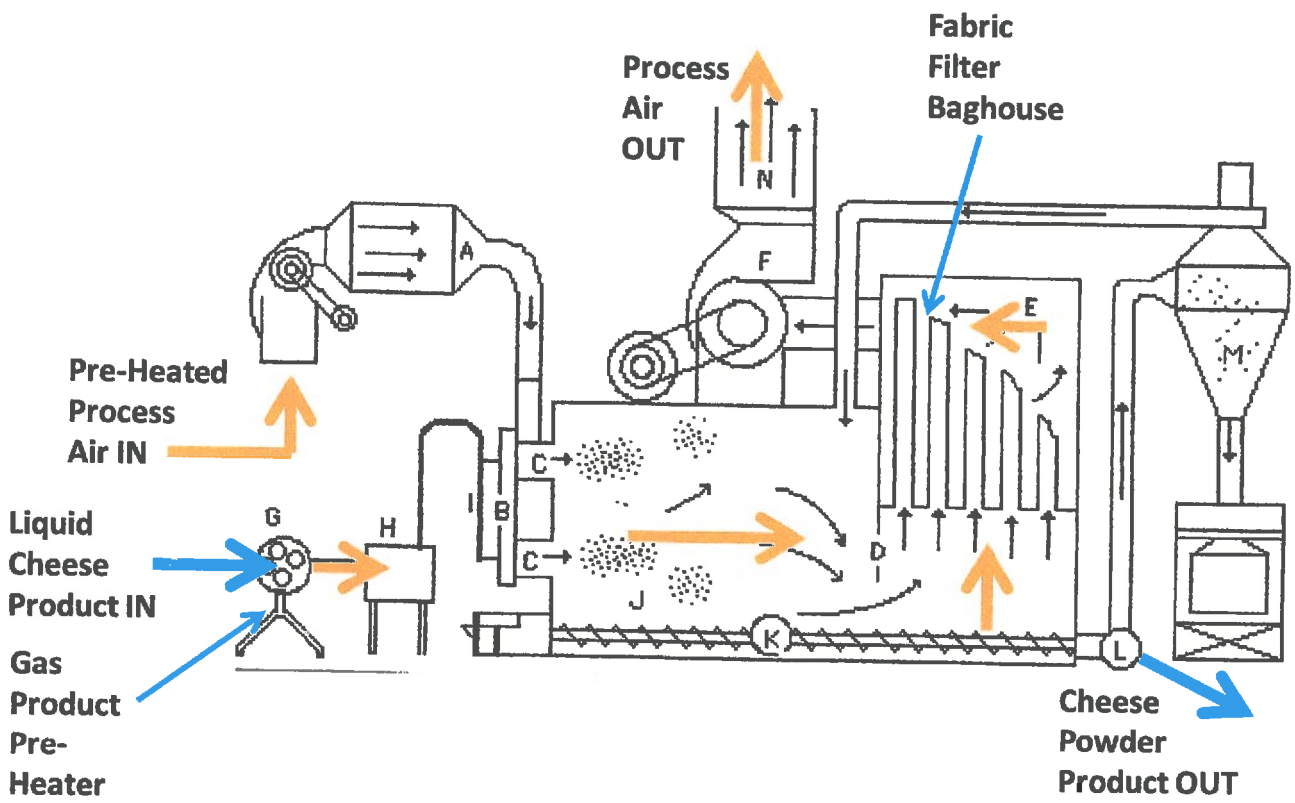
The conceptual process view of the pending York Shipley 125 hp Gas-fired Boiler is shown below. Natural gas is combusted in a firebox using combustion air, which may be pre-heated. Hot exhaust gas passes through the boiler tubes making contact with boiling water which has been pre-heated in an Economizer that is supplied with waste heat from the gas combustion exhaust stream. Conditioned feedwater makes up for system steam losses. The steam system provides energy for needed heat in the culture line, the Chunkette line, the drum dryer, and building heat as needed.



3.3 Process Flow Diagram for Proposed New Dryer D1

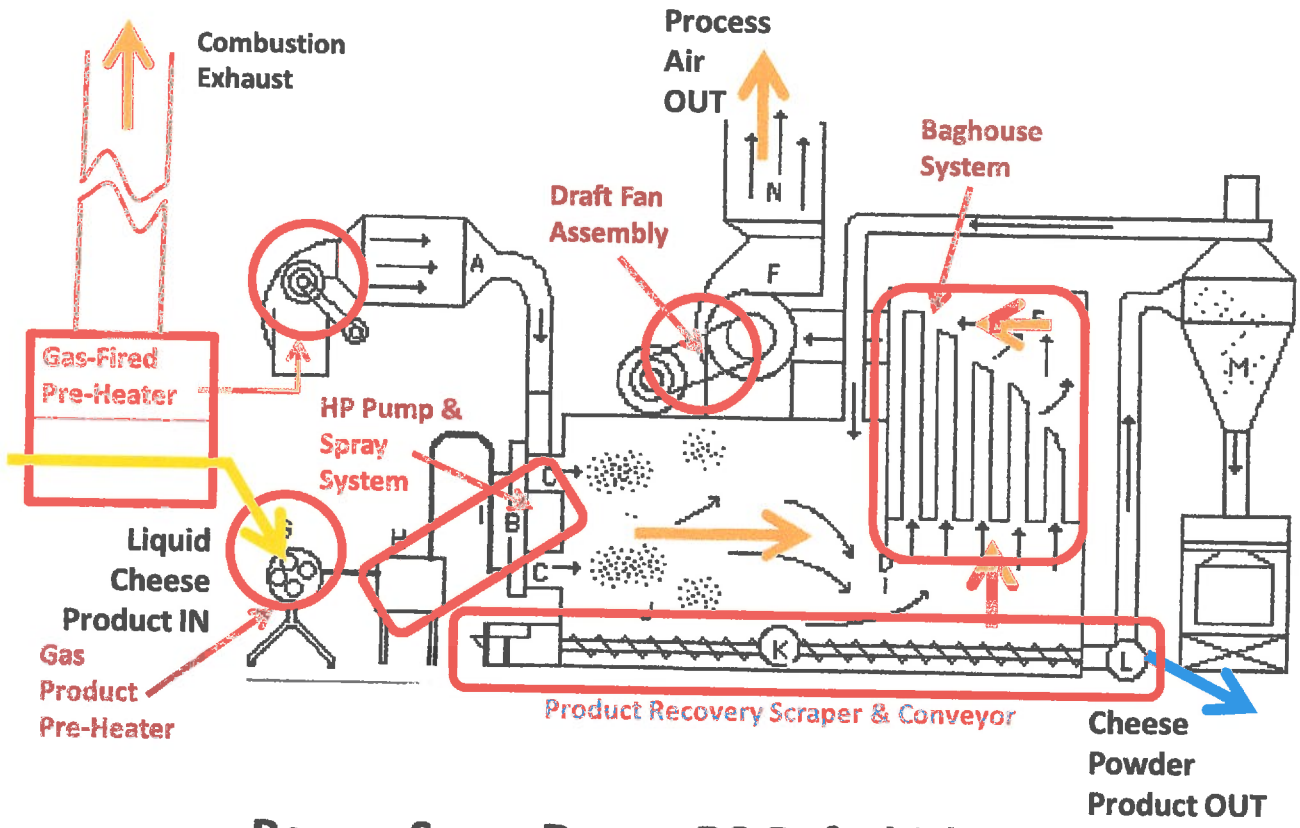
Filtered air is pre-heated with steam or gas and is blown into ductwork (A) and then to the specially-proportioned distributing head (B), passing through inlets to the drying chamber (C). The hot air absorbs the moisture from the finely divided liquid spray and passes under baffle (D) to cloth filter bags (E) where 100% of any remaining powder is trapped from the exhaust air. The filter bags are intermittently shaken by a mechanical device to remove any adhering powder which then drops to the floor and blends in with the remaining powder.

The moist air is then exhausted to the atmosphere through the exhaust fan. (F)
Liquid to be dried is pre-heated in heater (G) passing to a high-pressure pump (H), through the high-pressure line (I) to spray nozzles located at air inlets (C). The atomized liquid droplets are dried while suspended in the chamber and the powder settles to the floor, where it is conveyed by a reciprocating scraper (J) to the screw conveyor (K) The powder moves to the chamber outlet (L) where it may be removed manually or passed to or picked up by an optional pneumatic system to a cyclone separator (M) which cools the powder with fresh air. A sifter is located below the cyclone discharge.



Rogers Spray Dryers D1 / D2 Process

3.4 Process Flow Systems for Proposed Dryer D2 Refurbishment



Rogers Spray Dryers D2 Refurbishment

Section 4 Applicable Requirements

4.1 Federal Requirements

Attainment Designation (40 CFR 52.670)
Applicable.
The facility is located in Jerome County, which is designated as "attainment or unclassifiable" for PM-2.5, PM-10, SO2, NO2, CO, and Ozone. Refer to 40 CFR 52.670 for additional information.

PSD Classification (40 CFR 52.21)
Not Applicable.
40 CFR 52.21 Prevention of Significant Deterioration of Air Quality
The facility is not a major stationary source as defined in 40 CFR 52.21 (b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21 (a)(2), PSD requirements are not applicable to this permitting action.

NSPS Applicability (40 CFR 60)
Because the facility will have two boilers, one of which – the new one being permitted—will have commenced construction after June 9, 1989, the following NSPS requirement was a candidate for evaluation for this facility:

40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

§60.40c Applicability and Delegation of Authority
Not Applicable. The proposed new boiler B2 has a heat capacity of 6.1 MM Btu/hr.

Section (a) specifies that except as provided in paragraph (d) of this section, the *affected facility to which this subpart applies* is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr) or less, but greater than or equal to 2.9 M W (10 MMBtu/hr).

The proposed York Shipley boiler at this facility is not an affected facility under this subpart.

NESHAP Applicability (40 CFR 61)
Not Applicable. No listed source types at the Commercial Creamery Company facility.

The facility is not subject to any NESHAP requirements in 40 CFR 61. No operations occur at Applicant's facility that fall under industrial classifications encompassed in this standard.

MACT Applicability (40 CFR 63)
Not Applicable. No coal- or oil-fired source types at the Commercial Creamery Company facility.
The facility is not subject to any MACT standard in 40 CFR Part 63. The Applicant operates a gas-fired boiler (so exempt from 40 CFR 63 Subpart JJJJJJ requirements) and would be subject to Subpart DDDDD, except that **it is not located at a Major Source of HAPs** (see Table 8.4-2). Subpart ZZZZ is not applicable because Applicant does not operate a Reciprocating Internal Combustion Engine at this facility.

Title V Classification (40 CFR Part 70) -- see IDAPA 58.01.01.300
Applicable. This Application has been certified in accordance with this subpart. See Section 0.4 .

4.2 State of Idaho Requirements

IDAPA 58.01.01.123. CERTIFICATION OF DOCUMENTS.

All documents, including but not limited to, application forms for permits to construct, application forms for operating permits, progress reports, records, monitoring data, supporting information, requests for confidential treatment, testing reports or compliance certifications submitted to the Department shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Applicable. This Application has been certified in accordance with this subpart. See Section 0.4 .

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

Applicable. The permittee has requested that a Pre-PTC Construction Approval be issued to the facility for the proposed addition of one new boiler, one new dryer, and a refurbished dryer. Per Section 006, the definition of modification is "Any physical change in, or change in the method of operation of, a stationary source or facility which results in an emission increase as defined in Section 007 or which results in the emission of any regulated air pollutant not previously emitted." Installation of the new boiler and new dryer will result in an increase in PM-10/PM-2.5, NO2, CO, and VOC. Therefore, this permitting action is being processed in accordance with the procedures of IDAPA 58.01.01.200-228, Specifically, Section 213.

210. DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS.

In accordance with Subsection 203.03, the applicant shall demonstrate preconstruction compliance with Section 161 to the satisfaction of the Department.

01. Identification of Toxic Air Pollutants. The applicant may use process knowledge, raw materials inputs, EPA and Department references and commonly available references approved by EPA or the Department to identify the toxic air pollutants emitted by the stationary source or modification. (6-30-95)

Applicable. This Application is based on process knowledge coupled with AP-42 emission factors for TAPs. See _____ .

02. Quantification of Emission Rates. (6-30-95)

a. The applicant may use standard scientific and engineering principles and practices to estimate the emission rate of any toxic air pollutant at the point(s) of emission. (6-30-95) i. Screening engineering analyses use unrefined conservative data. (6-30-95) ii. Refined engineering analyses utilize refined and less conservative data including, but not limited to, emission factors requiring detailed input and actual emissions testing at a comparable emissions unit using EPA or Department approved methods. (6-30-95)

Applicable. This Application uses standard scientific and engineering principles and practices to convert AP-42 emission factors to projected emissions for TAPs. See emission work-up sheets in Appendix B.

b. The uncontrolled emissions rate of a toxic air pollutant from a source or modification is calculated using the maximum capacity of the source or modification under its physical and operational design without the effect of any physical or operational limitations. (6-30-95) i. Examples of physical and operational design include but are not limited to: the amount of time equipment operates during batch operations and the quantity of raw materials utilized in a batch process. (6-30-95) ii. Examples

of physical or operational limitations include but are not limited to: shortened hours of operation, use of control equipment, and restrictions on production which are less than design capacity. (6-30-95)
c. The controlled emissions rate of a toxic air pollutant from a source or modification is calculated using the maximum capacity of the source or modification under its physical and operational design with the effect of any physical or operational limitation that has been specifically described in a written and certified submission to the Department. (6-30-95)

Applicable. This Application calculates the PTE using design capacity of each source and 8760 hrs/yr operation. Dryers D1, D2, D3, and Filters P1 and P2 have fabric filters installed as integral parts of the dryer from manufacturer, with no way to bypass the filter -- therefore part of its physical and operational design. Dryer D4 and Boilers B1 and B2 are uncontrolled. See emission work-up sheets in Appendix B.

d. The T-RACT emissions rate of a toxic air pollutant from a source or modification is calculated using the maximum capacity of the source or modification under its physical and operational design with the effect of: (6-30-95) i. Any physical or operational limitation other than control equipment that has been specifically described in a written and certified submission to the Department; and (6-30-95) ii. An emission standard that is T-RACT. (6-30-95)
Not Applicable. In this Application, the Applicant seeks to demonstrate preconstruction compliance for toxic air pollutants listed in Section 585. T-RACT is not applicable to this application type, per IDAPA 58.01.01.210.

03. Quantification of Ambient Concentrations. (6-30-95)
a. The applicant may use the modeling methods provided in Subsection 202.02 to estimate the ambient concentrations at specified receptor sites for any toxic air pollutant emitted from the point(s) of emission. (6-30-95)

i. For screening modeling, the models use arbitrary meteorological data and predict maximum one (1) hour concentrations for all specified receptor sites. For toxic air pollutants listed in Section 586, multiply the maximum hourly concentration output from the model by a persistence factor of one hundred twenty five one-thousandths (0.125) to convert the hourly average to an annual average. For toxic air pollutants listed in Section 585, multiply the maximum hourly concentration output from the model by a persistence factor of four tenths (0.4) to convert the hourly concentration to a twenty-four (24) hour average. (6-30-95)
Not Utilized. Applicant performed refined AERMOD modeling in lieu of screening modeling for all applicable pollutants.

ii. For refined modeling, the models use site specific information. If actual meteorological data is used and the model predicts annual averages for toxic air pollutants listed in Section 586 and twenty-four (24) hour averages for toxic air pollutants listed in Section 585, persistence factors need not be used. (6-30-95)
Applicable. Direct modeling of standards was used by Applicant in lieu of persistence factors. .

b. The point of compliance is the receptor site that is estimated to have the highest ambient concentration of the toxic air pollutant of all the receptor sites that are located either at or beyond the facility property boundary or at a point of public access; provided that, if the toxic air pollutant is listed in Section 586, the receptor site is not considered to be at a point of public access if the receptor site is located on or within a road, highway or other transportation corridor transecting the facility. (6-30-95)
Applicable. Applicant's point of compliance was at or beyond the facility property boundary

c. The uncontrolled ambient concentration of the source or modification is estimated by modeling the uncontrolled emission rate. (6-30-95)
Applicable. Uncontrolled ambient concentration was calculated for all applicable TAPs. See Section 5.2.6.

d. The controlled ambient concentration of the source or modification is estimated by modeling the controlled emission rate. (6-30-95)

Applicable. Controlled ambient concentration was calculated for all applicable Criteria Pollutants. See Section 5.2.5.

e. The approved net ambient concentration from a modification for a toxic air pollutant at each receptor is calculated by subtracting the estimated decreases in ambient concentrations for all sources at the facility contributing an approved creditable decrease at the receptor site from the estimated ambient concentration from the modification at the receptor. (6-30-95)

Applicable. Because facility sources have not been permitted prior to this time, the approved net ambient concentration from these new sources will be the current and projected emissions, facility wide. See Section 5.2.6.

f. The approved offset ambient concentration from a source or modification for a toxic air pollutant at each receptor is calculated by subtracting the estimated decreases in ambient concentrations for all sources contributing an approved offset at the receptor from the estimated ambient concentration for the source or modification at the receptor. (6-30-95)

Not Applicable. Applicant has not proposed offsets for this project.

g. The T-RACT ambient concentration of the source or modification is estimated by using refined modeling and the T-RACT emission rate. (6-30-95)

Not Applicable. In this Application, the Applicant seeks to demonstrate preconstruction compliance for toxic air pollutants listed in Section 585. T-RACT is not applicable to this application type, per IDAPA 58.01.01.210 .

h. The approved interpollutant ambient concentration from a source or modification for a toxic air pollutant at each receptor is calculated as follows: (6-30-95) i. Step 1: Calculate the estimated decrease in ambient concentrations for each toxic air pollutant from each source contributing an approved interpollutant trade at the receptor by multiplying the approved interpollutant ratio by the overall decrease in the ambient concentration of the toxic air pollutant at the receptor site. (6-30-95) ii. Step 2: Calculate the total estimated decrease at the receptor by summing all of the individual estimated decreases calculated in Subsection 210.03.h.i. for that receptor. (6-30-95) iii. Step 3: Calculate the approved interpollutant ambient concentration by subtracting the total estimated decrease at the receptor from the estimated ambient concentration for the source or modification at the receptor. (6-30-95)

Not Applicable. Applicant has not proposed an interpollutant trade for this project.

04. Preconstruction Compliance Demonstration. The applicant may use any of the Department approved standard methods described in Subsections 210.05 through 210.08, and may use any applicable specialized method described in Subsections 210.09 through 210.12 to demonstrate preconstruction compliance for each identified toxic air pollutant. (6-30-95)

Applicable. Applicant has utilized the procedures of Subsections 210.05 for this project.

05. Uncontrolled Emissions. (6-30-95)

Applicable. Applicant has utilized the procedures of Subsections 210.05 for this project.

a. Compare the source's or modification's uncontrolled emissions rate for the toxic air pollutant to the applicable screening emission level listed in Sections 585 or 586. (6-30-95)

Applicable. For each source, this comparison is made in the emissions work-up sheets in Appendix B. Facility-wide applicability determinations using this comparison is documented in Section 5.2.6

b. If the source's or modification's uncontrolled emission rate is less than or equal to the applicable screening emission level, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)
Applicable. For each pollutant, this comparison is made in the emissions work-up sheets in Appendix B.

06. Uncontrolled Ambient Concentration. (6-30-95)
Not Applicable. Subsection 210.05 was utilized for this project.

a. Compare the source's or modification's uncontrolled ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

b. If the source's or modification's uncontrolled ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

07. Controlled Emissions and Uncontrolled Ambient Concentration. (6-30-95)
Not Applicable. Subsection 210.05 was utilized for this project.

a. Compare the source's or modification's controlled emissions rate for the toxic air pollutant to the applicable screening emission level listed in Sections 585 or 586 and compare the source's or modification's uncontrolled ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

b. If the source's or modification's controlled emission rate is less than or equal to the applicable screening emission level and if the source's or modification's uncontrolled ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

08. Controlled Ambient Concentration. (6-30-95)
Not Applicable. Subsection 210.05 was utilized for this project.

a. Compare the source's or modification's controlled ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

b. If the source's or modification's controlled ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

c. The Department shall include an emission limit for the toxic air pollutant in the permit to construct that is equal to or, if requested by the applicant, less than the emission rate that was used in the modeling. (6-30-95)

09. Net Emissions. (6-30-95)
Not Applicable. Netting Emissions was not utilized for this project.

a. As provided in Section 007 (definition of net emissions increase) and Sections 460 and 461, the owner or operator may net emissions to demonstrate preconstruction compliance. (4-5-00)

b. Compare the modification's approved net emissions increase (expressed as an emission rate) for the toxic air pollutant to the applicable screening emission level listed in Sections 585 or 586. (6-30-95)

c. If the modification's approved net emissions increase is less than or equal to the applicable screening emission level, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

10. Net Ambient Concentration. (6-30-95)
Not Applicable. Netting Emissions was not utilized for this project.

a. As provided in Section 007 (definition of net emission increase) and Sections 460 and 461, the owner or operator may net ambient concentrations to demonstrate preconstruction compliance. (4-5-00)

b. Compare the modification's approved net ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

c. If the modification's approved net ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

11. Toxic Air Pollutant Offset Ambient Concentration. (6-30-95)
Not Applicable. Emissions offsets were not utilized for this project.

a. As provided in Sections 206 and 460, the owner or operator may use offsets to demonstrate preconstruction compliance. (6-30-95)

b. Compare the source's or modification's approved offset ambient concentration at the point of compliance for the toxic air pollutant to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

c. If the source's or modification's approved offset ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

12. T-RACT Ambient Concentration for Carcinogens. (6-30-95)
Not Applicable. In this Application, the Applicant seeks to demonstrate preconstruction compliance for toxic air pollutants listed in Section 585.

a. As provided in Subsections 210.12 and 210.13, the owner or operator may use T-RACT to demonstrate preconstruction compliance for toxic air pollutants listed in Section 586. (6-30-95)
i. This method may be used in conjunction with netting (Subsection 210.09), and offsets (Subsection 210.11). (6-30-95) ii. This method is not to be used to demonstrate preconstruction compliance for toxic air pollutants listed in Section 585. (6-30-95)

b. Compare the source's or modification's approved T-RACT ambient concentration at the point of compliance for the toxic air pollutant to the amount of the toxic air pollutant that would contribute an ambient air cancer risk probability of less than one to one hundred thousand (1:100,000) (which amount is equivalent to ten (10) times the applicable acceptable ambient concentration listed in Section 586). (6-30-95)

c. If the source's or modification's approved T-RACT ambient concentration at the point of compliance is less than or equal to the amount of the toxic air pollutant that would contribute an ambient air cancer risk probability of less than one to one hundred thousand (1:100,000), no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits and other permit terms for the toxic air pollutant in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

13. T-RACT Determination Processing. (6-30-95)
Not Applicable. In this Application, the Applicant seeks to demonstrate preconstruction compliance for toxic air pollutants listed in Section 585. T-RACT is not applicable to this application type, per IDAPA 58.01.01.210.

a. The applicant may submit all information necessary to the demonstration at the time the applicant submits the complete initial application or the applicant may request the Department to review a complete initial application to determine if Subsection 210.12 may be applicable to the source or modification. (6-30-95)

b. Notwithstanding Subsections 209.01.a. and 209.01.b., if the applicant requests the Department to review a complete initial application and Subsection 210.12 is determined to be applicable, the completeness determination for the initial application will be revoked until a supplemental application is submitted and determined complete. When the supplemental application is determined complete, the timeline for agency action shall be reinitiated. (6-30-95)

14. T-RACT Determination. T-RACT shall be determined on a case-by-case basis by the Department as follows: (6-30-95)
Not Applicable. In this Application, the Applicant seeks to demonstrate preconstruction compliance for toxic air pollutants listed in Section 585. T-RACT is not applicable to this application type, per IDAPA 58.01.01.210 .

a. The applicant shall submit information to the Department identifying and documenting which control technologies or other requirements the applicant believes to be T-RACT. (5-1-94)
b. The Department shall review the information submitted by the applicant and determine whether the applicant has proposed T-RACT. (5-1-94)
c. The technological feasibility of a control technology or other requirements for a particular source shall be determined considering several factors including, but not limited to: (5-1-94) i. Process and operating procedures, raw materials and physical plant layout. (5-1-94) ii. The environmental impacts caused by the control technology that cannot be mitigated, including, but not limited to, water pollution and the production of solid wastes. (5-1-94) iii. The energy requirements of the control technology. (5-1-94)
d. The economic feasibility of a control technology or other requirement, including the costs of necessary mitigation measures, for a particular source shall be determined considering several factors including, but not limited to: (5-1-94) i. Capital costs. (5-1-94) ii. Cost effectiveness, which is the annualized cost of the control technology divided by the amount of emission reduction. (5-1-94) iii. The difference in costs between the particular source and other similar sources, if any, that have implemented emissions reductions. (5-1-94)
e. If the Department determines that the applicant has proposed T-RACT, the Department shall determine which of the options, or combination of options, will result in the lowest emission of toxic

air pollutants, develop the emission standards constituting T-RACT and incorporate the emission standards into the permit to construct. (5-1-94)

f. If the Department determines that the applicant has not proposed T-RACT, the Department shall disapprove the submittal. If the submittal is disapproved, the applicant may supplement its submittal or demonstrate preconstruction compliance through a different method provided in Section 210. If the applicant does not supplement its submittal or demonstrate preconstruction compliance through a different method provided in Section 210, the Department shall deny the permit. (6-30-95)

15. Short Term Source Factor. For short term sources, the applicant may utilize a short term adjustment factor of ten (10). For a carcinogen, multiply either the applicable acceptable ambient concentration (AACC) or the screening emission rate, but not both, by ten (10), to demonstrate preconstruction compliance. This method may be used for TAPs listed in Section 586 only and may be utilized in conjunction with standard methods for quantification of emission rates (Subsections 210.05 through 210.08). (4-5-00)

Not Applicable. In this Application, the Applicant has chosen to not utilize the factor-of-10 option to demonstrate preconstruction compliance for toxic air pollutants listed in Section 586.

16. Environmental Remediation Source. (6-30-95)

Not Applicable. The Commercial Creamery facility is not a remediation source.

a. For Remediation sources subject to or regulated by the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901-6992k) and the "Idaho Rules and Standards for Hazardous Waste," (IDAPA 58.01.05.000 et seq.) or the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 6901-6992k) or a consent order, if the estimated ambient concentration at the point of impact is greater than the acceptable ambient impacts listed in Sections 585 and 586, Best Available Control Technology shall be applied and operated until the estimated uncontrolled emissions from the remediation source are below the acceptable ambient concentration. (6-30-95)

b. For Remediation sources not subject to or regulated by the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901-6992k) and the "Idaho Rules and Standards for Hazardous Waste," (IDAPA 58.01.05.000 et seq.) or the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 6901-6992k) or a consent order, shall, for the purposes of these rules, be considered the same as any other new or modified source of toxic air pollution. (6-30-95)

c. For an environmental remediation source that functions to remediate or recover any release, spill, leak, discharge or disposal of any petroleum product or petroleum substance, the Department may waive the requirements of Section 513 of these rules. (3-15-02)

17. Interpollutant Trading Ambient Concentration. (6-30-95)

Not Applicable. This project does not seek to utilize interpollutant trading to demonstrate preconstruction compliance.

a. As provided in Subsections 209.01.c., 210.17 through 210.19, the owner or operator may use interpollutant trading to demonstrate preconstruction compliance. This method may be used in conjunction with netting (Subsection 210.10), and offsets (Subsection 210.11) (6-30-95)

b. Compare the source's or modification's approved interpollutant ambient concentration at the point of compliance for the toxic air pollutant emitted by the source or modification to the applicable acceptable ambient concentration listed in Sections 585 or 586. (6-30-95)

c. If the source's or modification's approved interpollutant ambient concentration at the point of compliance is less than or equal to the applicable acceptable ambient concentration listed in Sections 585 or 586, no further procedures for demonstrating preconstruction compliance will be required for that toxic air pollutant as part of the application process. (6-30-95)

d. The Department shall include emission limits for all of the toxic air pollutants involved in the trade in the permit to construct. The Department shall also include other permit terms in the permit to construct that assure that the facility will be operated in the manner described in the preconstruction compliance demonstration. (6-30-95)

18. Interpollutant Trading Determination Processing. (6-30-95)

Not Applicable. This project does not seek to utilize interpollutant trading to demonstrate preconstruction compliance.

a. The applicant may submit all information necessary to the demonstration at the time the applicant submits the complete initial application or the applicant may request the Department to review a complete initial application to determine if Subsection 210.17 may be applicable to the source or modification. (6-30-95)

b. Notwithstanding Subsections 209.01.a. and 209.01.b., if the applicant requests the Department to review a complete initial application and Subsection 210.17 is determined to be applicable, the completeness determination for the initial application will be revoked until a supplemental application is submitted and determined complete. When the supplemental application is determined complete, the timeline for agency action shall be reinitiated. (6-30-95)

19. Interpollutant Determination. (6-30-95)

Not Applicable. This project does not seek to utilize interpollutant trading to demonstrate preconstruction compliance.

a. The applicant may request an interpollutant trade if the Department determines that: (6-30-95) i. The facility complies with an emission standard at least as stringent as best available control technology (BACT); and (6-30-95) ii. The owner or operator has instituted all known and available methods of pollution prevention at the facility to reduce, avoid or eliminate toxic air pollution prior to its generation including, but not limited to, recycling, chemical substitution, and process modification provided that such pollution prevention methods are compatible with each other and the product or service being produced; and (6-30-95) iii. The owner or operator has taken all available offsets; and (6-30-95) iv. The owner or operator has identified all geographical areas and populations that may be impacted by the proposed interpollutant trade. (6-30-95)

b. Interpollutant trades shall be approved or denied on a case-by-case basis by the Department. Denials shall be within the discretion of the Department. Approvals shall be granted only if: (6-30-95) i. The Department of Health and Welfare's Division of Health approves the interpollutant trade; and (6-30-95) ii. The Department of Environmental Quality determines that the interpollutant trade will result in a overall benefit to the environment; and (6-30-95) iii. An EPA approved database or other EPA approved reference provides relative potency factors, or comparable factors, or other data that is sufficient to allow for adequate review and approval of the proposed trade by the Department and the Department of Health and Welfare's Division of Health is submitted for all of the toxic air pollutants being traded; and (6-30-95) iv. The reductions occur at the same facility where the proposed source or modification will be constructed; and (6-30-95) v. The interpollutant trade will not cause an increase in sum of the ambient concentrations of the carcinogenic toxic air pollutants involved in the particular interpollutant trade at any receptor site; and (6-30-95) vi. The total cancer risk with the interpollutant trade will be less than the total cancer risk without the interpollutant trade; and (6-30-95) vii. The total non-cancer health risk with the interpollutant trade will be less than the total non-cancer health risk without the interpollutant trade. (6-30-95)

20. NSPS and NESHAP Sources. (6-30-95)

Not Applicable. This project is not regulated at the time of permit issuance under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63,

a. If the owner or operator demonstrates that the toxic air pollutant from the source or modification is regulated by the Department at the time of permit issuance under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63, no further procedures for demonstrating preconstruction compliance will be required under Section 210 for that toxic air pollutant as part of the application process. (6-30-95)

b. If the owner or operator demonstrates that the toxic air pollutant from the source or modification is regulated by the EPA at the time of permit issuance under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63 and the permit to construct issued by the Department contains adequate provisions implementing the federal standard, no further procedures for demonstrating preconstruction compliance will be required under Section 210 for that toxic air pollutant as part of the application process. (6-30-95)

21. Permit Compliance Demonstration. Additional procedures and requirements to demonstrate and ensure actual and continuing compliance may be required by the Department in the permit to construct. (5-1-94)

Applicable. Applicant acknowledges DEQ's prerogative in the permitting process.

22. Interpretation and Implementation of Other Sections. Except as specifically provided in other sections of these rules, the provisions of Section 210 are not to be utilized in the interpretation or implementation of any other section of these rules. (6-30-95)

Applicable.

211.CONDITIONS FOR PERMITS TO CONSTRUCT.

Applicable. Applicant acknowledges DEQ's prerogative in the permitting process, and understands that the requirements of Section 211 are likely to appear in the PTC as issued.

01. Reasonable Conditions. The Department may impose any reasonable conditions upon an approval, including conditions requiring the stationary source or facility to be provided with: (5-1-94)

a. Sampling ports of a size, number, and location as the Department may require; (5-1-94)

b. Safe access to each port; (5-1-94)

c. Instrumentation to monitor and record emissions data; (5-1-94)

d. Instrumentation for ambient monitoring to determine the effect emissions from the stationary source or facility may have, or are having, on the air quality in any area affected by the stationary source or facility; and (5-1-94)

e. Any other sampling and testing facilities as may be deemed reasonably necessary. (5-1-94)

02. Cancellation. The Department may cancel a permit to construct if the construction is not begun within two (2) years from the date of issuance, or if during the construction, work is suspended for one (1) year. (5-1-94)

03. Notification to The Department. Any owner or operator of a stationary source or facility subject to a permit to construct shall furnish the Department written notifications as follows: (5-1-94)

a. A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty (60) days or less than thirty (30) days prior to such date; and (5-1-94)

b. A notification of the actual date of initial start-up of the stationary source or facility within fifteen (15) days after such date. (5-1-94)

04. Performance Test. Within sixty (60) days after achieving the maximum production rate at which the stationary source or facility will be operated but not later than one hundred eighty (180) days after initial start-up of such stationary source or facility, the owner or operator of such stationary source or facility may be required to conduct a performance test in accordance with methods and under operating conditions approved by the Department and furnish the Department a written report of the results of such performance test. (5-1-94)

a. Such test shall be at the expense of the owner or operator. (5-1-94)

b. The Department may monitor such test and may also conduct performance tests. (5-1-94)

c. The owner or operator of a stationary source or facility shall provide the Department fifteen (15) days prior notice of the performance test to afford the Department the opportunity to have an observer present. (5-1-94)

213. PRE-PERMIT CONSTRUCTION.
Applicable. Applicant seeks to utilize this permitting pathway in this application.
This section describes how owners or operators may commence construction or modification of certain stationary sources before obtaining the required permit to construct. (3-23-98)

01. Pre-Permit Construction Eligibility. Pre-permit construction approval is available for non-major sources and non-major modifications and for new sources or modifications proposed in accordance with Subsection 213.01.d. Pre-permit construction is not available for any new source or modification that: uses emissions netting to stay below major source levels; uses optional offsets pursuant to Section 206; or would have an adverse impact on the air quality related values of any Class I area. Owners or operators may ask the Department for the ability to commence construction or modification of qualifying sources under Section 213 before receiving the required permit to construct. To obtain the Department's pre-permit construction approval, the owner or operator shall satisfy the following requirements: (4-5-00)

a. The owner or operator shall apply for a permit to construct in accordance with Subsections 202.01.a., 202.02, and 202.03 of this chapter. (3-23-98)
Applicable. This document constitutes Commercial Creamery Company's application..

b. The owner or operator shall consult with Department representatives prior to submitting a pre-permit construction approval application. (3-23-98)
Applicable. Applicant's consultation is documented in Section 0.3.1.

c. The owner or operator shall submit a pre-permit construction approval application which must contain, but not be limited to: a letter requesting the ability to construct before obtaining the required permit to construct, a copy of the notice referenced in Subsection 213.02; proof of eligibility; process description(s); equipment list(s); proposed emission limits and modeled ambient concentrations for all regulated air pollutants and toxic air pollutants, such that they demonstrate compliance with all applicable air quality rules and regulations. The models shall be conducted in accordance with Subsection 202.02 and with written Department approved protocol and submitted with sufficient detail so that modeling can be duplicated by the Department. (4-11-06)
Applicable. Applicant's compliance with these requirements is documented in Section 0.2, Section 0.4, and Section 1.0 of this Application

d. Owners or operators seeking limitations on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must describe in detail in the pre-permit construction application the proposed restrictions and certify in accordance with Section 123 that they will comply with the restrictions, including any applicable monitoring and reporting requirements. (3-23-98)
Not Applicable. The Applicant does not seek limitations on PTE such that permitted emissions will be either below major source levels or below a significant increase.

02. Permit to Construct Procedures for Pre-Permit Construction. (3-23-98)
a. Within ten (10) days after the submittal of the pre-permit construction approval application, the owner or operator shall hold an informational meeting in at least one (1) location in the region in which the stationary source or facility is to be located. The informational meeting shall be made known by notice published at least ten (10) days before the meeting in a newspaper of general circulation in the county(ies) in which the stationary source or facility is to be located. A copy of such notice shall be included in the application. (3-23-98)
Applicable. Applicant's compliance with these requirements is documented in Section 0.3.9.

b. Within fifteen (15) days after the receipt of the pre-permit construction approval application, the Department shall notify the owner or operator in writing of pre-permit construction approval or denial. The Department may deny the pre-permit construction approval application for any reason it deems valid. (3-23-98)
Applicable.

c. Upon receipt of the pre-permit construction approval letter issued by the Department, the owner or operator may begin construction at their own risk as identified in Subsection 213.02.d. Upon issuance of the pre-permit construction approval letter, any and all potential to emit limitations addressed in the pre-permit construction application pursuant to Subsection 213.01.d. shall become enforceable. The owner or operator shall not operate those emissions units subject to permit to construct requirements in accordance with Section 200 unless and until issued a permit pursuant to Section 209. (5-3-03)
Applicable. Applicant's understanding of these requirements is documented in the letter of Section 0.2.

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d. If the pre-permit construction approval application is determined incomplete or the permit to construct is denied, the Department shall issue an incompleteness or denial letter pursuant to Section 209. If the Department denies the permit to construct, then the owner or operator shall have violated Section 201 on the date it commenced construction as defined in Section 006. The owner or operator shall not contest the final permit to construct decision based on the fact that they have already begun construction. (3-23-98)
Applicable. Applicant's understanding of these requirements is documented in in the letter of Section 0.2.

214. DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE FOR NEW AND RECONSTRUCTED MAJOR SOURCES OF HAZARDOUS AIR POLLUTANTS.

215. MERCURY EMISSION STANDARD FOR NEW OR MODIFIED SOURCES.
No owner or operator may commence construction or modification of a stationary source or facility that results in an increase in annual potential emissions of mercury of twenty-five (25) pounds or more unless the owner or operator has obtained a permit to construct under Sections 200 through 228 of these rules. The permit to construct application shall include an MBACT analysis for the new or modified source or sources for review and approval by the Department. A determination of applicability under Section 215 shall be based upon the best available information. Fugitive emissions shall not be included in a determination of applicability under Section 215. (4-7-11)
Not Applicable. The Facility's annual potential emissions of mercury are less than twenty-five (25) pounds. See Table 5.2.6-1 .

01. Exemptions. New or modified stationary sources within a source category subject to 40 CFR Part 63 are exempt from the requirements of Section 215. (4-7-11)
Not Applicable. None of the Facility's stationary sources are subject to 40 CFR Part 63. See Form FRA in Section 1.

02. Applicability. Except as provided in Subsection 215.01, Section 215 applies to all new or modified sources for which an application for a permit to construct was submitted to the Department on or after July 1, 2011. (4-7-11)
Applicable. Sources B2 and D1 both involve an application for a permit to construct that is submitted to the Department on or after July 1, 2011.

300. Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)
IDAPA 58.01.01.301 Requirement to Obtain Tier I Operating Permit

Not Applicable. Post-project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for PM-10/PM-2.5, SO2, NOx, CO, or VOC; or 10 tons per year for any one HAP or 25 tons per year for all HAPs combined as documented in the Emissions Inventories Section Tables 8.4-1 *et al.* of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113 and the requirements of IDAPA 58.01.01.301 do not apply.

401. Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 Tier II Operating Permit

Not Applicable. The application was submitted for a Pre-PTC Construction Approval ; however an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400-410 are not applicable to this permitting action.

577. AMBIENT AIR QUALITY STANDARDS FOR FLUORIDES.

Primary and secondary air quality standards are those concentrations in the ambient air which result in a total fluoride content in vegetation used for feed and forage of no more than: (5-1-94)

Not Applicable. Total facility-wide fluorine emissions are 5.9E-07 tpy, based on Table 5.2.6-1, a level at which fluoride content in vegetation used for feed and forage that results from these emissions is less several orders of magnitude smaller than the standards of this part.

01. Annual Standard. Forty (40) ppm, dry basis -- annual arithmetic mean. (5-1-94)

02. Bimonthly Standard. Sixty (60) ppm, dry basis -- monthly concentration for two (2) consecutive months. (5-1-94)

03. Monthly Standard. Eighty (80) ppm, dry basis -- monthly concentration never to be exceeded. (5-1-94)

585. TOXIC AIR POLLUTANTS NON-CARCINOGENIC INCREMENTS.

Applicable. Projected facility-wide impacts of non-carcinogenic TAPs are provided in Table 5.2.6-1.

The screening emissions levels (EL) and acceptable ambient concentrations (AAC) for non-carcinogens are as provided in the following table. The AAC in this section are twenty-four (24) hour averages. (6-30-95)

586. TOXIC AIR POLLUTANTS CARCINOGENIC INCREMENTS.

Applicable. Projected facility-wide impacts of carcinogenic TAPs are provided in Table 5.2.6-2

The screening emissions levels (EL) and acceptable ambient concentrations (AACC) for carcinogens are as provided in the following table. The AACC in this section are annual averages.

590. NEW SOURCE PERFORMANCE STANDARDS.

Not Applicable. No sources at the Commercial Creamery facility are subject to NSPS requirements. See documentation in Section 4.0.

The owner or operator of any stationary source shall comply with 40 CFR Part 60 as applicable to the stationary source. The applicable definitions for this Section shall be the definitions set forth in 40 CFR Part 60. (4-5-00)

591. NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS.

Not Applicable. No sources at the Commercial Creamery facility are subject to NESHAPS requirements. See documentation in Section 4.0.

The owner or operator of any stationary source shall comply with 40 CFR Part 61 and 40 CFR Part 63 as applicable to the stationary source. (5-1-94)

625. VISIBLE EMISSIONS.

A person shall not discharge any air pollutant into the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined by this section. (4-5-00)

Applicable. Commercial Creamery Company anticipates that opacity requirements will be included in the PTC as issued.

01. Exemptions. The provisions of this section shall not apply to: (4-5-00)

a. Kraft Process Lime Kilns, if operating prior to January 24, 1969; or (5-1-94)

b. Carbon Monoxide Flare Pits on Elemental Phosphorous Furnaces, if operating prior to January 24, 1969; or (5-1-94)

c. Liquid Phosphorous Loading Operations, if operating prior to January 24, 1969; or (5-1-94)

d. Wigwam Burners; or (5-1-94) **e.** Kraft Process Recovery Furnaces. (5-1-94)

f. Calcining Operations Utilizing an Electrostatic Precipitator to Control Emissions, if operating prior to January 24, 1969. (5-1-94)

Not Applicable. The Commercial Creamery facility is not an industrial facility described by this part.

02. Standards for Exempted Sources. Except as provided in Section 626, for sources exempted from the provisions of this section, a person shall not discharge into the atmosphere from any point of emission, for any air pollutant for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than forty percent (40%) opacity as determined by this section. (4-5-00)

Not Applicable. The Commercial Creamery facility is not an industrial facility described by this part.

03. Exception. The provisions of this section shall not apply when the presence of uncombined water, nitrogen oxides and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this rule. (4-5-00)

Applicable. The Commercial Creamery facility anticipates the presence of uncombined water in facility plumes.

04. Test Methods and Procedures. The appropriate test method under this section shall be EPA Method 9 (contained in 40 CFR Part 60) with the method of calculating opacity exceedances altered as follows: (4-5-00)

Applicable. Commercial Creamery Company anticipates that opacity requirements will be included in the PTC as issued.

a. Opacity evaluations shall be conducted using forms available from the Department or similar forms approved by the Department. (4-5-00)

b. Opacity shall be determined by counting the number of readings in excess of the percent opacity limitation, dividing this number by four (4) (each reading is deemed to represent fifteen (15) seconds) to find the

650. RULES FOR CONTROL OF FUGITIVE DUST.

The purpose of Sections 650 through 651 is to require that all reasonable precautions be taken to prevent the generation of fugitive dust. (5-1-94)

Fugitive Dust (IDAPA 58.01.01.650)

IDAPA 58.01.01.650 Fugitive Dust

Applicable. All reasonable precautions shall be taken to prevent particulate matter from becoming airborne under this provision. Compliance with this requirement will be demonstrated by implementation of the methods set forth at IDAPA 58.01.01.651.

651. GENERAL RULES. All reasonable precautions shall be taken to prevent particulate matter from becoming airborne. In determining what is reasonable, consideration will be given to factors such as the proximity of dust emitting operations to human habitations and/or activities, the proximity to mandatory Class I Federal Areas and atmospheric conditions which might affect the movement of particulate matter. Some of the reasonable precautions may include, but are not limited to, the following: (3-30-07)

01. Use of Water or Chemicals. Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land. (5-1-94)
02. Application of Dust Suppressants. Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust. (5-1-94) **03. Use of Control Equipment**. Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations. (5-1-94)
04. Covering of Trucks. Covering, when practical, open bodied trucks transporting materials likely to give rise to airborne dusts. (5-1-94)
05. Paving. Paving of roadways and their maintenance in a clean condition, where practical. (5-1-94)
Applicable. Commercial Creamery Company anticipates that fugitive dust requirements will be included in the PTC as issued. The working areas and streets surrounding the facility addressed in this permit are paved.
06. Removal of Materials. Prompt removal of earth or other stored material from streets, where practical

675. FUEL BURNING EQUIPMENT -- PARTICULATE MATTER.
The purpose of Sections 675 through 681 is to establish particulate matter emission standards for fuel burning equipment. (4-5-00)

676. STANDARDS FOR NEW SOURCES. A person shall not discharge into the atmosphere from any fuel burning equipment with a maximum rated input of ten (10) million BTU's per hour or more, and commencing operation on or after October 1, 1979, particulate matter in excess of the concentrations shown in the following table:
Applicable. Commercial Creamery Company proposed source D1 has a maximum rated input of 12 million BTU's per hour, and will be installed after October 1, 1979. Additionally, Dryer D1 heats product via heated air as an intermediary, therefore qualifies as Fuel-Burning Equipment subject to the Section 675 standard. (Proposed new Boiler B2 has a maximum rated input of 6.1 million BTU's per hour, and therefore does not qualify as Fuel-Burning Equipment subject to the Section 675 standard), which is :

FUEL TYPE : Gas
ALLOWABLE PARTICULATE EMISSIONS .015 **gr/dscf**
Oxygen 3%

677.STANDARDS FOR MINOR AND EXISTING SOURCES.
A person shall not discharge into the atmosphere from any fuel burning equipment in operation prior to October 1, 1979, or with a maximum rated input of less than ten (10) million BTU per hour, particulate matter in excess of the concentrations shown in the following table:
Applicable Commercial Creamery Company proposed source D2 has a maximum rated input of 12 million BTU's per hour, and was installed before October 1, 1979. Additionally, Dryer D2 heats

product via heated air as an intermediary, therefore qualifies a Fuel-Burning Equipment subject to the Section 677 standard. (Existing Boiler B1 has a maximum rated input of 6.1 million BTU's per hour, and therefore does not qualify as Fuel-Burning Equipment subject to the Section 677 standard), which is :

FUEL TYPE : Gas
ALLOWABLE PARTICULATE EMISSIONS .015 **gr/dscf**
Oxygen 3%

700. PARTICULATE MATTER -- PROCESS WEIGHT LIMITATIONS.

701. PARTICULATE MATTER -- NEW EQUIPMENT PROCESS WEIGHT LIMITATIONS.
Not Applicable Commercial Creamery Company proposed source D1 will be installed after October 1, 1979. Additionally, Dryer D1 will heats product via heated air as an intermediary, therefore qualifies a Fuel-Burning Equipment

01. Particulate Matter Emission Limitations. The purpose of Sections 700 through 703 is to establish particulate matter emission limitations for process equipment. (5-3-03)

02. Minimum Allowable Emission. Notwithstanding the provisions of Sections 701 and 702, no source shall be required to meet an emission limit of less than one (1) pound per hour. (4-5-00)

03. Averaging Period. For the purposes of Sections 701 through 703, emissions shall be averaged according to the following, whichever is the lesser period of time: (4-5-00)
a. One (1) complete cycle of operation; or (4-5-00)
b. One (1) hour of operation representing worst-case conditions for the emissions of particulate matter. (4-5-00)

04. Test Methods and Procedures. The appropriate test method under Sections 700 thought 703 shall be EPA Method 5 contained in 40 CFR Part 60 or such comparable and equivalent methods approved in accordance with Subsection 157.02.d. Test methods and procedures shall comply with Section 157. (4-5-00)

01. General Restrictions. No person shall emit into the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour. (4-5-00)
Not Applicable Commercial Creamery Company proposed source D1 will be installed after October 1, 1979.

a. If PW is less than 9,250 pounds per hour, E = 0.045(PW)0.60 (4-5-00)

b. If PW is equal to or greater than 9,250 pounds per hour, E = 1.10(PW)0.25 (4-5-00)

02. Exemption. The provisions of Section 701 shall not apply to fuel burning equipment. (4-5-00)
Not Applicable Commercial Creamery Company proposed source D1 heats product via heated air as an intermediary, therefore qualifies a Fuel-Burning Equipment

03. Emission Standards -- Table. The following table illustrates the emission standards set forth in Section 701.

PROCESS WEIGHT lb/hr	ALLOWABLE EMISSIONS FROM ENTIRE SOURCE lb/hr	PROCESS WEIGHT lb/hr	EMISSIONS FROM ENTIRE SOURCE lb/hr

175 or less	1	20,000	13.08
200	1.08	40,000	15.56
400	1.64	60,000	17.22
600	2.09	80,000	18.50
800	2.40	100,000	19.56
1,000	2.84	200,000	23.26
2,000	4.30	400,000	27.66
4,000	6.52	600,000	30.61
6,000	8.32	800,000	32.90
8,000	9.89	1,000,000	34.79
10,000	11.00	2,000,000	41.37

702. PARTICULATE MATTER -- EXISTING EQUIPMENT PROCESS WEIGHT LIMITATIONS.
The provisions of Section 702 shall become effective on January 1, 1981. (4-5-00)
Applicable. Commercial Creamery process sources D2, D3, D4, P1, and P2, are existing process sources that were in operation prior to October 1, 1979. Each of these sources have product process weights less than 17,000 pounds per hour. Conformance of each of these sources with the Process Weight Limitations is documented in the MS Excel Emissions Work-Up Sheets found in Appendix B. Emissions from the largest source (D2) are shown below :

Process Weight Rule (58.01.01.701.01.a)					
Pollutant	Pollutant Source	Potential Emissions PM (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	3.750		5.49	yes

01. General Restrictions. No person shall emit into the atmosphere from any process or process equipment operating prior to October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour: (4-5-00)

a. If PW is less than 17,000 pounds per hour, E = 0.045 (PW) 0.60 (4-5-00)

b. If PW is equal to or greater than 17,000 pounds per hour, E = 1.12 (PW)0.27. (4-5-00)

02. Exemptions. The provisions of Section 702 shall not apply to: (4-5-00)
a. Fuel burning equipment; or (5-1-94)
b. Equipment used exclusively to dehydrate sugar beet pulp or alfalfa. (5-1-94)

03. Emission Standards -- Table. The following table illustrates the emission standards set forth in Section 702.

175 or less 1 20,000 16.24
200 1.08 40,000 19.58 400 1.64 60,000 21.84 600 2.09 80,000 23.61 800 2.48 100,000 25.07
1,000 2.84 200,000 30.23 2,000 4.30 400,000 36.46 4,000 6.52 600,000 40.67 6,000 8.32 800,000
43.96 8,000 9.89 1,000,000 46.69 10,000 11.30 2,000,000 56.30

703.PARTICULATE MATTER -- OTHER PROCESSES.
Not Applicable. The Commercial Creamery facility is not an alfalfa or sugar beet pulp processing facility addressed by Section 7.2.02(b)

01. Other Processes. No person with processes exempt under Subsection 702.02.b. shall emit particulate matter to the atmosphere from any process or process equipment in excess of the amount shown in the following equations, where E is the total rate of emission from all emission points from the source in pounds per hour and P is the process weight rate in pounds per hour. (4-5-00)

a. If P is less than sixty thousand (60,000) pounds per hour, E = 0.02518(P)0.67 (4-5-00)

b. If P is greater than or equal to sixty thousand (60,000) pounds per hour, E = 23.84(P)0.11 - 40 (4-5-00)

Control of Odors (IDAPA 58.01.01.775)

IDAPA 58.01.01.775 Control of Odors

Applicable. No person shall allow emissions of odorous gases, liquids, solids into the atmosphere. .

Compliance with this requirement will be demonstrated responding appropriately to any odor complaints.

[■ end Section 4]

Section 5 PTE / Emission Estimates / Limitation on PTE

5.1 Potential to Emit

Potential to Emit is defined in IDAPA 58.01.01.006.86 as
" The maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, *including air pollution control equipment and restrictions on hours of operation* or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable ..."

Commercial Creamery Company facility consists of 38 air emissions sources, all of which are legacy sources that date from before applicability dates of current regulations, and are currently (pre-PTC) not permitted.

Controls in Currently in Place Five of these sources (D1, D2, D3, P1, P2) are controlled for PM using fabric filters. Dryer D4, plus 28 other small combustion sources (e.g., HVAC and room unit heaters, plus gas laundry dryers and water heaters) are uncontrolled.

Current Operating Schedule 29 of facility sources operate at only a portion of their physical and operational capacity. For example, the plant typically operates on a 2-shift-per-day, 5-day per-week basis and Dryers D1, D2, and D3 operate on a 2-shift per day basis. Dryer D4 and the Laundry dryers operate on a 1 day-per week basis. Only the two boilers and two 100-gallon water heaters operate on a continuous 8760 hrs/yr service. 25 of the smaller sources, HVAC units and unit heaters operate on a somewhat random schedule dictated by weather and season, averaging one-half time annual duty cycle.

Current PTE Assumptions :

1 All Fabric filters on all controlled sources (D1, D2, D3,) are integral to their sources. They come from the factory as part of the dryer assembly, which dryers are not configured to discharge except through the filter units. Dryer D4, operating 320 hrs/yr, is uncontrolled. Filters P1 and P1 control dust at the point where ingredients are added to blenders on a 2-shift-per-day basis. All of these considerations are part of the Dryer's physical and operational design, based on 40 years+ of operations.

2 The current PTE assumes a 50% duty cycle on an annual basis for the 25 smaller HVAC unit and unit heaters sources. Those considerations are part of the smaller sources' physical and operational design, based on 40 years+ of operations.

3 The current PTE is based on emissions data developed and documented, with assumptions, in the Emissions work-up sheets of Appendix B.

Assumed Changes to PTE with this permitting action:

1 We anticipate that as part of this PTC permitting action, the hours of operations for all facility sources will become federally or state-enforceable in their current control status and operating schedule. This action will lock-in the facility-wide PTE and establish a future permitting baseline.

4 Changes to the PTE for the Commercial Creamery Company through this permitting will consist of addition of the two new sources B2 and D1. Other changes will be negligible :-- the planned refurbishment of Dryer D2 is not expected to result in any changes to emissions. No changes are foreseen in operating schedules for any of the plant equipment.

5.2 Emission Estimates

The purpose of the emissions inventory is to enable decisions on which sources and pollutants require modeling and to provide appropriate quantitative emissions data for the dispersion modeling. Five emissions inventories were prepared for this project, in accordance with guidance for this **Proposed Modification to an Existing Minor Facility**. (*Air Quality Permit Application Emission Inventory Requirements*, DEQ, 2010a) These are:

1. *Facility Wide PTE Inventory*
2. *Proposed Modification to a Minor Facility Inventory*
3. *Ambient Impact Assessment Inventory*
4. *Toxic Air Pollutant Inventory, and*
5. *Hazardous Air Pollutant Inventory*

The emissions inventory for all Criteria Pollutants was calculated for the gas-fired boilers and product dryers, based primarily on Emission factors from AP-42 Section 1.4, (for natural gas combustion) and 9.6.1 "Natural and Processed Cheese" (for dryer particulate emissions).

Controlled emissions of all air pollutants were calculated. Only emissions of NO2, PM-10, PM-2.5 and four carcinogenic-TAPs are projected to exceed their respective modeling thresholds.

5.2.1 Overview of Emissions Data Flow

Figure 5.2..1-1 shows the relationships between data sources, the inventory work-up sheets, the five emissions inventory tables noted above.

Inventory Work-Up Sheets Commercial Creamery's emission data were developed using a standard template that calculates emissions for criteria pollutants and for TAPs. These inventory work-up sheets are provided as **Exhibits 5.2.1-1 through 5.2.1-16,** with odd numbers referring to criteria pollutants and even numbers referring to TAPs. These Exhibits are provided as **Appendix B**. These spreadsheets are provided with the modeling files as working Excel spreadsheets to allow DEQ to validate the calculation methodology. DEQ source documentations sheets (**Forms EU0, Forms BCE** , and **Forms EU5)** that summarize the emissions data from the Appendix B sheets are provided in **Section 1** of this application.

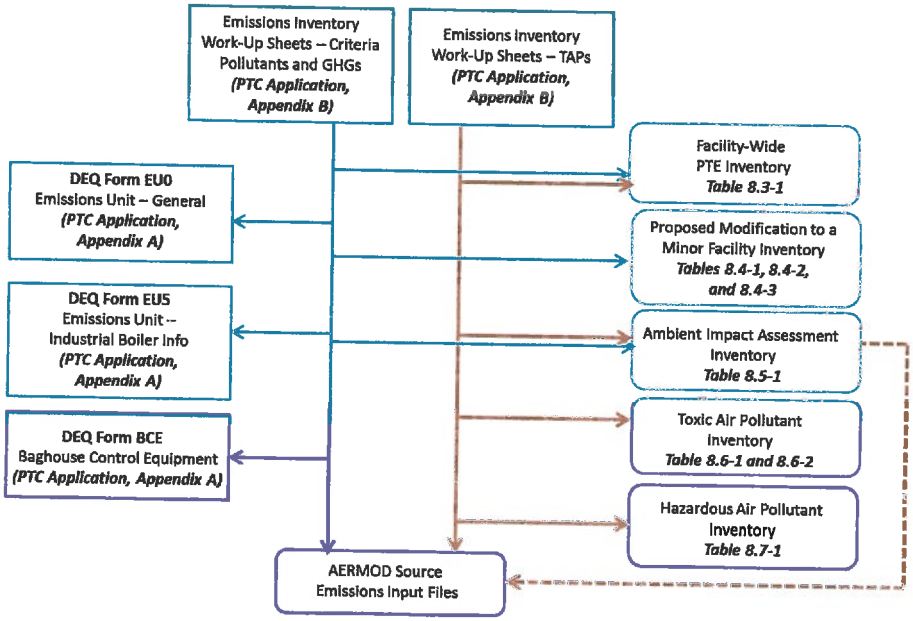


Figure 5.2.1-1
Emissions Inventory Information Flow

5.2.2 Emissions Inventory Considerations and Perspective

Emissions based on AP-42 Factors The Applicant has evaluated the project in the context of guidance in DEQ's *Emissions Data Hierarchy* (DEQ, undated). No CEM nor source test data are available for the Commercial Creamery Company facility. The Applicant continues to negotiate for the acquisition and use of quality-controlled performance test data that may exist for other, similar facilities and equipment. Although no manufacturer's guarantees exist, the manufacturer's grain-loading performance numbers are compatible with AP-42 emissions data for particulates; therefore, AP-42 emissions data are used in this PTC application.

Source Schedule, No Buffer Commercial Creamery Company operates normally on a 3-shift-per-day, 5-day-per-week basis. From time to time, weekend work is performed on some production lines. In lieu of using a *Compliance Buffer Component* factor of 1.2 as offered in DEQ's *Air Quality Permit Application Emission Inventory Requirements* (DEQ, 2010a), the emissions shown in the source inventory work-up sheets are based on a 3-shift-per-day, 7-day-per-week schedule. Two small sources (gas-fired clothes dryers) operate on an intermittent schedule. Emissions from multiple small sources (seasonally-operated gas-fired HVAC units (summer use) and gas-fired Unit Heaters (winter use) are included in the Inventory Work-Up Sheets (Appendix B) in full detail, and are included in the facility-wide PTE inventory.

5.2.3 Facility Wide PTE Inventory – Classified as Minor Facility

Table 5.2.3-1 presents the *existing* facility-wide Potential to Emit for NSR Regulated Pollutants for the Commercial Creamery facility. Formatting is identical to the template provided as. *Facility Wide Hazardous Air Pollutant Potential to Emit Application Template* (DEQ, 2010f)

This table provides a basis for the existing facility classification with respect to the Major Facility threshold of 100 tpy for any Criteria Pollutant. It is shown that no Criteria Pollutant has facility-wide emissions in excess of 100 tpy, (much less 250 tpy) therefore the Commercial Creamery facility is a Minor Facility.

Emissions are calculated for each facility source, for each Criteria Pollutant separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the Table 5.2.3-1 summary that is included here.

5.2.4 Proposed Modification to a Minor Facility Inventory

Tables 5.2.4-1, 5.2.4-2, and 5.2.4-3, which follow, present, respectively, the facility-wide

- Pre-Project Potential to Emit for NSR Regulated Pollutants
- Post-Project Potential to Emit for NSR Regulated Pollutants, and
- Changes in Potential to Emit for NSR Regulated Pollutants

for the Commercial Creamery facility. Formatting is identical to the template provided as. *Proposed Minor Modification to an Existing Minor Facility – Change in Potential to Emit* (DEQ, 2010c)

The primary purpose of these tables is to identify those pollutants that meet the *Method 1 criteria* for *de minimis* total facility-wide emissions that, under the graded modeling approach presented in DEQ, 2011a, are below the modeling thresholds listed in Table 2 of the *State of Idaho Air Quality Modeling Guideline ID-AQ-011* (DEQ 2011b). It is shown that SO2, CO, and Lead meet their corresponding *de minimis* criteria, and do not require modeling on the basis of this table. The remaining pollutants, PM-10, PM-2.5, NO2, and four TAPs (Arsenic, Cadmium, Formaldehyde, and Nickel, require modeling under terms of Method 3 of DEQ, 2011a.

All sources emitting any regulated pollutant to the atmosphere are represented, with emissions in units of lbs/hr for each source for each Criteria Pollutant and NAAQS. All point sources are addressed; however, the Applicant has not identified any fugitive sources at the facility. NOx (not NO2) emissions are provided, per template, and do not reflect the 0.8 ratio of NO2 /NOx that is used in the modeling.

Sources that have a non-continuous operating schedule are highlighted in green, which indicates an adjustment to their hourly emissions rate in those cases where a longer-term standard is being modeled. For example, a source operating only one 8-hr shift every day of the year with unit emissions per hour would be modeled with an emissions rate 1/3 of that unit rate on a per-hour basis when modeling a 24-hr standard, or an annual standard. Sources D4, P1 and P2 have particulate emissions only (no combustion), and do not have SO2, NOx, CO or Pb emissions. Emissions are calculated for each facility source, for each Criteria Pollutant separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Tables 5.2.4-1, 5.2.4-2, and 5.2.4-3,** summaries that are included here.

Emission Increase

Emissions Unit	Stack ID	PM-10 lb/hr 24-hr Avg.	PM-2.5 lb/hr 24-hr Avg.	PM-2.5 lb/hr Annual Avg.	SO2 lb/hr Max	SO2 lb/hr 3-hr Avg.	NOx lb/hr 1-hr Avg.	NOx lb/hr Annual Avg.	CO lb/hr Max	CO lb/hr 8-hr Avg.	Pb lb/hr Month Avg.	Pb lb/hr Qtrly Avg.
					Point Sources							
Boiler 150 hp York Shipley	B1	4.488E-02	4.488E-02	4.762E-02	3.543E-03	3.543E-03	4.724E-01	4.724E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Boiler Pending New 125 hp YS	B2	4.488E-02	4.488E-02	4.762E-02	3.543E-03	3.543E-03	4.724E-01	4.724E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Dryer Pending New Rogers	D1	3.754E+00	1.530E+00	1.530E+00	6.984E-03	6.970E-03	9.286E-01	7.778E-01	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing 1960 Rogers	D2	3.754E+00	1.530E+00	1.530E+00	6.984E-03	6.970E-03	9.286E-01	7.778E-01	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing Blaw Knox Spray	D3	5.960E-02	2.429E-02	2.429E-02	4.647E-03	4.647E-03	6.190E-01	5.159E-01	6.505E-01	6.505E-01	3.872E-06	3.872E-06
Dryer, Drum	D4	1.000E-01	1.000E-01	1.095E-02								
Tote-Dump Dust Collector 2	P1	6.000E-02	2.468E-02	2.468E-02								
Tote-Dump Dust Collector 1	P2	6.000E-02	2.468E-02	2.468E-02								
Clothes Dryer 1	NR3a	2.841E-04	2.841E-04	2.841E-04	6.738E-05	6.738E-05	3.516E-03	2.817E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Clothes Dryer 2	NR3b	2.841E-04	2.841E-04	2.841E-04	6.738E-05	6.738E-05	3.516E-03	2.817E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Water Heater 1	NR5a	5.518E-04	5.518E-04	5.518E-04	4.356E-05	4.356E-05	5.460E-03	5.460E-03	2.904E-03	2.904E-03	3.630E-08	3.630E-08
Water Heater 3	NR5b	1.471E-03	1.471E-03	1.471E-03	1.161E-04	1.161E-04	1.456E-02	1.456E-02	7.741E-03	7.741E-03	9.676E-08	9.676E-08
Proc'B - Carrier HVAC	NR4A	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
Blend'C - Carrier HVAC	NR4B	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
QA - Carrier HVAC	NR4C	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
QC - Carrier HVAC	NR4D	5.444E-04	5.444E-04	2.722E-04	4.298E-05	4.298E-05	6.734E-03	3.367E-03	2.865E-03	2.865E-03	3.582E-08	3.582E-08
E Side - Carrier HVAC Office	NR4E	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Carrier HVAC Bartelt	NR4F	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
Littleford - Carrier HVAC-1	NR4G	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Modine Unit Heater Down	NR7A	1.655E-03	1.655E-03	8.277E-04	1.307E-04	1.307E-04	2.047E-02	1.024E-02	8.712E-03	8.712E-03	1.089E-07	1.089E-07
E Side - Modine Unit Heater Up	NR7B	1.471E-03	1.471E-03	7.357E-04	1.162E-04	1.162E-04	1.820E-02	9.100E-03	7.744E-03	7.744E-03	9.681E-08	9.681E-08
Ph I ADP Unit Heater 1	NR7C	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph I ADP Unit Heater 2	NR7D	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph II ADP Unit Heater 1	NR7E	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph II ADP Unit Heater 2	NR7F	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph III ADP Unit Heater N-1	NR7G	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater N-2	NR7H	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater S-1	NR7I	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Ph III ADP Unit Heater S-2	NR7J	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Break Room - Carrier HVAC	NR4H	1.839E-03	1.839E-03	9.197E-04	1.452E-04	1.452E-04	2.275E-02	1.137E-02	9.681E-03	9.681E-03	1.210E-07	1.210E-07
Blend Room - Carrier HVAC-1	NR4I	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-2	NR4J	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-3	NR4K	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-4	NR4L	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Shop - Carrier HVAC	NR4M	3.311E-04	3.311E-04	1.655E-04	2.614E-05	2.614E-05	4.095E-03	2.047E-03	1.742E-03	1.742E-03	2.178E-08	2.178E-08
E Shop- Modine Unit Heater 1	NR7K	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
E Shop- Modine Unit Heater 2	NR7L	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
	lb/hr	7.918	3.363	3.261	0.029	0.029	3.916	3.276	3.813	3.813	0.000024	0.000024
	tpy	34.682	14.731	14.282	0.127	0.127		14.347	16.700	16.700	0.000106	0.000106
		PM-10	PM-2.5	PM-2.5	SO2	SO2	NOx	NOx	CO	CO	Pb	Pb

Fugitive Sources

No apparent fugitive sources are known at this facility

2013 PTC Application for New Boiler, New Dryer, Refurbished Dryer

Pre-Project Potential to Emit for NSR Regulated Pollutants

Commercial Creamery Company, Jerome, ID

Emissions Unit	Description	PM tpy	PM-10 tpy	PM-2.5 tpy	SO2 tpy	NO2 tpy	CO tpy	Pb tpy	O3 tpy	NSPS tpy	40 CFR 82 tpy	CH4 mass tpy	CO2 Mass tpy	N2O mass tpy	CH4 as CO2e tpy	CO2e tpy	N2O as CO2e tpy
	Point Sources																
B1	Boiler 150 hp York Shipley	1.966E-01	1.966E-01	1.966E-01	1.552E-02	2.069E+00	2.173E+00	1.293E-05	none	none	n/a	5.949E-02	3.104E+03	5.690E-02	1.249E+00	3.104E+03	1.997E+01
B2	Boiler Pending New 125hp YS																
D1	Dryer Pending New Rogers																
D2	Dryer Pending 2014 Refubished 1960 Rogers	1.095E+01	2.628E-01	1.081E-01	3.053E-02	3.392E+00	2.849E+00	1.696E-05	none	none	n/a	7.802E-02	4.070E+03	7.500E-02	1.638E+00	4.070E+03	2.633E+01
D2a	Dryer Pending 2014 Refubished 1960 Rogers																
D3	Dryer Existing Blaw Knox Spray	1.095E+01	2.611E-01	1.064E-01	1.400E-02	2.261E+00	1.900E+00	1.696E-05	none	none	n/a	5.200E-02	2.713E+03	5.000E-02	1.092E+00	2.713E+03	1.755E+01
D4	Dryer, Drum	1.000E-01	4.800E-02	4.800E-02													
P1	Tote-Dump Dust Collector 2	5.820E-01	3.430E-01	1.005E-01													
P2	Tote-Dump Dust Collector 1	5.820E-01	3.434E-01	1.005E-01													
NR3a	Clothes Dryer 1	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR3b	Clothes Dryer 2	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR5a	Water Heater 1	2.000E-03	2.000E-03	2.000E-03	1.908E-04	2.391E-02	1.272E-02	1.590E-07	none	none	n/a	7.314E-04	3.816E+01	6.996E-04	1.536E-02	3.816E+01	2.456E-01
NR5b	Water Heater 3	6.000E-03	6.440E-03	6.440E-03	5.086E-04	6.374E-02	3.390E-02	4.238E-07	none	none	n/a	1.949E-03	1.017E+02	1.865E-03	4.094E-02	1.017E+02	6.545E-01
NR4A	Proc'B - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	69.961	0.001	0.028	69.961	0.450
NR4B	Blend'C - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	31.946	0.001	0.013	31.946	0.206
NR4C	QA - Carrier HVAC	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4D	OC - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	1.833E-04	2.360E-02	1.255E-02	1.569E-07	none	none	n/a	0.000	18.826	0.000	0.008	18.826	0.121
NR4E	E Side - Carrier HVAC Office	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4F	E Side - Carrier HVAC Bartelt	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4G	Littleford - Carrier HVAC-1	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR7A	E Side - Modine Unit Heater Down	4.000E-03	4.000E-03	4.000E-03	5.724E-04	7.174E-02	3.816E-02	4.770E-07	none	none	n/a	0.001	57.241	0.001	0.023	57.241	0.368
NR7B	E Side - Modine Unit Heater Up	3.000E-03	3.000E-03	3.000E-03	5.083E-04	6.377E-02	3.392E-02	4.240E-07	none	none	n/a	0.001	50.831	0.001	0.020	50.831	0.327
NR7C	Ph I ADP Unit Heater 1	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7D	Ph I ADP Unit Heater 2	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7E	Ph II ADP Unit Heater 1	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7F	Ph II ADP Unit Heater 2	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7G	Ph III ADP Unit Heater N-1	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7H	Ph III ADP Unit Heater N-2	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7I	Ph III ADP Unit Heater S-1	3.000E-03	3.000E-03	3.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR7J	Ph III ADP Unit Heater S-2	6.000E-03	6.000E-03	6.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR4H	Break Room - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.360E-04	7.971E-02	4.240E-02	5.300E-07	none	none	n/a	0.001	63.601	0.001	0.026	63.601	0.409
NR4I	Blend Room - Carrier HVAC-1	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4J	Blend Room - Carrier HVAC-2	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4K	Blend Room - Carrier HVAC-3	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4L	Blend Room - Carrier HVAC-4	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4M	Shop - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	1.145E-04	1.435E-02	7.632E-03	9.540E-08	none	none	n/a	0.000	11.448	0.000	0.005	11.448	0.074
NR7K	E Shop- Modine Unit Heater 1	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
NR7L	E Shop- Modine Unit Heater 2	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
	TOTAL	**23.5**	**1.5**	**0.8**	**0.1**	**9.5**	**7.9**	**0.000059**	**0.0**	**0.0**	**0.0**	**0.2**	**11335.8**	**0.2**	**4.6**	**11335.8**	**73.2**
											Total GHG mass (tpy)=		11336		Total GHG CO2e (tpy)=		11414

Fugitive Sources

No apparent fugitive sources are known at this facility

Table 5.2.4-1
Pre-Project Potential to Emit for NSR Regulated Pollutants

2013 PTC Application for New Boiler, New Dryer, Refurbished Dryer

Post-Project Potential to Emit for NSR Regulated Pollutants

Commercial Creamery Company, Jerome, ID

Emissions Unit	Description	PM tpy	PM-10 tpy	PM-2.5 tpy	SO2 tpy	NOx tpy	CO tpy	Pb tpy	O3 tpy	NSPS tpy	40 CFR 82 tpy	CH4 mass tpy	CO2 Mass tpy	N2O mass tpy	CH4 as CO2e tpy	CO2e tpy	N2O as CO2e tpy
	Point Sources																
B1	Boiler 150 hp York Shipley	1.966E-01	1.966E-01	1.966E-01	1.552E-02	2.069E+00	2.173E+00	1.293E-05	none	none	n/a	5.949E-02	3.104E+03	5.690E-02	1.249E+00	3.104E+03	1.997E+01
B2	Boiler Pending New 125 hp YS	1.966E-01	1.966E-01	1.966E-01	1.552E-02	2.069E+00	2.173E+00	1.293E-05	none	none	n/a	5.949E-02	3.104E+03	5.690E-02	1.249E+00	3.104E+03	1.997E+01
D1	Dryer Pending New Rogers	1.095E+01	2.628E-01	1.081E-01	3.059E-02	3.392E+00	2.849E+00	1.696E-05	none	none	n/a	7.802E-02	4.070E+03	7.500E-02	1.638E+00	4.070E+03	2.633E+01
D2	Dryer Existing 1960 Rogers																
D2a	Dryer Pending 2014 Refubished 1960 Rogers	1.095E+01	2.628E-01	1.081E-01	3.053E-02	3.392E+00	2.849E+00	1.696E-05	none	none	n/a	7.802E-02	4.070E+03	7.500E-02	1.638E+00	4.070E+03	2.633E+01
D3	Dryer Existing Blaw Knox Spray	1.095E+01	2.611E-01	1.064E-01	1.400E-02	2.261E+00	1.900E+00	1.696E-05	none	none	n/a	5.200E-02	2.713E+03	5.000E-02	1.092E+00	2.713E+03	1.755E+01
D4	Dryer, Drum	1.000E-01	4.800E-02	4.800E-02													
P1	Tote-Dump Dust Collector 2	5.820E-01	3.430E-01	1.005E-01													
P2	Tote-Dump Dust Collector 1	5.820E-01	3.434E-01	1.005E-01													
NR3a	Clothes Dryer 1	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR3b	Clothes Dryer 2	1.246E-03	1.246E-03	1.246E-03	2.951E-04	3.699E-02	1.967E-02	2.459E-07	none	none	n/a	3.771E-04	1.967E+01	3.607E-04	7.919E-03	1.967E+01	1.266E-01
NR5a	Water Heater 1	2.000E-03	2.000E-03	2.000E-03	1.908E-04	2.391E-02	1.272E-02	1.590E-07	none	none	n/a	7.314E-04	3.816E+01	6.996E-04	1.536E-02	3.816E+01	2.456E-01
NR5b	Water Heater 3	6.000E-03	6.440E-03	6.440E-03	5.088E-04	6.374E-02	3.390E-02	4.238E-07	none	none	n/a	1.949E-03	1.017E+02	1.865E-03	4.094E-02	1.017E+02	6.545E-01
NR4A	Proc'B - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	69.961	0.001	0.028	69.961	0.450
NR4B	Blend'C - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.996E-04	8.768E-02	4.664E-02	5.830E-07	none	none	n/a	0.001	31.946	0.001	0.013	31.946	0.206
NR4C	QA - Carrier HVAC	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4D	QC - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	1.633E-04	2.360E-02	1.255E-02	1.569E-07	none	none	n/a	0.000	18.826	0.000	0.008	18.826	0.121
NR4E	E Side - Carrier HVAC Office	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4F	E Side - Carrier HVAC Bartelt	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR4G	Littleford - Carrier HVAC-1	2.000E-03	2.000E-03	2.000E-03	3.180E-04	3.986E-02	2.120E-02	2.650E-07	none	none	n/a	0.001	31.801	0.001	0.013	31.801	0.205
NR7A	E Side - Modine Unit Heater Down	4.000E-03	4.000E-03	4.000E-03	5.724E-04	7.174E-02	3.816E-02	4.770E-07	none	none	n/a	0.001	57.241	0.001	0.023	57.241	0.368
NR7B	E Side - Modine Unit Heater Up	3.000E-03	3.000E-03	3.000E-03	5.088E-04	6.377E-02	3.392E-02	4.240E-07	none	none	n/a	0.001	50.681	0.001	0.020	50.881	0.327
NR7C	Ph I ADP Unit Heater 1	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7D	Ph I ADP Unit Heater 2	4.000E-03	4.000E-03	4.000E-03	5.851E-04	7.334E-02	3.901E-02	4.876E-07	none	none	n/a	0.001	58.513	0.001	0.024	58.513	0.377
NR7E	Ph II ADP Unit Heater 1	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7F	Ph II ADP Unit Heater 2	6.000E-03	6.000E-03	6.000E-03	8.777E-04	1.100E-01	5.851E-02	7.314E-07	none	none	n/a	0.002	87.770	0.002	0.035	87.770	0.565
NR7G	Ph III ADP Unit Heater N-1	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7H	Ph III ADP Unit Heater N-2	3.000E-03	3.000E-03	3.000E-03	4.961E-04	6.218E-02	3.307E-02	4.134E-07	none	none	n/a	0.001	49.609	0.001	0.020	49.609	0.319
NR7I	Ph III ADP Unit Heater S-1	3.000E-03	3.000E-03	3.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR7J	Ph III ADP Unit Heater S-2	6.000E-03	6.000E-03	6.000E-03	9.922E-04	1.244E-01	6.615E-02	8.268E-07	none	none	n/a	0.002	99.218	0.002	0.040	99.218	0.638
NR4H	Break Room - Carrier HVAC	4.000E-03	4.000E-03	4.000E-03	6.360E-04	7.971E-02	4.240E-02	5.300E-07	none	none	n/a	0.001	63.601	0.001	0.026	63.601	0.409
NR4I	Blend Room - Carrier HVAC-1	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4J	Blend Room - Carrier HVAC-2	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4K	Blend Room - Carrier HVAC-3	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4L	Blend Room - Carrier HVAC-4	3.000E-03	3.000E-03	3.000E-03	4.579E-04	5.739E-02	3.053E-02	3.816E-07	none	none	n/a	0.001	45.793	0.001	0.018	45.793	0.295
NR4M	Shop - Carrier HVAC	1.000E-03	1.000E-03	1.000E-03	1.145E-04	1.435E-02	7.632E-03	9.540E-08	none	none	n/a	0.000	11.448	0.000	0.005	11.448	0.074
NR7K	E Shop- Modine Unit Heater 1	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
NR7L	E Shop- Modine Unit Heater 2	2.000E-03	2.000E-03	2.000E-03	2.544E-04	3.189E-02	1.696E-02	2.120E-07	none	none	n/a	0.000	25.440	0.000	0.010	25.440	0.164
	TOTAL	34.6	2.0	1.1	0.1	15.0	12.9	0.0	0.0			0.4	18510.0	0.3	7.5	18510.0	119.5
											Total GHG mass (tpy)=		18511		Total GHG CO2e (tpy)=		18687

Fugitive Sources

No apparent fugitive sources are known at this facility

Table 5.2.4-2

Post-Project Potential to Emit for NSR Regulated Pollutants

2013 PTC Application for New Boiler, New Dryer, Refurbished Dryer

Changes in Potential to Emit for NSR Regulated Pollutants

Commercial Creamery Company, Jerome, ID

Emissions Unit	Description	PM	PM-10	PM-2.5	SO2	NOx	CO	Pb	O3	NSPS	40 CFR 82	CH4 mass	CO2 Mass	N2O mass	CH4 as CO2e	CO2e	N2O as CO2e
		tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy
	Point Sources																
B1	Boiler 150 hp York Shipley	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
B2	Boiler Pending New 125 hp YS	0.197	0.197	0.197	0.016	2.069	2.173	1.293E-05	none	none	n/a	0.059	3103.737	0.057	1.249	3103.737	19.973
D1	Dryer Pending New Rogers	11	0.263	0.108	0.031	3.392	2.849	1.696E-05	none	none	n/a	0.078	4070.474	0.075	1.638	4070.474	26.325
D2	Dryer Existing 1960 Rogers	-16	-0.263	-0.108	-0.031	-3.392	-2.849	-1.696E-05	none	none	n/a	0.000	-4070.474	-0.075	-1.638	-4070.474	-26.325
D2a	Dryer Pending 2014 Refubished 1960 Rogers	16	0.263	0.108	0.031	3.392	2.849	1.696E-05	none	none	n/a	0.078	4070.474	0.075	1.638	4070.474	26.325
D3	Dryer Existing Blaw Knox Spray	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
D4	Dryer, Drum	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
P1	Tote-Dump Dust Collector 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
P2	Tote-Dump Dust Collector 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR3a	Clothes Dryer 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR3b	Clothes Dryer 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR5a	Water Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR5b	Water Heater 3	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4A	Proc'B - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4B	Blend'C - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4C	QA - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4D	QC - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4E	E Side - Carrier HVAC Office	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4F	E Side - Carrier HVAC Bartelt	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4G	Littleford - Carrier HVAC-1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7A	E Side - Modine Unit Heater Down	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7B	E Side - Modine Unit Heater Up	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7C	Ph I ADP Unit Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7D	Ph I ADP Unit Heater 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7E	Ph II ADP Unit Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7F	Ph II ADP Unit Heater 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7G	Ph III ADP Unit Heater N-1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7H	Ph III ADP Unit Heater N-2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7I	Ph III ADP Unit Heater S-1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7J	Ph III ADP Unit Heater S-2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4H	Break Room - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4I	Blend Room - Carrier HVAC-1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4J	Blend Room - Carrier HVAC-2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4K	Blend Room - Carrier HVAC-3	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4L	Blend Room - Carrier HVAC-4	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR4M	Shop - Carrier HVAC	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7K	E Shop- Modine Unit Heater 1	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
NR7L	E Shop- Modine Unit Heater 2	0	0	0	0	0	0	0	none	none	n/a	0	0	0	0	0	0
	TOTAL	11.1	0.5	0.3	0.0	5.5	5.0	0.0				0.2	7174.2	0.1	2.9	7174.2	46.3
											Total GHG mass change (tpy)=		7175		Total GHG CO2e change (tpy)=		7223

Fugitive Sources

No apparent fugitive sources are known at this facility

Table 5.2.4-3
Changes in Potential to Emit for NSR Regulated Pollutants

5.2.5 Ambient Impact Assessment Inventory

Table 5.2.5-1, which follows, presents the Ambient Impact Assessment Emissions Inventory for the Commercial Creamery facility. Formatting is identical to the template provided as. *Ambient Impact Assessment Emission Inventory for New Minor Facilities and Minor Modifications* (DEQ, 2011a)

The primary purpose of this table is to identify those pollutants that meet the *Method 1 criteria* for *de minimis* total facility-wide emissions that, under the graded modeling approach presented in DEQ, 2011a, are below the modeling thresholds listed in Table 2 of the *State of Idaho Air Quality Modeling Guideline ID-AQ-011* (DEQ 2011b). **It is shown that SO2, CO, and Lead meet their corresponding *de minimis* criteria, and do not require modeling on the basis of this table.** The remaining pollutants, PM-10, PM-2.5, NO2, and four TAPs (Arsenic, Cadmium, Formaldehyde, and Nickel, require modeling under terms of Method 3 of DEQ, 2011a.

All sources emitting any regulated pollutant to the atmosphere are represented, with emissions in units of lbs/hr for each source for each Criteria Pollutant and NAAQS. All point sources are addressed; however, the Applicant has not identified any fugitive sources at the facility. NOx (not NO2) emissions are provided, per template, and do not reflect the 0.8 ratio of NO2 /NOx that is used in the modeling.

Sources that have a non-continuous operating schedule are highlighted in green, which indicates an adjustment to their hourly emissions rate in those cases where a longer-term standard is being modeled. For example, a source operating only one 8-hr shift every day of the year with unit emissions per hour would be modeled with an emissions rate 1/3 of that unit rate on a per-hour basis when modeling a 24-hr standard, or an annual standard. Sources D4, P1 and P2 have particulate emissions only (no combustion), and do not have SO2, NOx, CO or Pb emissions. Emissions are calculated for each facility source, for each Criteria Pollutant separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Table 5.2.5-1** summary that is included here.

Table 5.2.5-1
Ambient Impact Assessment Emissions Inventory

Emission Increase

Emissions Unit	Stack ID	PM-10 lb/hr 24-hr Avg.	PM-2.5 lb/hr 24-hr Avg.	PM-2.5 lb/hr Annual Avg.	SO2 lb/hr Max	SO2 lb/hr 3-hr Avg.	NOx lb/hr 1-hr Avg.	NOx lb/hr Annual Avg.	CO lb/hr Max	CO lb/hr 8-hr Avg.	Pb lb/hr Month Avg.	Pb lb/hr Qtrly Avg.
					Point Sources							
Boiler 150 hp York Shipley	B1	4.488E-02	4.488E-02	4.488E-02	3.543E-03	3.543E-03	5.905E-01	5.905E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Boiler Pending New 125 hp YS	B2	4.488E-02	4.488E-02	4.488E-02	3.543E-03	3.543E-03	5.905E-01	5.905E-01	4.960E-01	4.960E-01	2.953E-06	2.953E-06
Dryer Pending New Rogers	D1	3.838E+00	1.211E+00	1.211E+00	6.970E-03	6.970E-03	1.162E+00	1.162E+00	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing 1960 Rogers	D2	3.838E+00	1.211E+00	1.211E+00	6.970E-03	6.970E-03	1.162E+00	1.162E+00	9.758E-01	9.758E-01	5.808E-06	5.808E-06
Dryer Existing Blaw Knox Spray	D3	1.934E+00	6.196E-01	6.196E-01	4.647E-03	4.647E-03	7.744E-01	7.744E-01	6.505E-01	6.505E-01	3.872E-06	3.872E-06
Dryer, Drum	D4	1.434E+00	5.737E-01	3.151E-02								
Tote-Dump Dust Collector 2	P1	2.000E-01	8.000E-02	8.000E-02								
Tote-Dump Dust Collector 1	P2	2.000E-01	8.000E-02	8.000E-02								
Clothes Dryer 1	NR3a	2.845E-04	2.845E-04	2.845E-04	6.738E-05	6.738E-05	1.056E-02	3.518E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Clothes Dryer 2	NR3b	2.845E-04	2.845E-04	2.845E-04	6.738E-05	6.738E-05	1.056E-02	3.518E-03	4.492E-03	4.492E-03	5.615E-08	5.615E-08
Water Heater 1	NR5a	5.518E-04	5.518E-04	5.518E-04	4.356E-05	4.356E-05	6.825E-03	6.825E-03	2.904E-03	2.904E-03	3.630E-08	3.630E-08
Water Heater 3	NR5b	1.471E-03	1.471E-03	1.471E-03	1.161E-04	1.161E-04	1.819E-02	1.819E-02	7.741E-03	7.741E-03	9.676E-08	9.676E-08
Proc'B - Carrier HVAC	NR4A	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
Blend'C - Carrier HVAC	NR4B	2.023E-03	2.023E-03	1.012E-03	1.597E-04	1.597E-04	2.502E-02	1.251E-02	1.065E-02	1.065E-02	1.331E-07	1.331E-07
QA - Carrier HVAC	NR4C	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
QC - Carrier HVAC	NR4D	5.444E-04	5.444E-04	2.722E-04	4.298E-05	4.298E-05	6.734E-03	3.367E-03	2.865E-03	2.865E-03	3.582E-08	3.582E-08
E Side - Carrier HVAC Office	NR4E	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Carrier HVAC Bartelt	NR4F	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
Littleford - Carrier HVAC-1	NR4G	9.197E-04	9.197E-04	4.598E-04	7.260E-05	7.260E-05	1.137E-02	5.687E-03	4.840E-03	4.840E-03	6.050E-08	6.050E-08
E Side - Modine Unit Heater Down	NR7A	1.655E-03	1.655E-03	8.277E-04	1.307E-04	1.307E-04	2.047E-02	1.024E-02	8.712E-03	8.712E-03	1.089E-07	1.089E-07
E Side - Modine Unit Heater Up	NR7B	1.471E-03	1.471E-03	7.357E-04	1.162E-04	1.162E-04	1.820E-02	9.100E-03	7.744E-03	7.744E-03	9.681E-08	9.681E-08
Ph I ADP Unit Heater 1	NR7C	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph I ADP Unit Heater 2	NR7D	1.692E-03	1.692E-03	8.461E-04	1.336E-04	1.336E-04	2.093E-02	1.046E-02	8.906E-03	8.906E-03	1.113E-07	1.113E-07
Ph II ADP Unit Heater 1	NR7E	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph II ADP Unit Heater 2	NR7F	2.538E-03	2.538E-03	1.269E-03	2.004E-04	2.004E-04	3.139E-02	1.570E-02	1.336E-02	1.336E-02	1.670E-07	1.670E-07
Ph III ADP Unit Heater N-1	NR7G	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater N-2	NR7H	1.435E-03	1.435E-03	7.173E-04	1.133E-04	1.133E-04	1.774E-02	8.872E-03	7.551E-03	7.551E-03	9.439E-08	9.439E-08
Ph III ADP Unit Heater S-1	NR7I	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Ph III ADP Unit Heater S-2	NR7J	2.869E-03	2.869E-03	1.435E-03	2.265E-04	2.265E-04	3.549E-02	1.774E-02	1.510E-02	1.510E-02	1.888E-07	1.888E-07
Break Room - Carrier HVAC	NR4H	1.839E-03	1.839E-03	9.197E-04	1.452E-04	1.452E-04	2.275E-02	1.137E-02	9.681E-03	9.681E-03	1.210E-07	1.210E-07
Blend Room - Carrier HVAC-1	NR4I	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-2	NR4J	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-3	NR4K	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Blend Room - Carrier HVAC-4	NR4L	1.324E-03	1.324E-03	6.621E-04	1.045E-04	1.045E-04	1.638E-02	8.190E-03	6.970E-03	6.970E-03	8.712E-08	8.712E-08
Shop - Carrier HVAC	NR4M	3.311E-04	3.311E-04	1.655E-04	2.614E-05	2.614E-05	4.095E-03	2.047E-03	1.742E-03	1.742E-03	2.178E-08	2.178E-08
E Shop- Modine Unit Heater 1	NR7K	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
E Shop- Modine Unit Heater 2	NR7L	7.357E-04	7.357E-04	3.679E-04	5.808E-05	5.808E-05	9.100E-03	4.550E-03	3.872E-03	3.872E-03	4.840E-08	4.840E-08
	lb/hr	11.575	3.905	3.344	0.029	0.029	4.793		3.813	3.813	0.000024	0.000024
	tpy	50.698	17.103	14.645	0.127	0.127		19.906	16.700	16.700	0.000106	0.000106
		PM-10	PM-2.5	PM-2.5	SO2	SO2	NOx	NOx	CO	CO	Pb	Pb
Table 2 Model Thrsld lb/hr		0.220	0.054		0.210	0.210	0.200		15.000	15.000	14.000	14.000
Table 2 Model Thrsld tpy		15.000		0.350	1.200			1.200				

Fugitive Sources

No apparent fugitive sources are known at this facility

5.2.6 Toxic Air Pollutant Inventory

Natural gas contains certain Toxics Air Pollutants (TAPs) that are naturally-occurring components of the gas, and are carried through the combustion process as air emissions. No TAPs occur in the ingredients or processed food at this facility.

This table provides a basis for the existing facility classification with respect to the Major Facility threshold of 25 tpy for the facility-wide sum of all TAPs. It is shown that facility-wide TAP emissions are 0.96 (for non-carcinogenic) + 0.02 (for carcinogenic) = 0.98 tpy. Which is less than 25 tpy, therefore the Commercial Creamery facility is a Minor Facility for TAPs.

Non-Carcinogenic TAPs that are evaluated in this emissions inventory are identified in the current IDAPA 58.01.01.585 list. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each Non-Carcinogenic TAP separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Table 8.6-1** summary that is included here.

Pre- and Post-Project Non-Carcinogenic TAP Emissions Summary
Potential to Emit

Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Post-Project 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emissions Level (lb/hr)	Exceeds Screening Level ? (Y / N)
	No permit-established allowable emissions rates specified				
Barium	0	2.12E-04	2.12E-04	3.30E-02	no
Chromium	0	6.76E-05	6.76E-05	3.30E-02	no
Cobalt	0	4.05E-06	4.05E-06	3.30E-03	no
Copper	0	4.10E-05	4.10E-05	3.33E-01	no
Dibutylphthalate	0	0.00E+00	0.00E+00	6.70E-02	no
Dichlorobenzene	0	5.79E-05	5.79E-05	2.00E+01	no
Ethylbenzene	0	0.00E+00	0.00E+00	2.90E+01	no
Fluorene	0	1.35E-07	1.35E-07	1.33E-01	no
Hexane	0	8.69E-02	8.69E-02	1.20E+01	no
Manganese	0	1.83E-05	1.83E-05	3.33E-01	no
Mercury	0	1.25E-05	1.25E-05	3.00E-03	no
Molybdenum	0	5.31E-05	5.31E-05	3.33E-01	no
Napthalene	0	2.94E-05	2.94E-05	3.33E+00	no
Pentane	0	1.25E-01	1.25E-01	1.18E+02	no
Phenol	0	0.00E+00	0.00E+00	1.27E+00	no
Selenium	0	8.79E-07	8.79E-07	1.30E-02	no
Toluene	0	1.64E-04	1.64E-04	2.50E+01	no
Vanadium	0	1.11E-04	1.11E-04	3.00E-03	no
o-Xylene	0	0.00E+00	0.00E+00	2.90E+01	no
Zinc	0	1.40E-03	1.40E-03	6.67E-01	no
	TOTAL Non-Carcinogenic TAPs, tpy	**0.94**			

Table 5.2.6-1
Pre- and Post-Project Non-Carcinogenic TAP Emissions Summary

The highest ratio of TAP emissions to EL is vanadium at 3.67%. On the basis of this comparison, no uncontrolled Non-Carcinogenic TAP emissions require modeling.

Carcinogenic TAPs that are evaluated in this emissions inventory are identified in the current IDAPA 58.01.01.586 list. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each Carcinogenic TAP separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Table 8.6-2** summary that is included here.

Pre- and Post-Project Carcinogenic TAP Emissions Summary
Potential to Emit

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr) *No permit-established allowable emissions rates specified*	Post-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emissions Level (lb/hr)	Exceeds Screening Level ? (Y / N)
Arsenic	0	9.65E-06	9.65E-06	1.50E-06	yes
Benzene	0	1.01E-04	1.01E-04	8.00E-04	no
Beryllium	0	4.40E-07	4.40E-07	2.80E-05	no
Benzo(a)pyrene	0	4.40E-08	4.40E-08	2.00E-06	no
Bis (2-ethylhexyl)phthalate	0	0.00E+00	0.00E+00	2.80E-02	no
Cadmium	0	5.31E-05	5.31E-05	3.70E-06	yes
Formaldehyde	0	3.62E-03	3.62E-03	5.10E-04	yes
Nickel	0	1.01E-04	1.01E-04	2.70E-05	yes
TOTAL Carcinogenic TAPs, tpy		**0.02**			

Table 5.2.6-2
Pre- and Post-Project Carcinogenic TAP Emissions Summary

Table 5.2.6-2 shows that four Carcinogenic Toxic Air Pollutants were emitted in amounts large enough (i.e., > EL) that they require modeling. These were: arsenic, cadmium, formaldehyde and nickel. Arsenic, cadmium and formaldehyde each had one or more sources with emissions that individually exceeded the EL. Nickel emissions did not exceed the EL for any individual source; however the sum of all facility nickel emissions did exceed the EL.

5.2.7 Hazardous Air Pollutant Inventory

Natural gas contains certain Hazardous Air Pollutants (HAPs) that are naturally-occurring components of the gas, and are carried through the combustion process as air emissions. No HAPs occur in the ingredients or processed food at this facility.

HAPs that are evaluated in this emissions inventory are identified in the current EPA list (http://www.epa.gov/ttn/atw/orig189.html) of 1990 CAAA HAPs. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each HAP separately, in the Emissions Inventory Work-Up Sheets found in Appendix B. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Table 8.7-1** summary that is included here.

Commercial Creamery Company

HAP Potential to Emit EMISSIONS SUMMARY

HAP Pollutants	PTE (tpy)
Benzene	4.44E-04
Bis(2-ethylhexyl)phthalate (DEHP)	0.00E+00 [No EF]
1,4-DiChloroBenzene (p)	2.54E-04
Ethylbenzene	0.00E+00 [No EF]
Formaldehyde	1.59E-02
Hexane	3.80E-01
Napthalene	1.29E-04
Phenol	0.00E+00 [No EF]
Toluene	7.19E-04
o-Xylenes	0.00E+00 [No EF]
Arsenic Compounds	4.23E-05
Beryllium Compounds	1.93E-06
Cadmium Compounds	2.32E-04
Chromium Compounds	2.96E-04
Cobalt Compounds	1.78E-05
Lead Compounds	1.06E-04
Manganese Compounds	8.03E-05
Mercury Compounds	5.50E-05
Nickel Compounds	4.44E-04
Selenium Compounds	3.85E-06
TOTAL	**3.99E-01**

Table 5.2.7-1
HAP Potential to Emit EMISSIONS SUMMARY

5.2.8 Greenhouse Gas Emissions

Each of the **Appendix B** odd-numbered emissions work-up sheets calculates GHG emissions (CO2, N2O, CH4) for each of the sources that combust natural gas. Consideration is taken for the radiational efficiency of each gas, per requirements of 40 CFR 98 "GHG reporting" The

GHG entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to **Table 8.4-2**. The total CO2e emissions of 24,102 tpy are less than the 100,000 tpy threshold for GHG permitting as an affected source under New Source Review.

5.2.9 Criteria Pollutant Emissions

5.2.9.1 Selection of Criteria Pollutants to be Modeled

Table 8.5-1 identifies those pollutants that meet the *Method 1 criteria* for *de minimis* total facility-wide emissions that, under the graded modeling approach presented in DEQ, 2011a, are below the modeling thresholds listed in Table 2 of the *State of Idaho Air Quality Modeling Guideline ID-AQ-011* (DEQ 2011b). **It was shown that SO2, CO, and Lead meet their corresponding *de minimis* criteria, and do not require modeling on the basis of this table.** The remaining pollutants, PM-10, PM-2.5, and NO2 require modeling under terms of Method 3 of DEQ, 2011a.

5.2.9.2 Modeling Emissions Inventory

The modeling emissions inventory is presented in **Table 5.2.9-1** (for Criteria Pollutants) and **Table 5.2.9-2** (for Toxic Air Pollutants). Stack parameters used in the modeling are discussed in **Section 7.4.5.**

Table 5.2.9-1
Criteria Pollutant Emission Rates for All Facility Sources
Part A : Short-Term Maximum Hourly Emissions (g/sec)
CRITERIA POLLUTANT EMISSIONS RATES USED FOR AIR IMPACT MODELING

Emissions Point	Description	Emissions Rates (g/sec) SHORT TERM PM-10 24 HR	PM-2.5 24 HR	SO2	NO2, 1 hr	CO	VOC	Pb
B1	Boiler 150 hp York Shipley	5.655E-03	5.655E-03	4.464E-04	5.952E-02	6.250E-02	4.092E-03	3.720E-07
B2	Boiler Pending New 125 hp YS	5.655E-03	5.655E-03	4.464E-04	5.952E-02	6.250E-02	4.092E-03	3.720E-07
D1	Dryer Pending New Rogers	7.560E-03	3.160E-03	8.800E-04	1.171E-01	1.230E-01	8.050E-03	7.318E-07
D2	Dryer Existing 1960 Rogers	7.560E-03	3.160E-03	8.800E-04	1.171E-01	1.230E-01	8.050E-03	7.318E-07
D2A	Dryer Pending 2014 Refubished 1960 Rogers							
D3	Dryer Existing Blaw Knox Spray	7.510E-03	3.060E-03	5.855E-04	7.806E-02	8.197E-02	5.367E-03	4.879E-07
D4	Dryer, Drum	1.260E-02	1.260E-02					
P1	Tote-Dump Dust Collector 2	9.880E-03	2.890E-03					
P2	Tote-Dump Dust Collector 1	9.880E-03	2.890E-03					
NR3a	Clothes Dryer 1	3.580E-05	3.580E-05	8.489E-06	1.064E-03	5.660E-04	7.782E-05	7.075E-09
NR3b	Clothes Dryer 2	3.580E-05	3.580E-05	8.489E-06	1.064E-03	5.660E-04	7.782E-05	7.075E-09
NR5a	Water Heater 1	6.953E-05	6.953E-05	5.489E-06	6.879E-04	3.659E-04	5.031E-05	4.574E-09
NR5b	Water Heater 3	1.853E-04	1.853E-04	1.463E-05	1.834E-03	9.753E-04	1.341E-04	1.219E-08
NR4A	Proc'D - Carrier HVAC	2.549E-04	2.549E-04	2.013E-05	2.522E-03	1.342E-03	1.845E-04	1.677E-08
NR4B	Blend'C - Carrier HVAC	2.549E-04	2.549E-04	2.013E-05	2.522E-03	1.342E-03	1.845E-04	1.677E-08
NR4C	QA - Carrier HVAC	1.669E-04	1.669E-04	1.317E-05	1.651E-03	8.782E-04	1.208E-04	1.098E-08
NR4D	QC - Carrier HVAC	6.860E-05	6.860E-05	5.416E-06	6.783E-04	3.610E-04	4.964E-05	4.513E-09
NR4E	E Side - Carrier HVAC Office	1.159E-04	1.159E-04	9.148E-06	1.147E-03	6.099E-04	8.386E-05	7.623E-09
NR4F	E Side - Carrier HVAC Bartelt	1.159E-04	1.159E-04	9.148E-06	1.147E-03	6.099E-04	8.386E-05	7.623E-09
NR4G	Littleford - Carrier HVAC-1	1.159E-04	1.159E-04	9.148E-06	1.147E-03	6.099E-04	8.386E-05	7.623E-09
NR7A	E Side - Modine Unit Heater Down	2.086E-04	2.086E-04	1.647E-05	2.064E-03	1.098E-03	1.509E-04	1.372E-08
NR7B	E Side - Modine Unit Heater Up	1.854E-04	1.854E-04	1.464E-05	1.835E-03	9.758E-04	1.342E-04	1.220E-08
NR7C	Ph I ADP Unit Heater 1	2.132E-04	2.132E-04	1.683E-05	2.110E-03	1.122E-03	1.543E-04	1.403E-08
NR7D	Ph I ADP Unit Heater 2	2.132E-04	2.132E-04	1.683E-05	2.110E-03	1.122E-03	1.543E-04	1.403E-08
NR7E	Ph II ADP Unit Heater 1	3.198E-04	3.198E-04	2.525E-05	3.165E-03	1.683E-03	2.314E-04	2.104E-08
NR7F	Ph II ADP Unit Heater 2	3.198E-04	3.198E-04	2.525E-05	3.165E-03	1.683E-03	2.314E-04	2.104E-08
NR7G	Ph III ADP Unit Heater N-1	1.808E-04	1.808E-04	1.427E-05	1.789E-03	9.514E-04	1.308E-04	1.189E-08
NR7H	Ph III ADP Unit Heater N-2	1.808E-04	1.808E-04	1.427E-05	1.789E-03	9.514E-04	1.308E-04	1.189E-08
NR7I	Ph III ADP Unit Heater S-1	3.615E-04	3.615E-04	2.854E-05	3.577E-03	1.903E-03	2.616E-04	2.379E-08
NR7J	Ph III ADP Unit Heater S-2	3.615E-04	3.615E-04	2.854E-05	3.577E-03	1.903E-03	2.616E-04	2.379E-08
NR4H	Break Room - Carrier HVAC	2.318E-04	2.318E-04	1.830E-05	2.293E-03	1.220E-03	1.677E-04	1.525E-08
NR4I	Blend Room - Carrier HVAC-1	1.669E-04	1.669E-04	1.317E-05	1.651E-03	8.782E-04	1.208E-04	1.098E-08
NR4J	Blend Room - Carrier HVAC-2	1.669E-04	1.669E-04	1.317E-05	1.651E-03	8.782E-04	1.208E-04	1.098E-08
NR4K	Blend Room - Carrier HVAC-3	1.669E-04	1.669E-04	1.317E-05	1.651E-03	8.782E-04	1.208E-04	1.098E-08
NR4L	Blend Room - Carrier HVAC-4	1.669E-04	1.669E-04	1.317E-05	1.651E-03	8.782E-04	1.208E-04	1.098E-08
NR4M	Shop - Carrier HVAC	4.172E-05	4.172E-05	3.293E-06	4.128E-04	2.196E-04	3.019E-05	2.744E-09
NR7K	E Shop- Modine Unit Heater 1	9.270E-05	9.270E-05	7.318E-06	9.173E-04	4.879E-04	6.709E-05	6.099E-09
NR7L	E Shop- Modine Unit Heater 2	9.270E-05	9.270E-05	7.318E-06	9.173E-04	4.879E-04	6.709E-05	6.099E-09
	TOTAL g/sec check	7.139E-02	4.416E-02	3.652E-03	4.831E-01	4.804E-01	3.344E-02	3.040E-06

Part B : Long-Term Average Emissions (g/sec)
CRITERIA POLLUTANT EMISSIONS RATES USED FOR AIR IMPACT MODELING

Emissions Point	SHORT TERM Description	LONG TERM Emissions Rates (g/sec) PM-10	PM-2.5 Ann	SO2	NO2, Ann	CO	VOC	Pb
B1	Boiler 150 hp York Shipley	N/A	6.000E-03	no model	5.952E-02	no model	no model	no model
B2	Boiler Pending New 125 hp YS	N/A	6.000E-03	no model	5.952E-02	no model	no model	no model
D1	Dryer Pending New Rogers	N/A	3.160E-03	no model	1.171E-01	no model	no model	no model
D2	Dryer Existing 1960 Rogers	N/A	3.160E-03	no model	1.171E-01	no model	no model	no model
D2A	Dryer Pending 2014 Refubished 1960 R	N/A		no model		no model	no model	no model
D3	Dryer Existing Blaw Knox Spray	N/A	3.060E-03	no model	5.200E-02	no model	no model	no model
D4	Dryer, Drum	N/A	1.380E-03	no model		no model	no model	no model
P1	Tote-Dump Dust Collector 2	N/A	2.890E-03	no model		no model	no model	no model
P2	Tote-Dump Dust Collector 1	N/A	2.890E-03	no model		no model	no model	no model
NR3a	Clothes Dryer 1	N/A	3.580E-05	no model	3.550E-04	no model	no model	no model
NR3b	Clothes Dryer 2	N/A	3.580E-05	no model	3.550E-04	no model	no model	no model
NR5a	Water Heater 1	N/A	6.953E-05	no model	6.879E-04	no model	no model	no model
NR5b	Water Heater 3	N/A	1.853E-04	no model	1.834E-03	no model	no model	no model

TAPs EMISSIONS RATES USED FOR AIR IMPACT MODELING

Emissions Point	Description	Emissions Rates (g/sec)			
		As	Cd	CH2O	Ni
B1	Boiler 150 hp York Shipley	1.49E-07	8.18E-07	5.58E-05	1.56E-06
B2	Boiler **Pending** New 125 hp YS	1.49E-07	8.18E-07	5.58E-05	1.56E-06
D1	Dryer **Pending** New Rogers	2.93E-07	1.61E-06	1.10E-04	3.07E-06
D2	Dryer Existing 1960 Rogers	-2.93E-07	-1.61E-06	-1.10E-04	-3.07E-06
D2a	Dryer **Pending** 2014 Refubishe	2.93E-07	1.61E-06	1.10E-04	3.07E-06
D3	Dryer Existing Blaw Knox Spray	1.95E-07	1.07E-06	7.32E-05	2.05E-06
D4	Dryer, Drum	0	0	0	0
P1	Tote-Dump Dust Collector 2	0.000	0.000	0.000	0.000
P2	Tote-Dump Dust Collector 1	0.000	0.000	0.000	0.000
NR3a	Clothes Dryer 1	2.83E-09	1.56E-08	1.06E-06	2.97E-08
NR3b	Clothes Dryer 2	2.83E-09	1.56E-08	1.06E-06	2.97E-08
NR5a	Water Heater 1	1.83E-09	1.01E-08	6.86E-07	1.92E-08
NR5b	Water Heater 3	4.88E-09	2.68E-08	1.83E-06	5.12E-08
NR4A	Proc'B - Carrier HVAC	6.71E-09	3.69E-08	2.52E-06	7.04E-08
NR4B	Blend'C - Carrier HVAC	6.71E-09	3.69E-08	2.52E-06	7.04E-08
NR4C	QA - Carrier HVAC	4.39E-09	2.42E-08	1.65E-06	4.61E-08
NR4D	QC - Carrier HVAC	1.81E-09	9.93E-09	6.77E-07	1.90E-08
NR4E	E Side - Carrier HVAC Office	3.05E-09	1.68E-08	1.14E-06	3.20E-08
NR4F	E Side - Carrier HVAC Bartelt	3.05E-09	1.68E-08	1.14E-06	3.20E-08
NR4G	Littleford - Carrier HVAC-1	3.05E-09	1.68E-08	1.14E-06	3.20E-08
NR7A	E Side - Modine Unit Heater Dc	5.49E-09	3.02E-08	2.06E-06	5.76E-08
NR7B	E Side - Modine Unit Heater Up	4.88E-09	2.68E-08	1.83E-06	5.12E-08
NR7C	Ph I ADP Unit Heater 1	5.61E-09	3.09E-08	2.10E-06	5.89E-08
NR7D	Ph I ADP Unit Heater 2	5.61E-09	3.09E-08	2.10E-06	5.89E-08
NR7E	Ph II ADP Unit Heater 1	8.42E-09	4.63E-08	3.16E-06	8.84E-08
NR7F	Ph II ADP Unit Heater 2	8.42E-09	4.63E-08	3.16E-06	8.84E-08
NR7G	Ph III ADP Unit Heater N-1	4.76E-09	2.62E-08	1.78E-06	4.99E-08
NR7H	Ph III ADP Unit Heater N-2	4.76E-09	2.62E-08	1.78E-06	4.99E-08
NR7I	Ph III ADP Unit Heater S-1	9.51E-09	5.23E-08	3.57E-06	9.99E-08
NR7J	Ph III ADP Unit Heater S-2	9.51E-09	5.23E-08	3.57E-06	9.99E-08
NR4H	Break Room - Carrier HVAC	6.10E-09	3.35E-08	2.29E-06	6.40E-08
NR4I	Blend Room - Carrier HVAC-1	4.39E-09	2.42E-08	1.65E-06	4.61E-08
NR4J	Blend Room - Carrier HVAC-2	4.39E-09	2.42E-08	1.65E-06	4.61E-08
NR4K	Blend Room - Carrier HVAC-3	4.39E-09	2.42E-08	1.65E-06	4.61E-08
NR4L	Blend Room - Carrier HVAC-4	4.39E-09	2.42E-08	1.65E-06	4.61E-08
NR4M	Shop - Carrier HVAC	1.10E-09	6.04E-09	4.12E-07	1.15E-08
NR7K	E Shop- Modine Unit Heater 1	2.44E-09	1.34E-08	9.15E-07	2.56E-08
NR7L	E Shop- Modine Unit Heater 2	2.44E-09	1.34E-08	9.15E-07	2.56E-08
Total All Sources	**g/sec**	9.23E-07	5.08E-06	3.46E-04	9.69E-06
Total All Sources	**tpy**	3.21E-05	1.77E-04	1.20E-02	3.37E-04

Table 5.2.9-2
Toxic Air Pollutant Emission Rates (g/sec) for All Facility Sources
All numbers are based on 8760 hr/yr operation Long-Term standards

5.3 Limitations on Potential to Emit

Commercial Creamery Company proposes the following Limitations on Potential to Emit :

Source B1 -- Existing 1979 York Shipley Gas-Fired Boiler, Uncontrolled

- Considerations : 8760 hr/yr operation required by plant steam systems. Facility-wide NO2, with background, is 51% of NAAQS, so not considered as pollutant/NAAQS for control. B1 is a secondary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. Combustion emissions only. No proposal for PM control for this natural gas source.
- Proposed Emission Limit : PM-2.5 < 0.045 lb/hr (< 0.006 g/sec).
- Proposed Quantification Method : Require combustion of Natural Gas, only. Monitor Natural Gas Fuel Consumption (scf) via totalizing gas meter on boiler.
- How Enforced :
    - Fuel consumption limits to ensure continuous compliance : Natural Gas Fuel Consumption NTE 5900 scf/hr, based on B1 records.
    - Operational Requirements to ensure continuous compliance : Regular boiler maintenance as recommended by manufacturer.
- How Demonstrates Compliance: 5-day/week: Daily Readings from totalizing gas meter on boiler .
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from totalizing gas meter on boiler
- Proposed Recordkeeping Requirements: 3-yr record retention. . Boiler maintenance performed. Boiler Operating log: hours/day. 5-day/week: Daily Readings from totalizing gas meter on boiler, to validate that Natural Gas Fuel Consumption NTE 5900 scf/hr. Instances of visible smoke plume and condition correction.

Source B2 -- Proposed New York Shipley Gas-Fired Boiler, Uncontrolled

- Considerations : 8760 hr/yr operation required by plant steam systems. Facility-wide NO2, with background, is 51% of NAAQS, so not considered as pollutant/NAAQS for control. B2 is a secondary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. Combustion emissions only. No proposal for PM control for this natural gas source.
- Proposed Emission Limit : PM-2.5 < 0.045 lb/hr (< 0.006 g/sec).
- Proposed Quantification Method : Require combustion of Natural Gas, only. Monitor Natural Gas Fuel Consumption (scf) via totalizing gas meter on boiler.
- How Enforced :
    - Fuel consumption limits to ensure continuous compliance : Natural Gas Fuel Consumption NTE 5900 scf/hr, based on B2 records.
    - Operational Requirements to ensure continuous compliance : Regular boiler maintenance as recommended by manufacturer.
- How Demonstrates Compliance: 5-day/week: Daily Readings from totalizing gas meter on boiler .
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from totalizing gas meter on boiler
- Proposed Recordkeeping Requirements: 3-yr record retention. Boiler maintenance performed. Boiler Operating log: hours/day. 5-day/week: Daily Readings from totalizing gas

meter on boiler, to validate that Natural Gas Fuel Consumption NTE 5900 scf/hr. Instances of visible smoke plume and their associated correction.

Source D1 -- Proposed New Gas-Fired Rogers Spray Dryer controlled with integral Fabric Filter

- Considerations : 5840 hr/yr operation, based on 16 hrs per day, 7 days/week ops. Facility-wide NO2, with background, is 51% of NAAQS, so not considered as pollutant/NAAQS for control. D1 is a primary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. Combustion emissions (74% of total) + baghouse emissions(26% of total). PM 98% control via fabric filter. Loaded fabric filter results in increased collection efficiency within pressure drop constraints.
- Proposed Emission Limit : PM-2.5 < 0.108 tpy AND < 0.00311 g/sec, 24-hr avg.
- Proposed Quantification Method : Limit hours of operation. . Require combustion of Natural Gas, only. Monitor Natural Gas Fuel Consumption (scf) via totalizing gas meter on dryer.
- How Enforced :
    - Hours of operation and fuel consumption limits to ensure continuous compliance : No more than 5840 hr/yr operation. Natural Gas Fuel Consumption NTE 11,617 scf/hr, based on D1 records.
    - Operational Requirements to ensure continuous compliance : Regular baghouse maintenance as recommended by manufacturer.
- How Demonstrates Compliance: 5-day/week: Daily Readings from totalizing gas meter on dryer .
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from totalizing gas meter on dryer
- Proposed Recordkeeping Requirements: 3-yr record retention. D1 Filter replacement or laundering. D1 Dryer Operating log: hours/day. Daily Readings from totalizing gas meter on D1 Dryer, to validate that Natural Gas Fuel Consumption NTE 11,617 scf/hr.

Source D2 -- Proposed Refurbished Rogers Gas-Fired Spray Dryer controlled with integral Fabric Filter

- Considerations : 5840 hr/yr operation, based on 16 hrs per day, 7 days/week ops. Facility-wide NO2, with background, is 51% of NAAQS, so not considered as pollutant/NAAQS for control. D2 is a primary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. Combustion emissions (74% of total) + baghouse emissions(26% of total). PM 98% control via fabric filter. Loaded fabric filter results in increased collection efficiency within pressure drop constraints.
- Proposed Emission Limit : PM-2.5 < 0.108 tpy AND < 0.00311 g/sec, 24-hr avg.
- Proposed Quantification Method : Limit hours of operation. Require combustion of Natural Gas, only. Monitor Natural Gas Fuel Consumption (scf) via totalizing gas meter on dryer..
- How Enforced :
    - Hours of operation and fuel consumption limits to ensure continuous compliance : No more than 5840 hr/yr operation. Natural Gas Fuel Consumption NTE 11,617 scf/hr, based on D2 records.
    - Operational Requirements to ensure continuous compliance : Regular baghouse maintenance as recommended by manufacturer.
- How Demonstrates Compliance: 5-day/week: Daily Readings from totalizing gas meter on dryer .
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from totalizing gas meter on dryer

- Proposed Recordkeeping Requirements: 3-yr record retention. D2 Filter replacement or laundering. D2 Dryer Operating log: hours/day. Daily Readings from totalizing gas meter on D2 Dryer, to validate that Natural Gas Fuel Consumption NTE 11,617 scf/hr.

Source D3 – Existing Blaw Knox Gas-Fired Spray Dryer controlled with Hammerlund Fabric Filter

- Considerations : 5840 hr/yr operation, based on 16 hrs per day, 7 days/week ops. Facility-wide NO2, with background, is 51% of NAAQS, so not considered as pollutant/NAAQS for control. D3 is a primary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. Combustion emissions (74% of total) + baghouse emissions(26% of total). PM 98% control via fabric filter. Loaded fabric filter results in increased collection efficiency within pressure drop constraints.
- Proposed Emission Limit : PM-2.5 < 0.106 tpy AND < 0.00306 g/sec, 24-hr avg.
- Proposed Quantification Method : Limit hours of operation. Require combustion of Natural Gas, only. Monitor Natural Gas Fuel Consumption (scf) via totalizing gas meter on dryer..
- How Enforced :
    - Hours of operation and fuel consumption limits to ensure continuous compliance : No more than 5840 hr/yr operation. Natural Gas Fuel Consumption NTE 7744 scf/hr, based on D3 records.
    - Operational Requirements to ensure continuous compliance : Regular baghouse maintenance as recommended by manufacturer.
- How Demonstrates Compliance: 5-day/week: Daily Readings from totalizing gas meter on dryer .
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from totalizing gas meter on dryer
- Proposed Recordkeeping Requirements: 3-yr record retention. D3 Filter replacement or laundering. D3Dryer Operating log: hours/day. Daily Readings from totalizing gas meter on D3 Dryer, to validate that Natural Gas Fuel Consumption NTE 7744 scf/hr.

Source D4 – Existing Blaw-Knox Steam-Heated Spray Dryer Not controlled. No Combustion

- Considerations : 320 hr/yr operation, based on 8 hrs per day, 5 days/week ops. Steam heated – No Combustion emissions. D4 is a primary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. Uncontrolled source.
- Proposed Emission Limit : PM-2.5 < 0.048 tpy AND < 0.0126 g/sec, 24-hr avg.
- Proposed Quantification Method : Dryer ops hrs =8/24 hrs and 320 hrs /yr.
- How Enforced :
    - Hours of operation limits to ensure continuous compliance :
    - Operational Requirements to ensure continuous compliance : Design throughput <1000 lb / hr dry product.
- How Demonstrates Compliance: 5-day/week: Daily calculation of hourly averaged product output.
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from scale of product output
- Proposed Recordkeeping Requirements: 3-yr record retention. D4 Dryer Operating log: hours/day. Daily calculation of hourly averaged product output.

Source PP1 – Existing AZO Tote Dump Dust Collector controlled with modular Fabric Filter

- Considerations : 5840 hr/yr operation, based on 16 hrs per day, 365 days/yr ops. Filter ops only. No Combustion emissions . PP1 is a primary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. PM 98% control via fabric filter. Loaded fabric filter results in increased collection efficiency within pressure drop constraints.
- Proposed Emission Limit : PM-2.5 < 0.100 tpy AND < 0.00289 g/sec, 24-hr avg.
- Proposed Quantification Method : Filter ops hrs =16/24 hrs and 5840 hrs /yr.
- How Enforced :
    - Production (or throughput) limits to ensure continuous compliance : 4000 lb/hr mixed product
    - Operational Requirements to ensure continuous compliance : Design throughput <4000 lb / hr mixed product.
- How Demonstrates Compliance: 5-day/week: Daily calculation of hourly averaged product output.
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from scale of product output
- Proposed Recordkeeping Requirements: 3-yr record retention. PP1 filter log: hours/day. Daily calculation of hourly averaged product output. PP1 Filter replacement or laundering.

Source PP2 -- Existing AZO Tote Dump Dust Collector controlled with modular Fabric Filter

- Considerations : 5840 hr/yr operation, based on 16 hrs per day, 365 days/yr ops. Filter ops only. No Combustion emissions . PP2 is a primary contributor to facility-wide 24-hr PM-2.5 emission, which is pollutant/NAAQS for control. PM 98% control via fabric filter. Loaded fabric filter results in increased collection efficiency within pressure drop constraints.
- Proposed Emission Limit : PM-2.5 < 0.100 tpy AND < 0.00289 g/sec, 24-hr avg.
- Proposed Quantification Method : Filter ops hrs =16/24 hrs and 5840 hrs /yr.
- How Enforced :
    - Production (or throughput) limits to ensure continuous compliance : 4000 lb/hr mixed product
    - Operational Requirements to ensure continuous compliance : Design throughput <4000 lb / hr mixed product.
- How Demonstrates Compliance: 5-day/week: Daily calculation of hourly averaged product output.
- Proposed Monitoring Requirements : 5-day/week: Daily Readings from scale of product output

Proposed Recordkeeping Requirements: 3-yr record retention. PP2 filter log: hours/day. Daily calculation of hourly averaged product output. PP2 Filter replacement or laundering.

Section 6 Facility Classification

Designated : ____ yes __X__ no
If yes, give category: ____**n/a**_____
Potential to Emit: _**45.4 tpy**
Give Pollutant which defines PTE : ____**PM-10**_____

The Commercial Creamery Company Jerome Plant is a ***PSD Minor Facility.***

Because the proposed project will occur at an existing *PSD Minor Facility,* the project's new and refurbished sources are not a PSD major modification.

Detailed emission inventories are provided for all proposed equipment and modified equipment in **Appendix B.**

Section 7. Ambient Impact Assessments

Proposed new sources at an existing facility Commercial Creamery Company (Commercial Creamery) plans to install a new gas-fired boiler ("B2") and a new gas-fired cheese product dryer ("D1") at its cheese processing facility in Jerome, Idaho. Additionally, Commercial Creamery plans to refurbish a gas-fired cheese product dryer ("D2"), with no increase of emissions or changes in stack parameters. The facility currently operates one gas-fired boiler ("B1") and two gas-fired product dryers ("D2" and "D3"). Other small sources include two tote-dump dust collectors, two gas-fired clothes dryers, two gas-fired water heaters, and 25 small gas-fired HVAC units and unit-heaters. The existing sources pre-date the CAA or applicability dates, and do not have permits.

The goal of the air quality impact analysis is to demonstrate compliance for a PTC for these two new sources and a no-emissions-change source modification. Applicant has made every effort to provide all required information, including comprehensive model-ready input files to enable DEQ to validate our data and analyses. In doing so, it is hoped that the Department's priority attention will be given to this permit application. Installation of equipment purchased to implement this project is on hold pending issuance of this PTC. In the event of a boiler failure, the plant would be unable to operate until proper approval and installation of the new unit.

7.1 Demonstrate compliance with Ambient Standards and TAP Increments

Summary :
Modeling was performed in conformance with the Applicant's approved modeling protocol document. Screening modeling was not performed in deference to full AERMOD modeling. In separate runs, AERMOD was used as the refined model to incorporate hourly meteorology, and simultaneous emissions from the facility sources.

Impacts vs NAAQS, including Background Modeling was performed for PM-10, PM-2.5 and NO2, and for three CTAPs that had emission rates that exceeded the modeling thresholds and the ELs, respectively. ***Electronic files of all input and output files used in the modeling are provided on a data CD.*** After modeling the combined emissions from all facility sources, and considering the ambient background concentrations provided by DEQ,

- NO2 1-hr impacts, including background, from all facility sources were estimated at 47.7% of the NAAQS, and, for the NO2 Annual case, were 6.7% of the NAAQS.
- Projected PM-10 Impacts are 59.8% of 24-hr NAAQS, including Background.
- Projected PM-2.5 Impacts are 84% of 24-hr NAAQS, including Background, and are 65.7% of the Annual NAAQS, including Background.
- CTAP maximum impacts ranged from 5% to 11% of the AACCs, when considering all sources.

The modeling results are summarized in the following table:

NAAQS Impact Analysis Summary

Pollutant	Averaging Period	Total Ambient Impact (Baseline Plus Modification) (ug/m3)	Impact from Co-Contributing Sources) (ug/m3)	X,Y Location (UTM)	Background Conc. (ug/m3)	Total NAAQS Conc. (ug/m3)	NAAQS (ug/m3)	Percent of Standard
CO	1-hour	no modeling required					40,000	not modeled
CO	8-hour	no modeling required					10,000	not modeled
NO2	1-hour	65.3		702790, 4733035	24.4	89.7	188	47.7%
NO2	Annual	2.6		702850, 4733080	4.1	6.7	100	6.7%
SO2	1-hour	no modeling required					196	not modeled
SO2	3-hour	no modeling required					1,300	not modeled
SO2	24-hour	no modeling required					365	not modeled
SO2	Annual	no modeling required					80	not modeled
PM-10	24-hour	11.7		702749, 4732997	78.0	89.7	150	59.8%
PM-2.5	24-hour	7.4		702749, 4732997	22.0	29.4	35	84.0%
PM-2.5	Annual	0.7		702805, 4733035	7.2	7.9	12	65.7%
Lead	Quarterly	no modeling required					1.5	not modeled
Lead	3-month	no modeling required					0.15	not modeled

Toxic Air Pollutants Impact Analysis Summary -- Facility-Wide

							AACC ug/m3	
Cadmium	Annual	6.200E-05	n/a	702808, 4733080	n/a	6.20E-05	5.60E-04	11.1%
Arsenic	Annual	1.300E-05	n/a	702808, 4733080	n/a	1.30E-05	2.30E-04	5.7%
Formaldehyde	Annual	4.230E-03	n/a	702808, 4733080	n/a	4.23E-03	7.70E-02	5.5%
Nickel	Annual	1.180E-04	n/a	702808, 4733080	n/a	1.18E-04	2.40E-03	4.9%

Toxic Air Pollutants Impact Analysis Summary -- New Proposed Sources B2 and D1 Only

							AACC ug/m3	
Cadmium	Annual	4.149E-06	n/a	702835, 4733102	n/a	4.15E-06	5.60E-04	0.7%
Arsenic	Annual	2.278E-05	n/a	702833, 4733102	n/a	2.28E-05	2.30E-04	9.9%
Formaldehyde	Annual	1.554E-03	n/a	702833, 4733102	n/a	1.55E-03	7.70E-02	2.0%
Nickel	Annual	4.344E-05	n/a	702833, 4733102	n/a	4.34E-05	2.40E-03	1.8%

Table 7.1-1
Summary of Project Impacts on NAAQS and applicable TAPs

This section provides the demonstration that the proposed project complies with Ambient Standards and TAP Increments.

Impacts of Criteria Pollutant Emissions

On the basis of annual projected emissions, several Criteria Pollutants were emitted in amounts that were below the modeling threshold.

When considering Criteria Pollutants that were subject to modeling, only NO2 (for the 1-hr and annual standards), PM-10 (for the 24-hr standard), and PM-2.5 (for the 24-hr and annual standards) are projected to exceed *25% of the applicable* standard. The projected isopleth patterns for these pollutants and standards are provided in **Appendix A.**

All gas-fired boilers and gas-fired dryers were included as sources in AERMOD, and were modeled separately for each CTAP. Except for the emission rate, the stack parameters used in the modeling for any pollutant were identical for any given source.

7.2 Demonstration that Assessments are conducted per a DEQ-approved modeling protocol.

The project submitted a Modeling Protocol on August 16, 2013, that was approved on September 12, 2012, which approval is provided in Section 1 of this Application as **Approval A-1.**

The requirement of the conditional approval are summarized as follows :

Comment 1 Justification of release parameters
This application provides justification for all release parameters. Facility-wide criteria pollutant impacts, after considering background, range from 49 to 84% of NAAQS. Facility-wide TAPs impacts range from 9 to 22% of AACCs.

Comment 2 Receptor Height
The modeling used in this application does not utilize any flagpole receptors that have AGL heights above the surface.

Comment 3: Modeling Protocol's unclear statement of permitting objective
The purpose of this application is to address compliance of a proposed facility modification involving two new sources and eventual refurbishment of an existing source. Given that the net emissions increase for the proposed results in a max impact that exceeds the SIL for certain pollutants, the modeling assessment involves a full impact analysis of all emissions of those pollutants the facility. Prior to this action, because of sources that pre-date the CAA and CAAA, no pre-existing permits exist. This permitting effort therefore establishes a baseline of compliance, addresses unpermitted sources, as well. This application therefore assesses modeling applicability based on a facility-wide emissions, and models facility-wide emissions for those pollutants and averaging periods that exceed Level 1 modeling thresholds.

Comment 4: Facility-wide TAPs emissions to be addressed.
Applicant understands that modeling applicability of TAPs is based on total TAP emissions for the proposed project. If previous projects should have been permitted, TAP emissions from previous projects have not been permitted are included in the TAP summation and compared to emissions screening levels (ELs).

Comment 5: Few Exempt Sources, No building interior-venting sources
Applicant understand that once a permit is required for a project, "all sources are on the table." After a thorough review of all process activities, Applicant did not identify any sources that vent to the inside of building. Potential fugitive sources of this type (e.g., Source P1 and P2 controlled by fabric filter assemblies, are individually controlled by stacks to the outside of the building

Comment 6 PM-2.5 as a Criteria Pollutant

This comment resulted from a typo in Applicant's table template used for the individual source-specific emissions work-up sheets. Understood.

Comment 7: Below Regulatory Concern Sources
Applicant understands that BRC is evaluated on a project-wide basis, not source-by-source. No BRC sources are claimed in this application.

Comment 8: Small sources' Exit Velocities not based on scaling
Upon detailed modeling, the small sources that were the subject of this comment were found, in total, to constitute between 1 and 3% of the facility-wide inventory of any give NAAQS or TAP. These sources were included in the facility-wide emissions inventory, but were not modeled individually because of the long run times that introduced in the modeling.

Comment 9: Modeling Thresholds
Rather than developing a facility-wide modeling threshold incorporating 1.25 x background and the equation of the modeling protocol approval, modeling thresholds were used directly from DEQ's Modeling Guidance (DEQ, 2011B)

Comment 10 AERMOD Version
he modeling used in this application utilizes EPA's AERMOD 12345.

Comment 11: NOx to NO2 conversion
Rather than using an in-stack ratio, this application uses the default ambient ratio of 0.8 that was established to demonstrate compliance with the 1-hour NO2 standard. This adjustment is made after establishing the NOx emissions on the individual source-specific emissions work-up sheets (Appendix B), prior to presenting data in, e.g., **Table 5.2.5-1.**

Comment 12: NED Digital Files
The modeling used in this application utilizes an NED83 digital terrain file having a standard x,y resolution of 10 m and elevation uncertainty of ±1 m. .

Comment 13: Receptors at facility Exterior Wall
The modeling used in this application does not introduce any space between boundary receptors and building walls in those cases where the exterior building wall constitutes the ambient air to which the public has access.

Comment 14: DEQ establishes background concentrations for Criteria Pollutants
Commercial Creamery Company accepts the background values provided in the Approval Letter in lieu of using the hour-by-hour background values, e.g., for NO2 and O3

Comment 15 : Co-Contributing Sources encompassed in DEQ Background Concentrations
DEQ noted that "If co-contributing sources are identified, there may be a concern that background values are already accounting for the sources, depending on the specific source and the proximity of the source to the proposed permitting action.
The applicant evaluated the relative source strengths of Darigold, Jerome Cheese, and Idaho Milk Products, all crosswind or more distant upwind sources, and using

Commercial Creamery Company's annual impact footprint for PM-10 and NO2, concluded that annual average plumes from these potential co-contributing sources were reduced to the DEQ-established background levels before reaching the Commercial Creamery facility's impact area. We agree with the DEQ assessment.

DEQ Requests Electronic Copies of Modeling Files.
One hard copy of the application, supported by a CD data disk with 1) a pdf file of the application, 2) Calculation spreadsheets (MS Excel) supporting the emissions inventory and receptor array, and 3) modeling files including AERMOD 7.7.3 [EPA 12345] input and output files, meteorological data files, BPIP input and output files, and DEQ PTC Forms, are included with this application package.

7.3 Scaled Plot Plan and Building Dimensions Table

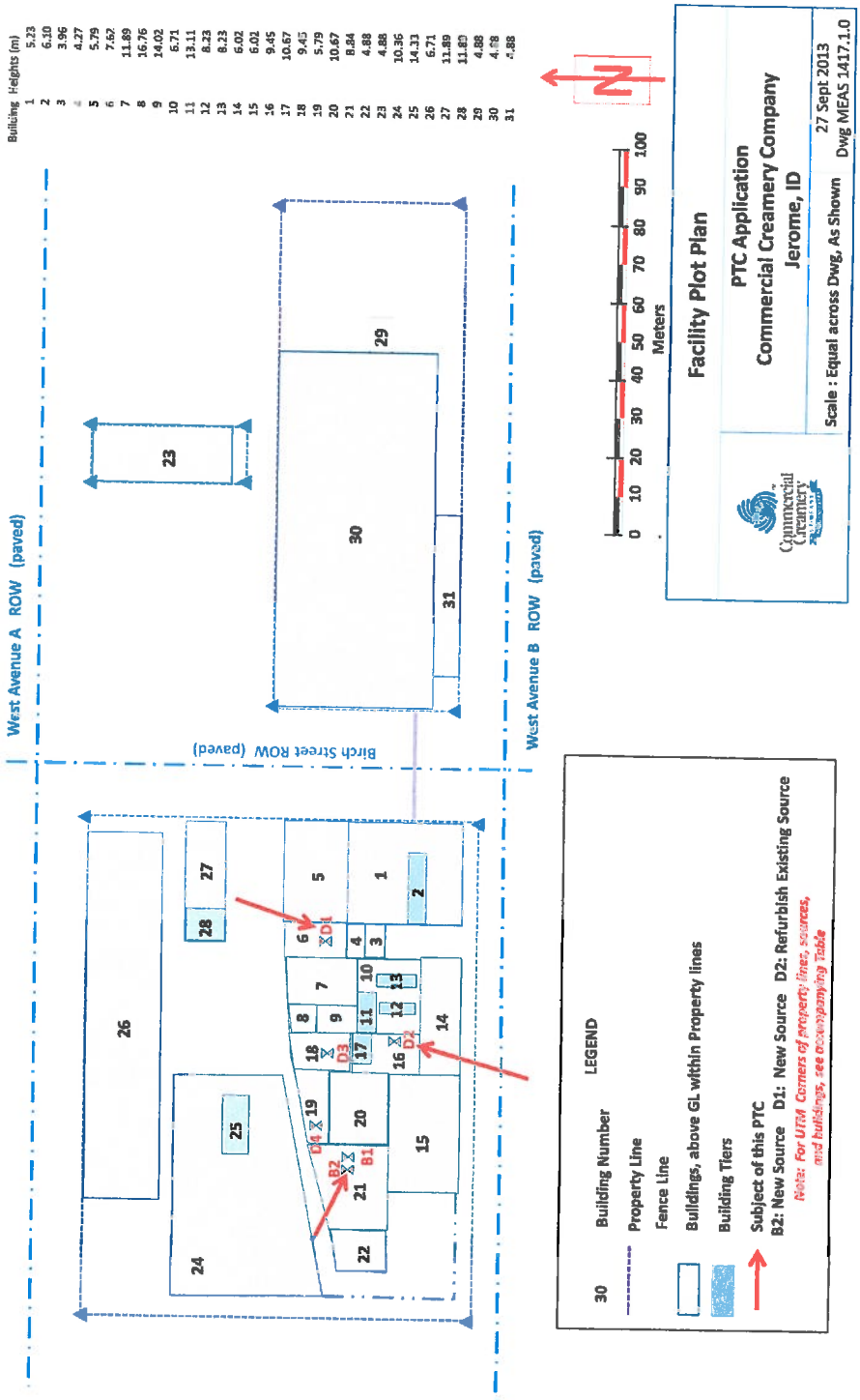


Figure 7.3-1
Facility Plot Plan

Corners CCW from SE

Building 1				
Base (m)	0.00	Building 1	5.23	Roof (m)
		mE	mN	
Corner 1		702873.0	4732945.0	
Corner 2		702873.0	4732972.3	
Corner 3		702850	4732972.3	
Corner 4		702850	4732944	

Building 2				
Base (m)	5.23	Building 2	6.10	Roof (m)
		mE	mN	
Corner 1		702867.6	4732954.5	
Corner 2		702867.6	4732958.3	
Corner 3		702850	4732958.3	
Corner 4		702850	4732954.5	

Building 3				
Base (m)	0.00	Building 3	3.96	Roof (m)
		mE	mN	
Corner 1		702850	4732963.5	
Corner 2		702850	4732968.5	
Corner 3		702841	4732968.5	
Corner 4		702841	4732963.5	

Building 4				
Base (m)	0.00	Building 4	4.27	Roof (m)
		mE	mN	
Corner 1		702850	4732968.5	
Corner 2		702850	4732972.3	
Corner 3		702841	4732972.3	
Corner 4		702841	4732968.5	

Building 5				
Base (m)	0.00	Building 5	5.79	Roof (m)
		mE	mN	
Corner 1		702873.0	4732972.3	
Corner 2		702873.0	4732987	
Corner 3		702848.9	4732987	
Corner 4		702848.9	4732972.3	

Building 6				
Base (m)	0.00	Building 6	7.62	Roof (m)
		mE	mN	
Corner 1		702848.9	4732972.3	
Corner 2		702848.9	4732987	
Corner 3		702841	4732987	
Corner 4		702841	4732972.3	

Building 7				
Base (m)	0.00	Building 7	11.89	Roof (m)
		mE	mN	
Corner 1		702841	4732971.0	
Corner 2		702841	4732987	
Corner 3		702830.1	4732987	
Corner 4		702830.1	4732971.0	

Building 8				
Base (m)	0.00	Building 8	16.76	Roof (m)
		mE	mN	
Corner 1		702830.1	4732979.5	
Corner 2		702830.1	4732987	
Corner 3		702823.3	4732986	
Corner 4		702823.3	4732979.5	

Corners CCW from SE

Building 9				
Base (m)	0.00	Building 9	14.02	Roof (m)
		mE	mN	
Corner 1		702830.1	4732971.0	
Corner 2		702830.1	4732979.5	
Corner 3		702823.3	4732979.5	
Corner 4		702823.3	4732971.0	

Building 10				
Base (m)	0.00	Building 10	6.71	Roof (m)
		mE	mN	
Corner 1		702841	4732954.5	
Corner 2		702841	4732971.0	
Corner 3		702823.3	4732971.0	
Corner 4		702823.3	4732954.5	

Building 11				
Base (m)	6.71	Building 11	13.11	Roof (m)
		mE	mN	
Corner 1		702833.0	4732965.0	
Corner 2		702833.0	4732971.0	
Corner 3		702823.3	4732971.0	
Corner 4		702823.3	4732965.0	

Building 12				
Base (m)	6.71	Building 12	8.23	Roof (m)
		mE	mN	
Corner 1		702829.9	4732957.0	
Corner 2		702829.9	4732965.0	
Corner 3		702827.7	4732965.0	
Corner 4		702827.7	4732957.0	

Building 13				
Base (m)	6.71	Building 13	8.23	Roof (m)
		mE	mN	
Corner 1		702837.1	4732957.0	
Corner 2		702837.1	4732966.7	
Corner 3		702834.4	4732966.7	
Corner 4		702834.4	4732957.0	

Building 14				
Base (m)	0.00	Building 14	6.02	Roof (m)
		mE	mN	
Corner 1		702841	4732943	
Corner 2		702841	4732954.5	
Corner 3		702813.0	4732954.5	
Corner 4		702813.0	4732943	

Building 15				
Base (m)	0.00	Building 15	6.02	Roof (m)
		mE	mN	
Corner 1		702813.0	4732943	
Corner 2		702813.0	4732962.4	
Corner 3		702785	4732958	
Corner 4		702785	4732941	

Building 16				
Base (m)	0.00	Building 16	9.45	Roof (m)
		mE	mN	
Corner 1		702823.3	4732954.5	
Corner 2		702823.3	4732971.0	
Corner 3		702813.0	4732971.0	
Corner 4		702813.0	4732954.5	

Table 7.3-1 (p1 of 2)
Building Coordinates

Building names are as shown in Figure 6.3-1: Facility Plot Plan, and in modeling BPIP input files

Corners CCW from SE

Building 17				
Base (m)	9.45	Building 17	10.67	Roof (m)
		mE	mN	
Corner 1		702823.3	4732966.4	
Corner 2		702823.3	4732971.0	
Corner 3		702816.6	4732971.0	
Corner 4		702816.6	4732966.4	

Building 18				
Base (m)	0.00	Building 18	9.45	Roof (m)
		mE	mN	
Corner 1		702823.3	4732971.0	
Corner 2		702823.3	4732986.0	
Corner 3		702813.0	4732983.9	
Corner 4		702813.0	4732971.0	

Building 19				
Base (m)	0.00	Building 19	5.79	Roof (m)
		mE	mN	
Corner 1		702810.4	4732977.3	
Corner 2		702810.4	4732983.5	
Corner 3		702796.1	4732981.7	
Corner 4		702796.1	4732977.3	

Building 20				
Base (m)	0.00	Building 20	10.67	Roof (m)
		mE	mN	
Corner 1		702813.0	4732962.4	
Corner 2		702813.0	4732977.3	
Corner 3		702796.1	4732977.3	
Corner 4		702796.1	4732960	

Building 21				
Base (m)	0.00	Building 21	8.84	Roof (m)
		mE	mN	
Corner 1		702796.1	4732960	
Corner 2		702796.1	4732981.7	
Corner 3		702775.6	4732976.2	
Corner 4		702775.6	4732958	

Building 22				
Base (m)	0.00	Building 22	4.88	Roof (m)
		mE	mN	
Corner 1		702775.6	4732958	
Corner 2		702775.6	4732976.2	
Corner 3		702764	4732970	
Corner 4		702764	4732957	

Building 23 NE Bldg				
Base (m)		Building 23 NE Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702965	4733000	
Corner 2		702963	4733037	
Corner 3		702951	4733037	
Corner 4		702952	4732999	

Building 24				
Base (m)	0.00	Building 24	10.36	Roof (m)
		mE	mN	
Corner 1		702809	4732986.0	
Corner 2		702809	4733011	
Corner 3		702755	4733009	
Corner 4		702756	4732975	

Corners CCW from SE

Building 25				
Base (m)	10.36	Building 25	14.33	Roof (m)
		mE	mN	
Corner 1		702804.3	4732996.9	
Corner 2		702804.3	4733001.2	
Corner 3		702790.6	4733001.2	
Corner 4		702790.6	4732996.9	

Building 26				
Base (m)	0.00	Building 26	6.71	Roof (m)
		mE	mN	
Corner 1		702867	4733016	
Corner 2		702867	4733034	
Corner 3		702777	4733031	
Corner 4		702778	4733013	

Building 27				
Base (m)	0.00	Building 27	11.89	Roof (m)
		mE	mN	
Corner 1		702871	4733002	
Corner 2		702871	4733011	
Corner 3		702851.7	4733011	
Corner 4		702851.7	4733002	

Building 28				
Base (m)	0.00	Building 28	11.89	Roof (m)
		mE	mN	
Corner 1		702851.7	4733002	
Corner 2		702851.7	4733011	
Corner 3		702843.0	4733011	
Corner 4		702843.0	4733002	

Building 29 EE Bldg				
Base (m)		Building 29 EE Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702995	4732967	
Corner 2		702995	4732976	
Corner 3		702985	4732976	
Corner 4		702985	4732967	

Building 30 E Bldg				
Base (m)		Building 30 E Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702986	4732956	
Corner 2		702984	4732994	
Corner 3		702899	4732992	
Corner 4		702900	4732953	

Building 31 S of E Bldg				
Base (m)		Building 31 S of E Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702948	4732949	
Corner 2		702948	4732955	
Corner 3		702910	4732954	
Corner 4		702910	4732948	

Table 7.3-1 (p2 of 2)
Building Coordinates

Building names are as shown in Figure 6.3-1: Facility Plot Plan, and in modeling BPIP input files

7.4 Demonstration that Assessments are conducted in Conformance with 40 CFR 51, Appendix W (Guideline on Air Quality Models).

7.4.1 Approved Modeling Protocol

The Applicant submitted a modeling protocol document to DEQ on August 16, 2013 which conformed to the requirements of the 2011 *State of Idaho Air Quality Modeling Guideline (DEQ, 2011)*. DEQ responded with their approval and comments on September 12, 2013, a copy of which is provided in **Section 1** (Schilling, 2013).

Applicant has complied with all requirements stipulated in the Modeling Protocol approval.

Two adjustments were made to the strategy outlined in the modeling protocol document :

1) After running AERMOD and determining the plume impact areas for the various pollutants and standards, the inner (10m) receptor grid was altered in shape to clearly encompass all instances of maximum (or "high") plume impact. It was not found necessary to add receptors at spacing less than 10 m to identify and quantify locations and magnitude of maximum impact.

2) After running AERMOD and determining the scale of maximum impact with respect to NAAQS and AACCs, and assessing the long model execution time that resulted from the 25 very small HVAC and unit heater sources, these HVAC sources were deleted from the modeling emissions input for PM-10 (where they contribute 0.3% of the facility-wide emissions) and PM-2.5 (where they contribute 0.9% of the facility-wide emissions). For NO2, these sources contribute 9.75% of the facility-wide NO2 emissions -- however, for NO2, the maximum facility-wide projected impact not close to the NAAQS, i.e., is 50% of the 1-hr standard and 9% of the NO2 Annual standard.

7.4.2 Modeling Strategy

Screening and Refined Modeling Screening modeling was not performed in deference to full AERMOD modeling.

Ambient Air, Compliance Point For this project, "ambient air" is defined as air outside the Commercial Creamery Company property line. In cases where the property line was the outer wall of a building, receptors were placed at the ground at the wall surface, per Comment 13 of (Schilling, 2013).

Pollutants Modeled On the basis of the analysis presented in **Exhibit 8-4**, PM-10 (24-hr std), PM-2.5 (24-hr and Annual std, NO2 (1-hr and Annual std) and Arsenic (Annual AACC), Cadmium(Annual AACC), Formaldehyde(Annual AACC), and Nickel(Annual AACC) are the only pollutants that are emitted in facility-wide amounts that exceed the respective modeling thresholds, and therefore require modeling.

7.4.3 Selection of Models Used

Screening modeling was not undertaken in this modeling analysis. Once it became evident that, on the basis of a source and stack configuration, BPIP and 1-hr NOx calculations would be a significant considerations in the modeling, AERMOD was used exclusively in the dispersion modeling simulations.

The Applicant's modeling protocol document approved by DEQ (DEQ, 2013), proposed AERMOD [Breeze AERMOD-ISC 7.7.1 (EPA AERMOD 12345)] as the model of choice for refined modeling analyses. DEQ's approval of the proposed model was the basis for their use by the Applicant.

7.4.4 Model Parameter Settings

AERMOD

The applicant utilized all regulatory default options. A typical input listing for AERMOD modeling of the Commercial Creamery facility is provided as **Table 7.4.4-1**.

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Commercial Creamery Co Jerome 2006-2010 TWF ARSENIC Annual FR2
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC
CO	AVERTIME	Averaging times	24,ANNUAL
CO	URBANOPT	Urban options	[NO ENTRY HERE MEANS RURAL DISPERSION COEFFICIENTS WERE USED]
CO	POLLUTID	Pollutant ID	OTHER
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	C:\Users\nrricks\Desktop\CC1PTC~1\FINALF~1\MODELI~1\CCCO5Y~1\KTWF_2006-2010.SFC

ME	PROFFILE	Profile met file	C:\Users\nrricks\Desktop\CC1PTC~1\FINALF~1\MODELI~1\CCCO5Y~1\KTWF_2006-2010.PFL
ME	SURFDATA	Surf met data info.	94178 2010 TWF
ME	UAIRDATA	U-Air met data info.	24131 2010 BOI
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	1266
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A
OU	DAYTABLE	Print summary opt.	

Table 7.4.4-1
Typical AERMOD Model Options Summary Utilized for Commercial Creamery PTC Modeling

7.4.5 Sources

All air emissions sources that exist at the Commercial Creamery Facility are listed in Table 7.4.5-1.

Emissions Unit	Stack ID
Boiler 150 hp York Shipley	B1
Boiler **Pending** New 125 hp YS	B2
Dryer **Pending** New Rogers	D1
Dryer Existing 1960 Rogers	D2
Dryer Existing Blaw Knox Spray	D3
Dryer, Drum	D4
Tote-Dump Dust Collector 2	P1
Tote-Dump Dust Collector 1	P2
Clothes Dryer 1	NR3a
Clothes Dryer 2	NR3b
Water Heater 1	NR5a
Water Heater 3	NR5b
Proc'B - Carrier HVAC	NR4A
Blend'C - Carrier HVAC	NR4B
QA - Carrier HVAC	NR4C
QC - Carrier HVAC	NR4D
E Side - Carrier HVAC Office	NR4E
E Side - Carrier HVAC Bartelt	NR4F
Littleford - Carrier HVAC-1	NR4G
E Side - Modine Unit Heater Down	NR7A
E Side - Modine Unit Heater Up	NR7B
Ph I ADP Unit Heater 1	NR7C
Ph I ADP Unit Heater 2	NR7D
Ph II ADP Unit Heater 1	NR7E
Ph II ADP Unit Heater 2	NR7F
Ph III ADP Unit Heater N-1	NR7G
Ph III ADP Unit Heater N-2	NR7H
Ph III ADP Unit Heater S-1	NR7I
Ph III ADP Unit Heater S-2	NR7J
Break Room - Carrier HVAC	NR4H
Blend Room - Carrier HVAC-1	NR4I
Blend Room - Carrier HVAC-2	NR4J
Blend Room - Carrier HVAC-3	NR4K
Blend Room - Carrier HVAC-4	NR4L
Shop - Carrier HVAC	NR4M
E Shop- Modine Unit Heater 1	NR7K
E Shop- Modine Unit Heater 2	NR7L

Table 7.4.5-1.
Air Emissions Sources at Commercial Creamery's Jerome, Idaho Plant

Sources B1 through NR5b are primary sources, all located in the **Commercial Creamery's** West Building complex. All sources are included in all Emissions Inventories for criteria pollutants and for TAPs. Sources NR4a through NR7l are small HVAC and unit heaters that meet the criteria for Exempt Sources in IDAPA 58.01.01.222.02(d) [fuel-burning equipment less than 1 MM Btu/hr heat input], and together emit less than 1% of the facility emissions inventory. They are not individually modeled. Specifications, including stack parameters and locations, for all sources, are provided in the Emissions Work-Up Sheets in **Appendix B**. Locations of the primary sources are shown on the Facility Plot Plan in **Section 7.3.**

Modeling Assumptions

The following assumptions are operative in the emissions inventory and modeling calculations :

1. Modeling -- Meteorology The TWF (sfc) and BOI (upper air) 2006-2010 AERMOD meteorological input data file is assumed representative for the location, terrain, and time period of sources addressed in this application.

2. Modeling -- Meteorology Winds used in this dispersions simulation are assumed to be continuous on an hour-by hour basis; i.e., no shift is addressed during any modeled hour.

3. Modeling: AERMOD is the EPA/DEQ-given regulatory compliance methodology used in this application. AERMOD is assumed to provide a reproducible analysis, in common with similar permitting analyses used throughout the nation. No site-specific or source specific validation data are available. It is assumed that projected ambient concentrations using AERMOD are within acceptable uncertainty or accuracy versus real world conditions.

4. Modeling: Because AERMOD is a Eulerian model, no Lagrangian trajectory modeling is simulated, e.g wind stagnation, fumigation or recirculation effects are not assumed or explicitly considered.

5. Modeling: AERMOD default values are assumed representative of the Jerome, Idaho area, and are used in the calculations.

6. Modeling: Rural dispersion coefficients are assumed representative of the Jerome, Idaho area, and are used in the calculations.

7. Modeling: USGS digital terrain data (NED83) are used. Plant property lines and building corners were surveyed using GPS converted to NED83 basis.

8. Modeling: Plant grade used in the modeling is assumed to follow underlying terrain, which is < 2% slope, and buildings are assumed placed on that underlying terrain.

9. Modeling: Aerodynamic effects of downwind, non-Commercial Creamery buildings are assumed not relevant, and are not considered by the BPIP used in this analysis.

10. Modeling: All structures within the owner's property lines are included in the BPIP analysis. Smooth terrain is assumed for impacts calculations at downwind receptors.

11. Modeling: Sensitive receptors used in analysis consist of known area schools and one hospital. Commercial and government facilities are assumed not sensitive receptors.

12. Modeling: Intermittent small combustion sources (HVAC and room unit heaters) are quantified for the facility-wide emissions inventory, but are assumed to be non-significant for modeling. For emissions inventory purposes, these intermittent room heaters are assumed conservatively (higher emissions) to operate for ½ year. They represent < 1% of the facility-wide emissions inventory. Unworkable AERMOD run times are a consideration in this assumption.

13. Modeling -- Facility Design Multiple 18-inch Parapet walls on the aggregate "West Building" are assumed not relevant to the BPIP roof heights and modeling.

14. Modeling -- Facility Design Small differences in five panels of the East Building roof are assumed represented by a single Flat Roof for the East Building. There are no modeled emission sources on that structure.

15. Modeling -- Plant Operations Single shift operation of Dryer D4 and 2-shift-per day operations of Dryers D1, D2, and D3 are assumed to occur during the periods of poorest dispersion at any time during a given 24-hr period, and are not restricted to a consistent clock schedule.

16. Modeling -- Plant Operations Part-year HVAC sources are assumed 4380 hrs/yr (half-time on an annual basis).

17. Modeling -- Plant Operations Boilers B1 and B2 are assumed to operate 8760 hrs/yr at full power -- no weekend or diurnal turn-down is assumed.

Emissions Inventory Assumptions

18. Emission Factor AP-42 Emission factors are based on national averages of multiple similar sources, and are used in the majority of source characterizations in this application. We believe, and have assumed, that sources used in this application are or will operate at the emissions level specified by AP-42.

19. Emission Factor Particulate emissions from natural gas combustion in Boilers B1 and B2 are assumed to be 100% PM-2.5, i.e., PM = PM-10 = PM-2.5

20. Emission Factor No leap year is assumed in the emissions calculations.

21. Emission Factor Natural gas is assumed at standard conditions before combustion, i.e., acf = scf.

22. Emission Factor At the tote-bag particulate filters (Source PP1, PP2): PM-2.5 emissions are assumed to be 29.2% of PM-10 emissions, based on Gabites (2007) for whole milk powder.

23. Emission Factor 98% particulate control performance is assumed for all fabric filters. This assumption is conservative (estimates high) given AP-42's published [Table B.2-3] efficiencies of 99% to 99.5%.

24. Emission Factor For Sources D1, D2, D3, the published AP-42 emission factor is a controlled emission, we assume based on a cyclone as the control device. To develop a credible emission amount based on 98% of the entry gas stream, we have assumed a conversion of the AP-42 published emission back to the uncontrolled "before cyclone" PM-10 emissions, then taken credit for 98% control. Similarly, we have assumed a conversion of the AP-42 published emission back to the uncontrolled "before cyclone" PM-2.5 emissions, then taken credit for 98% control. See footnotes to emissions work-up sheets for D1, D2, and D3.

25. Emission Factor CTAPs assumed from natural gas combustion – no local supply analyses

26. Emission Factor For natural gas combustion emissions from Dryers D1, D2, and D3, PM-2.5 emissions are assumed to be 97% of AP-42 PM-10 combustion emissions.

Example Calculation #1 : Use AP-42 Table 1.4-1 *et seq.* to calculate exhaust PM emissions from Boiler B1

Given:

B1 is "Small Boiler" (< 100 MMBtu/hr)
Heat rating 6,100,000 Btu/hr
Gas heat value = 1033 Btu/scf
uncontrolled source
operates 8760 hrs/yr
AP-42 Table 1.4-1 CO: 84 lb/10^6 scf, NOx: 100 lb/10^6 scf
AP-42 Table 1.4-2 Pb: 0.0005 lb/10^6 scf PM: 7.6 lb/10^6 scf
SO2: 0.6 lb/10^6 scf
AP-42 Table 1.4-3 As: 2.0E-4 lb/10^6 scf, Cd: 1.1E-3 lb/10^6 scf,
Ni: 2.1E-3 lb/10^6 scf
AP-42 Table 1.4-1 CH2O: 7.5E-2 lb/10^6 scf

Required:

lbs/hr PM emitted

6,100,000 Btu/hr / 1033 BTU/scf = 5905 scf/hr
7.6 lb/10E6 scf * 5905 scf/hr = 0.045 lb/hr

Required:

tpy PM emitted

0.045 lb/hr / 2000 lb/ton * 8760 hrs operated /yr = 0.197 tpy

Required:

g/sec PM emitted

0.045 lb/hr * 453.6 g/lb / 60 min/hr / 60 sec/min = 0..006 g/sec

Because D1 operates 8760 hrs /yr, the short-term emission is identical to the long-term emission.

These input assumptions and calculations for Pm emissions (as well as emissions for any other pollutant) may be checked on the Emissions Work-Up Sheets for Source B1 in Appendix B.

Example Calculation #2 : Use AP-42 Table 1.4-1 *et seq.* to calculate process PM-2.5 emissions from Dryer D1

Given:

D1 has combustion PM-2.5 emissions of 0.002 lb/hr using the emission factors and techniques shown in Example #1.

D1 operates 365days/yr x2 shifts/day = 5840 hrs/yr

D1 produces 1.5 tons / hr dry product

Emission factor for PM-2.5(process) from AP-42 Table 9.6.1-2 "Natural and Processed Cheese" Condensable particulate is 0.29 + 0.44 = 0.73 lbs PM-2.5 / ton dry product

Emission factor for PM-2.5(process) from AP-42 Table 9.6.1-2 pertains to controlled PM-2.5 emissions, Cyclone is assumed as control device that has 62% efficiency (interpolated value at 2.5 microns on Table 9.6.1-2 for AIRS 008).

Emission factor for condensable PM=0.73 is converted to "Total PM" =0.73/(1/0.62) (AP-42, Table B.2-3 AIRS Code = 008) assuming a medium efficiency centrifugal collector was used to develop the emission factor (footnote B to AP-42 table 9.6.1-2).

D1 is a controlled source: 5 oz woven poly eggshell finish filter 98% efficient for PM-2.5

Required:

total lbs/hr PM-2.5 emitted from D1 (Short Term)

0.73 lbs PM-2.5 / ton dry product *(1/0.62) for correction to "uncontrolled PM-2.5 *(1-0.98) for 98% control by fabric filter = 0.024 lbs / ton dry product * 1.5 tons dry product / hr = 0.035 lbs PM-2.5 / hr

Required:

tpy PM emitted

0.035 lb/hr / 2000 lb/ton * 5840 hrs operated /yr = 0.103 tpy

Required:

g/sec PM emitted (Short Term)

0.035 lb/hr * 453.6 g/lb / 60 min/hr / 60 sec/min = 0.00445 g/sec

Because D1 operates 5840 hrs /yr, the short-term emission is higher than the long-term (annual average) emission.

Short Term : TOTAL PM-2.5 emission is Process PM-2.5 + Combustion PM-2.5 :

0.035 lbs / hr + 0.002 lb/hr = 0.037 lb/hr = 0.00467 g/sec
But D1 operates 2 shifts / day = 16/24 hours so 24-hr average emission = 0.00467 g/sec * (16/24) = 0.00311 g/sec
Long Term : 0.00311 g/sec because D1 operates shifts/day 365 days / yr.

These input assumptions and calculations for PM-2.5 emissions (as well as emissions for any other pollutant) may be checked on the Emissions Work-Up Sheets for Source D1 in Appendix B.

Example Calculation #3 : Use appropriate referenceable emissions data to calculate process PM-2.5 emissions from Dryer D4

Commercial Creamery Company produces flake dried cheese in Dryer D4 in a niche market. Most dry milk processors utilize spray dryers to produce dried skim milk, which results in a comparatively dry powder. Only a few producers make spray-dried whole milk, which has larger, and more oily particulates, reflecting the higher butter-fat content of whole milk. Commercial Creamery Company produces *flake dried* cheese, not powdered, in D4. Flake cheese has a fat content higher than dried whole milk. Because there are no known EFs for flake dried cheese that match Commercial Creamery Company's process, other EFs have been adapted.

Given:

D4 is a Blaw-Knox Drum Dryer with a capacity of 1000 lbs/hr dry product
D4 is steam heated – not combustion emissions
D4 operates in an infrequent campaign mode, 320 hrs/yr at not more than 1 shift (8hrs) / day.

A flake dryer of identical make and model (Blaw Knox) is permitted for drying *potato flake* at Idahoan Foods LLC P-2012.0200, issued by Idaho DEQ on August 23, 2013. Idahoan's "Flaker Drum Dryers #1 and #2" have a capacity of 0.43 T/hr, [Table 3.1 of P-2012.0200] comparable to the 0.5 tph used for Commercial Creamery's drum dryer D4. The Emission limits of the "Flaker Drum Dryers #1 and #2" main stacks(both uncontrolled sources like Commercial Creamery's D4) are **0.60 lb/hr** for PM-2.5 [Table 3.2 of P-2012.0200], presumably based on a source test referenced in Footnote 4 of Table 3.2.

Commercial Creamery Company has assumed emission limits of their D4 flake dryer of **0.30 lb/hr** for PM-2.5. For comparison, this uncontrolled value is 10% of the inferred uncontrolled PM-2.5 that permitted in Glanbia Foods (Richfield, ID) PTC P-2009.0134 (June 3, 2011) Statement of Basis Table 3 for Glandia's Blaw Knox Baghouse Dryer BD1 (a baghouse-controlled source) that serves a *spray dryer.* A baghouse efficiency of 99% was assumed in this inference.

D1 is an uncontrolled source.

Required:

total lbs/hr PM-2.5 emitted from D4 (Short Term)

0.30 lbs PM-2.5 hr

Required:

tpy PM-2.5 emitted

0.30 lb/hr / 2000 lb/ton * 320 hrs operated /yr = 0.048 tpy PM-2.5

Required:

g/sec PM emitted (Short Term)

0.30 lb/hr * 453.6 g/lb / 60 min/hr / 60 sec/min = 0.038 g/sec

Because D4 operates 320 hrs /yr, and 8 hrs / day, the short-term emission is higher than the long-term (annual average) emission.

Short Term :
But D4 operates 1 shifts / day = 8/24 hours so 24-hr average emission = 0.038 g/sec * (8/24) = 0.01260 g/sec
Long Term : 0.048 tpy *2000lbs/ton *453.6 g/lb /8760 hrs/yr /60min/hr /60sec/min = 0.00138 g/sec

Efficiency Suggestions for Auditors of Emissions Estimates in this Application :

1. Source-specific emissions (g/sec) that are used in the modeling are presented in Form **MI2 in Section 1**, and in **Table 5.2.9-1** . These may be compared with model input data that are available in the modeling files on the data CD provided in this Application. Data in **Table 5.2.9-1** may be validated by reference to the individual source-specific work-up sheets on the MS Excel spreadsheet on the data CD provided in this Application.

Table 5.2.9-1 is a roll-up of source-specific, pollutant specific, and averaging time -specific emissions that are calculated on individual source-specific work-up sheets of an MS Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls .*** These work-up sheets are provided in pdf files as **Appendix B** of this application, but are best checked via the live Excel file provided on the data CD. A copy of the workup Sheet for Source D1 Criteria Pollutants is provided here as **Table 7.4.5-2**

2.

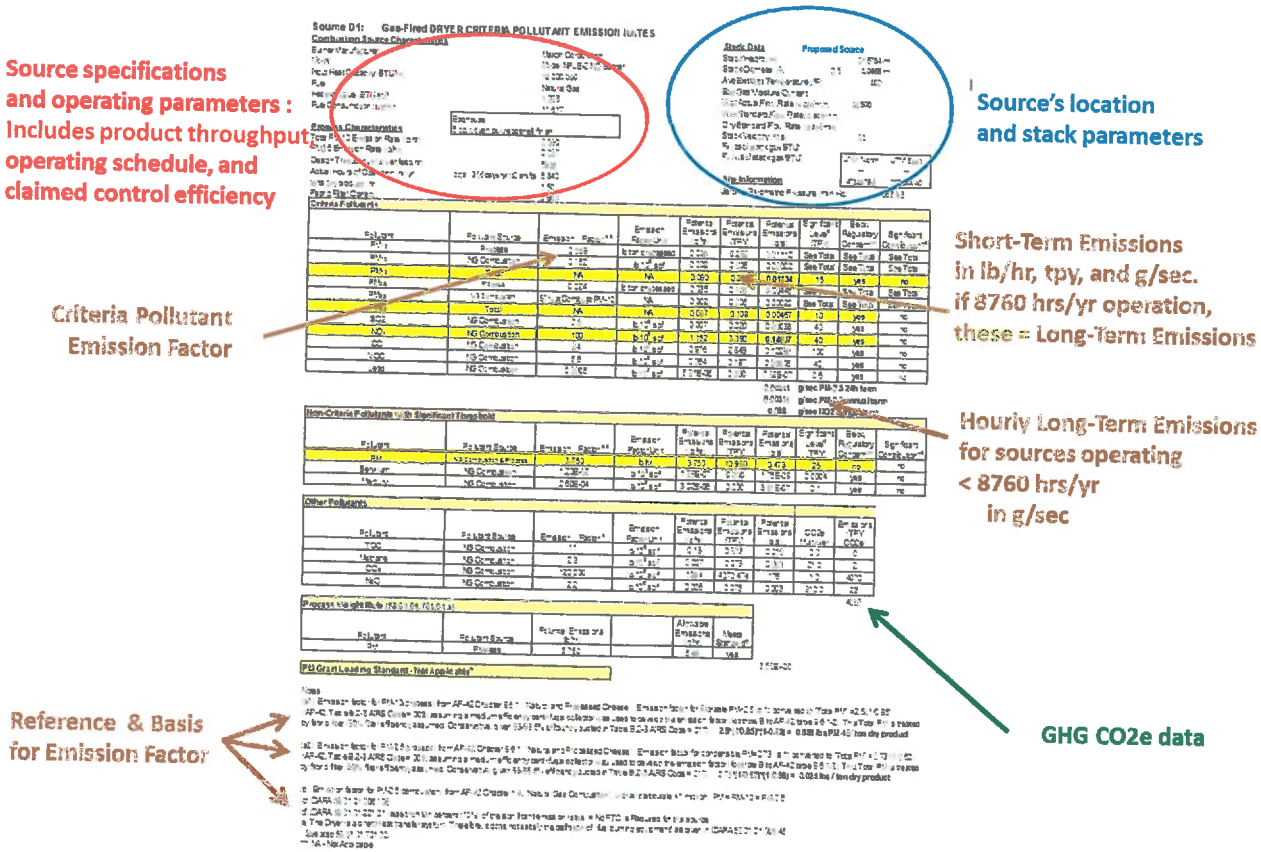


Table 7.4.5-2
Layout of Source-Specific Work-Up Sheet

Showing Calculations for Emissions Factors

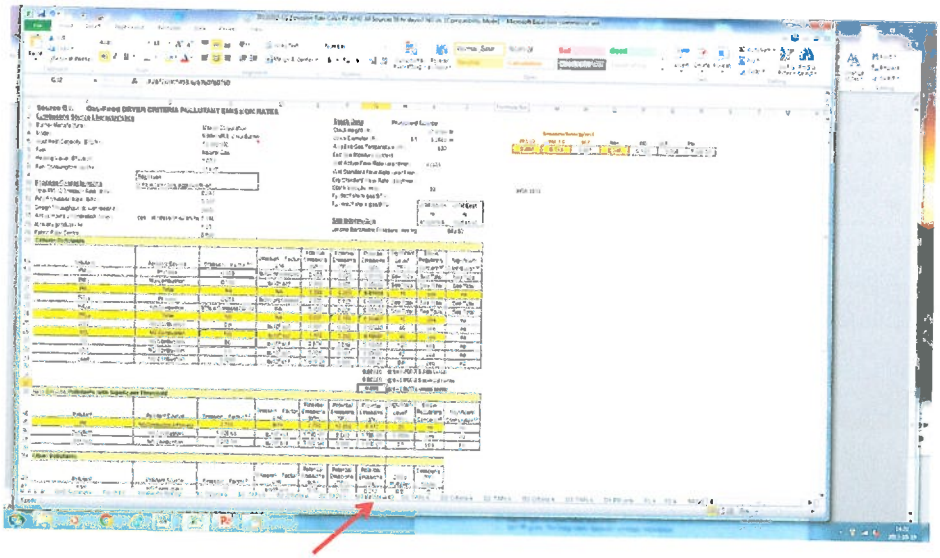
This section traces the development of certain emissions estimates expressed in g/sec that appear in the summary table and the actual AERMOD source input. Seven examples are provided to illustrate the calculation process, and aid the Reviewer in utilizing the individual source-specific work-up sheets on the MS Excel spreadsheet on the data CD provided in this Application.

The live Excel Spread Sheet, with tabbed emission work-up sheets for all sources, is Commercial Creamery's chosen method of showing the calculations and documenting the methodology for developing all project emissions.

Example 1: Determining the PM-10 emissions for modeling Source D1 emissions used document compliance with the 24-hr PM-10 Standard.

Note: These same steps and logic apply to Sources D1, D2, D3 and to all criteria pollutants. TAP emissions are found on a separate tab adjacent to the criteria pollutant tab for this source, and assume 8760 hrs/yr for their modeling.

1. Locate the **D1 Criteria** Tab on the Excel Spreadsheet. (TAPs emissions work up are found on the adjacent Tab, and follow the same methodology provided here.)



"D1 Criteria" Tab

2. Open the Emission Factor Cell (C19) for PM-10 arising from process emissions. (**Arrow A)** The contents of that cell show **=2.5*(1/0.85)*(1-C16).** This formula is used to convert the controlled factor of " 2.5 lbs filterable PM (PM-10) per ton of dry product" found in AP-42 Table B.2-3 to the uncontrolled PM-10, using the published efficiency of the cyclone described in footnote a1. This is multiplied by (1-0.98) to account for 98% assumed fabric filter efficiency.

Source D1: Gas-Fired DRYER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics

Burner Manufacturer	Maxon Corporation
Model	Model NPLE-2 NG Burner
Input Heat Capacity (BTU/hr)	12,000,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	11,617

Process Characteristics

	Baghouse: 5 oz woven poly eggshell finish
Total PM-10 Emission Rate (lb/hr)	0.090
PM2.5 Emission Rate (lb/hr)	0.037
Design Throughput (lb wet feed/hr)	5935
Actual Hours of Operation (hr/yr)	ops: 365days/yr x2 shifts 5,840
tons dry product / hr	1.50
Fabric Filter Control	0.980

Stack Data — **Proposed Source**

Stack Height (m)		17.6784 m
Stack Diameter (ft)	3.5	1.0668 m
Avg Exit Gas Temperature (°F)		130
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		41500
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		22
Fc (dscf stack gas/BTU)		
Fd (dscf stack gas/BTU)		

Site Information

	UTM North	UTM East
	m	m
	4732979.5	702844.40

Jerome Barometric Pressure (mm Hg) 663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor[a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[c]	Significant Contribution?[c]
PM_{10}	Process	0.059	lb/ton processed	0.088	0.258	0.01112	See Total	See Total	See Total
PM_{10}	NG Combustion	0.152	lb/10^6 scf	0.002	0.005	0.00022	See Total	See Total	See Total
PM_{10}	Total	NA	NA	0.090	0.263	0.01134	15	yes	no
$PM_{2.5}$	Process	0.024	lb/ton processed	0.035	0.103	0.00445	See Total	See Total	See Total
$PM_{2.5}$	NG Combustion	97% x Combust PM-10	NA	0.002	0.005	0.00022	See Total	See Total	See Total
$PM_{2.5}$	Total	NA	NA	0.037	0.108	0.00467	10	yes	[illegible]
SO2	NG Combustion	0.6	lb/10^6 scf	0.007	0.020	0.00088	40	yes	no
NO	NG Combustion	100	lb/10^6 scf	1.162	3.392	0.14637	40	yes	no
CO	NG Combustion	8	lb/10^6 scf	0.976	2.849	0.12295	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.064	0.187	0.00805	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	5.81E-06	0.00[illegible]	7.32E-07	0.6	yes	no

0.00311 g/sec PM-2.5 24h term
0.00311 g/sec PM-2.5 annual term
0.098 g/sec NO2 annual term

A B C D E F

3. In Cell E19 (**Arrow B**) calculates the lb/hr emission rate by applying the hourly throughput of dry product of 1.5 tons/hr to the emission factor, yielding **0.088 lbs / hr**

4. In Cell F19 (**Arrow C**) calculates the ton/year emission rate by applying the annual hours of operation for this source of 5840 hrs/yr to the lbs/hr, yielding **0.258 tpy.**

5. In Cell G19 (**Arrow D**) calculates the g/sec emission directly from the lbs/hr rate in Cell E19 yielding **0.01112 g/sec**

6. PM-10 from the dryer's combustion of natural gas is calculated in cell **G20,** by multiplying the PM-10 emission factor for natural gas combustion (7.6 lb PM-10 per 1,000,000 scf of gas fuel based on AP-42 Chapter 1.4, "Natural Gas Combustion", with all particulate <1 micron, as noted in **Footnote b**, then multiplied by (1-0.98) to account for the assumed filter efficiency of 98%. .

7. In Cell E20 calculates the lb/hr emission rate by applying the hourly fuel consumption of 11,617 scf/hr expressed in MMscf/hr to the emission factor, yielding **0.002 lbs / hr**

8. In Cell F20 calculates the ton/year emission rate by applying the annual hours of operation for this source of 5840 hrs/yr to the lbs/hr, yielding **0.005 tpy.**

9. In Cell G20 calculates the g/sec emission directly from the lbs/hr rate in Cell E20 yielding **0.00022 g/sec**

10. F20 and G20 are summed in **Cell G21** (**Arrow E**) to produce the hourly PM-10 emission from Dryer D1 considering both process particulate and combustion particulate. **0.01134 g/sec.**

11. Nine lines further down is found the calculation of the g/sec values to be used in long-term (annual average) calculations. Since PM-10 no longer has an annual standard, no entry is found here. PM-2.5 does have an annual standard, ***so changing to use PM-2.5 as an example,*** opening cell **G30 (Arrow F)** shows that the hourly PM-2.5 emission for short-term standards is reduced by multiplying by 0.666 to account for the fact that this source operates on a 2-shift-per day basis (**16/24** hours, reference **Cell B14**)

Stack parameter justification is made on the basis of inspection of equipment and installed conditions at the plant. These data are provided in the Emissions Work-Up Sheets of **Appendix B** and are summarized in **Form MI2 in Section 1**.

7.4.6 Receptors

Two separate Cartesian receptor grids were integrated to surround the sources to down-wind distances of 1 km.

- A central grid [designated "**Inner**"] with uniform 10m grid intervals extended to plus and minus 100m to the north and south; and to the east and west of the sources.

- An outer grid [designated "OUTER"] with uniform 40m grid intervals extended to plus and minus 1 km to the north and south; and to the east and west of the sources.

- **Boundary receptors** were placed with a 10m spacing along the entire property perimeter, with some shorter intervals where Commercial Creamery property line corners were less than multiples of 10 m. UTM coordinates of the corners of the property perimeter are shown in **Figure 7.4.11-3** as they are derived from an on-site GPS survey performed by EHM Engineers, Inc.(Schwarz, 2013) . **Table 7.4.6-1** provides the UTM coordinates of the boundary receptor arrays for the West, East, and NE property parcels.

Property Boundary Receptors
NE Building Area

UTM East (m)	UTM North (m)
702960	4732997
702950	4732997
702950	4733007
702950	4733017
702949	4733027
702949	4733037
702949	4733039
702959	4733039
702965	4733040
702965	4733037
702966	4733027
702966	4733017
702967	4733007
702967	4732998

Property Boundary Receptors
East Building Area

UTM East (m	UTM North (m)
702906	4732952
702898	4732952
702898	4732963
702898	4732973
702898	4732983
702897	4732989
702897	4732994
702907	4732994
702917	4732994
702927	4732995
702937	4732995
702947	4732995
702957	4732995
702967	4732995
702977	4732996
702987	4732996
702997	4732996
703007	4732996
703021	4732997
703021	4732997
703021	4732987
703021	4732977
703021	4732967
703022	4732957
703015	4732957
703015	4732949
703007	4732948
702997	4732948
702987	4732948
702977	4732948
702967	4732947
702957	4732947
702947	4732947
702937	4732946
702927	4732946
702917	4732946
702907	4732946

Property Boundary Receptors
West Building Area

UTM East (m)	UTM North (m)
702751	4732937
702751	4732947
702750	4732957
702750	4732967
702750	4732977
702749	4732987
702749	4732997
702749	4733007
702748	4733017
702748	4733027
702748	4733031
702758	4733033
702768	4733033
702778	4733034
702788	4733034
702798	4733034
702808	4733035
702818	4733035
702828	4733035
702838	4733036
702848	4733036
702858	4733036
702868	4733037
702872	4733035
702872	4733027
702872	4733017
702873	4733007
702873	4732997
702873	4732987
702874	4732977
702874	4732967
702874	4732957
702875	4732947
702875	4732940
702868	4732940
702858	4732940
702848	4732939
702838	4732939
702828	4732939
702818	4732938
702808	4732938
702798	4732938
702788	4732938
702778	4732937
702768	4732937

Table 7.4.6-1
UTM Coordinates of the Boundary Receptor Arrays

- **Sensitive Receptors** In order to quantify impacts at the sensitive receptors that were identified, UTM coordinates for sensitive receptors were derived from map placement of addresses expressed in latitude /longitude coordinates from National Geographic Topo ! 4.0 mapping software, followed by transform from latitude /longitude to UTM coordinates using www. earthpoint.us.

SENSITIVE RECEPTORS -- JEROME IDAHO Commercial Creamery Company Sources

	Distance	Bearing from from Facility	UTM mE	UTM mN	Latitude	Longitude	PM-10 24h Maximums % of Standard
St. Luke's Hospital	800 m	NNE	702936	4733852	042 43.822N	114 31.267W	**0.008**
Jerome Middle School	1250 m	N	702462	4734266	042 44.053N	114 31.605W	**0.003**
Jefferson Elementary School	1350 m	NE	703946	4733751	042 43.751N	114 30.529W	**0.003**
Horizon Elementary School	1950 m	NE	704453	4734223	042 43.998N	114 30.148W	**0.002**
Heritage Academy	500 m	SE	703214	4732660	042 43.174N	114 31.089W	**0.007**
Liberty Christian Academy	1600 m	SE	704305	4732426	042 43.030N	114 30.295W	**0.001**
Jerome High School	1650 m	ENE	704680	4733322	042 43.508N	114 30.001W	**0.001**
Canyonside Christian School	900 m	SE	703948	4731583	042 42.581N	114 30.575W	**0.001**
Summit Elementary School	1150 m	N	702844	4734170	042 43.995N	114 31.327W	**0.006**
North Valley Christian School	1000 m	N	703134	4734058	042 43.930N	114 31.117W	**0.007**
South Central Head Start	500 m	NE	703266	4733312	042 43.525N	114 31.037W	**0.011**
Jerome Senior Center	650 m	NNE	703148	4733772	042 43.775N	114 31.113W	**0.009**

Table 7.46-1
Sensitive Receptors

The receptor arrays are shown in their relationship to the property boundary, the sources, and the terrain and civil features **in the concentration isopleth plots provided in Appendix A**. Receptor array placement used in the modeling is consistent with DEQ's approval notes on the modeling protocol document. A listing of the UTM coordinates of all receptors is provided in the model input listing provided on the data CD that accompanies this application. All receptors were set at ground (z = 0 m) elevation.

7.4.7 Terrain

Terrain data used in the modeling is a current (2012) National Elevation Dataset GeoTIFF (NED) file with 10m horizontal accuracy and 1m vertical resolution. The file overlaps the Commercial Creamery facility ± 2 km, which is offset 1 km to SW of terrain file center to overlay the annual plume's center, which typically moves toward the NE . These data are compatible with 1983 North American Datum (NAD 83).

AERMAP used this file to assign terrain elevations to the sources, the buildings, the property boundary receptors, and all receptor grid points used by the model. Ground-level elevations for

the source bases, and all receptors in meters, MSL, are provided in the model input listing, **Exhibit 7.4.7-1**

7.4.8 Buildings

The Commercial Creamery facility consists of three separate building complexes : West, East, and NE, as shown in **Figure 7.4.8-1**

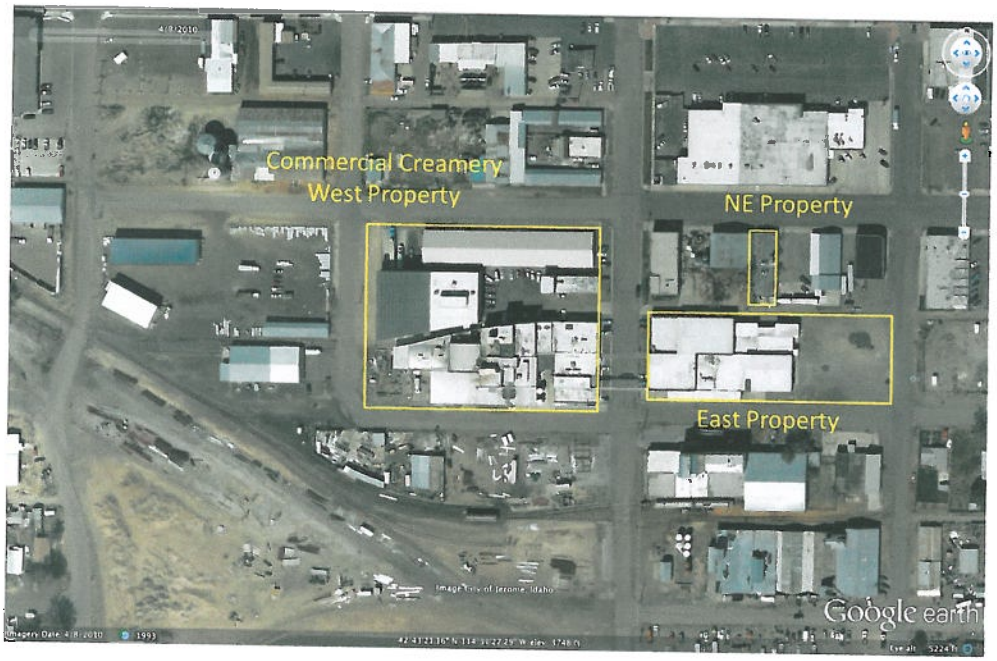


Figure 7.4.8-1
Commercial Creamery Company Properties

- The West complex is comprised of four separate building aggregations, that have a total of 28 separate roof lines, including above-roof penthouses. Building corners were surveyed using GPS equipment, and converted from lat/long survey data to UTM coordinates (see **Table 7.4.8-1**, Buildings 1- 22, 24-28)). Source coordinates at West complex were determined from facility drawings (see **Appendix E**) that were cross checked-with aerial photography (**Figure 7.4.8**-1).

- The East complex is comprised of one building, that have a total of 7 separate roof lines. Building corners were surveyed using GPS equipment, and converted from lat/long survey data to UTM coordinates (see **Table 7.4.8**-1, Buildings 29, 30, and 31). Source coordinates at East complex were determined from facility drawings (see **Appendix E**) that were cross checked-with aerial photography (**Figure 7.4.8**-1).

- The Northeast complex is comprised of one building, having one roof line. Building corners were surveyed using GPS equipment, and converted from lat/long survey data to UTM coordinates (see **Table 7.4.8**-1, Building 23). No sources exist at this location.

Buildings were processed through the Building Profile Input Program (BPIP) during the set-up for each modeling run. BPIP input files in AERMOD were validated against the survey conversion data of **Table 7.4.8**-1 and graphically checked for consistency. .

Table 7.4.8-1
Building Survey Conversions to UTM

Corners CCW from SE

1 1005 4732945 mE 702873 mN

Building	Base (m)	W	N	Roof (m)	Corner	E	N
1	0.00	5.23					
					Corner 1	1	0.0	702873.0	4732945.0	0.0
					Corner 2	2	0.0	702873.0	4732972.3	27.3
					Corner 3	3	-23.0	702850	4732972.3	27.3
					Corner 4	4	-23.0	702850	4732944	0.0
2	5.23	6.10					
					Corner 1	8	-5.4	702867.6	4732954.5	9.5
					Corner 2	9	-5.4	702867.6	4732958.8	13.3
					Corner 3	10	-23.0	702850	4732958.8	13.3
					Corner 4	11	-23.0	702850	4732954.5	9.5
3	0.00	3.96					
					Corner 1	12	-23.0	702850	4732963.5	18.5
					Corner 2	16	-23.0	702850	4732968.5	23.5
					Corner 3	18	-32.3	702841	4732968.5	23.5
					Corner 4	13	-32.3	702841	4732963.5	18.5
4	0.00	4.27					
					Corner 1	15	-23.0	702850	4732968.5	23.5
					Corner 2	3	-23.0	702850	4732972.3	27.3
					Corner 3	17	-32.3	702841	4732972.3	27.3
					Corner 4	18	-32.3	702841	4732968.5	23.5
5	0.00	5.79					
					Corner 1	2	0.0	702873.0	4732972.3	27.3
					Corner 2	5	0.0	702873.0	4732987	43.6
					Corner 3	6	-24.1	702848.9	4732987	43.6
					Corner 4	7	-24.1	702848.9	4732972.3	27.3
6	0.00	7.62					
					Corner 1	7	-24.1	702848.9	4732972.3	27.3
					Corner 2	6	-24.1	702848.9	4732987	43.6
					Corner 3	19	-32.3	702841	4732987	43.6
					Corner 4	17	-32.3	702841	4732972.3	27.3
7	0.00	11.89					
					Corner 1	48	-32.3	702841	4732971.0	26.0
					Corner 2	19	-32.3	702841	4732987	43.6
					Corner 3	20	-42.9	702830.1	4732987	42.2
					Corner 4	22	-42.9	702830.1	4732971.0	26.0
8	0.00	16.76					
					Corner 1	21	-42.9	702830.1	4732979.5	34.5
					Corner 2	20	-42.9	702830.1	4732987	42.2
					Corner 3	42	-49.7	702823.3	4732986	41.8
					Corner 4	43	-49.7	702823.3	4732979.5	34.5

Corners CCW from SE

Building	Base (m)	W	N	Roof (m)	Corner	E	N
9	0.00	14.02					
					Corner 1	22	-42.9	702830.1	4732971.0	26.0
					Corner 2	21	-42.9	702830.1	4732979.5	34.5
					Corner 3	43	-49.7	702823.3	4732979.5	34.5
					Corner 4	35	-49.3	702823.3	4732971.0	26.0
10	0.00	6.71					
					Corner 1	14	-32.3	702841	4732954.5	9.5
					Corner 2	48	-32.3	702841	4732971.0	26.0
					Corner 3	36	-49.3	702823.3	4732971.0	26.0
					Corner 4	34	-49.3	702823.3	4732954.5	9.5
11	6.71	13.11					
					Corner 1	29	-40.0	702833.0	4732965.0	20.0
					Corner 2	23	-40.0	702833.0	4732971.0	26.0
					Corner 3	35	-49.3	702823.3	4732971.0	26.0
					Corner 4	35	-49.3	702823.3	4732965.0	20.0
12	6.71	8.23					
					Corner 1	30	-43.1	702829.9	4732957.0	12.0
					Corner 2	31	-43.1	702829.9	4732965.0	20.0
					Corner 3	32	-49.3	702827.7	4732965.0	20.0
					Corner 4	33	-49.3	702827.7	4732957.0	12.0
13	6.71	8.23					
					Corner 1	25	-35.9	702837.1	4732957.0	12.0
					Corner 2	26	-35.9	702837.1	4732966.7	21.7
					Corner 3	28	-38.6	702834.4	4732966.7	21.7
					Corner 4	27	-38.6	702834.4	4732957.0	12.0
14	0.00	6.02					
					Corner 1	15	-32.3	702841	4732943	0.0
					Corner 2	14	-32.3	702841	4732954.5	9.5
					Corner 3	54	-60.0	702813.0	4732954.5	9.5
					Corner 4	54	-60.0	702813.0	4732943	0.0
15	0.00	6.02					
					Corner 1	54	-60.0	702813.0	4732943	0.0
					Corner 2	46	-60.0	702813.0	4732962.4	17.4
					Corner 3	56	-86.8	702785	4732962.4	17.4
					Corner 4	55	-86.8	702785	4732943	0.0
16	0.00	9.45					
					Corner 1	34	-49.3	702823.3	4732954.5	9.5
					Corner 2	36	-49.3	702823.3	4732971.0	26.0
					Corner 3	37	-60.0	702813.0	4732971.0	26.0
					Corner 4	38	-60.0	702813.0	4732954.5	9.5

Corners CCW from SE

Building	Base (m)	W	N	Roof (m)	Corner	E	N
17	9.45	10.67					
					Corner 1	39	-49.3	702823.3	4732966.4	21.4
					Corner 2	36	-49.3	702823.3	4732971.0	26.0
					Corner 3	40	-56.4	702816.6	4732971.0	26.0
					Corner 4	41	-56.4	702816.6	4732966.4	21.4
18	0.00	9.45					
					Corner 1	36	-49.3	702823.3	4732971.0	26.0
					Corner 2	42	-49.7	702823.3	4732986.0	31.3
					Corner 3	45	-60.0	702813.0	4732983.8	39.3
					Corner 4	37	-60.0	702813.0	4732971.0	26.0
19	0.00	5.79					
					Corner 1	50	-62.6	702810.4	4732977.3	32.3
					Corner 2	51	-62.6	702810.4	4732983.5	39.0
					Corner 3	52	-76.9	702796.1	4732981.7	36.7
					Corner 4	53	-76.9	702796.1	4732977.3	32.3
20	0.00	10.67					
					Corner 1	48	-60.0	702813.0	4732962.4	17.4
					Corner 2	47	-60.0	702813.0	4732977.3	32.3
					Corner 3	53	-76.9	702796.1	4732977.3	32.3
					Corner 4	49	-76.9	702796.1	4732960	17.4
21	0.00	8.84					
					Corner 1	49	-76.9	702796.1	4732960	17.4
					Corner 2	52	-76.9	702796.1	4732981.7	36.7
					Corner 3	57	-97.4	702775.6	4732976.2	31.2
					Corner 4	58	-97.4	702775.6	4732958	17.4
22	0.00	4.88					
					Corner 1	58	-97.4	702775.6	4732958	31.2
					Corner 2	57	-97.4	702775.6	4732976.2	17.4
					Corner 3	59	-106.8	702764	4732970	29.6
					Corner 4	60	-106.8	702764	4732957	17.4
23 NE Bldg				4.88	Roof (m)		
					Corner 1		702955	4733000	svy1024
					Corner 2		702933	4733037	svy1023
					Corner 3		702951	4733037	svy1022
					Corner 4		702952	4732999	svy1025
24	0.00	10.36					
					Corner 1	71	-63.5	702809	4732986.0	43.4
					Corner 2	72	-63.5	702809	4733011	70.0
					Corner 3	73	-117.4	702755	4733009	70.0
					Corner 4	74	-117.4	702756	4732975	33.0

Corners CCW from SE

Building	Base (m)	W	N	Roof (m)	Corner	E	N
25	10.36	14.33					
					Corner 1	75	-68.7	702804.3	4732996.9	51.9
					Corner 2	76	-68.7	702804.3	4733001.2	77.4
					Corner 3	77	-82.4	702790.6	4733001.2	77.4
					Corner 4	78	-82.4	702790.6	4732996.9	51.9
26	0.00	6.71					
					Corner 1	67	-3.2	702867	4733016	73.7
					Corner 2	68	-3.2	702867	4733034	91.6
					Corner 3	69	-82.0	702777	4733031	91.6
					Corner 4	70	-82.0	702778	4733013	73.7
27	0.00	11.89					
					Corner 1	61	0.0	702871	4733002	60.0
					Corner 2	62	0.0	702871	4733011	68.7
					Corner 3	66	-21.3	702851.7	4733011	68.7
					Corner 4	65	-21.3	702851.7	4733002	60.0
28	0.00	11.89					
					Corner 1	65	-21.3	702851.7	4733002	60.0
					Corner 2	66	-21.3	702851.7	4733011	68.7
					Corner 3	63	-30.0	702843.0	4733011	68.7
					Corner 4	64	-30.0	702843.0	4733002	60.0
29 EE Bldg				4.88	Roof (m)		
					Corner 1		702995	4732967	svy1038
					Corner 2		702995	4732976	svy1037
					Corner 3		702985	4732976	svy1036
					Corner 4		702985	4732967	svy1039
30 E Bldg				4.88	Roof (m)		
					Corner 1		702985	4732956	svy1040
					Corner 2		702984	4732994	svy1035
					Corner 3		702899	4732992	svy1034
					Corner 4		702900	4732953	svy1033
31 S of E Bldg				4.88	Roof (m)		
					Corner 1		702948	4732949	1042
					Corner 2		702948	4732955	1041
					Corner 3		702910	4732954	1044
					Corner 4		702910	4732948	1043
32 (Off Prop) NW of E				9.5	Roof (m)		
					Corner 1		[illegible]	[illegible]	xx1
					Corner 2		702913	[illegible]	xx2
					Corner 3		702899	[illegible]	xx3
					Corner 4		702899	[illegible]	xx4

7.4.9 Meteorological Data Used in Modeling Simulation

Consistent with the approved Modeling Protocol document, the modeling team utilized the "2006-2010 TWF" AERMET file provided by DEQ for the facility modeling in this PTC application.

No on-site, quality controlled, meteorological data are currently available in Jerome that can be utilized as credible model input data for AERMOD. The "2006-2010 TWF" AERMET file was selected because it provides the most realistic simulation of representative dispersion meteorology in Jerome, given available options. *Jerome city area and Twin Falls airport are 8 miles apart. Although the Snake River canyon separates them, both Jerome and Twin Falls airport are on flat terrain.*

The "2006-2010 TWF" AERMET file consists of surface wind data (wind speed, wind direction, temperature) from the Twin Falls Airport coupled with upper air (mixing depth) data derived from Boise Airport RAWIN soundings. Other, less accurate data that have been used in the past by others are 1) Pocatello Airport (PIH) NWS surface data coupled with Boise Airport (BOI) NWS upper-air data and 2) Minidoka NOAA-ARL surface data coupled with Boise Airport (BOI) NWS upper-air data.

7.4.10 Topographic and Civil Setting

The Commercial Creamery facility is seen in its topographic and civil setting in **Figure 7.4.10-1**.

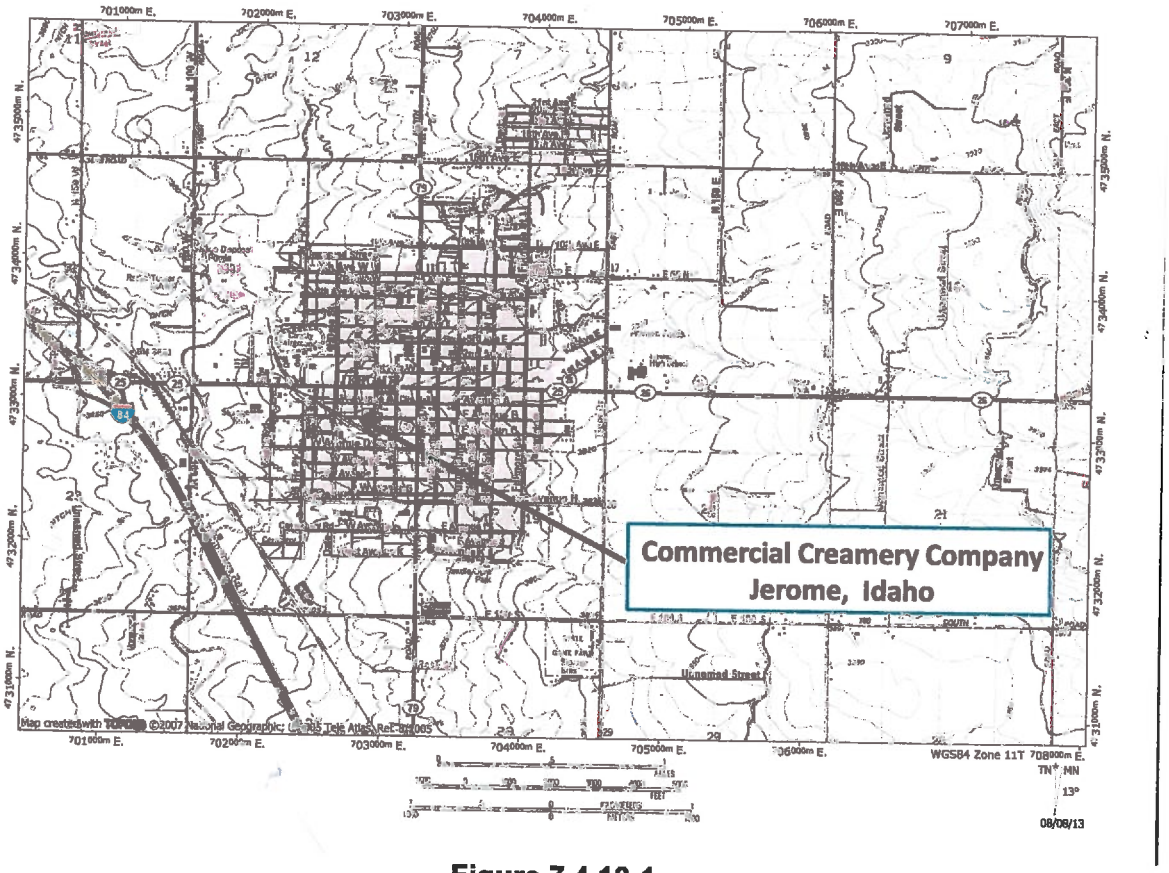


Figure 7.4.10-1
Commercial Creamery Location

The Commercial Creamery facility is located within NE ¼ of Section 24 of Township 8 South, Range 16 East, Boise Meridian, in Block 94, Jerome Townsite, Jerome County, Idaho. Jerome has a population of approximately 11,000 (2010 census). The site is located at N42 deg 43min 19.83857 sec, W114 deg 31min 25.76955sec. Interstate highway 84 runs SE to NW approximately 1 mile SW of the site. Surrounding land is flat, with a uniform, less-than 2 degree slope E to W. A drainage ditch flows N within 1 mile W of the facility. Flat terrain continues to a radius of 5 km from the site..

Lands surrounding the facility are covered with small town housing and light commercial development, surrounded by production farmland and pasture land.

7.4.11 Facility Plot Plan, Property Boundaries, and Ambient Air

Facility Plot Plan The scaled facility plot plan provided as **Figure 7.4.11-1** shows the Commercial Creamery properties, with property boundaries, building corners and heights, and locations of modeled sources. This area is shown in its context in **Figure 7.4.11-2**, which is an

annotated aerial photograph of the facility, with separate facilities and property boundaries identified.

Property Boundaries A GPS survey was conducted to ground-truth property corners and the corners of facility buildings. The results of that survey showing property lines and corners is provided as **Figure 7.4.11-3**

Latitude / longitude data from the survey locations was transformed to UTM coordinates using ***www. earthpoint.us*** software. Source UTM locations were derived from survey coordinates and plant drawings, and validated with aerial photographs. The UTM coordinates for the property boundaries and for each of the buildings, are provided in **Table 7.4.11-1** (two pages). Using the same methodology of survey and locate on drawings, transform, and check on aerial photos, the UTM coordinates for every source on the facility were logged on the individual source summary sheets found in **Appendix B**. The UTM coordinates for primary sources used in the modeling are :

Source	UTM mE	UTM mN
B1	702793.2	4732981.7
B2	702789.6	4732981.7
D1	702844.4	4732979.5
D2	702822.1	4732956.1
D3	702818.5	4732976.2
P1, P2	702808.4	4733000.1
NR3A, B	702856.3	4732975.7
NR5A	702858.1	4732973.4
NR5B	702801.6	4733007.1

Ambient Air This project is somewhat unique in that the property lines, which constitute the ambient air boundary, are co-located with the outer building walls of the facility for 50% of the walls. An over-street steam-pipe-rack connects the east and west lot buildings.

In those cases where the outer building walls (e.g., facing sidewalks and streets) are coincident with the property boundary, ambient air begins at the building wall. The Modeling Plan Approval letter (Schilling, 2013) makes reference to zero offset for the boundary receptors in those locations.

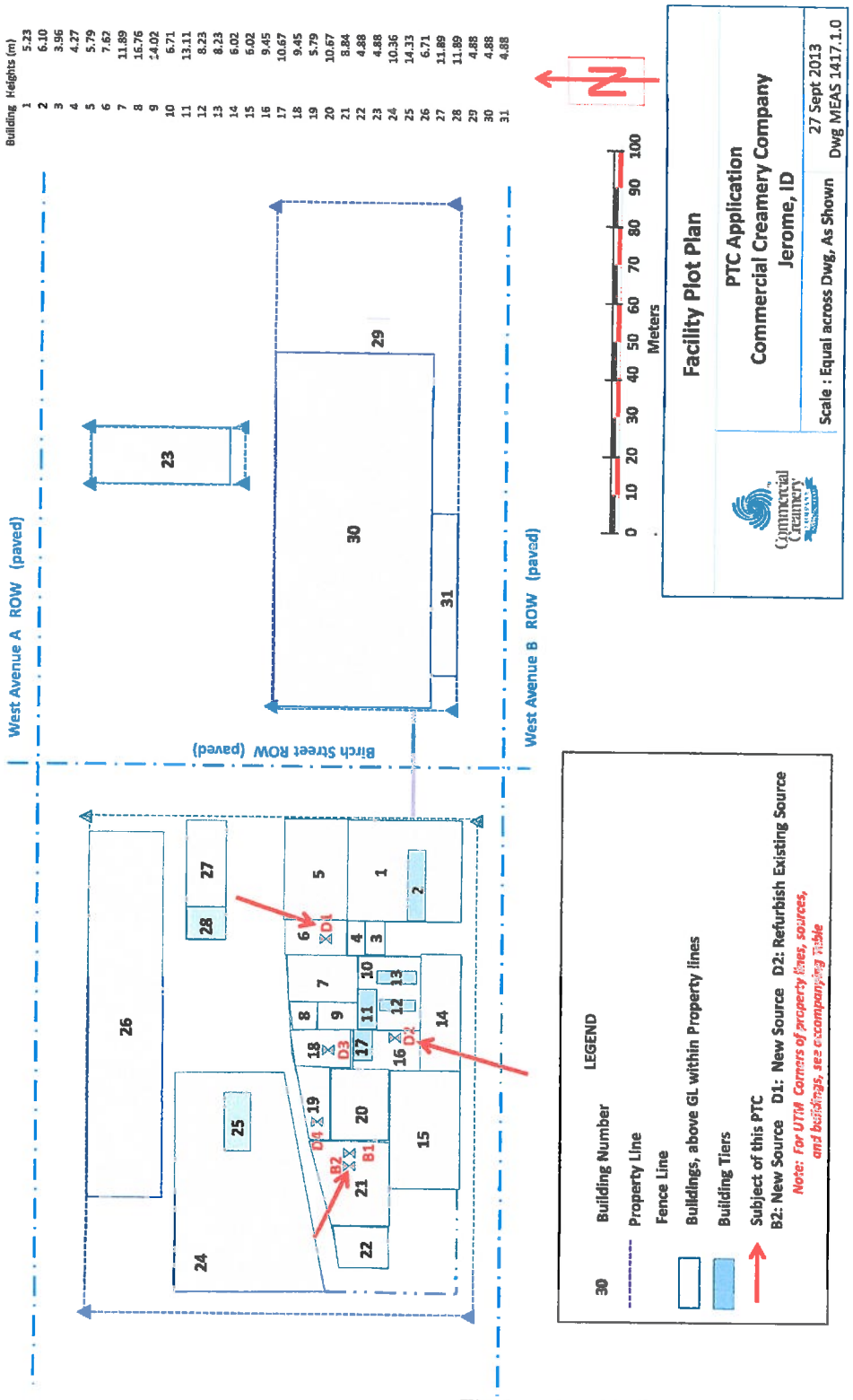


Figure 7.4.11-1
Facility Plot Plan

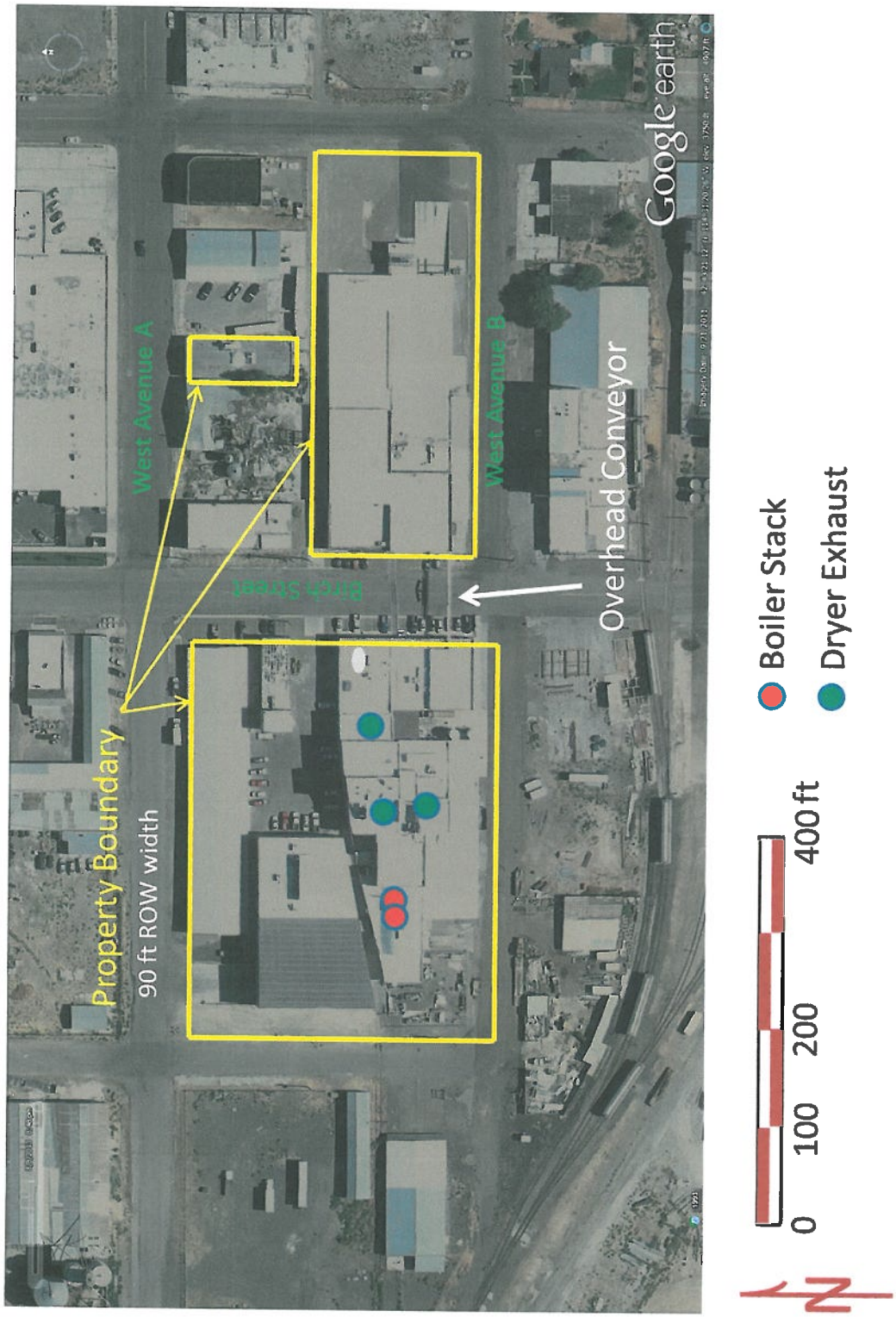


Figure 7.4.11-2
Facility Property Boundaries

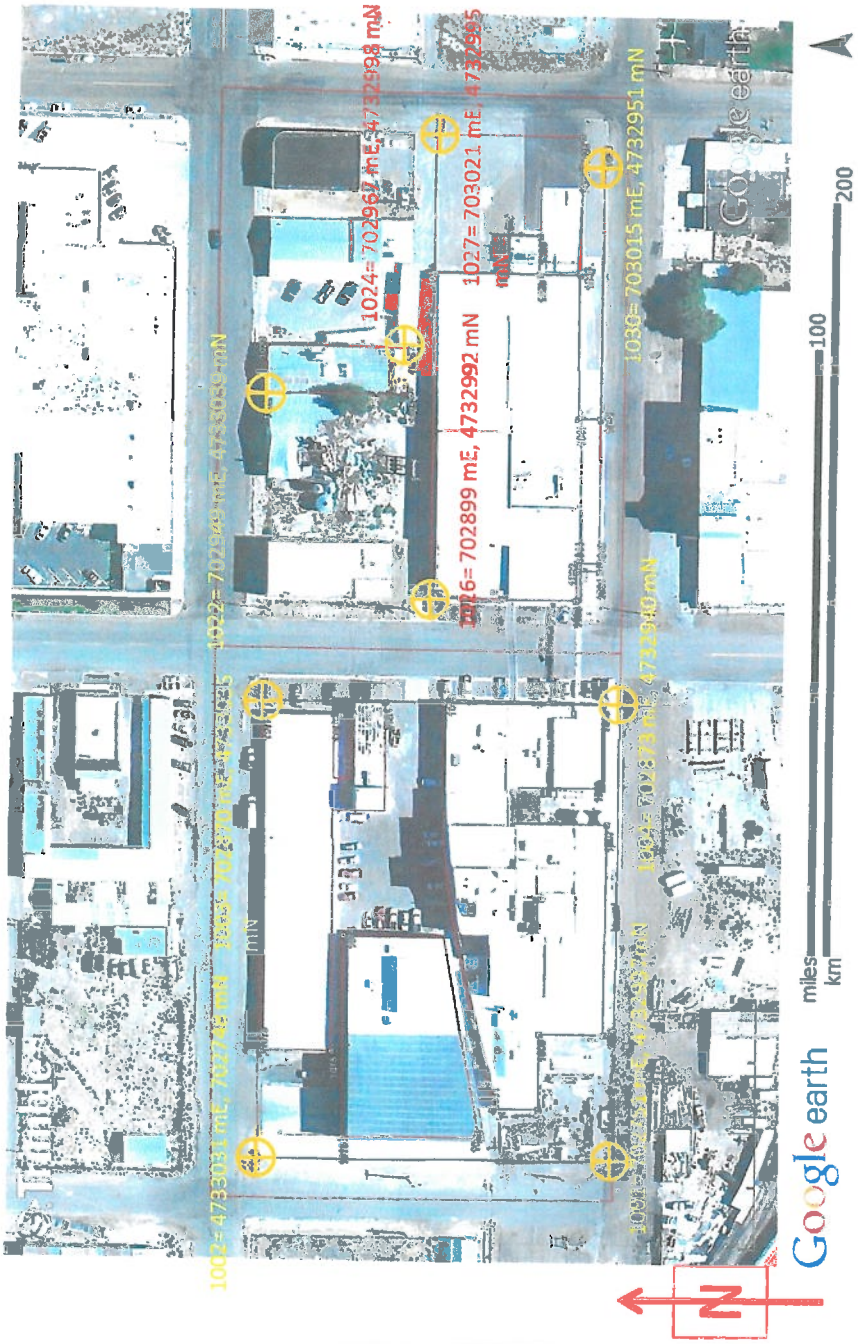


Figure 7.4.11-3
Surveyed Property Lines to Establish Ambient Air

Corners CCW from SE

Building 1				
Base (m)	0.00	Building 1	5.23	Roof (m)
		mE	mN	
Corner 1		702873.0	4732945.0	
Corner 2		702873.0	4732972.3	
Corner 3		702850	4732972.3	
Corner 4		702850	4732944	

Building 2				
Base (m)	5.23	Building 2	6.10	Roof (m)
		mE	mN	
Corner 1		702867.6	4732954.5	
Corner 2		702867.6	4732958.3	
Corner 3		702850	4732958.3	
Corner 4		702850	4732954.5	

Building 3				
Base (m)	0.00	Building 3	3.96	Roof (m)
		mE	mN	
Corner 1		702850	4732963.5	
Corner 2		702850	4732968.5	
Corner 3		702841	4732968.5	
Corner 4		702841	4732963.5	

Building 4				
Base (m)	0.00	Building 4	4.27	Roof (m)
		mE	mN	
Corner 1		702850	4732968.5	
Corner 2		702850	4732972.3	
Corner 3		702841	4732972.3	
Corner 4		702841	4732968.5	

Building 5				
Base (m)	0.00	Building 5	5.79	Roof (m)
		mE	mN	
Corner 1		702873.0	4732972.3	
Corner 2		702873.0	4732987	
Corner 3		702848.9	4732987	
Corner 4		702848.9	4732972.3	

Building 6				
Base (m)	0.00	Building 6	7.62	Roof (m)
		mE	mN	
Corner 1		702848.9	4732972.3	
Corner 2		702848.9	4732987	
Corner 3		702841	4732987	
Corner 4		702841	4732972.3	

Building 7				
Base (m)	0.00	Building 7	11.89	Roof (m)
		mE	mN	
Corner 1		702841	4732971.0	
Corner 2		702841	4732987	
Corner 3		702830.1	4732987	
Corner 4		702830.1	4732971.0	

Building 8				
Base (m)	0.00	Building 8	16.76	Roof (m)
		mE	mN	
Corner 1		702830.1	4732979.5	
Corner 2		702830.1	4732987	
Corner 3		702823.3	4732986	
Corner 4		702823.3	4732979.5	

Corners CCW from SE

Building 9				
Base (m)	0.00	Building 9	14.02	Roof (m)
		mE	mN	
Corner 1		702830.1	4732971.0	
Corner 2		702830.1	4732979.5	
Corner 3		702823.3	4732979.5	
Corner 4		702823.3	4732971.0	

Building 10				
Base (m)	0.00	Building 10	6.71	Roof (m)
		mE	mN	
Corner 1		702841	4732954.5	
Corner 2		702841	4732971.0	
Corner 3		702823.3	4732971.0	
Corner 4		702823.3	4732954.5	

Building 11				
Base (m)	6.71	Building 11	13.11	Roof (m)
		mE	mN	
Corner 1		702833.0	4732965.0	
Corner 2		702833.0	4732971.0	
Corner 3		702823.3	4732971.0	
Corner 4		702823.3	4732965.0	

Building 12				
Base (m)	6.71	Building 12	8.23	Roof (m)
		mE	mN	
Corner 1		702829.9	4732957.0	
Corner 2		702829.9	4732965.0	
Corner 3		702827.7	4732965.0	
Corner 4		702827.7	4732957.0	

Building 13				
Base (m)	6.71	Building 13	8.23	Roof (m)
		mE	mN	
Corner 1		702837.1	4732957.0	
Corner 2		702837.1	4732966.7	
Corner 3		702834.4	4732966.7	
Corner 4		702834.4	4732957.0	

Building 14				
Base (m)	0.00	Building 14	6.02	Roof (m)
		mE	mN	
Corner 1		702841	4732943	
Corner 2		702841	4732954.5	
Corner 3		702813.0	4732954.5	
Corner 4		702813.0	4732943	

Building 15				
Base (m)	0.00	Building 15	6.02	Roof (m)
		mE	mN	
Corner 1		702813.0	4732943	
Corner 2		702813.0	4732962.4	
Corner 3		702785	4732958	
Corner 4		702785	4732941	

Building 16				
Base (m)	0.00	Building 16	9.45	Roof (m)
		mE	mN	
Corner 1		702823.3	4732954.5	
Corner 2		702823.3	4732971.0	
Corner 3		702813.0	4732971.0	
Corner 4		702813.0	4732954.5	

Table 7.4.11-1 (p1 of 2)
Building Coordinates

Building names are as shown in Figure 7.4.11-1: Facility Plot Plan, and in modeling BPIP input files

Corners CCW from SE

Building 17				
Base (m)	9.45	Building 17	10.67	Roof (m)
		mE	mN	
Corner 1		702823.3	4732966.4	
Corner 2		702823.3	4732971.0	
Corner 3		702816.6	4732971.0	
Corner 4		702816.6	4732966.4	

Building 18				
Base (m)	0.00	Building 18	9.45	Roof (m)
		mE	mN	
Corner 1		702823.3	4732971.0	
Corner 2		702823.3	4732986.0	
Corner 3		702813.0	4732983.9	
Corner 4		702813.0	4732971.0	

Building 19				
Base (m)	0.00	Building 19	5.79	Roof (m)
		mE	mN	
Corner 1		702810.4	4732977.3	
Corner 2		702810.4	4732983.5	
Corner 3		702796.1	4732981.7	
Corner 4		702796.1	4732977.3	

Building 20				
Base (m)	0.00	Building 20	10.67	Roof (m)
		mE	mN	
Corner 1		702813.0	4732962.4	
Corner 2		702813.0	4732977.3	
Corner 3		702796.1	4732977.3	
Corner 4		702796.1	4732960	

Building 21				
Base (m)	0.00	Building 21	8.84	Roof (m)
		mE	mN	
Corner 1		702796.1	4732960	
Corner 2		702796.1	4732981.7	
Corner 3		702775.6	4732976.2	
Corner 4		702775.6	4732958	

Building 22				
Base (m)	0.00	Building 22	4.88	Roof (m)
		mE	mN	
Corner 1		702775.6	4732958	
Corner 2		702775.6	4732976.2	
Corner 3		702764	4732970	
Corner 4		702764	4732957	

Building 23 NE Bldg				
Base (m)		Building 23 NE Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702965	4733000	
Corner 2		702963	4733037	
Corner 3		702951	4733037	
Corner 4		702952	4732999	

Building 24				
Base (m)	0.00	Building 24	10.36	Roof (m)
		mE	mN	
Corner 1		702809	4732986.0	
Corner 2		702809	4733011	
Corner 3		702755	4733009	
Corner 4		702756	4732975	

Corners CCW from SE

Building 25				
Base (m)	10.36	Building 25	14.33	Roof (m)
		mE	mN	
Corner 1		702804.3	4732996.9	
Corner 2		702804.3	4733001.2	
Corner 3		702790.6	4733001.2	
Corner 4		702790.6	4732996.9	

Building 26				
Base (m)	0.00	Building 26	6.71	Roof (m)
		mE	mN	
Corner 1		702867	4733016	
Corner 2		702867	4733034	
Corner 3		702777	4733031	
Corner 4		702778	4733013	

Building 27				
Base (m)	0.00	Building 27	11.89	Roof (m)
		mE	mN	
Corner 1		702871	4733002	
Corner 2		702871	4733011	
Corner 3		702851.7	4733011	
Corner 4		702851.7	4733002	

Building 28				
Base (m)	0.00	Building 28	11.89	Roof (m)
		mE	mN	
Corner 1		702851.7	4733002	
Corner 2		702851.7	4733011	
Corner 3		702843.0	4733011	
Corner 4		702843.0	4733002	

Building 29 EE Bldg				
Base (m)		Building 29 EE Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702995	4732967	
Corner 2		702995	4732976	
Corner 3		702985	4732976	
Corner 4		702985	4732967	

Building 30 E Bldg				
Base (m)		Building 30 E Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702986	4732956	
Corner 2		702984	4732994	
Corner 3		702899	4732992	
Corner 4		702900	4732953	

Building 31 S of E Bldg				
Base (m)		Building 31 S of E Bldg	4.88	Roof (m)
		mE	mN	
Corner 1		702948	4732949	
Corner 2		702948	4732955	
Corner 3		702910	4732954	
Corner 4		702910	4732948	

Table 7.4.11-1 (p2 of 2)
Building Coordinates

Building names are as shown in Figure 4.7.11-1: Facility Plot Plan, and in modeling BPIP input files

The southwestern corner of the western lot consists of a fenced surplus property lot. *All other non-building areas of Commercial Creamery facility are used for active truck loading and maneuvering.* Although the General Public theoretically has unfenced access to those areas, such access is a trespassing violation that could present a personal safety hazard to those individuals. Equipment operators in those areas are deemed to be on official company business, and so do not quality as members of the General Public. For this reason, it is appropriate that the ambient air boundary used in the modeling reflect the surveyed property boundaries without modification.

7.4.12 Identification of Sensitive Receptors

After a review of adjacent housing and commercial development in the Jerome town site, the Applicant has determined that some buildings that qualify as sensitive receptors under IDAPA 58.01.01.007.10 [e.g., elementary and secondary schools, day-care centers, playgrounds, and parks, hospitals, clinics or nursing homes] are located in the area NE through SE east of the facility. School and hospital facilities that qualify as sensitive receptors are shown in **Table 6.3-1.**

SENSITIVE RECEPTORS -- JEROME IDAHO Commercial Creamery Company Sources	Distance	Bearing from from Facility	UTM mE	UTM mN	Latitude	Longitude	PM-10 24h Maximums % of Standard
St. Luke's Hospital	800 m	NNE	702936	4733852	042 43.822N	114 31.267W	0.008
Jerome Middle School	1250 m	N	702462	4734266	042 44.053N	114 31.605W	0.003
Jefferson Elementary School	1350 m	NE	703946	4733751	042 43.751N	114 30.529W	0.003
Horizon Elementary School	1950 m	NE	704453	4734223	042 43.998N	114 30.148W	0.002
Heritage Academy	500 m	SE	703214	4732660	042 43.174N	114 31.089W	0.007
Liberty Christian Academy	1600 m	SE	704305	4732426	042 43.030N	114 30.295W	0.001
Jerome High School	1650 m	ENE	704680	4733322	042 43.508N	114 30.001W	0.001
Canyonside Christian School	900 m	SE	703948	4731583	042 42.581N	114 30.575W	0.001
Summit Elementary School	1150 m	N	702844	4734170	042 43.995N	114 31.327W	0.006
North Valley Christian School	1000 m	N	703134	4734058	042 43.930N	114 31.117W	0.007
South Central Head Start	500 m	NE	703266	4733312	042 43.525N	114 31.037W	0.011
Jerome Senior Center	650 m	NNE	703148	4733772	042 43.775N	114 31.113W	0.009

Table 7.4.12-1
Sensitive Receptors

All identified Sensitive Receptors are shown to be beyond the distance at which maximum 24-hr PM-2.5 is at DEQ-published background levels, as shown in **Figure 6.3-1. All sensitive receptors are less that 1/100 of 1% of the NAAQS for PM-2.5 (24-hr) which is designed to be fully protective of health effects.**

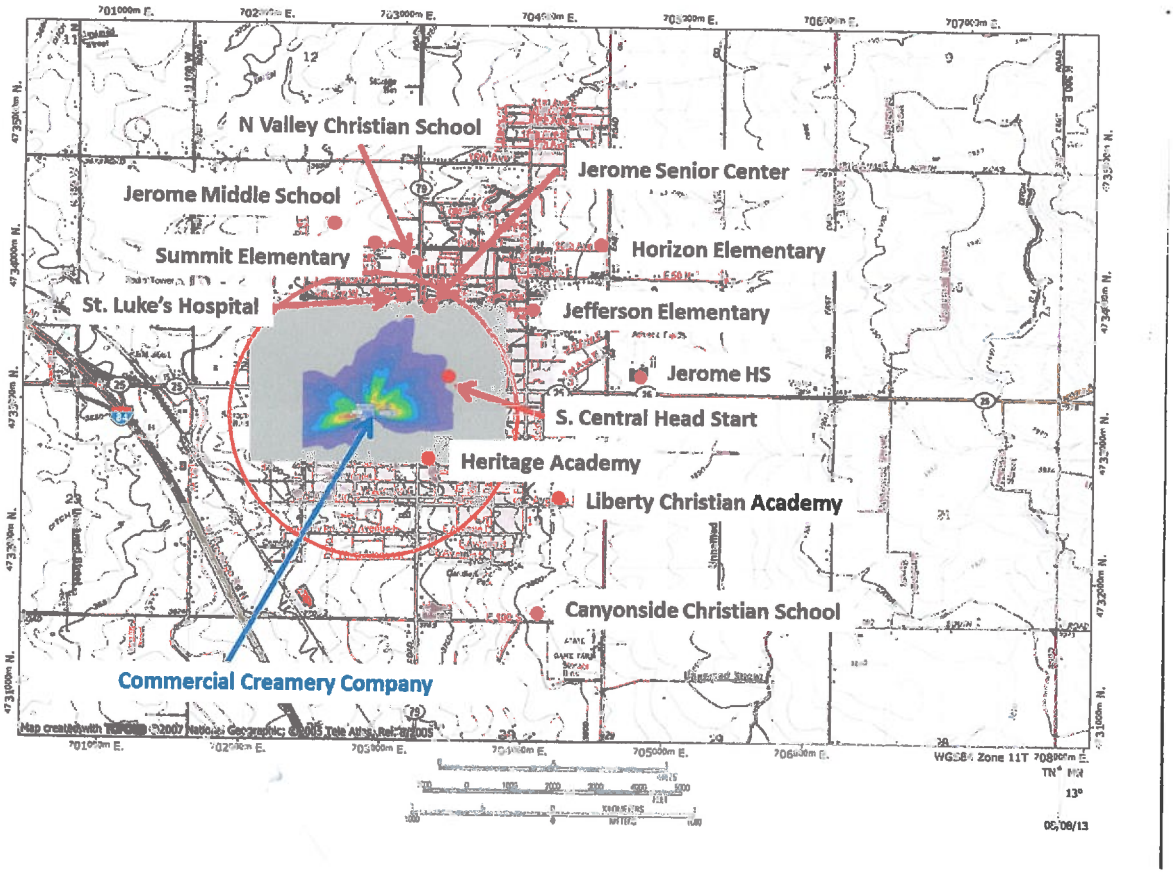


Figure 7.4.12-1
Sensitive Receptors near Commercial Creamery Company facility
1 km radius reference circle
Maximum PM-2.5 24-hr Impact area shown for reference
Annual Background = 7.2 ug/m3
Outer (violet) Isopleth = 7.34 ug/m3 24-hr maximum

7.4.13 Identification of Adjacent Sources

In the review and approval of the Applicant's Modeling Plan, DEQ found that the impacts of adjacent potentially-co-contributing sources were encompassed in the recently-established DEQ background concentrations. This position is consistent with the Applicant's qualitative assessment of those potential impacts, which is provided here.

Three sources of PM-10/PM-2.5 and NOx air quality emissions (which are the pollutants of concern for the pending Commercial Creamery PTC) have been identified within a 2.5 km radius of the Commercial Creamery site. The closest industrial sources emitting PM-10/ PM-2.5 are the Darigold processing plant, located approximately 1 km SSE (generally cross-wind) of the site; the Jerome Cheese Company plant, located approximately 1.6 km SSW (generally up-wind) of the site, and the Idaho Milk Products plant, located approximately 2.4 km SW (generally cross-wind) of the site.

The Applicant assumes that DEQ modeled the emissions from these facilities when they established the site-specific background concentrations for NOx, PM-10 and PM-2.5 (DEQ, 2013). This section addresses whether there is an obvious need to add to (or subtract from) the DEQ-established background to account for local impacts of large neighboring sources.

PM-10 and PM-2.5 Backgrounds

It is possible to make a qualitative assessment of the potential impact of these neighboring sources using Commercial Creamery's modeling. We observe that:

- **Figure 7.4.13-1** shows the spatial relationship between Commercial Creamery's impact area and its neighboring sources. The isopleth patterns shown are for annual PM-2.5 impact (2006). One can see that Jerome Cheese is (based on an all-stability windrose) upwind of Commercial Creamery and that Darigold and Idaho Milk Products are cross-wind, based on the annual modeled area of impact.
- The peak-to-tail ratio in the down-wind direction along the plotted Commercial Creamery annual plume is about 5.8 (over approximately 1 km). One could expect similar dispersion in the second km of plume travel, since travel times are short and meteorological conditions are not prone to change within that travel time. We could conclude that if Jerome Cheese PM-2.5 emissions were equal to those of Commercial Creamery, the annual impact of Jerome Cheese at the impact area of Commercial Creamery would be less than 7.74 ug/m3, which is the modeled edge of the Commercial Creamery annual plume.

We conclude from the above that the impact of other air emissions sources that are likely to affect the Commercial Creamery impact area is within the scope of DEQ's recently-established background levels for PM-10 and PM-2.5, and that no additional impact needs to be added to account for those nearby sources.

7.4.14 Justification of "Rural" Dispersion Parameters

Aerial photography that complements **Figure 7.4.10-1** supports the evaluation of land use that was made in accordance with the Land Use Classification Procedure of Appendix E of the *Air Quality Modeling Guideline* ID-AQ-011 (July, 2011) to determine the correct dispersion coefficient for use in the modeling. Within the 3-km (2 mile) radius of the landfill, no land use exists within the following categories:

- I1: Heavy Industrial
- I2: Light/ Moderate Industrial
- C1: Commercial
- R2: Compact Residential, and
- R3 Compact Residential

Because the summed area with land use in these types is less than 50% of the lands in the 3 km radius of the landfill, "rural" dispersion coefficients are appropriate for use in the modeling.

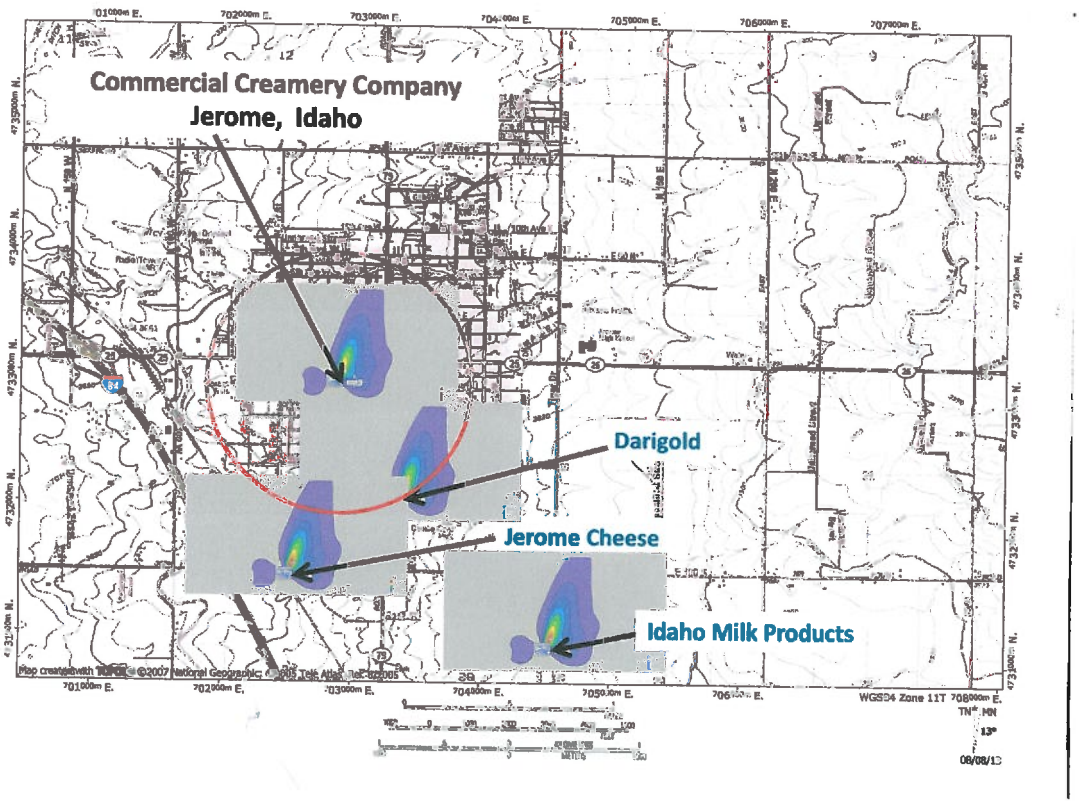


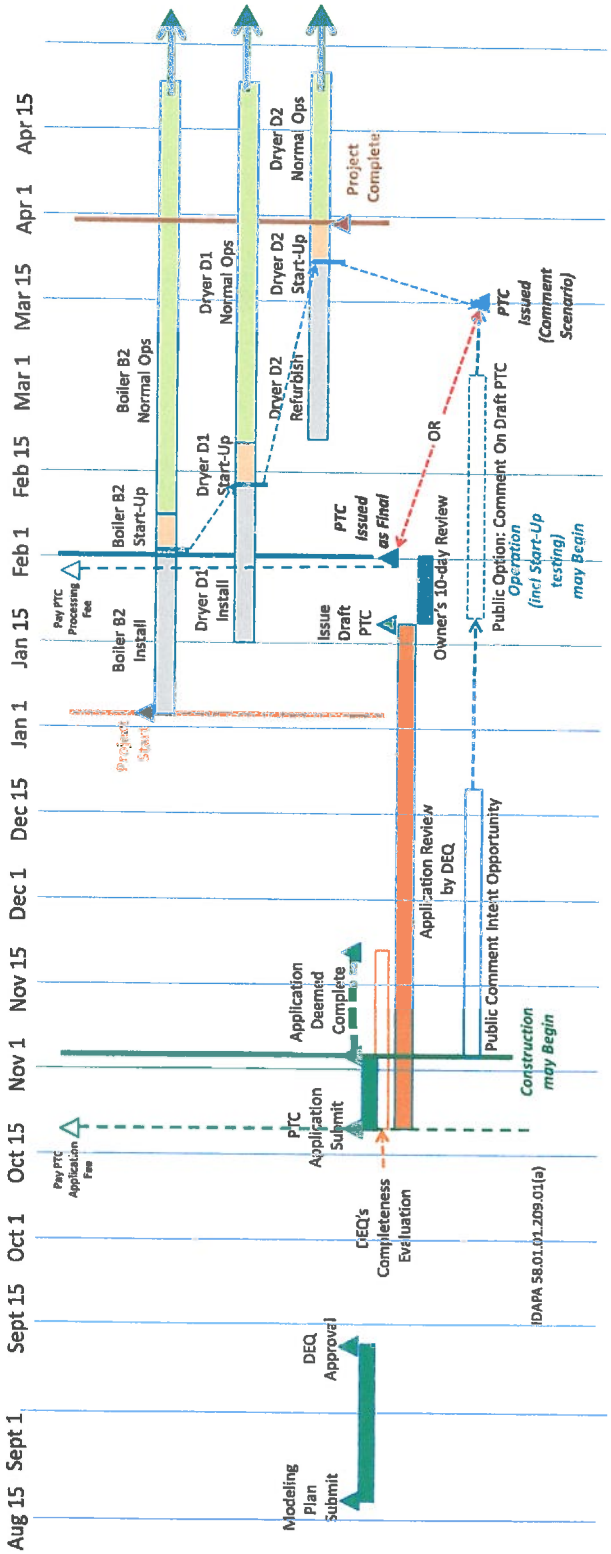
Figure 7.4.13-1

Potential contributing sources near Commercial Creamery Company facility
1 km radius reference circle
Maximum PM-2.5 24-hr Impact area shown for reference
DEQ-established Annual Background = 7.2 ug/m3
Outer (violet) Isopleth of Commercial Creamery Plume = 7.34 ug/m3 24-hr maximum

7.4.15 Commercial Creamery Modeling area is "Attainment or Unclassified"

The Commercial Creamery facility is located at 218 South Birch Street, Jerome, Idaho. Jerome is located in AQCR 63 and UTM Zone 11. The area is designated as attainment or unclassifiable for PM-10, PM-2.5, CO, NO2, SO2 and Ozone.

7.5 Schedule for Construction



7.6 Demonstration of Compliance with IDAPA 58.01.01.123. CERTIFICATION OF DOCUMENTS

Two certifications are provided in Section 0.3 of this *Application for Pre-Permit Construction Approval* for Commercial Creamery Company's, Jerome, Idaho Plant :

- Certified Proof of Pre-Permit Construction Eligibility
- Certification of Responsible Official

7.7 Demonstration of Compliance with IDAPA 58.01.01.210. DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS

No Major Sources Total facility-wide emissions of the largest criteria pollutant, PM-10, will increase from 27.7 to 44.7 tpy as a result of the new sources. Total TAPs emissions are less than 25 tpy and less than 10 tpy for any individual HAP. The facility is not "major" under IDAPA rules, and the facility will not be subject to PSD rules.

The Applicant has completed DEQ's TAP Preconstruction Compliance Application Completeness Checklist and submitted it in **Section 1, Checklist C-3**, with the following results:

Part I, Para 1: "Toxic air pollutants (TAPs) are regulated in accordance with Rules Section 210 only from emission units constructed or modified on or after July 1, 1995."

Response: Only proposed Boiler B2 and Dryer D1 will be constructed after July 1, 1995. All other sources at Commercial Creamery's facility commenced operations prior to that date.

Part I, Para 2:: Will the new or modified source result in new or increased potential emissions of TAPs?

Response: Yes (... so, going to Part II)

Part I1 A, Para 1
Calculate the uncontrolled emissions (Rules Section 210.05) of each TAP from new emissions units. Uncontrolled emission rates are emissions at maximum capacity without the effect of physical or operational limitations. See Quantification of Emission Rates (Rules Section 210.02).

Show calculations and state all assumptions.

- **Section 7.4.5** of this Application presents a statement of all assumptions dealing with the development of Emissions Inventories and the application of those data in the modeling analysis.These assumptions apply to the data presented in **Table 7.7-1 and Table 7.7-2.**

- The calculations used in the development of all emissions inventories, including the data presented in **Table 7.7-1 and Table 7.7-2,** are shown using the Emissions Work-Up spreadsheets for each source that are provided in **Appendix B**. Separate tabs on the spreadsheet pertain to Criteria Pollutants and to TAPs. An electronic copy of those spreadsheets is provided on the data CD that accompanies this Application for the reviewer's use in validation any calculation. An illustration of how to use the spreadsheet to calculate the emissions is provided in **Section 7.4.5** of this Application

Response:
For Proposed Boiler B2 : See **Table 7.7-1,** which follows

For Proposed Dryer D1 : See **Table 7.7-2,** which follows

Part I1 A, Para 4
Aggregate the uncontrolled emissions for each TAP from all new emissions units with the increase in emissions from all modified emissions units.

Response:
Aggregated emissions from new sources are shown in **Table 7.7-3.**
Note: No increase in emissions for the Refurbished Dryer D2 is projected.

Part I1 A, Para 5

If the aggregated emissions increase for each TAP from the new and modified units, as determined above, are less than or equal to the respective TAP screening emissions level (EL) then preconstruction compliance with toxic standards has been demonstrated and no further analysis is required. Submit a table comparing the uncontrolled emissions rate to the applicable EL.

Response:
Table 7.7-3, the submitted table, shows that no further analysis is required for any pollutants except Arsenic, Cadmium, Formaldehyde and Nickel, which require modeling.

Part I1 B, Para 1
Determine the uncontrolled emissions of each TAP from new emission units and the increase in emissions from all modified emissions units as described above in compliance Method A.

Show calculations and state all assumptions.

- **Section 7.4.5** of this Application presents a statement of all assumptions dealing with the development of Emissions Inventories and the application of those data in the modeling analysis.These assumptions apply to the data presented in **Table 7.7-3.**

- The calculations used in the development of all emissions inventories, including the data presented in **Table 7.7-3,** are shown using the Emissions Work-Up spreadsheets for each source that are provided in **Appendix B**. Separate tabs on the spreadsheet pertain to Criteria Pollutants and to TAPs. An electronic copy of those spreadsheets is provided on the data CD that accompanies this Application for the reviewer's use in validation any calculation. An illustration of how to use the spreadsheet to calculate the emissions is provided in **Section 7.4.5** of this Application

Response:
Uncontrolled emissions of each TAP from new emission units B2 and D1 are provided in **Table 7.7-3.**

Part I1 B, Para 2
Model the uncontrolled emissions of each TAP from new emissions units and the increase in emissions from all modified emissions units.

Response:

As, Cd, CH2O, and Ni (annual basis in g/sec) emitted from Sources B2 and D1 were modeled in separate modeling runs, incorporating all (and identical) modeling set-up parameters for sources, pollutant-specific source strength excepted.

Part I1 B, Para 3

If the uncontrolled ambient concentration is less than or equal to the acceptable ambient concentration increment listed in Rules Section 585 and 586 no further procedures for demonstrating preconstruction compliance will be required for that TAP as part of the application process. Submit a table comparing uncontrolled ambient concentrations to the applicable acceptable ambient concentration.

Response:

The uncontrolled ambient concentrations for As, Cd, CH2O, and Ni are provided in **Table 7.7-4.** Projected impacts are 0.7% to 10% of the AACC, demonstrating pre-construction compliance for all applicable TAPs for the applicable sources B2 and D1.

Source B2: Gas-Fired BOILER TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics

Burner	York Shipley
Model	560-SPHV-150-N2 (125 hp, 1988)
Input Heat Capacity (BTU/hr)	6,100,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Product Consumption (scf/hr)	5,905

Process Characteristics

Actual Hours of Operation (hr/yr)	8,760

Stack Data — Proposed Source

Stack Height (ft)	13.716 m
Stack Diameter (ft)	0.3048 m
Exit Gas Temperature (°F)	215
Exit Gas Moisture Content	
Wet Actual Flow Rate (wacf/min)	
Wet Standard Flow Rate (wscf/min)	
Dry Standard Flow Rate (dscf/min)	2329
Stack Velocity (m/s)	15.1
Fd (dscf stack gas/BTU)	
Fw (wscf stack gas/BTU)	

Site Information

UTM North	UTM East
m	m
4732981.7	702789.60

Jerome Barometric Pressure (mm Hg) 663.93

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Toxic Air Pollutants – Non-Carcinogenic						
Barium	4.40E-03	lb/10^6 scf	2.60E-05	3.27E-06	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	8.27E-06	1.04E-06	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	4.96E-07	6.25E-08	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	5.02E-06	6.32E-07	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	FNA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	7.09E-06	8.93E-07	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	FNA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	1.65E-08	2.08E-09	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.06E-02	1.34E-03	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	2.24E-06	2.83E-07	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	1.54E-06	1.93E-07	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	6.50E-06	8.18E-07	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	3.60E-06	4.54E-07	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	1.54E-02	1.93E-03	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	FNA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	1.42E-07	1.79E-08	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	2.01E-05	2.53E-06	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	1.36E-05	1.71E-06	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	FNA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	1.71E-04	2.16E-05	6.67E-01	no
Toxic Air Pollutants – Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.18E-06	1.49E-07	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	1.24E-05	1.56E-06	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	7.09E-08	8.93E-09	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	7.09E-09	8.93E-10	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	FNA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	6.50E-06	8.18E-07	3.70E-06	yes
Formaldehyde	7.50E-02	lb/10^6 scf	4.43E-04	5.58E-05	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	1.24E-05	1.56E-06	2.70E-05	no

0.115 TOTAL TAPs (tpy)

Notes:
(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".
(b) IDAPA 58.01.01.585 and 586
(c) IDAPA 58.01.01.210.05(b)
* FNA - Factor Not Available

Table 7.7-1
Uncontrolled TAPs from Proposed New Source: Boiler B2

Source D1: Gas-Fired DRYER TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics

Burner	Maxon Corporation
Model	Model NP-LE Airflo Burner
Input Heat Capacity (BTU/hr)	12,000,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Product Consumption (scf/hr)	11,617

Process Characteristics

Max Wet Feedrate (lb/hr)	
Dry Solids in Product	
Max Dry Production Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	8,760

Stack Data		**Proposed Source**
Stack Height (ft)		17.6784 m
Stack Diameter (ft)	3.5	1.0668 m
Exit Gas Temperature (°F)		130
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		41500
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		22
Fd (dscf stack gas/BTU)		
Fw (wscf stack gas/BTU)		

UTM North m	UTM East m
4732979.5	702844.40

Site Information

Jerome Barometric Pressure (mm H 663.93

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Toxic Air Pollutants -- Non-Carcinogenic						
Barium	4.40E-03	lb/10^6 scf	5.11E-05	6.44E-06	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.63E-05	2.05E-06	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	9.76E-07	1.23E-07	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	9.87E-06	1.24E-06	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.39E-05	1.76E-06	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	3.25E-08	4.10E-09	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	2.09E-02	2.63E-03	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	4.41E-06	5.56E-07	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	3.02E-06	3.81E-07	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.28E-05	1.61E-06	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	7.09E-06	8.93E-07	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	3.02E-02	3.81E-03	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	2.79E-07	3.51E-08	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	3.95E-05	4.98E-06	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.67E-05	3.37E-06	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	3.37E-04	4.24E-05	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	2.32E-06	2.93E-07	1.50E-06	yes
Benzene	2.10E-03	lb/10^6 scf	2.44E-05	3.07E-06	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	1.39E-07	1.76E-08	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.39E-08	1.76E-09	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.28E-05	1.61E-06	3.70E-06	yes
Formaldehyde	7.50E-02	lb/10^6 scf	8.71E-04	1.10E-04	5.10E-04	yes
Nickel	2.10E-03	lb/10^6 scf	2.44E-05	3.07E-06	2.70E-05	no

0.226 TOTAL TAPs (tpy)

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Table 7.7-2
Uncontrolled TAPs from Proposed New Source: Dryer D1

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor (a)	Emission Factor Unit	Source B2 Potential Emissions (lb/hr)	Source D1 Potential Emissions (lb/hr)	Source B2+D1 Potential Emissions (lb/hr)	Emission Limit (lb/hr)	Modeling Required?
Barium	4.40E-03	lb/106 scf	2.60E-05	5.11E-05	7.71E-05	3.30E-02	no
Chromium	1.40E-03	lb/106 scf	8.27E-06	1.63E-05	2.45E-05	3.30E-02	no
Cobalt	8.40E-05	lb/106 scf	4.96E-07	9.76E-07	1.47E-06	3.30E-03	no
Copper	8.50E-04	lb/106 scf	5.02E-06	9.87E-06	1.49E-05	3.33E-01	no
Dibutylphthalate	FNA	lb/106 scf	NA	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/106 scf	7.09E-06	1.39E-05	2.10E-05	2.00E+01	no
Ethylbenzene	FNA	lb/106 scf	NA	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/106 scf	1.65E-08	3.25E-08	4.91E-08	1.33E-01	no
Hexane	1.80E+00	lb/106 scf	1.06E-02	2.09E-02	3.15E-02	1.20E+01	no
Manganese	3.80E-04	lb/106 scf	2.24E-06	4.41E-06	6.66E-06	3.33E-01	no
Mercury	2.60E-04	lb/106 scf	1.54E-06	3.02E-06	4.56E-06	3.00E-03	no
Molybdenum	1.10E-03	lb/106 scf	6.50E-06	1.28E-05	1.93E-05	3.33E-01	no
Napthalene	6.10E-04	lb/106 scf	3.60E-06	7.09E-06	1.07E-05	3.33E+00	no
Pentane	2.60E+00	lb/106 scf	1.54E-02	3.02E-02	4.56E-02	1.18E+02	no
Phenol	FNA	lb/106 scf	NA	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/106 scf	1.42E-07	2.79E-07	4.21E-07	1.30E-02	no
Toluene	3.40E-03	lb/106 scf	2.01E-05	3.95E-05	5.96E-05	2.50E+01	no
Vanadium	2.30E-03	lb/106 scf	1.36E-05	2.67E-05	4.03E-05	3.00E-03	no
o-Xylene	FNA	lb/106 scf	NA	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/106 scf	1.71E-04	3.37E-04	5.08E-04	6.67E-01	no

Toxic Air Pollutants -- Carcinogenic

Pollutant	Emission Factor (a)	Emission Factor Unit	Source B2 Potential Emissions (lb/hr)	Source D1 Potential Emissions (lb/hr)	Source B2+D1 Potential Emissions (lb/hr)	Emission Limit (lb/hr)	Modeling Required?
Arsenic	2.00E-04	lb/106 scf	1.18E-06	2.32E-06	3.50E-06	1.50E-06	yes
Benzene	2.10E-03	lb/106 scf	1.24E-05	2.44E-05	3.68E-05	8.00E-04	no
Beryllium	1.20E-05	lb/106 scf	7.09E-08	1.39E-07	2.10E-07	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/106 scf	7.09E-09	1.39E-08	2.10E-08	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/106 scf	NA	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/106 scf	6.50E-06	1.28E-05	1.93E-05	3.70E-06	yes
Formaldehyde	7.50E-02	lb/106 scf	4.43E-04	8.71E-04	1.31E-03	5.10E-04	yes
Nickel	2.10E-03	lb/106 scf	1.24E-05	2.44E-05	3.68E-05	2.70E-05	yes

Notes:
(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".
(b) IDAPA 58.01.01.585 and 586
(c) IDAPA 58.01.01.210.05(b)
* FNA - Factor Not Available

Table 7.7-3
Aggregated Uncontrolled TAPs from Proposed New Sources B2 and D1

Toxic Air Pollutants Impact Analysis Summary -- Sources B2 and D1 Only								
							AACC ug/m3	
Cadmium	Annual	4.149E-06	n/a	702833, 4733102	n/a	4.15E-06	5.60E-04	0.7%
Arsenic	Annual	2.278E-05	n/a	702833, 4733102	n/a	2.28E-05	2.30E-04	9.9%
Formaldehyde	Annual	1.554E-03	n/a	702833, 4733102	n/a	1.55E-03	7.70E-02	2.0%
Nickel	Annual	4.344E-05	n/a	702833, 4733102	n/a	4.34E-05	2.40E-03	1.8%

Table 7.7-4
TAPs Impact Analysis from Proposed New Sources B2 and D1
Note: No increase in emissions for the Refurbished Dryer D2 is projected

7.8 Demonstration of Compliance with IDAPA 58.01.01.577. AMBIENT AIR QUALITY STANDARDS FOR SPECIFIC AIR POLLUTANTS

IDAPA 58.01.01.577 sets an Idaho standard for fluorides in the environment, and is expressed as total fluoride content in vegetation used for feed and forage in ppm. Commercial Creamery's facility-wide emissions expressed as elemental fluorine are provided in **Table 7.9-1**
These data are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each Non-Carcinogenic TAP separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Table 7.9-1** summary.

Table 7.9-1 shows that Commercial Creamery's facility-wide emissions are six orders of magnitude smaller than the Non-Carcinogenic Screening Emissions Level (EL). On this basis, the Applicant asserts that total fluoride content in vegetation used for feed and forage, expressed in ppm will not exceed the Section 577 standards.

7.9 Demonstration of Compliance with IDAPA 58.01.01.585. TOXIC AIR POLLUTANTS NON-CARCINOGENIC INCREMENTS

Non-Carcinogenic TAPs that are presented in this demonstration are identified in the current IDAPA 58.01.01.585 list. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for each natural-gas-burning source, for each Non-Carcinogenic TAP separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Table 7.9-1** summary that is included here.

Pre- and Post-Project Non-Carcinogenic TAP Emissions Summary
Potential to Emit

Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Post-Project 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hr Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emissions Level (lb/hr)	Exceeds Screening Level ? (Y / N)
	No permit-established allowable emissions rates specified				
Barium	0	2.12E-04	2.12E-04	3.30E-02	no
Chromium	0	6.76E-05	6.76E-05	3.30E-02	no
Cobalt	0	4.05E-06	4.05E-06	3.30E-03	no
Copper	0	4.10E-05	4.10E-05	3.33E-01	no
Dibutylphthalate	0	0.00E+00	0.00E+00	6.70E-02	no
Dichlorobenzene	0	5.79E-05	5.79E-05	2.00E+01	no
Ethylbenzene	0	0.00E+00	0.00E+00	2.90E+01	no
Fluorene	0	1.35E-07	1.35E-07	1.33E-01	no
Hexane	0	8.69E-02	8.69E-02	1.20E+01	no
Manganese	0	1.83E-05	1.83E-05	3.33E-01	no
Mercury	0	1.25E-05	1.25E-05	3.00E-03	no
Molybdenum	0	5.31E-05	5.31E-05	3.33E-01	no
Napthalene	0	2.94E-05	2.94E-05	3.33E+00	no
Pentane	0	1.25E-01	1.25E-01	1.18E+02	no
Phenol	0	0.00E+00	0.00E+00	1.27E+00	no
Selenium	0	8.79E-07	8.79E-07	1.30E-02	no
Toluene	0	1.64E-04	1.64E-04	2.50E+01	no
Vanadium	0	1.11E-04	1.11E-04	3.00E-03	no
o-Xylene	0	0.00E+00	0.00E+00	2.90E+01	no
Zinc	0	1.40E-03	1.40E-03	6.67E-01	no
TOTAL Non-Carcinogenic TAPs, tpy		**0.94**			

Table 7.9-1
Pre- and Post-Project Non-Carcinogenic TAP Emissions Summary

The highest ratio of TAP emissions to EL is vanadium at 3.67%. On the basis of this comparison, *no uncontrolled Non-Carcinogenic TAP emissions require modeling.*

7.10 Demonstration of Compliance with IDAPA 58.01.01.586. TOXIC AIR POLLUTANTS CARCINOGENIC INCREMENTS

Carcinogenic TAPs that are presented in this demonstration are identified in the current IDAPA 58.01.01.586 list. The totals presented here are based on AP-42-listed constituents and emission factors listed in AP-42 Section 1.4 for natural gas combustion. Emissions are calculated for all natural-gas-burning sources at Applicant's facility, for each Carcinogenic TAP separately, in the *Emissions Inventory Work-Up Sheets* found in **Appendix B**. The entries taken from each source and pollutant are summed on the *Emissions Roll-Up* tab of Excel spreadsheet ***20131021 CCCo Emission WorkUp Sheets All Sources INCLUDES CONTROL & HRS OPS LIMITS.xls*** and linked to the **Table 7.10-1** summary that is included here.

Pre- and Post-Project Carcinogenic TAP Emissions Summary
Potential to Emit

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr) *No permit-established allowable emissions rates specified*	Post-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emissions Level (lb/hr)	Exceeds Screening Level ? (Y/N)
Arsenic	0	9.65E-06	9.65E-06	1.50E-06	yes
Benzene	0	1.01E-04	1.01E-04	8.00E-04	no
Beryllium	0	4.40E-07	4.40E-07	2.80E-05	no
Benzo(a)pyrene	0	4.40E-08	4.40E-08	2.00E-06	no
Bis (2-ethylhexyl)phthalate	0	0.00E+00	0.00E+00	2.80E-02	no
Cadmium	0	5.31E-05	5.31E-05	3.70E-06	yes
Formaldehyde	0	3.62E-03	3.62E-03	5.10E-04	yes
Nickel	0	1.01E-04	1.01E-04	2.70E-05	yes
TOTAL Carcinogenic TAPs, tpy		**0.02**			

Table 7.10-1
Pre- and Post-Project Carcinogenic TAP Emissions Summary

Table 7.10-1 shows that four Carcinogenic Toxic Air Pollutants were emitted in amounts large enough (i.e., > EL) that they require modeling. These were: arsenic, cadmium, formaldehyde and nickel. Arsenic, cadmium and formaldehyde each had one or more sources with emissions that individually exceeded the EL. Nickel emissions did not exceed the EL for any individual source; however the sum of all facility nickel emissions did exceed the EL.

7.11 Demonstration of Compliance with IDAPA 58.01.01.590. NEW SOURCE PERFORMANCE STANDARDS

Commercial Creamery Company has completed the DEQ air quality permit application **Form FRA** (See Section 1 of this application) as a means to address all NSPS requirements that may be applicable. The Applicant has determined that

- 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units : *Does not apply*, since proposed new boiler B2 has a heat capacity of 6.1 MM Btu/hr, which is less than the 10 MMBtu/hr threshold of Subpart Dc.
- Based on Applicant's review, no operations occur at Applicant's facility that fall under any other published New Source Performance Standard.

7.12 Demonstration of Compliance with IDAPA 58.01.01.591. NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Commercial Creamery Company has completed the DEQ air quality permit application **Form FRA** (See Section 1 of this application) as a means to address all NESHAPs that may be applicable. The Applicant has determined that

- No operations occur at Applicant's facility that fall under industrial classifications encompassed in 40 CFR 61.
- The facility is not subject to any MACT standard in 40 CFR 63. [Gas-fired boiler, Not located at major Source of HAPs, No RICE on site.]

7.13 Demonstration of Compliance with IDAPA 58.01.01.625. VISIBLE EMISSIONS

Commercial Creamery Company will demonstrate compliance with the provisions of IDAPA 58.01.01.625 by not discharging any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. This commitment will not apply when the presence of uncombined water is the only reason for the failure of the emission to comply with the visible emissions regulation.

To document compliance, the plant management will conduct a monthly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The inspection will consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, Commercial Creamery Company will take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions. Within 24 hours of the initial see/no see evaluation and after the corrective action, Commercial Creamery Company will conduct a see/no see evaluation of the emissions point in question. If the visible emissions are not eliminated, the Applicant will perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. If that testing confirms an opacity exceedance, the plant operator will take all necessary corrective actions and report the period or periods as an excess emission in the annual compliance certification.

7.14 Demonstration of Compliance with IDAPA 58.01.01.650. RULES FOR THE CONTROL OF FUGITIVE DUST

The Commercial Creamery Company facility is located within the developed area of the City of Jerome, and is surrounded by paved streets and paved parking areas. The applicant is subject

to the requirements of IDAPA 58.01.01.650; however, we assert that we do not have vehicle movement on unpaved surfaces or other causes of fugitive dust emissions.

7.15 Demonstration of Compliance with IDAPA 58.01.01.675. FUEL BURNING EQUIPMENT -- PARTICULATE

Boilers B1 and B2 that are addressed in this permit application are not subject to IDAPA 58.01.01.675 because the nameplate capacity of these boilers is less than 10,000,000 Btu/hr:

Burner B1 Manufacturer	York Shipley
Model	560-SPHV-150-N2 (150 hp, 1979)
Input Heat Capacity (BTU/hr)	6,100,000
Burner B2 Manufacturer	York Shipley
Model	560-SPHV-150-N2 (125 hp, 1988)
Input Heat Capacity (BTU/hr)	6,100,000

Dryers D1, D2, and D3 are natural gas-fired dryers in which the combustion exhaust gases do not come in contact with the food product being dried, therefore these dryers dry the product by means of indirect heat transfer. As such, they are subject to the Section 675 : FUEL BURNING EQUIPMENT – PARTICULATE requirement, which encompasses Sections 675 through 681.

Dryers D2, and D3 were placed in service prior to October 1, 1979, and therefore are subject to IDAPA 58.01.01.677, STANDARDS FOR MINOR AND EXISTING SOURCES:

FUEL TYPE Gas **ALLOWABLE PARTICULATE gr/dscf :** .015 **EMISSIONS Oxygen :** 3%

Dryers D2, and D3 burn natural gas as their only fuel – combinations of fuels provisions of IDAPA 58.01.01.678 do not apply. The applicable averaging period under Section 679 for Dryers D2, and D3 is one hour.

As an example, the allowable emission for the D2 dryer (operating at 1.5 ton/hr dry product) is:
Allowable (lb/hr) = 0.045 *(1.5 tons dry product/hr * 2000 lb/ton)^0.6
0.045 * 2000^0.6 = 4.59 lb/hr
The actual anticipated PM emission = 2.5 * 1.5 ton/hr dry product = 3.75 lb/hr, so compliant

After the PTC is approved, Commercial Creamery Company will arrange for testing in compliance with the terms of the issued PTC using EPA Method 5 (40 CFR Part 60 Appendix A) in compliance with IDAPA 58.01.01.157.

Dryer D4, heated by steam, is not a fuel-burning source and is not subject to these requirements. **Dryer D1** is addressed by IDAPA 58.01.01.676 in the following section.

7.16 Demonstration of Compliance with IDAPA 58.01.01.676. STANDARDS FOR NEW SOURCES

IDAPA 58.01.01.676 will apply to the proposed new gas-fired **Dryer D1**. It will be a new source with a maximum rated input of ten (10) million BTU's per hour or more, that commences operation on or after October 1, 1979. As such, its performance requirement is

FUEL TYPE Gas **ALLOWABLE PARTICULATE gr/dscf :** 0.015 **EMISSIONS Oxygen :** 3%

Dryer D1 will burn natural gas as its only fuel – combinations of fuels provisions of IDAPA 58.01.01.678 do not apply. The applicable averaging period for Dryer D1 under Section 679 is one hour.

As an example, the allowable grain standard emission for the D1 dryer (operating at 1.5 ton/hr dry product) is:
Allowable (lb/hr) = 0.015 gr/dscf [IDAPA 58.01.01.676]
The actual anticipated PM emission = 2.5 * 1.5 ton/hr dry product = 3.75 lb/hr
1 lb = 7000 gr, so 3.75 lb/hr = 26,250 gr/hr = 437.5 gr/min
D1 Exhaust flow = 3053 acfm = 1814 dscfm = 1901 dscfm @3% O2 = 227 dscfm per IDAPA 58.01.01.680 at 4478 ft. MSL.
so 437.5 gr/min =2227 dscfm = 0.196 gr/dscfm uncontrolled
Assuming 98% controlled, **= 0.004 gr/dscfm controlled**
0.004 < 0.015 gr/dscfm QED
So the D1 dryer controlled by a fabric filter at 98% will be well within the grain loading standard.

After the PTC is approved, Commercial Creamery Company will arrange for testing in compliance with the terms of the issued PTC using EPA Method 5 (40 CFR Part 60 Appendix A) in compliance with IDAPA 58.01.01.157.

7.17 Demonstration of Compliance with IDAPA 58.01.01.700. PARTICULATE MATTER -- PROCESS WEIGHT LIMITATIONS

Boilers B1 and B2 that are addressed in this permit application are not subject to IDAPA 58.01.01.700 *et seq.* because they are not process equipment.

Dryers D1, D2, D3, and D4 are process equipment and are subject to IDAPA 58.01.01.700 *et seq.*

Dryer D1 IDAPA 58.01.01.701 will apply to the proposed new gas-fired **Dryer D1**. It will be a new source that commences operation on or after October 1, 1979. As such, its performance requirement is

E= 0.045 PW ^0.6
where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

Proposed Dryer D1 will comply with this standard, as documented in the D1 source emissions work-up sheet in Appendix B.

Process Weight Rule (58.01.01.701.01.a)					
Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	3.750		5.49	yes

Dryers D2, D3, and D4. IDAPA 58.01.01.702 will apply to the existing gas-fired **Dryers D2, D3, and D4**. They are existing sources that commenced operation before October 1, 1979. As such, their performance requirement is identical to the standard for proposed Dryer D1 :

E= 0.045 PW ^0.6
where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

Existing **Dryer D2** presently complies and will continue to comply with this standard, as documented in the D2 source emissions work-up sheet in Appendix B.

Process Weight Rule (58.01.01.701.01.a)					
Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	3.750		5.49	yes

Existing Dryer **D3** presently complies and will continue to comply with this standard, as documented in the D3 source emissions work-up sheet in Appendix B.

Process Weight Rule (58.01.01.701.01.a)					
Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	3.750		5.49	yes

Existing Dryer **D4** presently complies and will continue to comply with this standard, as documented in the D4 source emissions work-up sheet in Appendix B.

Process Weight Rule (58.01.01.701.01.a)					
Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	1.250		2.84	yes

Section 8 References

DEQ 2009. *Rules for the Control of Air Pollution in Idaho) (Revised) IDAPA 58.01.01,* Idaho Department of Environmental Quality, revised through April 7, 2011.

DEQ 2010a. *Air Quality Permit Application Emission Inventory Requirements* Version 1, August, 2010

DEQ 2010b. *Facility-Wide Potential to Emit Emission Inventory Application Template* Version 1, August, 2010

DEQ 2010c. *Proposed Minor Modification to an Existing Minor Facility – Change in Potential to Emit, Application Template* Version 1, August, 2010

DEQ 2010e. *Toxic Air Pollutant Emission Inventory Requirements Application Template* Version 1, August, 2010

DEQ 2010f *Facility Wide Hazardous Air Pollutant Potential to Emit Application Template* Version 1, August, 2010

DEQ 2011a. *Ambient Impact Assessment Emission Inventory for New Minor Facilities and Minor Modifications* Version 2, January 2011

DEQ 2011b. *State of Idaho Air Quality Modeling Guideline ID-AQ-011,* Idaho Department of Environmental Quality, revised through July 2, 2011.

DEQ undated. Air quality *Emissions Data Hierarchy* guidance letter.

EPA 1985. *Guideline for Determination of Good Engineering Practice Stack Height (Technical Support Document for the Stack Height Regulations) (Revised) EPA-450/ 4-80-023R, EPA OAQPS, June 1985*

EPA 2008. *Compilation of Air Pollution Emission Factors, AP-42 5th Ed., Section 1.4 Natural Gas Combustion (July 2008) and Section 9.6.1 Natural and Processed Cheese (August, 1997)* EPA Office of Air Quality Planning and Standards,

Gabites, 2007. *Washable Baghouse Operation and Design as Applied to Milk Powder Production,* PhD Thesis, University of Canterbury, John R. Gabites, 2007

Schilling, K. (2013). Letter from DEQ to N. Ricks, MEAS, Inc., re "Modeling Protocol for the Commercial Creamery Company Permit to Construct application for proposed changes to their dairy processing facility in Idaho" dated September 12, 2013.

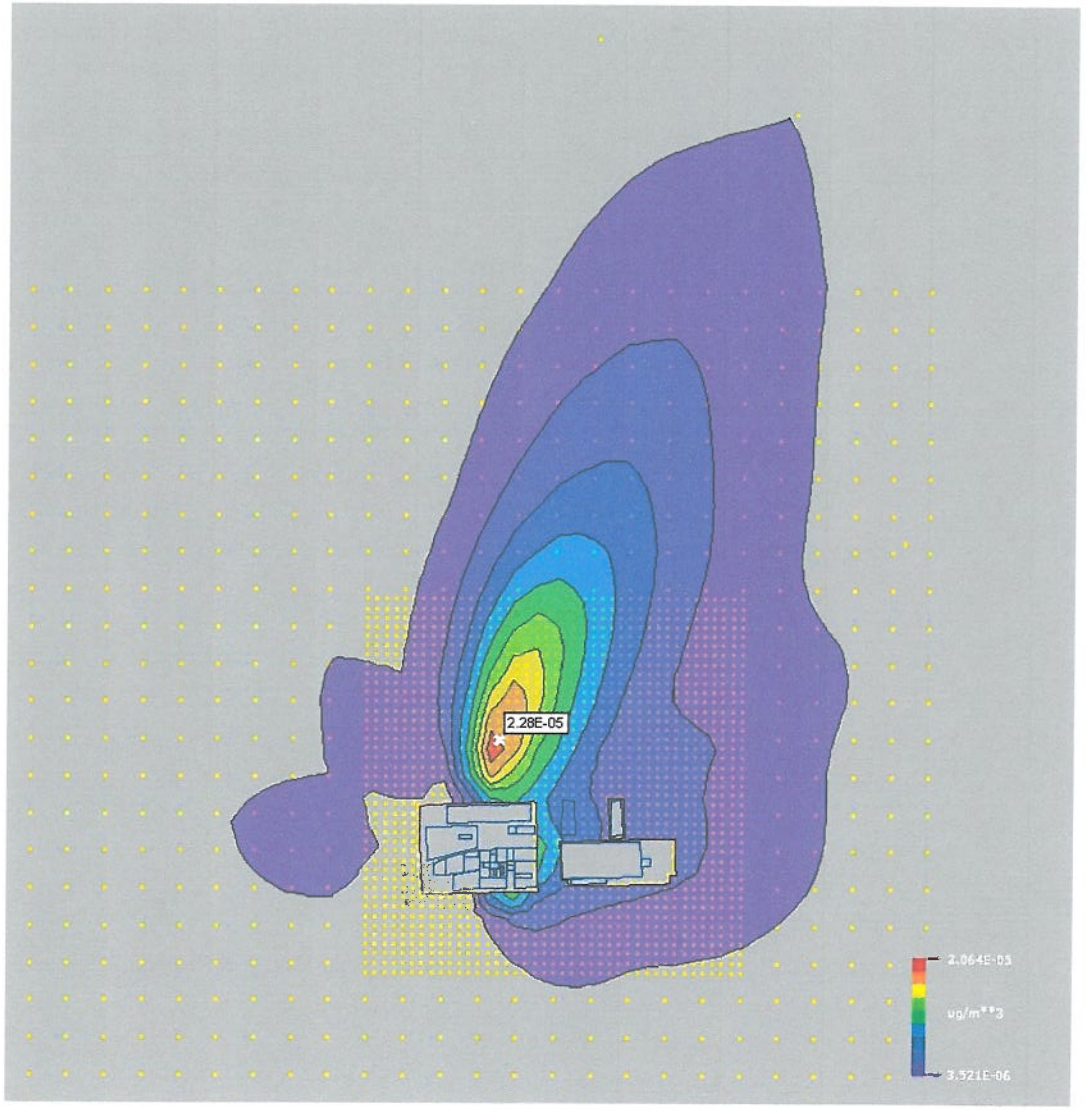
Schwarz, 2013. *GPS Survey report for the Commercial Creamery Site* e-mail Doug Schwarz, EHM, Inc., Twin Falls, ID to Norman Ricks, MEAS, Inc., 27 August 2013.

Appendix A: Plots and Tables

Appendix A1 Plots & Summary Tables, TAPs, SOURCES B2 AND D1 ONLY

Arsenic	Annual AACC
Cadmium	Annual AACC
Formaldehyde	Annual AACC
Nickel	Annual AACC

Impacts (2.278E-5 ug/m3) v Annual AACC (2.3E-4) 2006-2010 TWF Data
Arsenic : Sources B1 and D2 without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

New Proposed Sources B2 and D1 ONLY

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 2259
Projection
Projection = UTM Datum = WGE Zone = 12 Hemisphere = N

Statistics

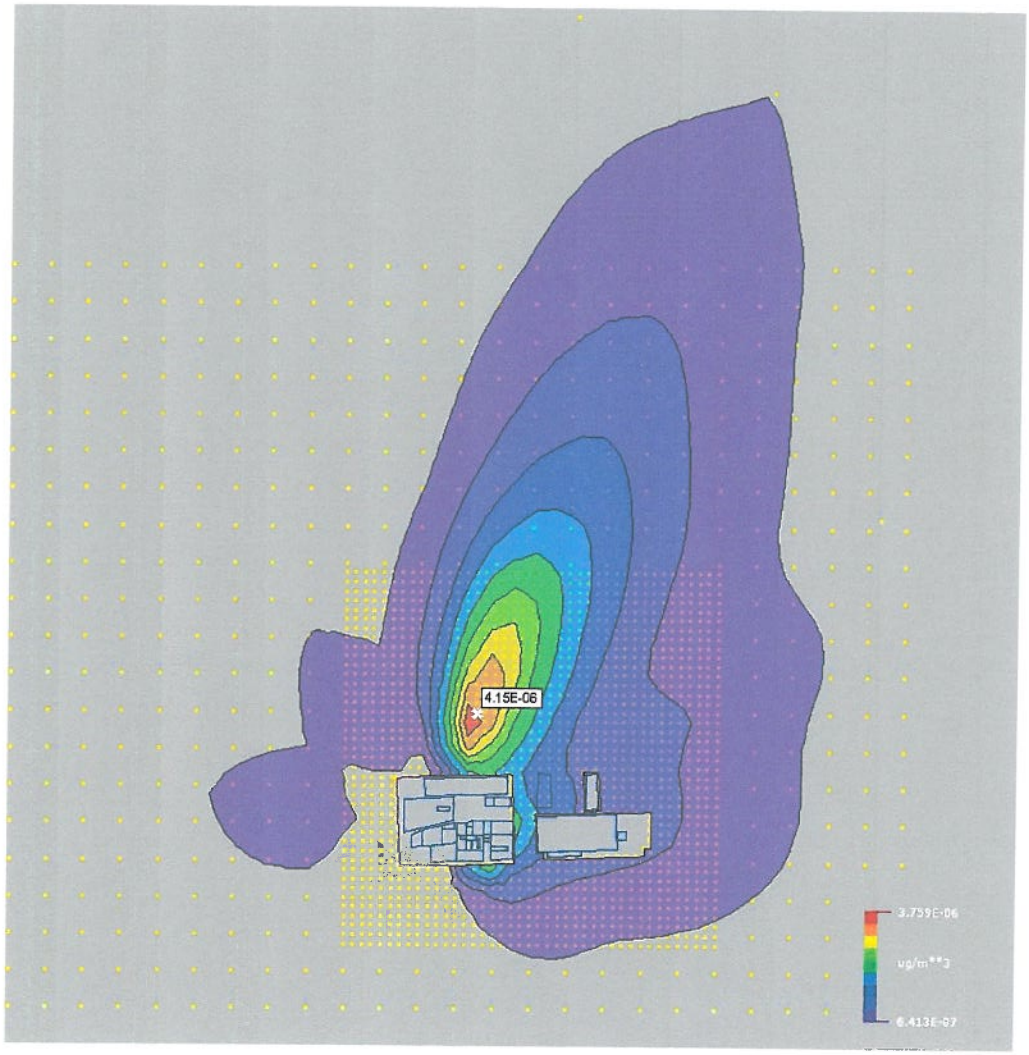
	All Values
Maximum	4.14903E-06 (702833, 4733102)
Minimum	2.23159E-08 (703948, 4731683)
Mean	1.046305E-06
Median	8.81748E-07
Mode	1.14565E-06
Std. Dev.	7.732459E-07

Maximum Values

#	Value	X	Y
1	4.14903E-06	702833	4733102
2	4.1298E-06	702833	4733092
3	4.06867E-06	702833	4733112
4	4.03788E-06	702823	4733092
5	4.0201E-06	702823	4733082
6	3.98463E-06	702833	4733082
7	3.97716E-06	702843	4733112
8	3.95434E-06	702823	4733102
9	3.94563E-06	702843	4733122
10	3.93651E-06	702843	4733102
11	3.93138E-06	702833	4733122
12	3.85675E-06	702843	4733132
13	3.80946E-06	702823	4733072
14	3.79676E-06	702843	4733092
15	3.78555E-06	702823	4733112
16	3.74523E-06	702833	4733132
17	3.7188E-06	702843	4733142
18	3.71176E-06	702833	4733072
19	3.68781E-06	702853	4733132

20	3.68647E-06	702853	4733122
21	3.65153E-06	702853	4733142
22	3.65153E-06	702853	4733142
23	3.63404E-06	702853	4733112
24	3.59933E-06	702823	4733122
25	3.57003E-06	702853	4733152
26	3.56385E-06	702843	4733082
27	3.56324E-06	702843	4733152
28	3.56039E-06	702833	4733142
29	3.50732E-06	702853	4733102
30	3.50732E-06	702853	4733102
31	3.49573E-06	702813	4733082
32	3.47188E-06	702813	4733092
33	3.45825E-06	702853	4733162
34	3.40504E-06	702823	4733062
35	3.40341E-06	702863	4733142
36	3.39987E-06	702843	4733162
37	3.39669E-06	702823	4733132
38	3.39467E-06	702863	4733152
39	3.38518E-06	702863	4733132
40	3.37647E-06	702813	4733072
41	3.36892E-06	702833	4733152
42	3.35888E-06	702813	4733102
43	3.35888E-06	702813	4733102
44	3.35408E-06	702863	4733162
45	3.33806E-06	702853	4733172
46	3.32322E-06	702863	4733122
47	3.31768E-06	702853	4733092
48	3.29384E-06	702863	4733172
49	3.25079E-06	702833	4733062
50	3.24682E-06	702843	4733072

Impacts (4.149 E-6 ug/m3) v Annual AACC (5.6E-4) 2006-2010 TWF Data
Cadmium: Sources B1 and D2 without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

New Proposed Sources B2 and D1 ONLY

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 2259
Projection
Projection = UTM Datum = WGE Zone = 12 Hemisphere = N

Statistics

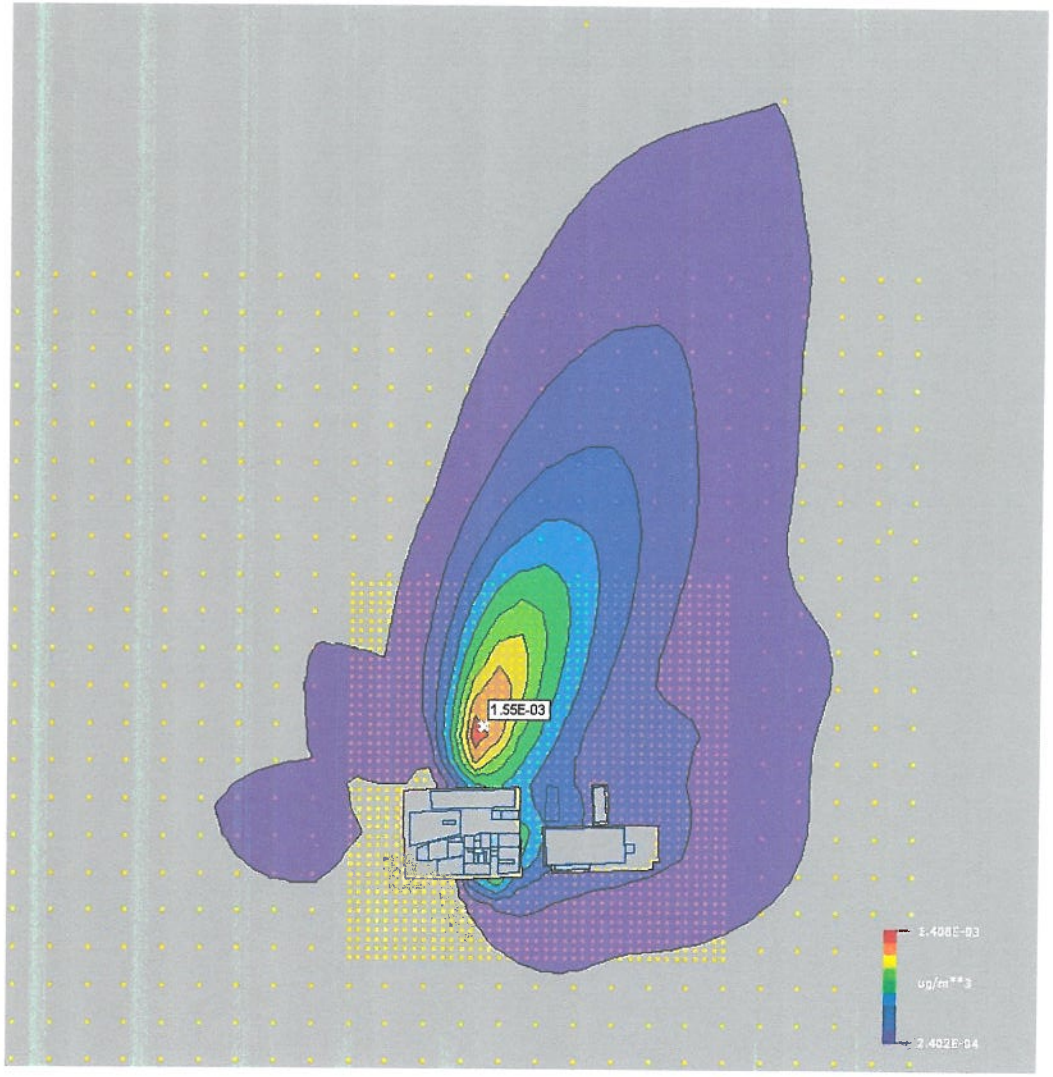
	All Values
Maximum	2.27783E-05 (702833, 4733102)
Minimum	1.22567E-07 (703948, 4731683)
Mean	5.74514E-06
Median	4.8415E-06
Mode	6.29178E-06
Std. Dev.	4.245253E-06

Maximum Values

#	Value	X	Y
1	2.27783E-05	702833	4733102
2	2.26727E-05	702833	4733092
3	2.23372E-05	702833	4733112
4	2.2168E-05	702823	4733092
5	2.20703E-05	702823	4733082
6	2.18756E-05	702833	4733082
7	2.1835E-05	702843	4733112
8	2.17095E-05	702823	4733102
9	2.16619E-05	702843	4733122
10	2.16117E-05	702843	4733102
11	2.15836E-05	702833	4733122
12	2.11741E-05	702843	4733132
13	2.09139E-05	702823	4733072
14	2.08443E-05	702843	4733092
15	2.07829E-05	702823	4733112
16	2.05618E-05	702833	4733132
17	2.04168E-05	702843	4733142
18	2.03775E-05	702833	4733072
19	2.02467E-05	702853	4733132

20	2.02393E-05	702853	4733122
21	2.00477E-05	702853	4733142
22	2.00477E-05	702853	4733142
23	1.99513E-05	702853	4733112
24	1.97607E-05	702823	4733122
25	1.96003E-05	702853	4733152
26	1.95656E-05	702843	4733082
27	1.95629E-05	702843	4733152
28	1.95471E-05	702833	4733142
29	1.92555E-05	702853	4733102
30	1.92555E-05	702853	4733102
31	1.91916E-05	702813	4733082
32	1.90607E-05	702813	4733092
33	1.89867E-05	702853	4733162
34	1.86936E-05	702823	4733062
35	1.86856E-05	702863	4733142
36	1.86661E-05	702843	4733162
37	1.86482E-05	702823	4733132
38	1.86377E-05	702863	4733152
39	1.85854E-05	702863	4733132
40	1.85368E-05	702813	4733072
41	1.8496E-05	702833	4733152
42	1.84404E-05	702813	4733102
43	1.84404E-05	702813	4733102
44	1.84149E-05	702863	4733162
45	1.83269E-05	702853	4733172
46	1.82452E-05	702863	4733122
47	1.82143E-05	702853	4733092
48	1.80843E-05	702863	4733172
49	1.78468E-05	702833	4733062
50	1.7825E-05	702843	4733072

Impacts (1.554E-3 ug/m3) v Annual AACC (7.7E-2) 2006-2010 TWF Data
Formaldehyde: Sources B1 and D2 without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

New Proposed Sources B2 and D1 ONLY

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 2259
Projection
Projection = UTM Datum = WGE Zone = 12 Hemisphere = N

Statistics

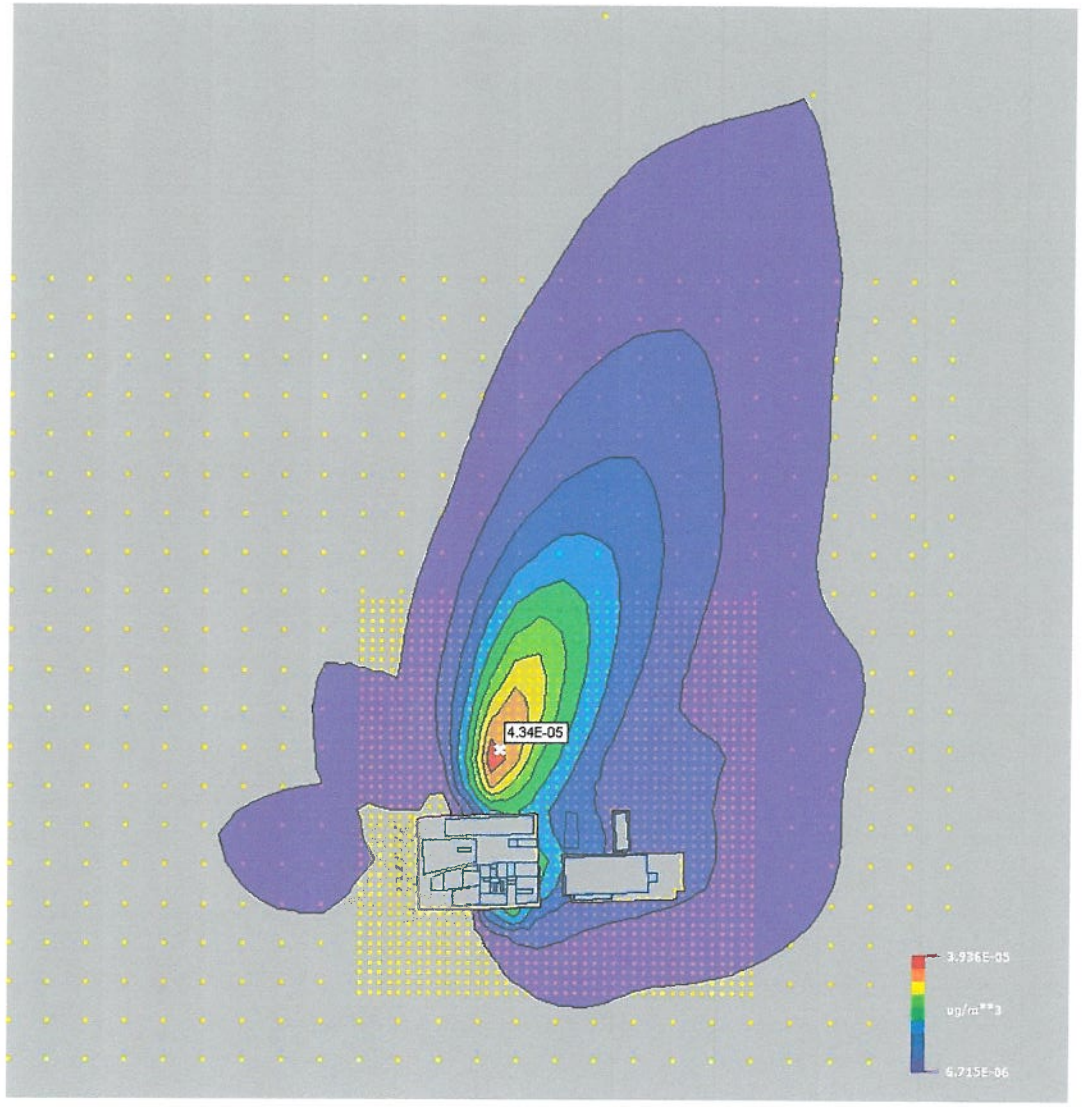
	All Values
Maximum	0.00155388 (702833, 4733102)
Minimum	8.36734E-06 (703948, 4731683)
Mean	0.000392026
Median	0.000330319
Mode	0.00042946
Std. Dev.	0.0002896134

Maximum Values

#	Value	X	Y
1	0.00155388	702833	4733102
2	0.00154666	702833	4733092
3	0.0015238	702833	4733112
4	0.00151224	702823	4733092
5	0.00150556	702823	4733082
6	0.00149228	702833	4733082
7	0.00148955	702843	4733112
8	0.00148096	702823	4733102
9	0.00147776	702843	4733122
10	0.0014743	702843	4733102
11	0.00147241	702833	4733122
12	0.00144449	702843	4733132
13	0.00142666	702823	4733072
14	0.00142195	702843	4733092
15	0.00141777	702823	4733112
16	0.00140271	702833	4733132
17	0.00139284	702843	4733142
18	0.00139008	702833	4733072
19	0.00138124	702853	4733132

20	0.00138072	702853	4733122
21	0.00136767	702853	4733142
22	0.00136767	702853	4733142
23	0.00136106	702853	4733112
24	0.00134804	702823	4733122
25	0.00133716	702853	4733152
26	0.0013347	702843	4733082
27	0.0013346	702843	4733152
28	0.00133351	702833	4733142
29	0.00131359	702853	4733102
30	0.00131359	702853	4733102
31	0.00130919	702813	4733082
32	0.00130027	702813	4733092
33	0.00129532	702853	4733162
34	0.0012752	702823	4733062
35	0.00127477	702863	4733142
36	0.00127344	702843	4733162
37	0.00127217	702823	4733132
38	0.00127151	702863	4733152
39	0.00126793	702863	4733132
40	0.00126451	702813	4733072
41	0.00126182	702833	4733152
42	0.00125796	702813	4733102
43	0.00125796	702813	4733102
44	0.00125633	702863	4733162
45	0.00125032	702853	4733172
46	0.00124471	702863	4733122
47	0.00124255	702853	4733092
48	0.00123378	702863	4733172
49	0.00121743	702833	4733062
50	0.00121596	702843	4733072

Impacts (4.344E-5 ug/m3) v Annual AACC (2.4E-3) 2006-2010 TWF Data
Nickel: Sources B1 and D2 without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

New Proposed Sources B2 and D1 ONLY

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 2259

Projection
Projection = UTM Datum = WGE Zone = 12 Hemisphere = N

Statistics

	All Values
Maximum	4.34402E-05 (702833, 4733102)
Minimum	2.3373E-07 (703948, 4731683)
Mean	1.09562E-05
Median	9.23305E-06
Mode	9.35074E-06
Std. Dev.	8.096036E-06

Maximum Values

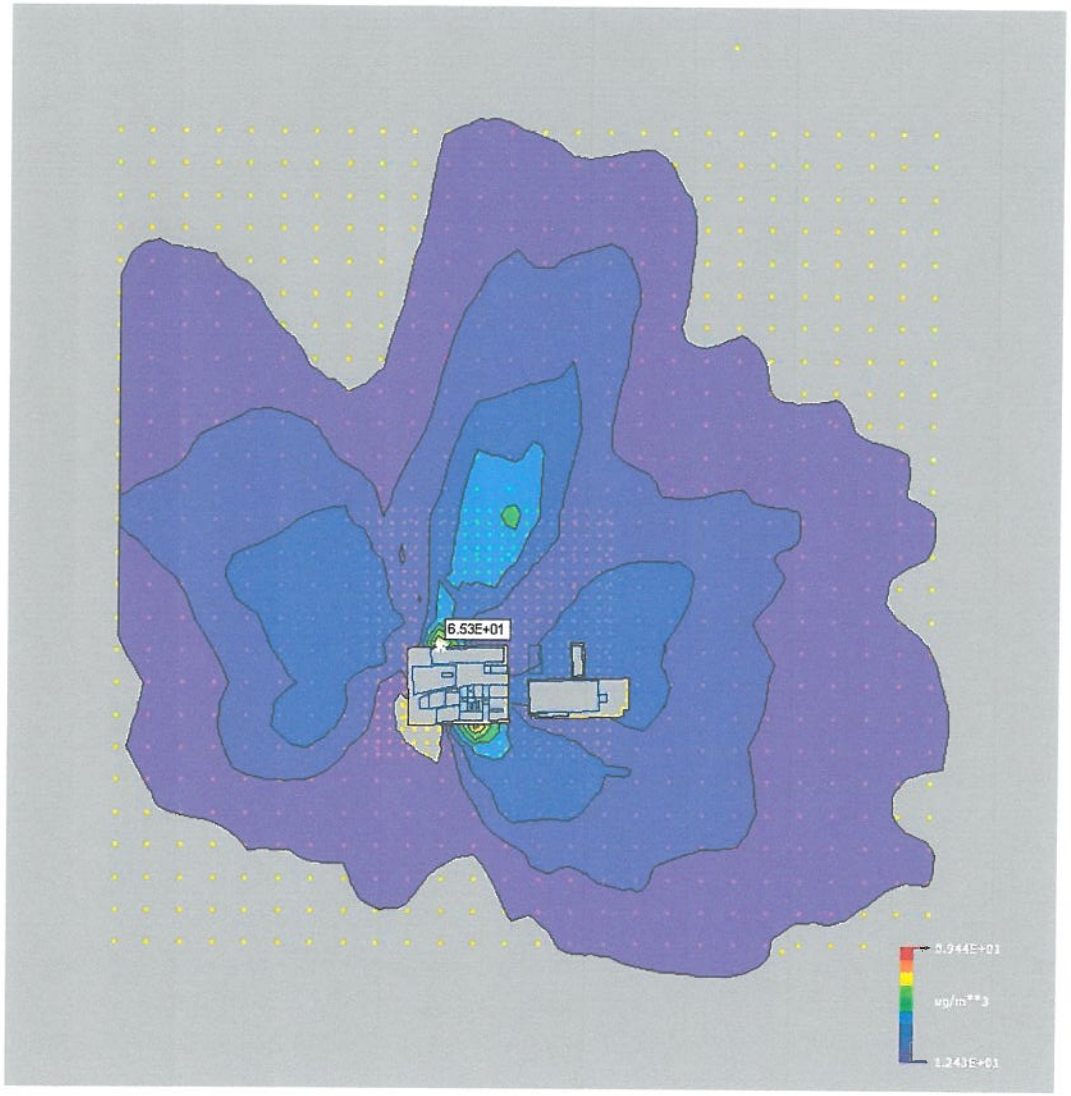
#	Value	X	Y
1	4.34402E-05	702833	4733102
2	4.32388E-05	702833	4733092
3	4.2599E-05	702833	4733112
4	4.22764E-05	702823	4733092
5	4.20901E-05	702823	4733082
6	4.17187E-05	702833	4733082
7	4.16411E-05	702843	4733112
8	4.14018E-05	702823	4733102
9	4.13111E-05	702843	4733122
10	4.12152E-05	702843	4733102
11	4.11618E-05	702833	4733122
12	4.03807E-05	702843	4733132
13	3.98846E-05	702823	4733072
14	3.97519E-05	702843	4733092
15	3.96348E-05	702823	4733112
16	3.9213E-05	702833	4733132
17	3.89365E-05	702843	4733142
18	3.88617E-05	702833	4733072
19	3.86121E-05	702853	4733132

20	3.85979E-05	702853	4733122
21	3.82324E-05	702853	4733142
22	3.82324E-05	702853	4733142
23	3.80487E-05	702853	4733112
24	3.76852E-05	702823	4733122
25	3.73792E-05	702853	4733152
26	3.73133E-05	702843	4733082
27	3.7308E-05	702843	4733152
28	3.72779E-05	702833	4733142
29	3.67219E-05	702853	4733102
30	3.67219E-05	702853	4733102
31	3.66E-05	702813	4733082
32	3.63504E-05	702813	4733092
33	3.62091E-05	702853	4733162
34	3.56503E-05	702823	4733062
35	3.56348E-05	702863	4733142
36	3.55977E-05	702843	4733162
37	3.55637E-05	702823	4733132
38	3.55434E-05	702863	4733152
39	3.54438E-05	702863	4733132
40	3.53513E-05	702813	4733072
41	3.52734E-05	702833	4733152
42	3.51675E-05	702813	4733102
43	3.51675E-05	702813	4733102
44	3.51186E-05	702863	4733162
45	3.49508E-05	702853	4733172
46	3.47949E-05	702863	4733122
47	3.47362E-05	702853	4733092
48	3.4488E-05	702863	4733172
49	3.40354E-05	702833	4733062
50	3.39938E-05	702843	4733072

Appendix A2
Plots & Summary Tables, ALL MODELED SOURCES

NO2	1-hr Standard
NO2	Annual Standard
PM-10	24-hr Standard
PM-2.5	24-hr Standard
PM-2.5	Annual Standard
Arsenic	Annual AACC
Cadmium	Annual AACC
Formaldehyde	Annual AACC
Nickel	Annual AACC

Impacts (65.3 ug/m3) v 1 hr Standard (188) 2006-2010 TWF Data
NO2: All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = No2, all, 1-hr, 8th high, conc Units = ug/m**3 Format = XYZ Points = 1134

Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

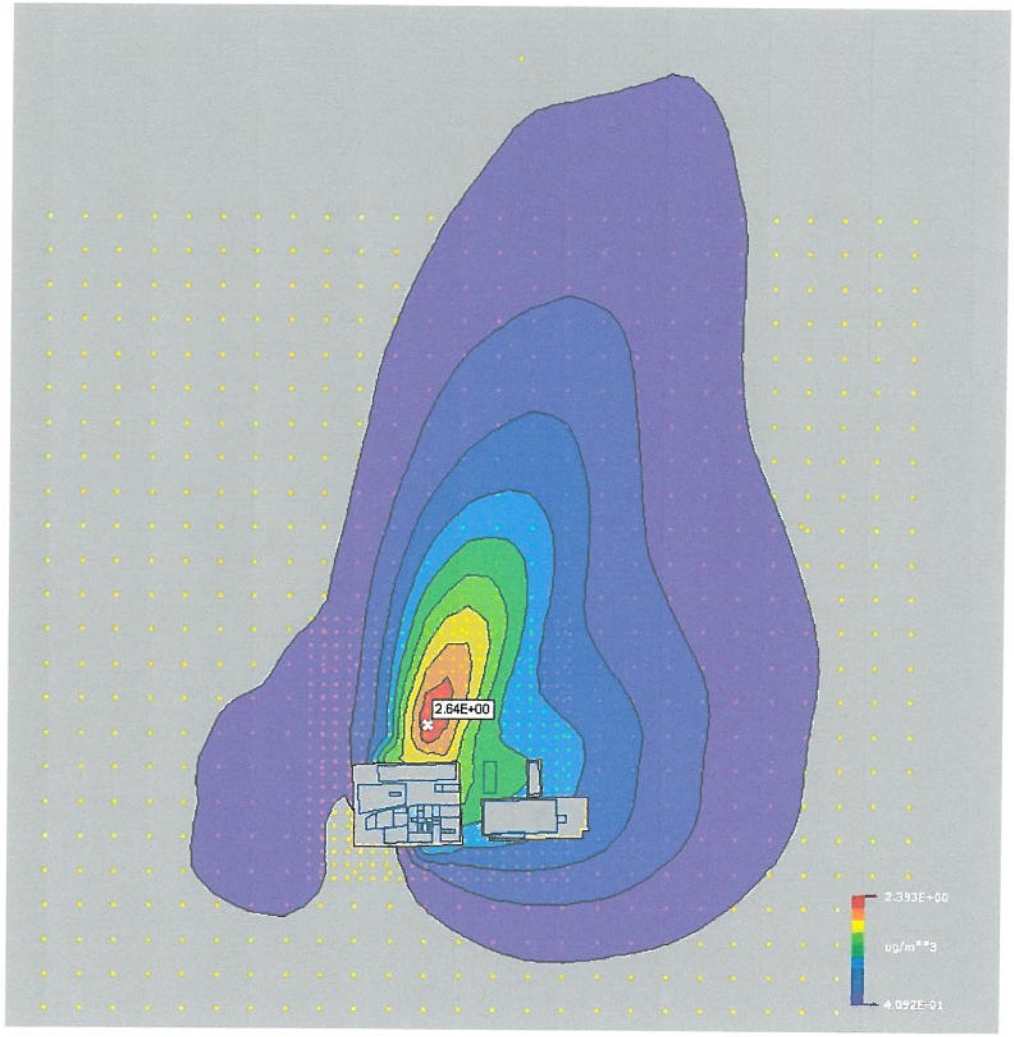
	All Values
Maximum	65.3219 (702790, 4733035)
Minimum	3.09527 (703948, 4731683)
Mean	19.46795
Median	19.39685
Mode	27.0081
Std. Dev.	8.189421

Maximum Values

#	Value	X	Y
1	65.3219	702790	4733035
2	64.7297	702788	4733034
3	62.3633	702798	4733034
4	60.6815	702835	4732930
5	54.2321	702848	4732939
6	53.8381	702838	4732939
7	52.7635	702828	4732939
8	51.1872	702820	4732930
9	48.5782	702805	4733035
10	47.9318	702778	4733034
11	45.3059	702818	4732938
12	44.2973	702790	4733050
13	41.362	702858	4732940
14	41.0784	702808	4733035
15	40.3877	702775	4733035
16	39.4362	702850	4732930
17	37.8922	702874	4733187
18	37.8773	702880	4733200
19	37.0157	702880	4733185

20	36.6327	702865	4733155
21	36.2405	702805	4733050
22	36.2295	702865	4733185
23	35.8174	702865	4733170
24	35.5073	702834	4733187
25	35.4472	702850	4733140
26	35.3792	702865	4733200
27	35.3053	702850	4733200
28	35.2688	702835	4733200
29	35.1788	702835	4733185
30	35.1225	702880	4733170
31	34.9279	702820	4733185
32	34.8638	702794	4733067
33	34.8589	702820	4733200
34	34.7449	702850	4733170
35	34.6306	702850	4733155
36	34.6027	702820	4733170
37	34.5742	702834	4733227
38	34.5287	702895	4733200
39	34.3891	702790	4733065
40	34.2688	702850	4733185
41	34.1906	702835	4733170
42	33.9852	702865	4733140
43	33.9087	702790	4733080
44	33.8962	702850	4733125
45	33.6658	702874	4733227
46	33.5303	702874	4733147
47	33.4871	702820	4733155
48	33.3788	702835	4733155
49	33.2014	702834	4733147
50	33.1977	702790	4733095

Impacts (2.64 ug/m3) v Annual Standard (100) 2006-2010 TWF Data
NO2: All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = No2, all, annual, conc Units = ug/m**3 Format = XYZ Points = 1134

Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

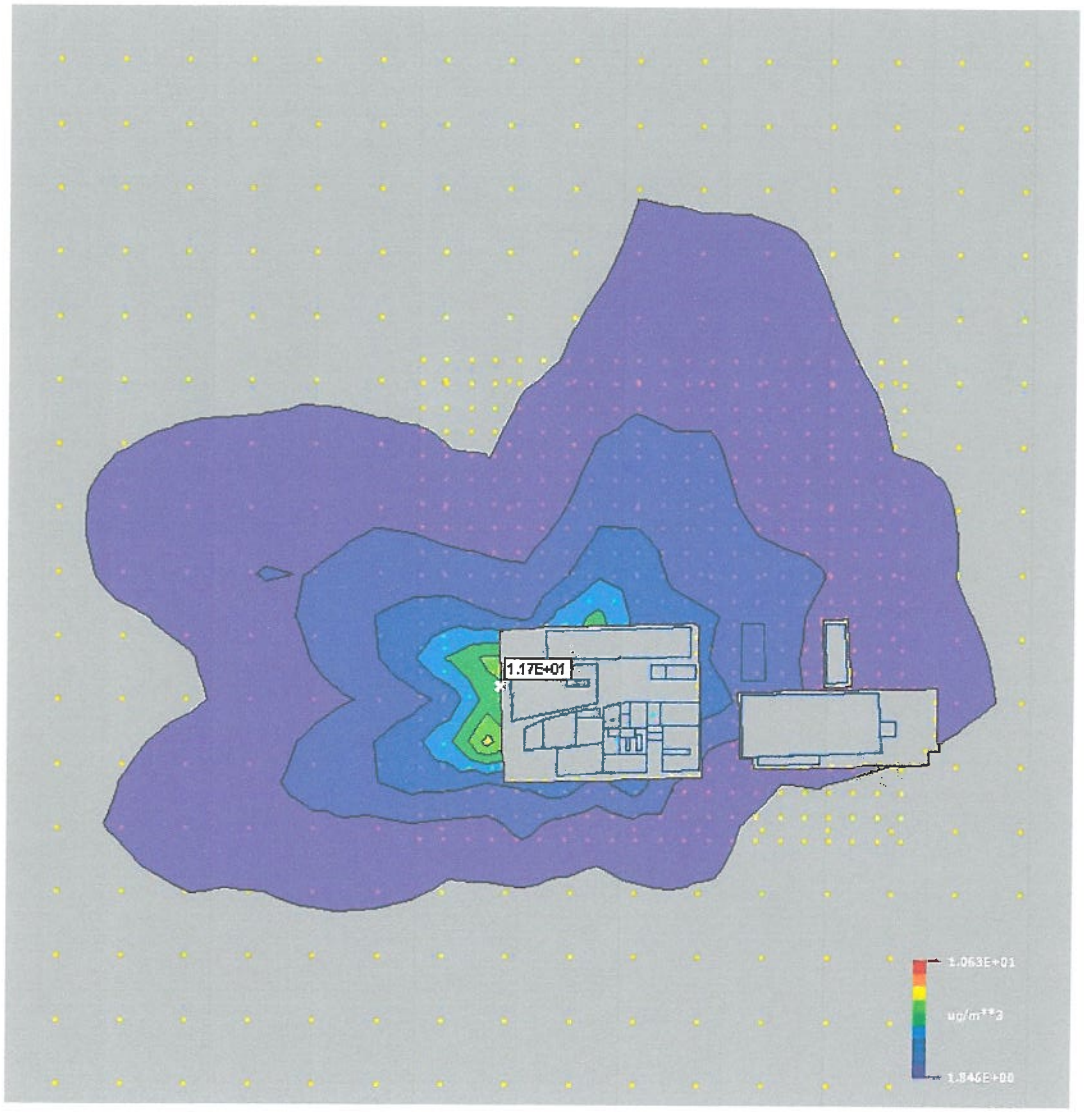
	All Values
Maximum	2.64097 (702835, 4733080)
Minimum	0.0153703 (703948, 4731683)
Mean	0.7418165
Median	0.523526
Mode	1.09185
Std. Dev.	0.5880498

Maximum Values

#	Value	X	Y
1	2.64097	702835	4733080
2	2.60674	702835	4733095
3	2.59676	702850	4733095
4	2.57245	702834	4733067
5	2.56735	702850	4733110
6	2.55144	702835	4733065
7	2.55099	702850	4733080
8	2.52059	702834	4733107
9	2.50944	702835	4733110
10	2.48028	702850	4733125
11	2.44671	702850	4733065
12	2.42043	702820	4733080
13	2.41735	702865	4733125
14	2.41541	702865	4733110
15	2.38642	702820	4733065
16	2.38438	702850	4733140
17	2.38046	702835	4733125
18	2.36956	702865	4733140
19	2.36588	702865	4733095

20	2.34695	702820	4733095
21	2.31683	702835	4733050
22	2.29117	702865	4733155
23	2.278	702874	4733147
24	2.27242	702850	4733050
25	2.27018	702798	4733034
26	2.26607	702850	4733155
27	2.24571	702865	4733080
28	2.24291	702874	4733107
29	2.23987	702835	4733140
30	2.22456	702880	4733140
31	2.21615	702820	4733110
32	2.21077	702865	4733170
33	2.20744	702880	4733155
34	2.20082	702880	4733125
35	2.16159	702880	4733170
36	2.15647	702834	4733147
37	2.15517	702820	4733050
38	2.14312	702850	4733170
39	2.1429	702790	4733035
40	2.13594	702848	4733036
41	2.12816	702880	4733110
42	2.12551	702805	4733035
43	2.11507	702865	4733185
44	2.10823	702865	4733065
45	2.10628	702874	4733187
46	2.10339	702880	4733185
47	2.09614	702835	4733155
48	2.07022	702820	4733125
49	2.06843	702788	4733034
50	2.04565	702838	4733036

Impacts (11.7 ug/m3) v 24 hr Standard (150) 2006-2010 TWF Data
PM-10: All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = Pm10, all, 24-hr, 6th high, conc Units = ug/m**3 Format = XYZ Points = 1134

Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

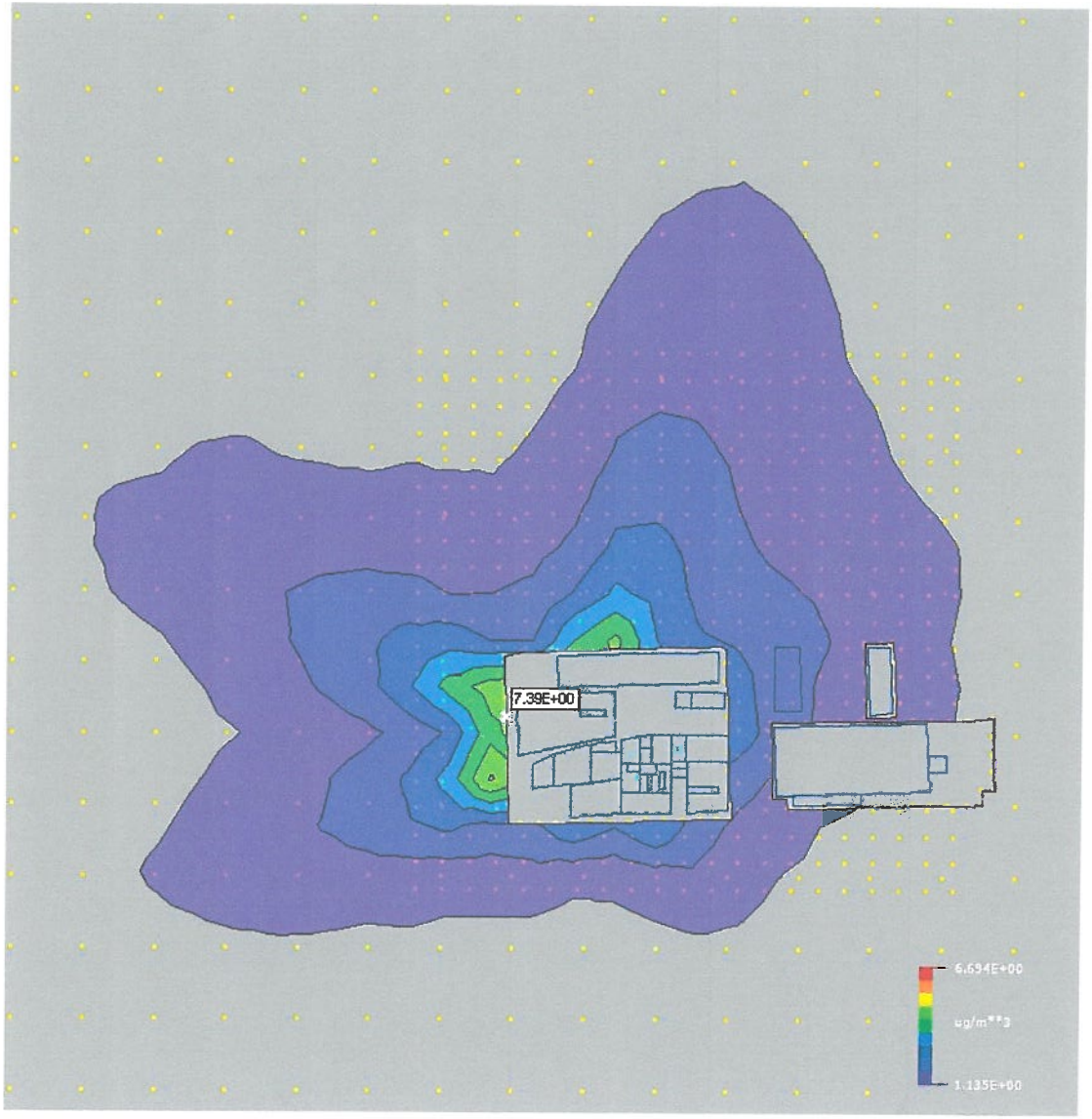
	All Values
Maximum	11.7266 (702749, 4732997)
Minimum	0.102011 (703948, 4731683)
Mean	1.941541
Median	1.571785
Mode	2.32976
Std. Dev.	1.484738

Maximum Values

#	Value	X	Y
1	11.7266	702749	4732997
2	10.0787	702745	4733005
3	10.0007	702750	4732967
4	9.70058	702745	4732960
5	9.34162	702749	4733007
6	8.89954	702730	4733005
7	8.25651	702750	4732957
8	8.02043	702798	4733034
9	7.64252	702730	4732960
10	7.41031	702805	4733035
11	7.30763	702745	4732990
12	7.10282	702749	4732987
13	7.06094	702750	4732977
14	6.90362	702745	4732975
15	6.86647	702808	4733035
16	6.58983	702730	4733020
17	6.52091	702818	4733035
18	6.48536	702790	4733035
19	6.44704	702788	4733034

20	6.37536	702748	4733017
21	6.23436	702715	4733005
22	6.18859	702714	4732947
23	6.18014	702715	4733020
24	5.96453	702700	4733020
25	5.93341	702715	4732960
26	5.92195	702805	4733050
27	5.92117	702745	4733020
28	5.80653	702715	4732945
29	5.66631	702730	4732975
30	5.63037	702820	4733050
31	5.61419	702730	4732945
32	5.58877	702700	4732945
33	5.45241	702730	4732990
34	5.26178	702778	4732937
35	5.25132	702700	4732960
36	5.15718	702714	4733027
37	5.13968	702873	4732987
38	5.12354	702828	4733035
39	5.11612	702828	4732939
40	5.10289	702805	4733065
41	5.07754	702874	4732987
42	5.00988	702751	4732947
43	4.96533	702745	4732945
44	4.94118	702730	4733035
45	4.89498	702790	4733050
46	4.89437	702715	4733035
47	4.87781	702748	4733027
48	4.86385	702788	4732938
49	4.85392	702820	4733065
50	4.84813	702835	4733065

Impacts (7.39 ug/m3) v 24 hr Standard (35) 2006-2010 TWF Data
PM-2.5: All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = Pm25, all, 24-hr, 8th high, conc Units = ug/m**3 Format = XYZ Points = 1134

Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

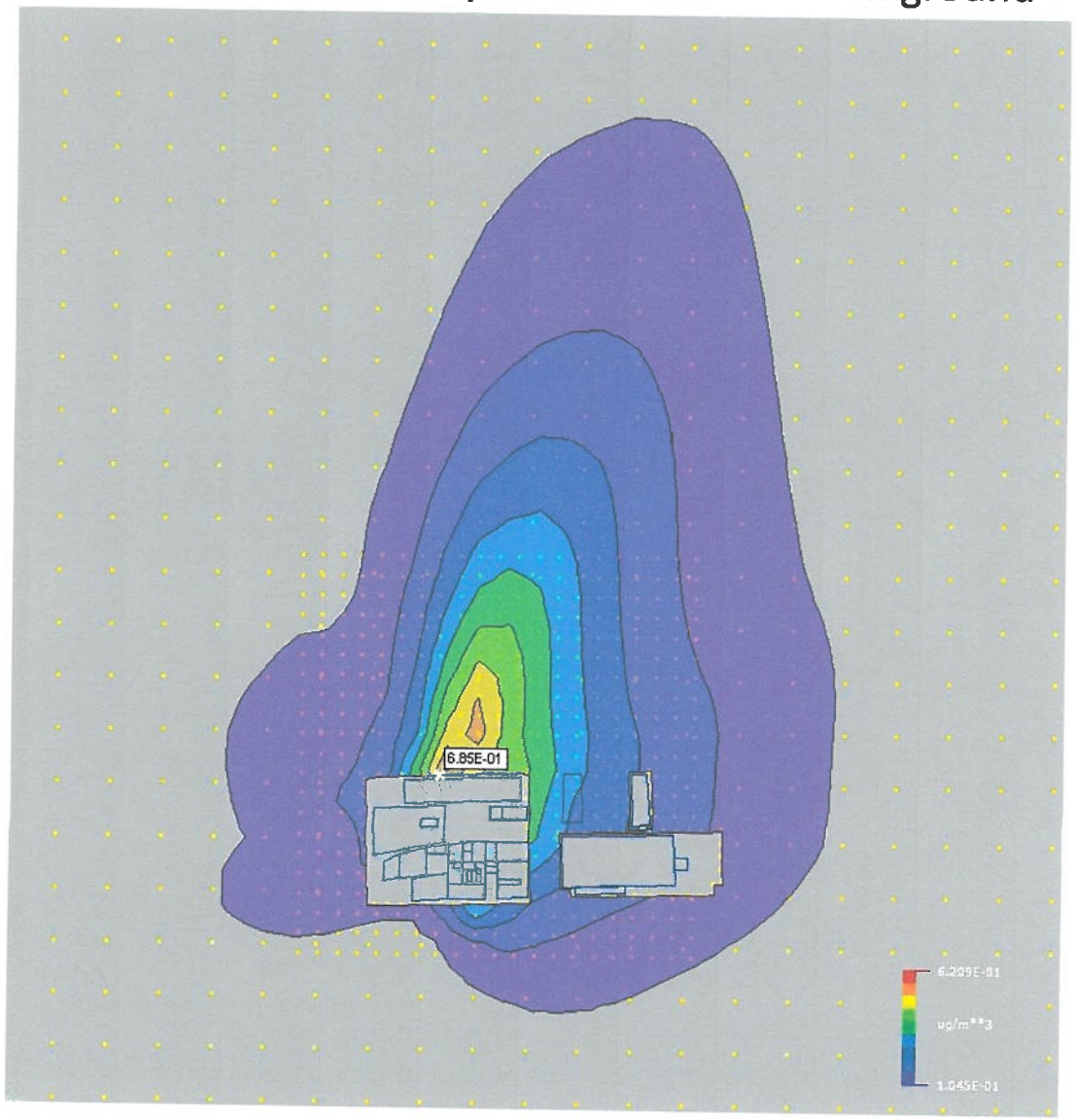
	All Values
Maximum	7.38829 (702749, 4732997)
Minimum	0.031767 (703948, 4731683)
Mean	1.118164
Median	0.8404965
Mode	1.03801
Std. Dev.	0.9771733

Maximum Values

#	Value	X	Y
1	7.38829	702749	4732997
2	6.57032	702745	4733005
3	6.15394	702749	4733007
4	6.12426	702750	4732967
5	6.06324	702745	4732960
6	5.73181	702798	4733034
7	5.60988	702750	4732957
8	5.53399	702805	4733035
9	5.45384	702730	4733005
10	5.29055	702808	4733035
11	4.96933	702745	4732990
12	4.69723	702750	4732977
13	4.68691	702749	4732987
14	4.63815	702790	4733035
15	4.48306	702788	4733034
16	4.47966	702730	4732960
17	4.39397	702818	4733035
18	4.34173	702745	4732975
19	4.29411	702730	4733020

20	4.26409	702748	4733017
21	4.20818	702805	4733050
22	4.14895	702715	4733020
23	4.02446	702745	4733020
24	4.02184	702715	4733005
25	3.85272	702714	4732947
26	3.744	702820	4733050
27	3.64521	702715	4732945
28	3.61899	702700	4733020
29	3.59144	702714	4733027
30	3.55397	702788	4732938
31	3.50298	702828	4733035
32	3.41932	702805	4733065
33	3.41828	702790	4733050
34	3.41685	702715	4732960
35	3.39939	702828	4732939
36	3.38266	702730	4732990
37	3.35083	702730	4732975
38	3.32392	702700	4732945
39	3.31022	702730	4732945
40	3.25171	702820	4733065
41	3.25008	702778	4733034
42	3.22061	702873	4732987
43	3.17504	702778	4732937
44	3.16442	702838	4732939
45	3.1626	702874	4732987
46	3.15604	702748	4733027
47	3.14589	702820	4733080
48	3.12716	702730	4733035
49	3.11972	702835	4733050
50	3.08698	702715	4733035

Impacts (0.685 ug/m3) v Annual Standard (12) 2006-2010 TWF Data
PM-2.5 - All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = Pm25, all, annual, conc Units = ug/m**3 Format = XYZ Points = 1134
Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

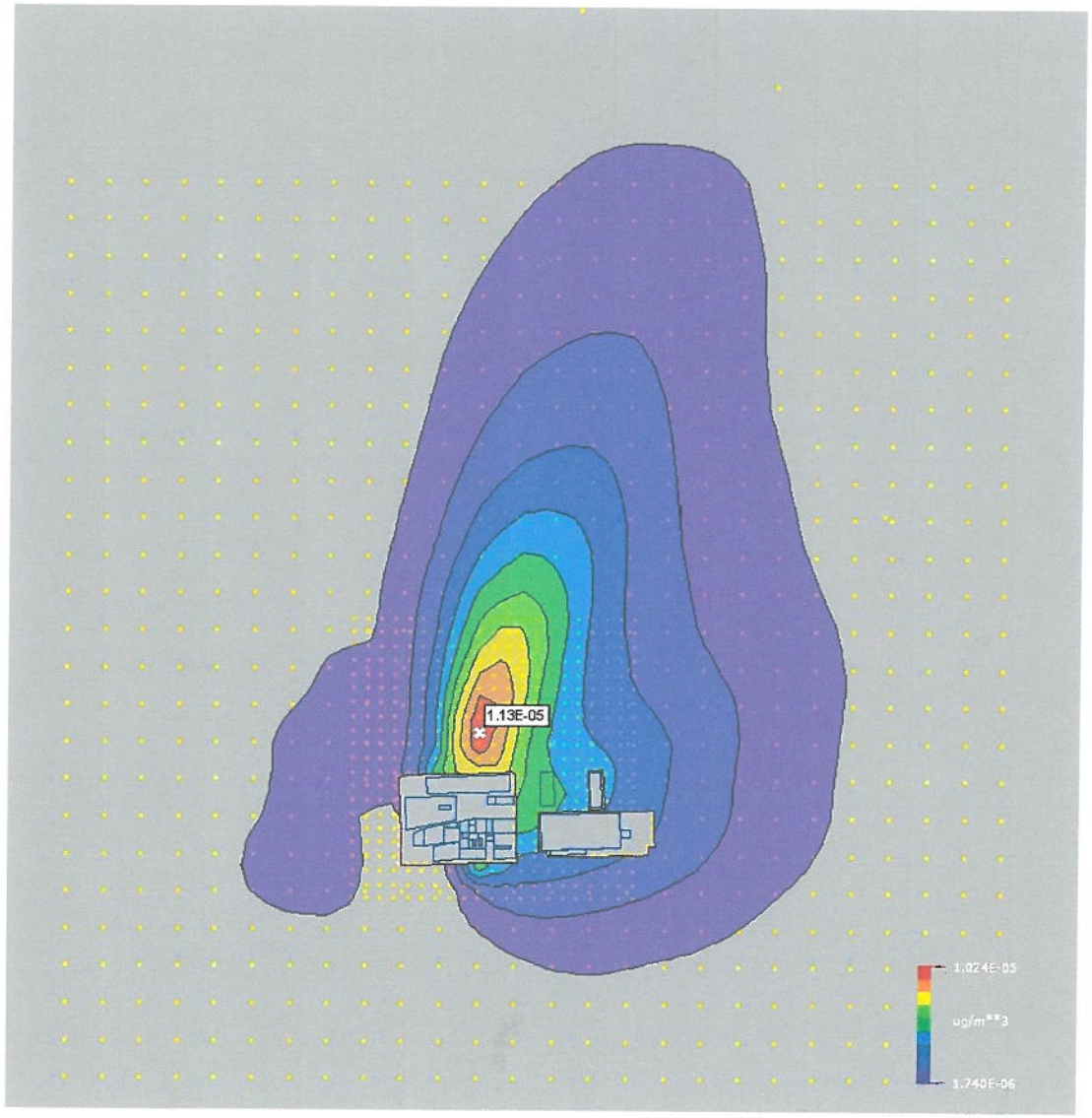
	All Values
Maximum	0.685481 (702805, 4733035)
Minimum	0.0019689 (703948, 4731683)
Mean	0.1389181
Median	0.0991688
Mode	0.16206
Std. Dev.	0.1240262

Maximum Values

#	Value	X	Y
1	0.685481	702805	4733035
2	0.680827	702808	4733035
3	0.640508	702798	4733034
4	0.610022	702820	4733050
5	0.601942	702818	4733035
6	0.601599	702820	4733065
7	0.583541	702835	4733080
8	0.581604	702834	4733067
9	0.578975	702835	4733065
10	0.574258	702820	4733080
11	0.561241	702835	4733095
12	0.541839	702805	4733050
13	0.53816	702835	4733050
14	0.534551	702834	4733107
15	0.53251	702820	4733095
16	0.528854	702835	4733110
17	0.506644	702850	4733095
18	0.502788	702850	4733080
19	0.498195	702828	4733035

20	0.496434	702850	4733110
21	0.49359	702850	4733065
22	0.491079	702835	4733125
23	0.488372	702820	4733110
24	0.488254	702790	4733035
25	0.484643	702805	4733065
26	0.478456	702850	4733050
27	0.478277	702850	4733125
28	0.477069	702868	4733037
29	0.476724	702858	4733036
30	0.465714	702848	4733036
31	0.46168	702872	4733027
32	0.461116	702872	4733035
33	0.458274	702838	4733036
34	0.45728	702788	4733034
35	0.455942	702850	4733140
36	0.453553	702872	4733017
37	0.452523	702835	4733140
38	0.45126	702805	4733080
39	0.449064	702874	4733027
40	0.444769	702820	4733125
41	0.439466	702865	4733050
42	0.43854	702865	4733110
43	0.436718	702865	4733125
44	0.436525	702865	4733095
45	0.434586	702834	4733147
46	0.427538	702850	4733155
47	0.426056	702865	4733080
48	0.423375	702865	4733140
49	0.422233	702865	4733065
50	0.416001	702835	4733155

Impacts (1.3E-5 ug/m3) v Annual AACC (2.3E-4) 2006-2010 TWF Data
Arsenic : All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 1134
Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

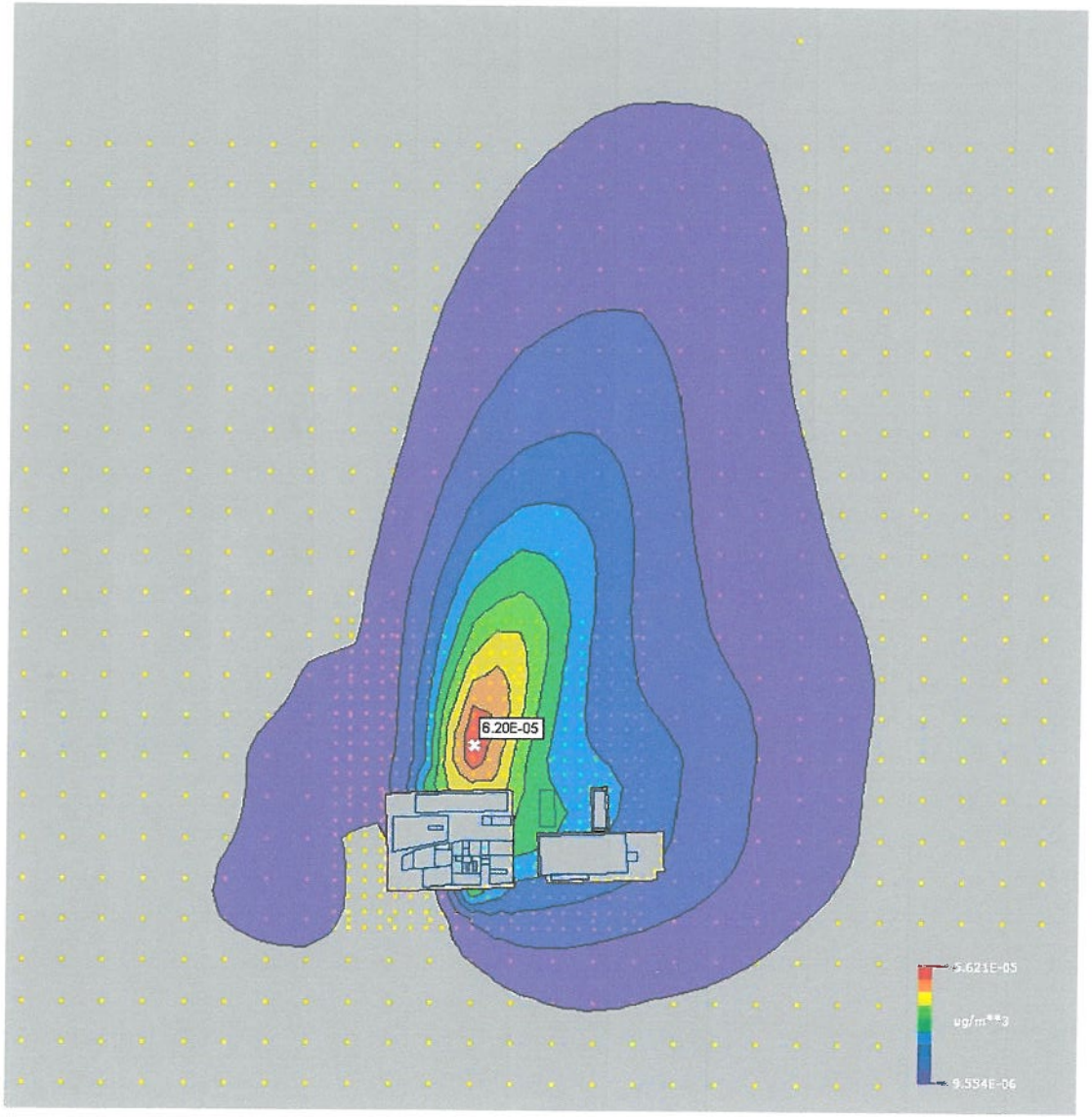
	All Values
Maximum	1.13012E-05 (702835, 4733080)
Minimum	5.29863E-08 (703948, 4731683)
Mean	2.881813E-06
Median	1.9357E-06
Mode	3.99821E-06
Std. Dev.	2.418348E-06

Maximum Values

#	Value	X	Y
1	1.13012E-05	702835	4733080
2	1.1148E-05	702835	4733095
3	1.1055E-05	702834	4733067
4	1.09314E-05	702835	4733065
5	1.07769E-05	702834	4733107
6	1.07074E-05	702835	4733110
7	1.07008E-05	702850	4733095
8	1.0591E-05	702850	4733110
9	1.0586E-05	702820	4733080
10	1.04801E-05	702820	4733065
11	1.04709E-05	702850	4733080
12	1.02433E-05	702850	4733125
13	1.02242E-05	702820	4733095
14	1.01208E-05	702835	4733125
15	1.00854E-05	702850	4733065
16	9.95084E-06	702835	4733050
17	9.84084E-06	702850	4733140
18	9.63217E-06	702865	4733125
19	9.62161E-06	702820	4733110

20	9.5887E-06	702865	4733110
21	9.57483E-06	702850	4733050
22	9.50091E-06	702820	4733050
23	9.49368E-06	702835	4733140
24	9.45984E-06	702865	4733140
25	9.34155E-06	702865	4733095
26	9.3258E-06	702850	4733155
27	9.20565E-06	702848	4733036
28	9.17066E-06	702865	4733155
29	9.13698E-06	702834	4733147
30	8.95413E-06	702865	4733080
31	8.94217E-06	702820	4733125
32	8.93401E-06	702838	4733036
33	8.92551E-06	702874	4733147
34	8.84731E-06	702835	4733155
35	8.83979E-06	702865	4733170
36	8.80872E-06	702850	4733170
37	8.77496E-06	702858	4733036
38	8.71829E-06	702874	4733107
39	8.61724E-06	702880	4733140
40	8.6111E-06	702865	4733065
41	8.57237E-06	702880	4733155
42	8.484E-06	702880	4733125
43	8.46887E-06	702805	4733035
44	8.46727E-06	702865	4733050
45	8.45212E-06	702865	4733185
46	8.4088E-06	702880	4733170
47	8.38158E-06	702798	4733034
48	8.37201E-06	702808	4733035
49	8.31496E-06	702850	4733185
50	8.29479E-06	702868	4733037

Impacts (6.20 E-5 ug/m3) v Annual AACC (5.6E-4) 2006-2010 TWF Data
Cadmium: All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 1134

Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

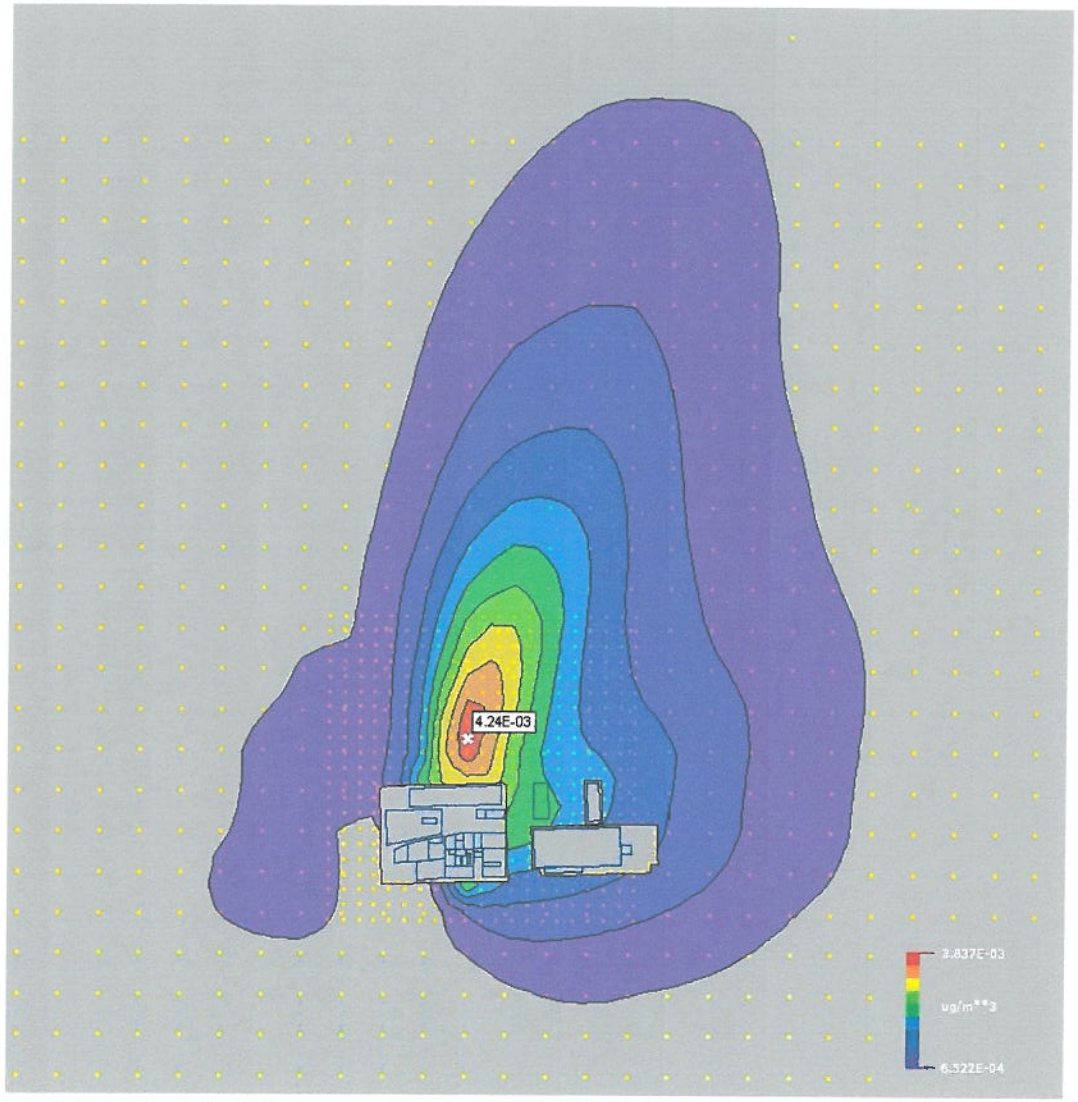
	All Values
Maximum	6.20414E-05 (702835, 4733080)
Minimum	2.90976E-07 (703948, 4731683)
Mean	1.582302E-05
Median	1.062845E-05
Mode	2.19553E-05
Std. Dev.	1.327743E-05

Maximum Values

#	Value	X	Y
1	6.20414E-05	702835	4733080
2	6.12011E-05	702835	4733095
3	6.06904E-05	702834	4733067
4	6.0012E-05	702835	4733065
5	5.91642E-05	702834	4733107
6	5.87832E-05	702835	4733110
7	5.8747E-05	702850	4733095
8	5.81446E-05	702850	4733110
9	5.81151E-05	702820	4733080
10	5.75328E-05	702820	4733065
11	5.74843E-05	702850	4733080
12	5.62361E-05	702850	4733125
13	5.61296E-05	702820	4733095
14	5.55631E-05	702835	4733125
15	5.53718E-05	702850	4733065
16	5.46272E-05	702835	4733050
17	5.40267E-05	702850	4733140
18	5.28817E-05	702865	4733125
19	5.28221E-05	702820	4733110

20	5.2643E-05	702865	4733110
21	5.25715E-05	702850	4733050
22	5.21549E-05	702820	4733050
23	5.21206E-05	702835	4733140
24	5.19358E-05	702865	4733140
25	5.12862E-05	702865	4733095
26	5.11996E-05	702850	4733155
27	5.05455E-05	702848	4733036
28	5.03486E-05	702865	4733155
29	5.01625E-05	702834	4733147
30	4.91599E-05	702865	4733080
31	4.90924E-05	702820	4733125
32	4.90453E-05	702838	4733036
33	4.9003E-05	702874	4733147
34	4.85725E-05	702835	4733155
35	4.85323E-05	702865	4733170
36	4.83613E-05	702850	4733170
37	4.81893E-05	702858	4733036
38	4.78653E-05	702874	4733107
39	4.73108E-05	702880	4733140
40	4.72803E-05	702865	4733065
41	4.70646E-05	702880	4733155
42	4.65793E-05	702880	4733125
43	4.64968E-05	702865	4733050
44	4.64887E-05	702805	4733035
45	4.64044E-05	702865	4733185
46	4.61668E-05	702880	4733170
47	4.60109E-05	702798	4733034
48	4.59565E-05	702808	4733035
49	4.56509E-05	702850	4733185
50	4.55599E-05	702868	4733037

Impacts (4.24E-3 ug/m3) v Annual AACC (7.7E-2) 2006-2010 TWF Data
Formaldehyde: All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 1134

Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

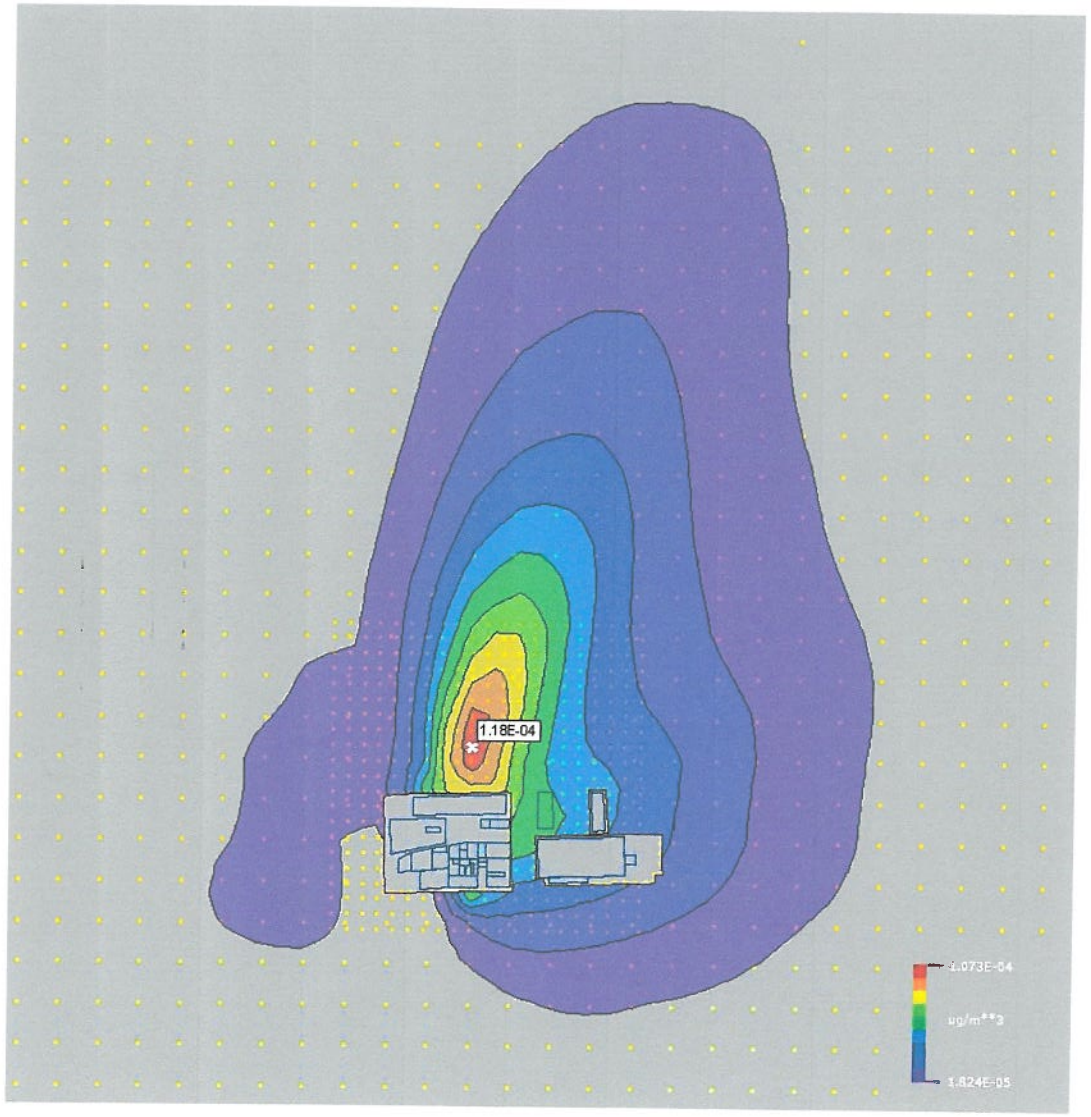
	All Values
Maximum	0.00423528 (702835, 4733080)
Minimum	1.98695E-05 (703948, 4731683)
Mean	0.001080236
Median	0.0007256935
Mode	0.00149921
Std. Dev.	0.0009063809

Maximum Values

#	Value	X	Y
1	0.00423528	702835	4733080
2	0.00417763	702835	4733095
3	0.00414328	702834	4733067
4	0.00409711	702835	4733065
5	0.00403843	702834	4733107
6	0.00401245	702835	4733110
7	0.00401111	702850	4733095
8	0.00396973	702850	4733110
9	0.00396626	702820	4733080
10	0.00392667	702820	4733065
11	0.00392531	702850	4733080
12	0.00383924	702850	4733125
13	0.00383071	702820	4733095
14	0.00379262	702835	4733125
15	0.00378123	702850	4733065
16	0.0037302	702835	4733050
17	0.00368829	702850	4733140
18	0.00361084	702865	4733125
19	0.00360501	702820	4733110

20	0.00359477	702865	4733110
21	0.00359012	702850	4733050
22	0.00355992	702820	4733050
23	0.00355762	702835	4733140
24	0.00354611	702865	4733140
25	0.0035024	702865	4733095
26	0.00349523	702850	4733155
27	0.00345168	702848	4733036
28	0.0034376	702865	4733155
29	0.00342393	702834	4733147
30	0.00335739	702865	4733080
31	0.00335052	702820	4733125
32	0.00334978	702838	4733036
33	0.00334604	702874	4733147
34	0.00331544	702835	4733155
35	0.00331352	702865	4733170
36	0.00330142	702850	4733170
37	0.00328975	702858	4733036
38	0.00326882	702874	4733107
39	0.00323069	702880	4733140
40	0.00322885	702865	4733065
41	0.00321375	702880	4733155
42	0.00318092	702880	4733125
43	0.00317464	702865	4733050
44	0.00317198	702805	4733035
45	0.00316816	702865	4733185
46	0.00315234	702880	4733170
47	0.00313904	702798	4733034
48	0.00313588	702808	4733035
49	0.00311637	702850	4733185
50	0.00310925	702868	4733037

Impacts (1.18E-4 ug/m3) v Annual AACC (2.4E-3) 2006-2010 TWF Data
Nickel: All Facility Sources without Background



Fine Mesh Grid
= 10 m spacing

Commercial Creamery Company, Jerome, ID

Dataset

Dataset
Variable = Other, all, annual, conc Units = ug/m**3 Format = XYZ Points = 1134
Projection
Projection = UTM Datum = WGE Zone = 11 Hemisphere = N

Statistics

	All Values
Maximum	0.000118447 (702835, 4733080)
Minimum	5.55306E-07 (703948, 4731683)
Mean	3.020481E-05
Median	2.02881E-05
Mode	4.19144E-05
Std. Dev.	2.534866E-05

Maximum Values

#	Value	X	Y
1	0.000118447	702835	4733080
2	0.000116827	702835	4733095
3	0.000115883	702834	4733067
4	0.000114595	702835	4733065
5	0.00011293	702834	4733107
6	0.000112204	702835	4733110
7	0.000112181	702850	4733095
8	0.000111018	702850	4733110
9	0.00011091	702820	4733080
10	0.000109808	702820	4733065
11	0.000109791	702850	4733080
12	0.000107363	702850	4733125
13	0.000107116	702820	4733095
14	0.000106053	702835	4733125
15	0.000105777	702850	4733065
16	0.00010435	702835	4733050
17	0.000103138	702850	4733140
18	0.00010098	702865	4733125
19	0.000100804	702820	4733110

20	0.000100536	702865	4733110
21	0.000100448	702850	4733050
22	9.95594E-05	702820	4733050
23	9.94793E-05	702835	4733140
24	9.91662E-05	702865	4733140
25	9.79606E-05	702865	4733095
26	9.77358E-05	702850	4733155
27	9.65869E-05	702848	4733036
28	9.61277E-05	702865	4733155
29	9.57396E-05	702834	4733147
30	9.39121E-05	702865	4733080
31	9.37299E-05	702838	4733036
32	9.36863E-05	702820	4733125
33	9.35704E-05	702874	4733147
34	9.27051E-05	702835	4733155
35	9.26549E-05	702865	4733170
36	9.23138E-05	702850	4733170
37	9.2054E-05	702858	4733036
38	9.14238E-05	702874	4733107
39	9.03471E-05	702880	4733140
40	9.03271E-05	702865	4733065
41	8.98697E-05	702880	4733155
42	8.89601E-05	702880	4733125
43	8.88211E-05	702865	4733050
44	8.86947E-05	702805	4733035
45	8.8587E-05	702865	4733185
46	8.81489E-05	702880	4733170
47	8.77694E-05	702798	4733034
48	8.76885E-05	702808	4733035
49	8.71369E-05	702850	4733185
50	8.69988E-05	702868	4733037

Appendix B: Emission Work-Up Sheets

Appendix B1 Criteria Pollutant Emissions. ALL SOURCES

Emissions Unit	Stack ID
Boiler 150 hp York Shipley	B1
Boiler **Pending** New 125 hp YS	B2
Dryer **Pending** New Rogers	D1
Dryer Existing 1960 Rogers	D2
Dryer Existing Blaw Knox Spray	D3
Dryer, Drum	D4
Tote-Dump Dust Collector 2	P1
Tote-Dump Dust Collector 1	P2
Clothes Dryer 1	NR3a
Clothes Dryer 2	NR3b
Water Heater 1	NR5a
Water Heater 3	NR5b
Proc'B - Carrier HVAC	**NR4A**
Blend'C - Carrier HVAC	**NR4B**
QA - Carrier HVAC	**NR4C**
QC - Carrier HVAC	**NR4D**
E Side - Carrier HVAC Office	**NR4E**
E Side - Carrier HVAC Bartelt	**NR4F**
Littleford - Carrier HVAC-1	**NR4G**
E Side - Modine Unit Heater Down	**NR7A**
E Side - Modine Unit Heater Up	**NR7B**
Ph I ADP Unit Heater 1	**NR7C**
Ph I ADP Unit Heater 2	**NR7D**
Ph II ADP Unit Heater 1	**NR7E**
Ph II ADP Unit Heater 2	**NR7F**
Ph III ADP Unit Heater N-1	**NR7G**
Ph III ADP Unit Heater N-2	**NR7H**
Ph III ADP Unit Heater S-1	**NR7I**
Ph III ADP Unit Heater S-2	**NR7J**
Break Room - Carrier HVAC	**NR4H**
Blend Room - Carrier HVAC-1	**NR4I**
Blend Room - Carrier HVAC-2	**NR4J**
Blend Room - Carrier HVAC-3	**NR4K**
Blend Room - Carrier HVAC-4	**NR4L**
Shop - Carrier HVAC	**NR4M**
E Shop- Modine Unit Heater 1	**NR7K**
E Shop- Modine Unit Heater 2	**NR7L**

Source B1: Gas-Fired BOILER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	York Shipley
Model	560-SPHV-150-N2 (150 hp, 1979)
Input Heat Capacity (BTU/hr)	6,100,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	5,905
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	8,760

Stack Data	Existing Source		
Stack Height (ft)		13.716	m
Stack Diameter (ft)	1	0.3048	m
Avg Exit Gas Temperature (°F)		215	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)		2329	
Stack Velocity (m/s)		15.1	
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			
		UTM North	UTM East
		m	m
Site Information		4732981.7	702793.2
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.045	0.197	**0.006**	15	yes	no
$PM_{2.5}$	NG Combustion	7.6	lb/10^6 scf	0.045	0.197	**0.006**	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.004	0.016	0.0004	40	yes	no
NO_x	NG Combustion	100	lb/10^6 scf	0.591	2.586	**0.074**	40	yes	no
CO	NG Combustion	84	lb/10^6 scf	0.496	2.173	0.062	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.032	0.142	0.004	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	2.95E-06	1.29E-05	3.72E-07	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM	NG Combustion	7.6	lb/10^6 scf	0.045	0.197	0.006	25	yes	no
Beryllium	NG Combustion	1.20E-05	lb/10^6 scf	0.000	0.000	0.000	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	0.000	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Potential Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.065	0.285	0.008	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.014	0.059	0.002	21.0	1
CO_2	NG Combustion	120,000	lb/10^6 scf	708.616	3103.737	89.286	1.0	3104
N_2O	NG Combustion	2.2	lb/10^6 scf	0.013	0.057	0.002	310.0	18
								3123

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, Tables 1.4-1 (NOx and CO) 1.4-2 "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source B2: Gas-Fired BOILER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics		Stack Data		Proposed Source	
Burner Manufacturer	York Shipley	Stack Height (ft)	13.716 m		47
Model	560-SPHV-150-N2 (125 hp, 1988)	Stack Diameter (ft)	0.3048 m		
Input Heat Capacity (BTU/hr)	6,100,000	Avg Exit Gas Temperature (°F)	215		
Fuel	Natural Gas	Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033	Wet Actual Flow Rate (wacf/min)			
Fuel Consumption (scf/hr)	5,905	Wet Standard Flow Rate (wscf/min)			
		Dry Standard Flow Rate (dscf/min)	2329		
Process Characteristics		Stack Velocity (m/s)	15.1		
Total PM Emission Rate (lb/hr)		F_d (dscf stack gas/BTU)			381.803279
PM2.5 Emission Rate (lb/hr)		F_w (wscf stack gas/BTU)		UTM North	UTM East
				m	m
Actual Hours of Operation (hr/yr)	8,760	**Site Information**		4732981.7	702789.60
		Jerome Barometric Pressure (mm Hg)	663.93		

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.045	0.197	**0.006**	15	yes	no
$PM_{2.5}$	NG Combustion	7.6	lb/10^6 scf	0.045	0.197	**0.006**	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.004	0.016	0.0004	40	yes	no
NO_x	NG Combustion	100	lb/10^6 scf	0.591	2.586	**0.074**	40	yes	no
CO	NG Combustion	84	lb/10^6 scf	0.496	2.173	0.062	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.032	0.142	0.004	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	2.95E-06	1.29E-05	3.72E-07	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	NG Combustion	7.6	lb/10^6 scf	0.045	0.197	0.006	25	yes	no
Beryllium	NG Combustion	1.20E-05	lb/10^6 scf	0.000	0.000	0.000	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	0.000	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Potential Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.065	0.285	0.008	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.014	0.059	0.002	21.0	1
CO_2	NG Combustion	120,000	lb/10^6 scf	708.616	3103.737	89.286	1.0	3104
N_2O	NG Combustion	2.2	lb/10^6 scf	0.013	0.057	0.002	310.0	18
								3123

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, Tables 1.4-1 (NOx and CO) 1.4-2 "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source D1: Gas-Fired DRYER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics		
Burner Manufacturer		Maxon Corporation
Model		Model NPLE-2 NG Burner
Input Heat Capacity (BTU/hr)		12,000,000
Fuel		Natural Gas
Heating Value (BTU/scf)		1,033
Fuel Consumption (scf/hr)		11,617
	Baghouse:	
Process Characteristics	5 oz woven poly eggshell finish	
Total PM-10 Emission Rate (lb/hr)		0.090
PM2.5 Emission Rate (lb/hr)		0.037
Design Throughput (lb wet feed/hr)		5935
Actual Hours of Operation (hr/yr)	ops: 365days/yr x2 shifts	5,840
tons dry product / hr		1.50
Fabric Filter Control		0.980

Stack Data		Proposed Source	
Stack Height (m)		17.6784	m
Stack Diameter (ft)	3.5	1.0668	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)		41500	
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)		22	
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)		UTM North	UTM East
		m	m
Site Information		4732979.5	702844.40
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	Process	0.059	lb/ton processed	0.088	0.258	0.01112	See Total	See Total	See Total
PM_{10}	NG Combustion	0.152	lb/10^6 scf	0.002	0.005	0.00022	See Total	See Total	See Total
PM_{10}	Total	NA	NA	0.090	0.263	0.01134	15	yes	no
$PM_{2.5}$	Process	0.024	lb/ton processed	0.035	0.103	0.00445	See Total	See Total	See Total
$PM_{2.5}$	NG Combustion	97% x Combust PM-10	NA	0.002	0.005	0.00022	See Total	See Total	See Total
$PM_{2.5}$	Total	NA	NA	0.037	0.108	0.00467	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.007	0.020	0.00088	40	yes	no
NO_x	NG Combustion	100	lb/10^6 scf	1.162	3.392	0.14637	40	yes	no
CO	NG Combustion	84	lb/10^6 scf	0.976	2.849	0.12295	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.064	0.187	0.00805	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	5.81E-06	0.000	7.32E-07	0.6	yes	no
						7.56E-03	**g/sec PM-10 24h term**		
						0.00311	**g/sec PM-2.5 24h term**		
						0.00311	**g/sec PM-2.5 annual term**		
						0.117	**g/sec NO2 1-hr**		
						0.098	g/sec NOx annual term		
						0.078	**g/sec NO2 annual term**		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion & Process	3.750	lb/hr	3.750	10.950	0.473	25	no	no
Beryllium	NG Combustion	1.20E-05	lb/10^6 scf	1.39E-07	0.000	1.76E-08	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	3.02E-06	0.000	3.81E-07	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.13	0.373	0.016	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.027	0.078	0.003	21.0	2
CO_2	NG Combustion	120,000	lb/10^6 scf	1394	4070.474	176	1.0	4070
N_2O	NG Combustion	2.2	lb/10^6 scf	0.026	0.075	0.003	310.0	23
								4095

Process Weight Rule (58.01.01.701.01.a)

Pollutant	Pollutant Source	Potential Emissions PM (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	3.750		5.49	yes
					3.56E+00

PM Grain Loading Standard - Not Applicable[e]

Notes:

(a1) Emission factor for PM-10(process) from AP-42 Chapter 9.6.1 "Natural and Processed Cheese". Emission factor for filterable PM=2.5 is 1) converted to "Total PM" =2.5/(1/0.85) (AP-42, Table B.2-3 AIRS Code = 008) assuming a medium efficiency centrifugal collector was used to develop the emission factor (footnote B to AP-42 table 9.6.1-2). This Total PM is treate by fabric filter (98% filter efficiency assumed. Conservative, given 99-99.5% efficiency quoted in Table B.2-3 AIRS Code = 017). **2.5*(1/0.85)*(1-0.98) = 0.059 lbs PM-10/ ton dry product**

(a2) Emission factor for PM-2.5(process) from AP-42 Chapter 9.6.1 "Natural and Processed Cheese". Emission factor for condensible PM=0.73 is 1) converted to "Total PM" =0.73/(1/0.62) (AP-42, Table B.2-3 AIRS Code = 008) assuming a medium efficiency centrifugal collector was used to develop the emission factor (footnote B to AP-42 table 9.6.1-2). This Total PM is treate by fabric filter (98% filter efficiency assumed. Conservative, given 99-99.5% efficiency quoted in Table B.2-3 AIRS Code = 017). **0.73*(1/0.62)*(1-0.98) = 0.024 lbs / ton dry product**

(b) Emission factor for PM-2.5(combustion) from AP-42 Chapter 1.4, "Natural Gas Combustion", with all particulate <1 micron. PM = PM-10 = PM-2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) The Dryer is a direct heat transfer system. Therefore, it does not satisfy the definition of "fuel burning equipment" as given in IDAPA 58.01.01.006.45. See also 58.01.01.701.02.

** NA - Not Applicable

Source D2: Gas-Fired DRYER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics			
Burner Manufacturer		North American	
Model		3065	(Rogers Dryer)
Input Heat Capacity (BTU/hr)		12,000,000	
Fuel		Natural Gas	
Heating Value (BTU/scf)		1,033	
Fuel Consumption (scf/hr)		11,617	
		Baghouse:	
Process Characteristics		5 oz woven poly eggshell finish	
Total PM-10 Emission Rate (lb/hr)		0.090	
PM2.5 Emission Rate (lb/hr)		0.035	
Design Throughput (lb wet feed/hr)		5935	
Actual Hours of Operation (hr/yr)	ops: 365days/yr x2 shifts	5,840	
tons dry product / hr		1.50	
Fabric Filter Control		0.980	

Stack Data	Existing Source		
Stack Height (m)		14.6304	m
Stack Diameter (ft)	4.15	1.266	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content		100.00%	
Wet Actual Flow Rate (wacf/min)		41,500	
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)		16	
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)		UTM North	UTM East
		m	m
Site Information		4732956.1	702822.10
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM10	Process	0.059	lb/ton processed	0.088	0.258	0.01112	See Total	See Total	See Total
PM10	NG Combustion	0.152	lb/10^6 scf	0.002	0.005	0.00022	See Total	See Total	See Total
PM10	Total	NA	NA	0.090	0.263	0.01134	15	yes	no
PM2.5	NG Process	0.024	lb/ton processed	0.035	0.103	0.00445	See Total	See Total	See Total
PM2.5	NG Combustion	97% x Combust PM-10	NA	0.002	0.005	0.00022	See Total	See Total	See Total
PM2.5	Total	NA	NA	0.037	0.108	0.00467	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.007	0.020	0.00088	40	yes	no
NOx	NG Combustion	100	lb/10^6 scf	1.162	3.392	0.14637	40	yes	no
CO	NG Combustion	84	lb/10^6 scf	0.976	2.849	0.12295	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.064	0.187	0.00805	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	5.81E-06	0.000	7.32E-07	0.6	yes	no
						7.56E-03	g/sec PM-10 24h term		
						0.00311	g/sec PM-2.5 24h term		
						0.00311	g/sec PM-2.5 annual term		
						0.117	g/sec NO2 1-hr		
						0.098	g/sec NOx annual term		
						0.078	g/sec NO2 annual term		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM	NG Combustion & Process	3.750	lb/hr	3.750	10.950	0.473	25	no	no
Beryllium	NG Combustion	<1.2E-5	lb/10^6 scf	1.39E-07	6.11E-07	1.76E-08	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	3.02E-06	1.32E-05	3.81E-07	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Potential Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.13	0.560	0.016	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.027	0.117	0.003	21.0	2
CO_2	NG Combustion	120,000	lb/10^6 scf	1394	6106	176	1.0	6106
N_2O	NG Combustion	2.2	lb/10^6 scf	0.026	0.112	0.003	310.0	35
								6143

Process Weight Rule (58.01.01.701.01.a)

Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?	
PM	Process	3.750		5.49	yes	
						5.49E+00

PM Grain Loading Standard - Not Applicable[e]

Notes:

(a1) Emission factor for PM-10(process) from AP-42 Chapter 9.6.1 "Natural and Processed Cheese". Emission factor for filterable PM=2.5 is 1) converted to "Total PM" =2.5/(1/0.85) (AP-42, Table B.2-3 AIRS Code = 008) assuming a medium efficiency centrifugal collector was used to develop the emission factor (footnote B to AP-42 table 9.6.1-2). This Total PM is treated by fabric filter (98% filter efficiency assumed. Conservative, given 99-99.5% efficiency quoted in Table B.2-3 AIRS Code = 017). **2.5*(1/0.85)*(1-0.98) = 0.059 lbs PM-10/ ton dry product**

(a2) Emission factor for PM-2.5(process) from AP-42 Chapter 9.6.1 "Natural and Processed Cheese". Emission factor for condensible PM=0.73 is 1) converted to "Total PM" =0.73/(1/0.62) (AP-42, Table B.2-3 AIRS Code = 008) assuming a medium efficiency centrifugal collector was used to develop the emission factor (footnote B to AP-42 table 9.6.1-2). This Total PM is treated by fabric filter (98% filter efficiency assumed. Conservative, given 99-99.5% efficiency quoted in Table B.2-3 AIRS Code = 017). **0.73*(1/0.62)*(1-0.98) = 0.024 lbs / ton dry product**

(b) Emission factor for PM-2.5(combustion) from AP-42 Chapter 1.4, "Natural Gas Combustion", with all particulate <1 micron. PM = PM-10 = PM-2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

Source D3: Gas-Fired DRYER CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics

Burner Manufacturer		Maxon Corporation	
Model	Blaw Knox Dryer	Line-o-Flame B Burner	
Input Heat Capacity (BTU/hr)		8,000,000	
Fuel		Natural Gas	
Heating Value (BTU/scf)		1,033	1
Fuel Consumption (scf/hr)		7,744	
	Baghouse: Hammerlund pulse type		
Process Characteristics	10 oz seamless poly eggshell finish		
Total PM-10 Emission Rate (lb/hr)		0.089	
PM2.5 Emission Rate (lb/hr)		0.035	
Design Throughput (lb wet feed/hr)		3000	
Actual Hours of Operation (hr/yr)	ops: 365days/yr x2 shifts	5,840	
tons dry product / hr		1.50	
Fabric Filter Control		0.980	

Stack Data	**Existing Source**		
Stack Height (ft)		14.63	m
Stack Diameter (ft)	3.568	1.09	
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content		100.00%	
Wet Actual Flow Rate (wacf/min)		18000	
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)		9	
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)		UTM North	UTM East
		m	m
Site Information		4732976.2	702818.50
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM10	Process	0.059	lb/ton processed	0.088	0.258	0.011	See Total	See Total	See Total
PM10	NG Combustion	0.152	lb/10^6 scf	0.001	0.003	0.000	See Total	See Total	See Total
PM10	Total	NA	NA	0.089	0.261	0.011	15	yes	no
PM2.5	NG Process	0.024	lb/ton processed	0.035	0.103	0.004	See Total	See Total	See Total
PM2.5	NG Combustion	97% x Combust PM-10	NA	0.001	0.003	0.000	See Total	See Total	See Total
PM2.5	Total	NA	NA	0.036	0.106	0.005	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.005	0.014	0.001	40	yes	no
NOx	NG Combustion	100	lb/10^6 scf	0.774	2.261	0.098	40	yes	no
CO	NG Combustion	84	lb/10^6 scf	0.651	1.900	0.082	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.043	0.124	0.005	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	3.87E-06	0.000	4.88E-07	0.6	yes	no
						7.51E-03	g/sec PM-10 24h term		
						0.00306	g/sec PM-2.5 24h term		
						0.00306	g/sec PM-2.5 annual term		
						0.078	g/sec NO2 1-hr		
						0.065	g/sec NOx annual term		
						0.052	g/sec NO2 annual term		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	NG Combustion & Process	3.750	lb/hr	3.750	10.950	0.473	25	no	no
Beryllium	NG Combustion	<1.2E-5	lb/10^6 scf	9.29E-08	0.000	1.17E-08	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	2.01E-06	0.000	2.54E-07	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.09	0.249	0.011	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.018	0.052	0.002	21.0	1
CO_2	NG Combustion	120,000	lb/10^6 scf	929	2713.650	117	1.0	2714
N_2O	NG Combustion	2.2	lb/10^6 scf	0.017	0.050	0.002	310.0	15
								2730

Process Weight Rule (58.01.01.701.01.a)

Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	3.750		5.49	yes

PM Grain Loading Standard - Not Applicable[e]

Notes:

(a1) Emission factor for PM-10(process) from AP-42 Chapter 9.6.1 "Natural and Processed Cheese". Emission factor for filterable PM=2.5 is 1) converted to "Total PM" =2.5/(1/0.85) (AP-42, Table B.2-3 AIRS Code = 008) assuming a medium efficiency centrifugal collector was used to develop the emission factor (footnote B to AP-42 table 9.6.1-2). This Total PM is trea by fabric filter (98% filter efficiency assumed. Conservative, given 99-99.5% efficiency quoted in Table B.2-3 AIRS Code = 017). **2.5*(1/0.85)*(1-0.98) = 0.059 lbs PM-10/ ton dry product**

(a2) Emission factor for PM-2.5(process) from AP-42 Chapter 9.6.1 "Natural and Processed Cheese". Emission factor for condensible PM=0.73 is 1) converted to "Total PM" =0.73/(1/0.62 (AP-42, Table B.2-3 AIRS Code = 008) assuming a medium efficiency centrifugal collector was used to develop the emission factor (footnote B to AP-42 table 9.6.1-2). This Total PM is trea by fabric filter (98% filter efficiency assumed. Conservative, given 99-99.5% efficiency quoted in Table B.2-3 AIRS Code = 017). **0.73*(1/0.62)*(1-0.98) = 0.024 lbs PM-2.5/ ton dry produ**

(b) Emission factor for PM-2.5(combustion) from AP-42 Chapter 1.4, "Natural Gas Combustion", with all particulate <1 micron. PM = PM-10 = PM-2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) The Dryer is a direct heat transfer system. Therefore, it does not satisfy the definition of "fuel burning equipment" as given in IDAPA 58.01.01.006.45. See also IDAPA 58.01.01.701.02.

** NA - Not Applicable

Source D4: Drum Dryer (Steam Heated) CRITERIA POLLUTANT EMISSION RATES

Source Characteristics					Stack Data	Existing Source		
Filter Unit Manufacturer		no control			Stack Height (ft)	20	6.1	m
Model					Stack Diameter (ft)	2.5	0.762	m (0.001 used)
Input Heat Capacity (BTU/hr)		na			Avg Exit Gas Temperature (°F)		120	
Fuel		na -- steam heated			Exit Gas Moisture Content			
Heating Value (BTU/scf)		na			Wet Actual Flow Rate (wacf/min)		9,815	(0.001 used)
Fuel Consumption (scf/hr)		na			Wet Standard Flow Rate (wscf/min)			
					Dry Standard Flow Rate (dscf/min)			
Process Characteristics					Stack Velocity (m/s)		10	
Total PM Emission Rate (lb/hr)		1.250			F_d (dscf stack gas/BTU)			
PM2.5 Emission Rate (lb/hr)		0.300	8.000	hrs/day x	F_w (wscf stack gas/BTU)		UTM North	UTM East
Design Throughput (lb/hr)		1,000	5.00	days/wk x			m	m
Actual Hours of Operation (hr/yr)		320	8	wk/yr =	**Site Information**		4732979.5	702799.10
Control (%)		0	Not Controlled		Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	Process	0.30	lb/hr	0.300	0.048	**0.038**	15	yes	no
$PM_{2.5}$	Process	0.30	lb/hr	0.300	0.048	**0.038**	10	yes	no
						0.01260	**g/sec PM-2.5 24h term**		
						0.01260	**g/sec PM-2.5 24h term**		
						0.00138	**g/sec PM-2.5 annual term**		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	Process	1.25	lb/ton thru	0.625	0.100	0.079	15	yes	no

Other Pollutants

(GHG not applicable – steam heated)

Process Weight Rule (58.01.01.701.01.a)

Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	1.250		2.84	yes

PM Grain Loading Standard - Not Applicable[e]

Notes:

(a) Emission factors for other pollutants from AP-42 Chapters 9.6.1 "Natural and Processed Cheese"

(b) PM-10 fraction of total PM, and PM-2.5 fraction of PM-10, from Gabites (2007) for whole milk powder

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01

(e) The Dryer is a direct heat transfer system. Therefore, it does not satisfy the definition of "fuel burning equipment" as given in IDAPA 58.01.01.006.45.

Source P1: Tote Dump Dust Collector (Ruberg Blender) CRITERIA POLLUTANT EMISSION RATES

Source Characteristics									
Filter Unit Manufacturer		AZO			Stack Data		Existing Source		
Model		16 ox felted poly			Stack Height (m)		14.33		
Input Heat Capacity (BTU/hr)		na			Stack Diameter (ft)	0.25	0.0762	m	
Fuel		na			Avg Exit Gas Temperature (°F)		130		
Heating Value (BTU/scf)		na			Exit Gas Moisture Content				
Fuel Consumption (scf/hr)		na			Wet Actual Flow Rate (wacf/min)		130		
					Wet Standard Flow Rate (wscf/min)				
Process Characteristics					Dry Standard Flow Rate (dscf/min)				
Total PM Emission Rate (lb/hr)		3.533			Stack Velocity (m/s)		13		
PM2.5 Emission Rate (lb/hr)		3.427			F_d (dscf stack gas/BTU)				
Design Throughput (lb tote xfer/hr)		4,000			F_w (wscf stack gas/BTU)			UTM North	UTM East
Actual Hours of Operation (hr/yr)	ops: 7days/wk x2 shifts	5,824						m	m
Filter Control (%)		98%			Site Information			4733000.1	702808.40
					Jerome Barometric Pressure (mm Hg)				663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution? [c]
PM_{10}	Process	0.059	lb/ton processed	0.118	0.343	**0.015**	15	yes	no
$PM_{2.5}$	Process	0.017176471	29.2% of PM10	0.034	0.100	**0.004**	10	yes	no
						0.00988	**g/sec PM-10 24h term**		
						0.00289	**g/sec PM-2.5 24h term**		
						0.00288	**g/sec PM-2.5 annual term**		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution? [c]
PM	Process	0.10	lb/ton thru	0.200	0.582	0.025	25	yes	no

Other Pollutants

(GHG not applicable)

Process Weight Rule (58.01.01.701.01.a)

Pollutant	Pollutant Source	Potential Emissions (lb/hr)		Allowable Emissions (lb/hr)	Meets Standard?
PM	Process	0.200		6.52	yes

PM Grain Loading Standard - Not Applicable**

Notes:

(a) Emission factors for other pollutants from AP-42 Chapters 9.6.1 "Natural and Processed Cheese"

(b) Assumes 4000 lbs transferred from totes/hr, 5824 hrs /yr tote transfer, and 98% dust filter control.

PM-2.5 fraction of PM-10 defined in footnotes on Workup Sheet D3

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01

** NA - Not Applicable

Source NR3a and NR3b: Gas-Fired Clothes Dryers POLLUTANT EMISSION RATES

Combustion Source Characteristics		Stack Data		Existing Source, 2 each			
Burner Manufacturer	Unspecified	Stack Height (ft)		6.7056			
Model	Unspecified	Stack Diameter (ft)	1	0.3048	m		
Input Heat Capacity (BTU/hr)	116,000	Avg Exit Gas Temperature (°F)		160			
Fuel	Natural Gas	Exit Gas Moisture Content					
Heating Value (BTU/scf)	1,033	Wet Actual Flow Rate (wacf/min)		750	0.354232563	m3/sec	
Fuel Consumption (scf/hr)	112	Wet Standard Flow Rate (wscf/min)					
		Dry Standard Flow Rate (dscf/min)					
Process Characteristics		Stack Velocity (m/s)		5			
Total PM Emission Rate (lb/hr)		F_d (dscf stack gas/BTU)					
PM2.5 Emission Rate (lb/hr)		F_w (wscf stack gas/BTU)			UTM North	UTM East	
	8 hr/day all days				m	m	
Actual Hours of Operation (hr/yr)	2,920	**Site Information**			4732975.7	702856.30	
		Jerome Barometric Pressure (mm Hg)			663.93		

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	8.534E-04	1.246E-03	1.075E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	8.534E-04	1.246E-03	1.075E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	6.738E-05	9.837E-05	8.489E-06	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	1.056E-02	1.541E-02	1.330E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	4.492E-03	6.558E-03	5.660E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	6.176E-04	9.017E-04	7.782E-05	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	5.615E-08	8.197E-08	7.075E-09	0.6	yes	no
						3.58E-05	**g/sec PM-10 24h term**		
						3.58E-05	**g/sec PM-2.5 24h term**		
						3.58E-05	**g/sec PM-2.5 annual term**		
						4.43E-04	NOx Annual as g/sec		
						3.55E-04	**NO2 Annual as g/sec**		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM	NG Combustion	7.600	lb/10^6 scf	8.534E-04	1.246E-03	1.075E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	1.348E-09	1.967E-09	1.698E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	2.920E-08	4.263E-08	3.679E-09	0.1	yes	no

Other Pollutants **GHG**

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Potential Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	1.235E-03	1.80E-03	1.56E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	2.583E-04	3.77E-04	3.25E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	1.348E+01	1.97E+01	1.70E+00	1.0	20
N_2O	NG Combustion	2.2	lb/10^6 scf	2.470E-04	3.61E-04	3.11E-05	310.0	0
								20

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for all listed pollutants from AP-42 Chapter 1.4 "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4a : Gas-Fired Proc'B - Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	275,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	266
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	6.7	m
Stack Diameter (ft)	0.12	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

UTM North	UTM East
m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.002	4.431E-03	2.549E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.002	4.431E-03	2.549E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	3.498E-04	2.013E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.025	5.480E-02	3.153E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.011	2.332E-02	1.342E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	3.207E-03	1.845E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	2.915E-07	1.677E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.549E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	4.025E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	8.721E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.003	0.006	3.690E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.001	7.715E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	31.946	69.961	4.025E+00	1.0	70
N_2O	NG Combustion	2.2	lb/10^6 scf	0.001	0.001	7.379E-05	310.0	0
								70

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".
(b) All particulate emissions assumed to be PM2.5
(c) IDAPA 58.01.01.006.106
(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source
(e) IDAPA 58.01.01.701.02
(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4B : Gas-Fired Blend'C - Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	275,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	266
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	5.2	m
Stack Diameter (ft)	0.12	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

	UTM North	UTM East
	m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	G Combusti	7.6	lb/10^6 scf	0.002	0.004	2.549E-04	15	yes	no
$PM_{2.5}$	G Combusti	7.600	lb/10^6 scf	0.002	0.004	2.549E-04	10	yes	no
SO2	G Combusti	0.6	lb/10^6 scf	0.000	0.000	2.013E-05	40	yes	no
NO_x	G Combusti	94	lb/10^6 scf	0.025	0.055	3.153E-03	40	yes	no
CO	G Combusti	40	lb/10^6 scf	0.011	0.023	1.342E-03	100	yes	no
VOC	G Combusti	5.5	lb/10^6 scf	0.001	0.003	1.845E-04	40	yes	no
Lead	G Combusti	0.0005	lb/10^6 scf	0.000	0.000	1.677E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	G Combusti	7.600	lb/10^6 scf	0.002	0.004	2.549E-04	25	yes	no
Beryllium	G Combusti	0.000012	lb/10^6 scf	0.000	0.000	4.025E-10	0.0004	yes	no
Mercury	G Combusti	2.60E-04	lb/10^6 scf	0.000	0.000	8.721E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	G Combusti	11	lb/10^6 scf	0.003	0.006	3.690E-04	0.0	0
Methane	G Combusti	2.3	lb/10^6 scf	0.001	0.001	7.715E-05	21.0	0
CO_2	G Combusti	120,000	lb/10^6 scf	31.946	69.961	4.025E+00	1.0	70
N_2O	G Combusti	2.2	lb/10^6 scf	0.001	0.001	7.379E-05	310.0	0
								70

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	G Combusti	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4C : Gas-Fired QA - Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	180,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	174
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	2.3	m
Stack Diameter (ft)	0.056	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

	UTM North	UTM East
	m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.003	1.669E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.317E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.016	0.036	2.064E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.007	0.015	8.782E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.002	1.208E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.098E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	2.635E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	5.708E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.004	2.415E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	5.050E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	20.910	45.793	2.635E+00	1.0	46
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	4.830E-05	310.0	0
								46

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4D : Gas-Fired QC - Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	74,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	72
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	2.3	m
Stack Diameter (ft)	0.056	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North	UTM East
	m	m
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	G Combusti	7.6	lb/10^6 scf	0.001	0.001	6.860E-05	15	yes	no
$PM_{2.5}$	G Combusti	7.600	lb/10^6 scf	0.001	0.001	6.860E-05	10	yes	no
SO2	G Combusti	0.6	lb/10^6 scf	0.000	0.000	5.416E-06	40	yes	no
NO_x	G Combusti	94	lb/10^6 scf	0.007	0.015	8.485E-04	40	yes	no
CO	G Combusti	40	lb/10^6 scf	0.003	0.006	3.610E-04	100	yes	no
VOC	G Combusti	5.5	lb/10^6 scf	0.000	0.001	4.964E-05	40	yes	no
Lead	G Combusti	0.0005	lb/10^6 scf	0.000	0.000	4.513E-09	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	G Combusti	7.600	lb/10^6 scf	0.001	0.001	6.860E-05	25	yes	no
Beryllium	G Combusti	0.000012	lb/10^6 scf	0.000	0.000	1.083E-10	0.0004	yes	no
Mercury	G Combusti	2.60E-04	lb/10^6 scf	0.000	0.000	2.347E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	G Combusti	11	lb/10^6 scf	0.001	0.002	9.929E-05	0.0	0
Methane	G Combusti	2.3	lb/10^6 scf	0.000	0.000	2.076E-05	21.0	0
CO_2	G Combusti	120,000	lb/10^6 scf	8.596	18.826	1.083E+00	1.0	19
N_2O	G Combusti	2.2	lb/10^6 scf	0.000	0.000	1.986E-05	310.0	0
								19

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	G Combusti	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

Source NR4E : Gas-Fired East Side Office - Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	125,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	121
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	7.2	m
Stack Diameter (ft)	0.056	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

UTM North	UTM East
m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	G Combusti	7.6	lb/10^6 scf	0.001	0.002	1.159E-04	15	yes	no
$PM_{2.5}$	G Combusti	7.600	lb/10^6 scf	0.001	0.002	1.159E-04	10	yes	no
SO2	G Combusti	0.6	lb/10^6 scf	0.000	0.000	9.148E-06	40	yes	no
NO_x	G Combusti	94	lb/10^6 scf	0.011	0.025	1.433E-03	40	yes	no
CO	G Combusti	40	lb/10^6 scf	0.005	0.011	6.099E-04	100	yes	no
VOC	G Combusti	5.5	lb/10^6 scf	0.001	0.001	8.386E-05	40	yes	no
Lead	G Combusti	0.0005	lb/10^6 scf	0.000	0.000	7.623E-09	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	G Combusti	7.600	lb/10^6 scf	0.001	0.002	1.159E-04	25	yes	no
Beryllium	G Combusti	0.000012	lb/10^6 scf	0.000	0.000	1.830E-10	0.0004	yes	no
Mercury	G Combusti	2.60E-04	lb/10^6 scf	0.000	0.000	3.964E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	G Combusti	11	lb/10^6 scf	0.001	0.003	1.677E-04	0.0	0
Methane	G Combusti	2.3	lb/10^6 scf	0.000	0.001	3.507E-05	21.0	0
CO_2	G Combusti	120,000	lb/10^6 scf	14.521	31.801	1.830E+00	1.0	32
N_2O	G Combusti	2.2	lb/10^6 scf	0.000	0.001	3.354E-05	310.0	0
								32

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	G Combusti	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4F : Gas-Fired East Side Barfelt- Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	125,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	121
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	6.8	m
Stack Diameter (ft)	0.056	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		
Site Information	UTM North m	UTM East m
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.002	1.159E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	1.159E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	9.148E-06	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.011	0.025	1.433E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.005	0.011	6.099E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.001	8.386E-05	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	7.623E-09	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	1.159E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	1.830E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	3.964E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.001	0.003	1.677E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	3.507E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	14.521	31.801	1.830E+00	1.0	32
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	3.354E-05	310.0	0
								32

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4G : Gas-Fired Littleford- Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr	125,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	121
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (h	4,380

Stack Data	Existing Source	
Stack Height (ft)	6.8	m
Stack Diameter (ft)	0.056	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		
	UTM North	UTM East
	m	m
Site Information		
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.002	1.159E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	1.159E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	9.148E-06	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.011	0.025	1.433E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.005	0.011	6.099E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.001	8.386E-05	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	7.623E-09	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	1.159E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	1.830E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	3.964E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.001	0.003	1.677E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	3.507E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	14.521	31.801	1.830E+00	1.0	32
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	3.354E-05	310.0	0
								32

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4H : Gas-Fired Break Room - Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	250,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	242
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	10.7	m
Stack Diameter (ft)	0.056	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North	UTM East
	m	m
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.002	0.004	2.318E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.318E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.830E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.023	0.050	2.866E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.010	0.021	1.220E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.003	1.677E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.525E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.318E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	3.659E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	7.928E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.003	0.006	3.354E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.001	7.014E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	29.042	63.601	3.659E+00	1.0	64
N_2O	NG Combustion	2.2	lb/10^6 scf	0.001	0.001	6.709E-05	310.0	0
								64

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4I : Gas-Fired Blend Room - Carrier HVAC #1 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	180,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	174
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source		
Stack Height (ft)		10.7	m
Stack Diameter (ft)	0.3333	0.056	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)			
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			
Site Information		UTM North m	UTM East m
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM_{10}	G Combusti	7.6	lb/10^6 scf	0.001	0.003	1.669E-04	15	yes	no
$PM_{2.5}$	G Combusti	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	10	yes	no
SO2	G Combusti	0.6	lb/10^6 scf	0.000	0.000	1.317E-05	40	yes	no
NO_x	G Combusti	94	lb/10^6 scf	0.016	0.036	2.064E-03	40	yes	no
CO	G Combusti	40	lb/10^6 scf	0.007	0.015	8.782E-04	100	yes	no
VOC	G Combusti	5.5	lb/10^6 scf	0.001	0.002	1.208E-04	40	yes	no
Lead	G Combusti	0.0005	lb/10^6 scf	0.000	0.000	1.098E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	G Combusti	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	25	yes	no
Beryllium	G Combusti	0.000012	lb/10^6 scf	0.000	0.000	2.635E-10	0.0004	yes	no
Mercury	G Combusti	2.60E-04	lb/10^6 scf	0.000	0.000	5.708E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	G Combusti	11	lb/10^6 scf	0.002	0.004	2.415E-04	0.0	0
Methane	G Combusti	2.3	lb/10^6 scf	0.000	0.001	5.050E-05	21.0	0
CO_2	G Combusti	120,000	lb/10^6 scf	20.910	45.793	2.635E+00	1.0	46
N_2O	G Combusti	2.2	lb/10^6 scf	0.000	0.001	4.830E-05	310.0	0
								46

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	G Combusti	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4J : Gas-Fired Blend Room - Carrier HVAC #2 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	180,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	174
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source		
Stack Height (ft)		10.7	m
Stack Diameter (ft)	0.3333	0.056	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)			
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			

UTM North	UTM East
m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	G Combusti	7.6	lb/10^6 scf	0.001	0.003	1.669E-04	15	yes	no
$PM_{2.5}$	G Combusti	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	10	yes	no
SO2	G Combusti	0.6	lb/10^6 scf	0.000	0.000	1.317E-05	40	yes	no
NO_x	G Combusti	94	lb/10^6 scf	0.016	0.036	2.064E-03	40	yes	no
CO	G Combusti	40	lb/10^6 scf	0.007	0.015	8.782E-04	100	yes	no
VOC	G Combusti	5.5	lb/10^6 scf	0.001	0.002	1.208E-04	40	yes	no
Lead	G Combusti	0.0005	lb/10^6 scf	0.000	0.000	1.098E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	G Combusti	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	25	yes	no
Beryllium	G Combusti	0.000012	lb/10^6 scf	0.000	0.000	2.635E-10	0.0004	yes	no
Mercury	G Combusti	2.60E-04	lb/10^6 scf	0.000	0.000	5.708E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	G Combusti	11	lb/10^6 scf	0.002	0.004	2.415E-04	0.0	0
Methane	G Combusti	2.3	lb/10^6 scf	0.000	0.001	5.050E-05	21.0	0
CO_2	G Combusti	120,000	lb/10^6 scf	20.910	45.793	2.635E+00	1.0	46
N_2O	G Combusti	2.2	lb/10^6 scf	0.000	0.001	4.830E-05	310.0	0
								46

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	G Combusti	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4K : Gas-Fired Blend Room - Carrier HVAC #3 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	180,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	174
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source		
Stack Height (ft)		10.7	m
Stack Diameter (ft)	0.3333	0.056	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)			
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			
		UTM North	UTM East
		m	m
Site Information			
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	G Combusti	7.6	lb/10^6 scf	0.001	0.003	1.669E-04	15	yes	no
$PM_{2.5}$	G Combusti	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	10	yes	no
SO2	G Combusti	0.6	lb/10^6 scf	0.000	0.000	1.317E-05	40	yes	no
NO_x	G Combusti	94	lb/10^6 scf	0.016	0.036	2.064E-03	40	yes	no
CO	G Combusti	40	lb/10^6 scf	0.007	0.015	8.782E-04	100	yes	no
VOC	G Combusti	5.5	lb/10^6 scf	0.001	0.002	1.208E-04	40	yes	no
Lead	G Combusti	0.0005	lb/10^6 scf	0.000	0.000	1.098E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	G Combusti	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	25	yes	no
Beryllium	G Combusti	0.000012	lb/10^6 scf	0.000	0.000	2.635E-10	0.0004	yes	no
Mercury	G Combusti	2.60E-04	lb/10^6 scf	0.000	0.000	5.708E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	G Combusti	11	lb/10^6 scf	0.002	0.004	2.415E-04	0.0	0
Methane	G Combusti	2.3	lb/10^6 scf	0.000	0.001	5.050E-05	21.0	0
CO_2	G Combusti	120,000	lb/10^6 scf	20.910	45.793	2.635E+00	1.0	46
N_2O	G Combusti	2.2	lb/10^6 scf	0.000	0.001	4.830E-05	310.0	0
								46

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	G Combusti	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4L : Gas-Fired Blend Room - Carrier HVAC #4 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	180,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	174
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source		
Stack Height (ft)		10.7	m
Stack Diameter (ft)	0.3333	0.056	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)			
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			

	UTM North	UTM East
	m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.003	1.669E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.317E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.016	0.036	2.064E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.007	0.015	8.782E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.002	1.208E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.098E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.669E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	2.635E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	5.708E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.004	2.415E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	5.050E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	20.910	45.793	2.635E+00	1.0	46
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	4.830E-05	310.0	0
								46

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR4M : Gas-Fired Shop - Carrier HVAC CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	45,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	44
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source		
Stack Height (ft)		6.9	m
Stack Diameter (ft)	0.3333	0.056	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)			
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			

UTM North	UTM East
m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.000	0.001	4.172E-05	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.000	0.001	4.172E-05	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	3.293E-06	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.004	0.009	5.160E-04	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.002	0.004	2.196E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.000	0.001	3.019E-05	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	2.744E-09	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.000	0.001	4.172E-05	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	6.587E-11	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	1.427E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.000	0.001	6.038E-05	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.000	1.262E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	5.227	11.448	6.587E-01	1.0	11
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.000	1.208E-05	310.0	0
								12

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR5a : Gas-Fired Water Heater CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	AO Smith
Model	100 Gal Cat 4
Input Heat Capacity (BTU/hr)	75,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	73
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	8,760

Stack Data	Existing Source		
Stack Height (m)		6.7056	m
Stack Diameter (ft)	0.5	0.1524	m
Avg Exit Gas Temperature (°F)		160	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)		30	
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)		1	
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)		UTM North	UTM East
		m	m
Site Information		4732973.4	702858.10
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.002	6.953E-05	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	6.953E-05	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	5.489E-06	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.007	0.030	8.599E-04	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.003	0.013	3.659E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.000	0.002	5.031E-05	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	4.574E-09	0.6	yes	no
						6.88E-04	**NO2 Annual as g/sec**		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	6.953E-05	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	1.098E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	2.379E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.001	0.003	1.006E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	2.104E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	8.712	38.161	1.098E+00	1.0	38
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	2.013E-05	310.0	0
								38

Process Weight Rule - Not Applicable**

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR5b : Gas-Fired Water Heater CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics		Stack Data	Existing Source		
Burner Manufacturer	AO Smith	Stack Height (ft)		10.3632	m
Model	100 Gal Cat 4	Stack Diameter (ft)	0.3333	0.1016	m
Input Heat Capacity (BTU/hr)	199,900	Avg Exit Gas Temperature (°F)		170	
Fuel	Natural Gas	Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033	Wet Actual Flow Rate (wacf/min)		43	
Fuel Consumption (scf/hr)	194	Wet Standard Flow Rate (wscf/min)			
		Dry Standard Flow Rate (dscf/min)			
Process Characteristics		Stack Velocity (m/s)		3	
Total PM Emission Rate (lb/hr)		F_d (dscf stack gas/BTU)			
PM2.5 Emission Rate (lb/hr)		F_w (wscf stack gas/BTU)		UTM North	UTM East
				m	m
Actual Hours of Operation (hr/yr)	8,760	**Site Information**		4733007.1	702801.60
		Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.006	1.853E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.006	1.853E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.001	1.463E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.018	0.080	2.292E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.008	0.034	9.753E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.005	1.341E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.219E-08	0.6	yes	no
						1.83E-03	**NO2 Annual as g/sec**		

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.006	1.853E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	2.926E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	6.340E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.009	2.682E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.002	5.608E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	23.222	101.711	2.926E+00	1.0	102
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.002	5.364E-05	310.0	1
								102

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Vendor (York Shipley) emission factors for NOx, CO, CO2, VOCs, and PM.
Emission factors for other pollutants from AP-42 Chapter 1.4,
"Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7A : Gas-Fired East Side - Modine Unit Heater Down CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	225,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	218
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	9.14	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

UTM North	UTM East
m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.002	0.004	2.086E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.086E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.647E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.020	0.045	2.580E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.009	0.019	1.098E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.003	1.509E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.372E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.086E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	3.293E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	7.136E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.005	3.019E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.001	6.312E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	26.137	57.241	3.293E+00	1.0	57
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	6.038E-05	310.0	0
								58

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Vendor (York Shipley) emission factors for NOx, CO, CO2, VOCs, and PM.
Emission factors for other pollutants from AP-42 Chapter 1.4,
"Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7b : Gas-Fired East Side - Modine Unit Heater Up CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	200,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	194
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	10.54	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		
	UTM North	UTM East
	m	m
Site Information		
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.003	1.854E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.854E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.464E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.018	0.040	2.293E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.008	0.017	9.758E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.002	1.342E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.220E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.854E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	2.927E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	6.343E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.005	2.683E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	5.611E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	23.233	50.881	2.927E+00	1.0	51
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	5.367E-05	310.0	0
								51

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7C : Gas-Fired Phase 1 - ADP Unit Heater #1 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	230,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	223
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	6.4	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North	UTM East
	m	m
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.002	0.004	2.132E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.132E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.683E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.021	0.046	2.637E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.009	0.020	1.122E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.003	1.543E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.403E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.132E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	3.367E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	7.294E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.005	3.086E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.001	6.452E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	26.718	58.513	3.367E+00	1.0	59
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	6.172E-05	310.0	0
								59

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7D : Gas-Fired Phase 1 - ADP Unit Heater #2 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	230,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	223
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	6.4	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

UTM North	UTM East
m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.002	0.004	2.132E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.132E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.683E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.021	0.046	2.637E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.009	0.020	1.122E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.003	1.543E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.403E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.002	0.004	2.132E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	3.367E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	7.294E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.005	3.086E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.001	6.452E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	26.718	58.513	3.367E+00	1.0	59
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	6.172E-05	310.0	0
								59

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7E : Gas-Fired Phase 2 - ADP Unit Heater #1 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	345,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	334
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	10.7	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North	UTM East
	m	m
Jerome Barometric Pressure (mm Hg)	663.93	

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.003	0.006	3.198E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.003	0.006	3.198E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	2.525E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.031	0.069	3.956E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.013	0.029	1.683E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.002	0.004	2.314E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	2.104E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.003	0.006	3.198E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	5.050E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	1.094E-08	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.004	0.008	4.629E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.002	9.679E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	40.077	87.770	5.050E+00	1.0	88
N_2O	NG Combustion	2.2	lb/10^6 scf	0.001	0.002	9.258E-05	310.0	0
								88

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7F : Gas-Fired Phase 2 - ADP Unit Heater #2 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	345,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	334
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source		
Stack Height (ft)		10.7	m
Stack Diameter (ft)	0.3333	0.152	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)			
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			
Site Information		UTM North m	UTM East m
Jerome Barometric Pressure (mm Hg)			663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM_{10}	NG Combustio	7.6	lb/10^6 scf	0.003	0.006	3.198E-04	15	yes	no
$PM_{2.5}$	NG Combustio	7.600	lb/10^6 scf	0.003	0.006	3.198E-04	10	yes	no
SO2	NG Combustio	0.6	lb/10^6 scf	0.000	0.000	2.525E-05	40	yes	no
NO_x	NG Combustio	94	lb/10^6 scf	0.031	0.069	3.956E-03	40	yes	no
CO	NG Combustio	40	lb/10^6 scf	0.013	0.029	1.683E-03	100	yes	no
VOC	NG Combustio	5.5	lb/10^6 scf	0.002	0.004	2.314E-04	40	yes	no
Lead	NG Combustio	0.0005	lb/10^6 scf	0.000	0.000	2.104E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	NG Combustio	7.600	lb/10^6 scf	0.003	0.006	3.198E-04	25	yes	no
Beryllium	NG Combustio	0.000012	lb/10^6 scf	0.000	0.000	5.050E-10	0.0004	yes	no
Mercury	NG Combustio	2.60E-04	lb/10^6 scf	0.000	0.000	1.094E-08	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustio	11	lb/10^6 scf	0.004	0.008	4.629E-04	0.0	0
Methane	NG Combustio	2.3	lb/10^6 scf	0.001	0.002	9.679E-05	21.0	0
CO_2	NG Combustio	120,000	lb/10^6 scf	40.077	87.770	5.050E+00	1.0	88
N_2O	NG Combustio	2.2	lb/10^6 scf	0.001	0.002	9.258E-05	310.0	0
								88

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustio	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7G : Gas-Fired Phase 3 - ADP Unit Heater #N-1 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	195,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	189
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	5.6	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North	UTM East
	m	m
Jerome Barometric Pressure (mm Hg)	663.93	

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.003	1.808E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.808E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.427E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.018	0.039	2.236E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.008	0.017	9.514E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.002	1.308E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.189E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.808E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	2.854E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	6.184E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.005	2.616E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	5.471E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	22.652	49.609	2.854E+00	1.0	50
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	5.233E-05	310.0	0
								50

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7H : Gas-Fired Phase 3 - ADP Unit Heater #N-2 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Carrier
Model	not specified
Input Heat Capacity (BTU/hr)	195,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	189
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source		
Stack Height (ft)		5.6	m
Stack Diameter (ft)	0.3333	0.152	m
Avg Exit Gas Temperature (°F)		130	
Exit Gas Moisture Content			
Wet Actual Flow Rate (wacf/min)			
Wet Standard Flow Rate (wscf/min)			
Dry Standard Flow Rate (dscf/min)			
Stack Velocity (m/s)			
F_d (dscf stack gas/BTU)			
F_w (wscf stack gas/BTU)			

Site Information	UTM North	UTM East
	m	m
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.003	1.808E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.808E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	1.427E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.018	0.039	2.236E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.008	0.017	9.514E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.002	1.308E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	1.189E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.003	1.808E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	2.854E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	6.184E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.002	0.005	2.616E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.001	5.471E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	22.652	49.609	2.854E+00	1.0	50
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.001	5.233E-05	310.0	0
								50

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7I : Gas-Fired Phase 3 - ADP Unit Heater #S-1 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	ADP
Model	not specified
Input Heat Capacity (BTU/hr)	390,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	378
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	10.7	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

Site Information	UTM North	UTM East
	m	m
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.003	0.006	3.615E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.003	0.006	3.615E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	2.854E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.035	0.078	4.472E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.015	0.033	1.903E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.002	0.005	2.616E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	2.379E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.003	0.006	3.615E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	5.708E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	1.237E-08	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.004	0.009	5.233E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.002	1.094E-04	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	45.305	99.218	5.708E+00	1.0	99
N_2O	NG Combustion	2.2	lb/10^6 scf	0.001	0.002	1.047E-04	310.0	1
								100

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7J : Gas-Fired Phase 3 - ADP Unit Heater #S-2 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	ADP
Model	not specified
Input Heat Capacity (BTU/hr)	390,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	378
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	10.7	m
Stack Diameter (ft)	0.3333	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		
Site Information	UTM North m	UTM East m
Jerome Barometric Pressure (mm Hg)		663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.003	0.006	3.615E-04	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.003	0.006	3.615E-04	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	2.854E-05	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.035	0.078	4.472E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.015	0.033	1.903E-03	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.002	0.005	2.616E-04	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	2.379E-08	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.003	0.006	3.615E-04	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	5.708E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	1.237E-08	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.004	0.009	5.233E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.001	0.002	1.094E-04	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	45.305	99.218	5.708E+00	1.0	99
N_2O	NG Combustion	2.2	lb/10^6 scf	0.001	0.002	1.047E-04	310.0	1
								100

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7K: Gas-Fired East Shop - Modine Unit Heater #1 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Modine
Model	unspecified
Input Heat Capacity (BTU/hr)	100,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	97
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	7.3	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		

	UTM North	UTM East
	m	m

Site Information	
Jerome Barometric Pressure (mm Hg)	663.93

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.002	9.270E-05	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	9.270E-05	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	7.318E-06	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.009	0.020	1.147E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.004	0.008	4.879E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.001	6.709E-05	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	6.099E-09	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution?[e]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	9.270E-05	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	1.464E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	3.171E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.001	0.002	1.342E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.000	2.805E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	11.617	25.440	1.464E+00	1.0	25
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.000	2.683E-05	310.0	0
								26

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Source NR7L : Gas-Fired East Shop - Modine Unit Heater #2 CRITERIA POLLUTANT EMISSION RATES

Combustion Source Characteristics	
Burner Manufacturer	Modine
Model	unspecified
Input Heat Capacity (BTU/hr)	100,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Fuel Consumption (scf/hr)	97
Process Characteristics	
Total PM Emission Rate (lb/hr)	
PM2.5 Emission Rate (lb/hr)	
Actual Hours of Operation (hr/yr)	4,380

Stack Data	Existing Source	
Stack Height (ft)	6.7	m
Stack Diameter (ft)	0.152	m
Avg Exit Gas Temperature (°F)	130	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)		
Stack Velocity (m/s)		
F_d (dscf stack gas/BTU)		
F_w (wscf stack gas/BTU)		
Site Information	UTM North m	UTM East m
Jerome Barometric Pressure (mm Hg)	663.93	

Criteria Pollutants

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM_{10}	NG Combustion	7.6	lb/10^6 scf	0.001	0.002	9.270E-05	15	yes	no
$PM_{2.5}$	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	9.270E-05	10	yes	no
SO2	NG Combustion	0.6	lb/10^6 scf	0.000	0.000	7.318E-06	40	yes	no
NO_x	NG Combustion	94	lb/10^6 scf	0.009	0.020	1.147E-03	40	yes	no
CO	NG Combustion	40	lb/10^6 scf	0.004	0.008	4.879E-04	100	yes	no
VOC	NG Combustion	5.5	lb/10^6 scf	0.001	0.001	6.709E-05	40	yes	no
Lead	NG Combustion	0.0005	lb/10^6 scf	0.000	0.000	6.099E-09	0.6	yes	no

Non-Criteria Pollutants with Significant Threshold

Pollutant	Pollutant Source	Emission Factor [a,b]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	Significant Level[c] (TPY)	Below Regulatory Concern?[d]	Significant Contribution ?[c]
PM	NG Combustion	7.600	lb/10^6 scf	0.001	0.002	9.270E-05	25	yes	no
Beryllium	NG Combustion	0.000012	lb/10^6 scf	0.000	0.000	1.464E-10	0.0004	yes	no
Mercury	NG Combustion	2.60E-04	lb/10^6 scf	0.000	0.000	3.171E-09	0.1	yes	no

Other Pollutants

Pollutant	Pollutant Source	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (TPY)	Potential Emissions (g/s)	CO2e Multiplier	Emissions (TPY CO2e)
TOC	NG Combustion	11	lb/10^6 scf	0.001	0.002	1.342E-04	0.0	0
Methane	NG Combustion	2.3	lb/10^6 scf	0.000	0.000	2.805E-05	21.0	0
CO_2	NG Combustion	120,000	lb/10^6 scf	11.617	25.440	1.464E+00	1.0	25
N_2O	NG Combustion	2.2	lb/10^6 scf	0.000	0.000	2.683E-05	310.0	0
								26

Process Weight Rule - Not Applicable[e]

PM Grain Loading Standard[f]

Pollutant	Pollutant Source	Potential Emissions (lb/hr)	Potential Emissions (gr/dscf)	Allowable Emissions (gr/dscf)	Meets Standard?
PM	NG Combustion	n/a	< 0.01	0.015	yes

Notes:

(a) Emission factors for other pollutants from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) All particulate emissions assumed to be PM2.5

(c) IDAPA 58.01.01.006.106

(d) IDAPA 58.01.01.221.01 (less than ten percent (10%) of the significant emission rates) = No PTC is Required for this source

(e) IDAPA 58.01.01.701.02

(f) IDAPA 58.01.01.676

** NA - Not Applicable

Appendix B2 Toxic Air Pollutant Emissions. ALL SOURCES

Emissions Unit	Stack ID
Boiler 150 hp York Shipley	B1
Boiler **Pending** New 125 hp YS	B2
Dryer **Pending** New Rogers	D1
Dryer Existing 1960 Rogers	D2
Dryer Existing Blaw Knox Spray	D3
Dryer, Drum	D4
Tote-Dump Dust Collector 2	P1
Tote-Dump Dust Collector 1	P2
Clothes Dryer 1	NR3a
Clothes Dryer 2	NR3b
Water Heater 1	NR5a
Water Heater 3	NR5b
Proc'B - Carrier HVAC	**NR4A**
Blend'C - Carrier HVAC	**NR4B**
QA - Carrier HVAC	**NR4C**
QC - Carrier HVAC	**NR4D**
E Side - Carrier HVAC Office	**NR4E**
E Side - Carrier HVAC Bartelt	**NR4F**
Littleford - Carrier HVAC-1	**NR4G**
E Side - Modine Unit Heater Down	**NR7A**
E Side - Modine Unit Heater Up	**NR7B**
Ph I ADP Unit Heater 1	**NR7C**
Ph I ADP Unit Heater 2	**NR7D**
Ph II ADP Unit Heater 1	**NR7E**
Ph II ADP Unit Heater 2	**NR7F**
Ph III ADP Unit Heater N-1	**NR7G**
Ph III ADP Unit Heater N-2	**NR7H**
Ph III ADP Unit Heater S-1	**NR7I**
Ph III ADP Unit Heater S-2	**NR7J**
Break Room - Carrier HVAC	**NR4H**
Blend Room - Carrier HVAC-1	**NR4I**
Blend Room - Carrier HVAC-2	**NR4J**
Blend Room - Carrier HVAC-3	**NR4K**
Blend Room - Carrier HVAC-4	**NR4L**
Shop - Carrier HVAC	**NR4M**
E Shop- Modine Unit Heater 1	**NR7K**
E Shop- Modine Unit Heater 2	**NR7L**

Source B1: Gas-Fired BOILER TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics		Stack Data	Existing Source	
Burner	York Shipley	Stack Height (ft)	13.716	m
Model	560-SPHV-150-N2 (150 hp, 1979)	Stack Diameter (m)	0.3048	
Input Heat Capacity (BTU/hr)	6,100,000	Exit Gas Temperature (°F)	215	
Fuel	Natural Gas	Exit Gas Moisture Content		
Heating Value (BTU/scf)	1,033	Wet Actual Flow Rate (wacf/min)		
Product Consumption (scf/hr)	5,905	Wet Standard Flow Rate (wscf/min)		
		Dry Standard Flow Rate (dscf/min)	2329	
Process Characteristics		Stack Velocity (m/s)	15.1	
		Fd (dscf stack gas/BTU)		
		Fw (wscf stack gas/BTU)	UTM North	UTM East
			m	m
Actual Hours of Operation (hr/yr)	8,760	**Site Information**	4732981.7	702793.2
		Jerome Barometric Pressure (mm Hg)	663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	2.60E-05	3.27E-06	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	8.27E-06	1.04E-06	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	4.96E-07	6.25E-08	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	5.02E-06	6.32E-07	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	7.09E-06	8.93E-07	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	1.65E-08	2.08E-09	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.06E-02	1.34E-03	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	2.24E-06	2.83E-07	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	1.54E-06	1.93E-07	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	6.50E-06	8.18E-07	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	3.60E-06	4.54E-07	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	1.54E-02	1.93E-03	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	1.42E-07	1.79E-08	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	2.01E-05	2.53E-06	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	1.36E-05	1.71E-06	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	1.71E-04	2.16E-05	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.18E-06	1.49E-07	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	1.24E-05	1.56E-06	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	7.09E-08	8.93E-09	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	7.09E-09	8.93E-10	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	6.50E-06	8.18E-07	3.70E-06	yes
Formaldehyde	7.50E-02	lb/10^6 scf	4.43E-04	5.58E-05	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	1.24E-05	1.56E-06	2.70E-05	no
			0.117	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source B2: Gas-Fired BOILER TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics	
Burner	York Shipley
Model	560-SPHV-150-N2 (125 hp, 1988)
Input Heat Capacity (BTU/hr)	6,100,000
Fuel	Natural Gas
Heating Value (BTU/scf)	1,033
Product Consumption (scf/hr)	5,905
Process Characteristics	
Actual Hours of Operation (hr/yr)	8,760

Stack Data	Proposed Source	
Stack Height (ft)	13.716	m
Stack Diameter (ft)	0.3048	m
Exit Gas Temperature (°F)	215	
Exit Gas Moisture Content		
Wet Actual Flow Rate (wacf/min)		
Wet Standard Flow Rate (wscf/min)		
Dry Standard Flow Rate (dscf/min)	2329	
Stack Velocity (m/s)	15.1	
Fd (dscf stack gas/BTU)		
Fw (wscf stack gas/BTU)		

Site Information	UTM North	UTM East
	m	m
	4732981.7	702789.60
Jerome Barometric Pressure (mm Hg)	663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	2.60E-05	3.27E-06	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	8.27E-06	1.04E-06	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	4.96E-07	6.25E-08	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	5.02E-06	6.32E-07	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	FNA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	7.09E-06	8.93E-07	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	FNA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	1.65E-08	2.08E-09	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.06E-02	1.34E-03	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	2.24E-06	2.83E-07	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	1.54E-06	1.93E-07	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	6.50E-06	8.18E-07	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	3.60E-06	4.54E-07	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	1.54E-02	1.93E-03	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	FNA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	1.42E-07	1.79E-08	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	2.01E-05	2.53E-06	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	1.36E-05	1.71E-06	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	FNA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	1.71E-04	2.16E-05	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.18E-06	1.49E-07	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	1.24E-05	1.56E-06	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	7.09E-08	8.93E-09	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	7.09E-09	8.93E-10	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	FNA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	6.50E-06	8.18E-07	3.70E-06	yes
Formaldehyde	7.50E-02	lb/10^6 scf	4.43E-04	5.58E-05	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	1.24E-05	1.56E-06	2.70E-05	no
			0.115	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source D1: Gas-Fired DRYER TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics			Stack Data	Proposed Source		
Burner	Maxon Corporation		Stack Height (ft)		17.6784	m
Model	Model NP-LE Airflo Burner		Stack Diameter (ft)	3.5	1.0668	m
Input Heat Capacity (BTU/hr)	12,000,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)		41500	
Product Consumption (scf/hr)	11,617		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)		22	
Max Wet Feedrate (lb/hr)			Fd (dscf stack gas/BTU)			
Dry Solids in Product			Fw (wscf stack gas/BTU)	UTM North	UTM East	
Max Dry Production Rate (lb/hr)				m	m	
Actual Hours of Operation (hr/yr)	8,760		**Site Information**	4732979.5	702844.40	
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	5.11E-05	6.44E-06	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.63E-05	2.05E-06	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	9.76E-07	1.23E-07	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	9.87E-06	1.24E-06	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.39E-05	1.76E-06	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	3.25E-08	4.10E-09	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	2.09E-02	2.63E-03	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	4.41E-06	5.56E-07	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	3.02E-06	3.81E-07	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.28E-05	1.61E-06	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	7.09E-06	8.93E-07	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	3.02E-02	3.81E-03	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	2.79E-07	3.51E-08	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	3.95E-05	4.98E-06	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.67E-05	3.37E-06	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	3.37E-04	4.24E-05	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	2.32E-06	2.93E-07	1.50E-06	yes
Benzene	2.10E-03	lb/10^6 scf	2.44E-05	3.07E-06	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	1.39E-07	1.76E-08	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.39E-08	1.76E-09	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.28E-05	1.61E-06	3.70E-06	yes
Formaldehyde	7.50E-02	lb/10^6 scf	8.71E-04	1.10E-04	5.10E-04	yes
Nickel	2.10E-03	lb/10^6 scf	2.44E-05	3.07E-06	2.70E-05	no
			0.226	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source D2: Gas-Fired DRYER TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	North American		Stack Height (ft)		14.6304	m
Model	3065	(Rogers Dryer)	Stack Diameter (ft)	4.15	1.266	m
Input Heat Capacity (BTU/hr)	12,000,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content		100.00%	
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)		41,500	
Product Consumption (scf/hr)	11,617		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)		16	
Max Wet Feedrate (lb/hr)			Fd (dscf stack gas/BTU)			
Dry Solids in Product			Fw (wscf stack gas/BTU)	UTM North	UTM East	
Max Dry Production Rate (lb/hr)				m	m	
Actual Hours of Operation (hr/yr)	8,760		**Site Information**	4732956.1	702822.10	
			Jerome Barometric Pressure (mm Hg)		663.93	

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Toxic Air Pollutants -- Non-Carcinogenic						
Barium	4.40E-03	lb/10^6 scf	5.11E-05	6.44E-06	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.63E-05	2.05E-06	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	9.76E-07	1.23E-07	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	9.87E-06	1.24E-06	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.39E-05	1.76E-06	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	3.25E-08	4.10E-09	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	2.09E-02	2.63E-03	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	4.41E-06	5.56E-07	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	3.02E-06	3.81E-07	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.28E-05	1.61E-06	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	7.09E-06	8.93E-07	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	3.02E-02	3.81E-03	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	<2.4E-5	lb/10^6 scf	NA	NA	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	3.95E-05	4.98E-06	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.67E-05	3.37E-06	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	3.37E-04	4.24E-05	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	2.32E-06	2.93E-07	1.50E-06	yes
Benzene	2.10E-03	lb/10^6 scf	2.44E-05	3.07E-06	8.00E-04	no
Beryllium	<1.2E-5	lb/10^6 scf	NA	NA	2.80E-05	no
Benzo(a)pyrene	<1.2E-6	lb/10^6 scf	NA	NA	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.28E-05	1.61E-06	3.70E-06	yes
Formaldehyde	7.50E-02	lb/10^6 scf	8.71E-04	1.10E-04	5.10E-04	yes
Nickel	2.10E-03	lb/10^6 scf	2.44E-05	3.07E-06	2.70E-05	no
			0.226	TOTAL TAPs (tpy)		

Notes:
(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".
(b) IDAPA 58.01.01.585 and 586
(c) IDAPA 58.01.01.210.05(b)
* FNA - Factor Not Available

Source D3: Gas-Fired DRYER TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Maxon Corporation		Stack Height (ft)		14.630	m
Model	Model NP-LE Airflo Burner		Stack Diameter (ft)	3.568	1.088	m
Input Heat Capacity (BTU/hr)	8,000,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content		100.00%	
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)		18000	
Product Consumption (scf/hr)	7,744		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)		9	
Max Wet Feedrate (lb/hr)			Fd (dscf stack gas/BTU)			
Dry Solids in Product			Fw (wscf stack gas/BTU)	UTM North	UTM East	
Max Dry Production Rate (lb/hr)				m	m	
Actual Hours of Operation (hr/yr)	8,760		**Site Information**	4732976.2	702818.50	
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	3.41E-05	4.29E-06	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.08E-05	1.37E-06	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	6.51E-07	8.20E-08	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	6.58E-06	8.29E-07	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	FNA	FNA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	9.29E-06	1.17E-06	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	FNA	FNA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	2.17E-08	2.73E-09	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.39E-02	1.76E-03	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	2.94E-06	3.71E-07	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	2.01E-06	2.54E-07	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	8.52E-06	1.07E-06	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	4.72E-06	5.95E-07	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	2.01E-02	2.54E-03	1.18E+02	no
Phenol	FNA	lb/10^6 scf	FNA	FNA	1.27E+00	no
Selenium	<2.4E-5	lb/10^6 scf	1.86E-07	2.34E-08	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	2.63E-05	3.32E-06	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	1.78E-05	2.24E-06	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	FNA	FNA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	2.25E-04	2.83E-05	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.55E-06	1.95E-07	1.50E-06	yes
Benzene	2.10E-03	lb/10^6 scf	1.63E-05	2.05E-06	8.00E-04	no
Beryllium	<1.2E-5	lb/10^6 scf	9.29E-08	1.17E-08	2.80E-05	no
Benzo(a)pyrene	<1.2E-6	lb/10^6 scf	9.29E-09	1.17E-09	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	FNA	FNA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	8.52E-06	1.07E-06	3.70E-06	yes
Formaldehyde	7.50E-02	lb/10^6 scf	5.81E-04	7.32E-05	5.10E-04	yes
Nickel	2.10E-03	lb/10^6 scf	1.63E-05	2.05E-06	2.70E-05	no
			0.151	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR3a and NR3b: Gas-Fired Clothes Dryers TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source, 2 each			
Burner	Unspecified		Stack Height (m)		6.7056		
Model	Unspecified		Stack Diameter (ft)	1	0.3048	m	
Input Heat Capacity (BTU/hr)	116,000		Exit Gas Temperature (°F)		160		
Fuel	Natural Gas		Exit Gas Moisture Content				
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)		750		
Product Consumption (scf/hr)	112		Wet Standard Flow Rate (wscf/min)				
			Dry Standard Flow Rate (dscf/min)				
Process Characteristics			Stack Velocity (m/s)		5		
			Fd (dscf stack gas/BTU)				
			Fw (wscf stack gas/BTU)	UTM North	UTM East		
				m	m		
Actual Hours of Operation (hr/yr)	2,920		Site Information	4732975.7	702856.30		
			Jerome Barometric Pressure (mm Hg)		663.93		

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]		
Toxic Air Pollutants -- Non-Carcinogenic								
Barium	4.40E-03	lb/10^6 scf	4.94E-07	6.23E-08	3.30E-02	no		As
Chromium	1.40E-03	lb/10^6 scf	1.57E-07	1.98E-08	3.30E-02	no		
Cobalt	8.40E-05	lb/10^6 scf	9.43E-09	1.19E-09	3.30E-03	no		
Copper	8.50E-04	lb/10^6 scf	9.55E-08	1.20E-08	3.33E-01	no		
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no		
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.35E-07	1.70E-08	2.00E+01	no		
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no		
Fluorene	2.80E-06	lb/10^6 scf	3.14E-10	3.96E-11	1.33E-01	no		
Hexane	1.80E+00	lb/10^6 scf	2.02E-04	2.55E-05	1.20E+01	no		
Manganese	3.80E-04	lb/10^6 scf	4.27E-08	5.38E-09	3.33E-01	no		
Mercury	2.60E-04	lb/10^6 scf	2.92E-08	3.68E-09	3.00E-03	no		
Molybdenum	1.10E-03	lb/10^6 scf	1.24E-07	1.56E-08	3.33E-01	no		
Napthalene	6.10E-04	lb/10^6 scf	6.85E-08	8.63E-09	3.33E+00	no		
Pentane	2.60E+00	lb/10^6 scf	2.92E-04	3.68E-05	1.18E+02	no		
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no		
Selenium	2.40E-05	lb/10^6 scf	2.70E-09	3.40E-10	1.30E-02	no		
Toluene	3.40E-03	lb/10^6 scf	3.82E-07	4.81E-08	2.50E+01	no		
Vanadium	2.30E-03	lb/10^6 scf	2.58E-07	3.25E-08	3.00E-03	no		
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no		
Zinc	2.90E-02	lb/10^6 scf	3.26E-06	4.10E-07	6.67E-01	no		
Toxic Air Pollutants -- Carcinogenic								
Arsenic	2.00E-04	lb/10^6 scf	2.25E-08	2.83E-09	1.50E-06	no		
Benzene	2.10E-03	lb/10^6 scf	2.36E-07	2.97E-08	8.00E-04	no		
Beryllium	1.20E-05	lb/10^6 scf	1.35E-09	1.70E-10	2.80E-05	no		
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.35E-10	1.70E-11	2.00E-06	no		
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no		
Cadmium	1.10E-03	lb/10^6 scf	1.24E-07	1.56E-08	3.70E-06	no		
Formaldehyde	7.50E-02	lb/10^6 scf	8.42E-06	1.06E-06	5.10E-04	no		
Nickel	2.10E-03	lb/10^6 scf	2.36E-07	2.97E-08	2.70E-05	no		
			0.001	TOTAL TAPs (tpy)				

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR5a : Gas-Fired Water Heater TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics		Stack Data	Existing Source		
Burner	AO Smith	Stack Height (ft)		6.7056	m
Model	100 Gal Cat 4	Stack Diameter (ft)	0.5	0.1524	m
Input Heat Capacity (BTU/hr)	75,000	Exit Gas Temperature (°F)		160	
Fuel	Natural Gas	Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033	Wet Actual Flow Rate (wacf/min)		30	
Product Consumption (scf/hr)	73	Wet Standard Flow Rate (wscf/min)			
		Dry Standard Flow Rate (dscf/min)			
Process Characteristics		Stack Velocity (m/s)		1	
		Fd (dscf stack gas/BTU)			
		Fw (wscf stack gas/BTU)	UTM North	UTM East	
			m	m	
Actual Hours of Operation (hr/yr)	8,760	**Site Information**	4732973.4	702858.10	
		Jerome Barometric Pressure (mm Hg		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	3.19E-07	4.03E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.02E-07	1.28E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	6.10E-09	7.68E-10	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	6.17E-08	7.78E-09	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	8.71E-08	1.10E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	2.03E-10	2.56E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.31E-04	1.65E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	2.76E-08	3.48E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	1.89E-08	2.38E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	7.99E-08	1.01E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	4.43E-08	5.58E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	1.89E-04	2.38E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	1.74E-09	2.20E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	2.47E-07	3.11E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	1.67E-07	2.10E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	2.11E-06	2.65E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.45E-08	1.83E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	1.52E-07	1.92E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	8.71E-10	1.10E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	8.71E-11	1.10E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	7.99E-08	1.01E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	5.45E-06	6.86E-07	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	1.52E-07	1.92E-08	2.70E-05	no
			0.001	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR5b : Gas-Fired Water Heater TOXIC AIR POLLUTANT (TAP) EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	AO Smith		Stack Height (ft)		10.3632	m
Model	100 Gal Cat 4		Stack Diameter (ft)	0.3333	0.1016	m
Input Heat Capacity (BTU/hr)	199,900		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)		43	
Product Consumption (scf/hr)	194		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)		3	
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	8,760		**Site Information**	4733007.1	702801.60	
			Jerome Barometric Pressure (mm H	663.93		

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Toxic Air Pollutants -- Non-Carcinogenic						
Barium	4.40E-03	lb/10^6 scf	8.51E-07	1.07E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.71E-07	3.41E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.63E-08	2.05E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.64E-07	2.07E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.32E-07	2.93E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	5.42E-10	6.83E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.48E-04	4.39E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	7.35E-08	9.27E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	5.03E-08	6.34E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.13E-07	2.68E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.18E-07	1.49E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	5.03E-04	6.34E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.64E-09	5.85E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	6.58E-07	8.29E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.45E-07	5.61E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.61E-06	7.07E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.87E-08	4.88E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	4.06E-07	5.12E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.32E-09	2.93E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.32E-10	2.93E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.13E-07	2.68E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.45E-05	1.83E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	4.06E-07	5.12E-08	2.70E-05	no
			0.004	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

- **Source D4 is a steam-heated Drum Dryer – No TAPs Emissions**

- **Source P1 is a filter unit only --- No TAPs emissions**

- **Source P2 is a filter unit only --- No TAPs emissions**

Source NR4a : Gas-Fired Proc'B - Carrier HVAC TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source	
Burner	Carrier		Stack Height (ft)		6.7
Model	not specified		Stack Diameter (ft)		0.12
Input Heat Capacity (BTU/hr)	275,000		Exit Gas Temperature (°F)		130
Fuel	Natural Gas		Exit Gas Moisture Content		
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)		
Product Consumption (scf/hr)	266		Wet Standard Flow Rate (wscf/min)		
			Dry Standard Flow Rate (dscf/min)		
Process Characteristics			Stack Velocity (m/s)		
			Fd (dscf stack gas/BTU)		
			Fw (wscf stack gas/BTU)	UTM North m	UTM East m
Actual Hours of Operation (hr/yr)	4,380		**Site Information**		
			Jerome Barometric Pressure (mm H	663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.17E-06	1.48E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	3.73E-07	4.70E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	2.24E-08	2.82E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	2.26E-07	2.85E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	3.19E-07	4.03E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	7.45E-10	9.39E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	4.79E-04	6.04E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	1.01E-07	1.27E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	6.92E-08	8.72E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.93E-07	3.69E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.62E-07	2.05E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	6.92E-04	8.72E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	6.39E-09	8.05E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	9.05E-07	1.14E-07	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	6.12E-07	7.71E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	7.72E-06	9.73E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	5.32E-08	6.71E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	5.59E-07	7.04E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	3.19E-09	4.03E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	3.19E-10	4.03E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.93E-07	3.69E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	2.00E-05	2.52E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	5.59E-07	7.04E-08	2.70E-05	no
			0.003	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4B : Gas-Fired Blend'C - Carrier HVAC TOXIC AIR POLLUTANT EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		5.2	m
Model	not specified		Stack Diameter (ft)	0.3333	0.12	m
Input Heat Capacity (BTU/hr)	275,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	266		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.17E-06	1.48E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	3.73E-07	4.70E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	2.24E-08	2.82E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	2.26E-07	2.85E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	3.19E-07	4.03E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	7.45E-10	9.39E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	4.79E-04	6.04E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	1.01E-07	1.27E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	6.92E-08	8.72E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.93E-07	3.69E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.62E-07	2.05E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	6.92E-04	8.72E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	6.39E-09	8.05E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	9.05E-07	1.14E-07	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	6.12E-07	7.71E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	7.72E-06	9.73E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	5.32E-08	6.71E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	5.59E-07	7.04E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	3.19E-09	4.03E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	3.19E-10	4.03E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.93E-07	3.69E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	2.00E-05	2.52E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	5.59E-07	7.04E-08	2.70E-05	no
			0.003	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4C : Gas-Fired QA - Carrier HVAC TOXIC AIR POLLUTANT EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		2.3	m
Model	not specified		Stack Diameter (ft)	0.3333	0.056	m
Input Heat Capacity (BTU/hr)	180,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	174		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	7.67E-07	9.66E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.44E-07	3.07E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.46E-08	1.84E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.48E-07	1.87E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.09E-07	2.63E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	4.88E-10	6.15E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.14E-04	3.95E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	6.62E-08	8.34E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	4.53E-08	5.71E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.06E-07	1.34E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	4.53E-04	5.71E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.18E-09	5.27E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	5.92E-07	7.46E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.01E-07	5.05E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.05E-06	6.37E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.48E-08	4.39E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.09E-09	2.63E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.09E-10	2.63E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.31E-05	1.65E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4D : Gas-Fired QC - Carrier HVAC TOXIC AIR POLLUTANT EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		2.3	m
Model	not specified		Stack Diameter (ft)	0.3333	0.056	m
Input Heat Capacity (BTU/hr)	74,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	72		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Toxic Air Pollutants -- Non-Carcinogenic						
Barium	4.40E-03	lb/10^6 scf	3.15E-07	3.97E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.00E-07	1.26E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	6.02E-09	7.58E-10	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	6.09E-08	7.67E-09	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	8.60E-08	1.08E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	2.01E-10	2.53E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.29E-04	1.62E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	2.72E-08	3.43E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	1.86E-08	2.35E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	7.88E-08	9.93E-09	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	4.37E-08	5.51E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	1.86E-04	2.35E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	1.72E-09	2.17E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	2.44E-07	3.07E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	1.65E-07	2.08E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	2.08E-06	2.62E-07	6.67E-01	no
Toxic Air Pollutants – Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.43E-08	1.81E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	1.50E-07	1.90E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	8.60E-10	1.08E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	8.60E-11	1.08E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	7.88E-08	9.93E-09	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	5.37E-06	6.77E-07	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	1.50E-07	1.90E-08	2.70E-05	no
			0.001	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4E : Gas-Fired East Side Office - Carrier HVAC TOXIC AIR POLLUTANT EMISSION R

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		7.2	m
Model	not specified		Stack Diameter (ft)		0.056	m
Input Heat Capacity (BTU/hr)	125,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	121		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Toxic Air Pollutants -- Non-Carcinogenic						
Barium	4.40E-03	lb/10^6 scf	5.32E-07	6.71E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.69E-07	2.13E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.02E-08	1.28E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.03E-07	1.30E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.45E-07	1.83E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	3.39E-10	4.27E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	2.18E-04	2.74E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	4.60E-08	5.79E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	3.15E-08	3.96E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.33E-07	1.68E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	7.38E-08	9.30E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	3.15E-04	3.96E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	2.90E-09	3.66E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	4.11E-07	5.18E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.78E-07	3.51E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	3.51E-06	4.42E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	2.42E-08	3.05E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	2.54E-07	3.20E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	1.45E-09	1.83E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.45E-10	1.83E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.33E-07	1.68E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	9.08E-06	1.14E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	2.54E-07	3.20E-08	2.70E-05	no
			0.001	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4F : Gas-Fired East Side Barfelt- Carrier HVAC TOXIC AIR POLLUTANT EMISSION R

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		6.8	m
Model	not specified		Stack Diameter (ft)	0.3333	0.056	m
Input Heat Capacity (BTU/hr)	125,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	121		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	5.32E-07	6.71E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.69E-07	2.13E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.02E-08	1.28E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.03E-07	1.30E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.45E-07	1.83E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	3.39E-10	4.27E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	2.18E-04	2.74E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	4.60E-08	5.79E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	3.15E-08	3.96E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.33E-07	1.68E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	7.38E-08	9.30E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	3.15E-04	3.96E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	2.90E-09	3.66E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	4.11E-07	5.18E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.78E-07	3.51E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	3.51E-06	4.42E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	2.42E-08	3.05E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	2.54E-07	3.20E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	1.45E-09	1.83E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.45E-10	1.83E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.33E-07	1.68E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	9.08E-06	1.14E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	2.54E-07	3.20E-08	2.70E-05	no
			0.001	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4G : Gas-Fired Littleford- Carrier HVAC TOXIC AIR POLLUTANT EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		6.8	m
Model	not specified		Stack Diameter (ft)		0.056	m
Input Heat Capacity (BTU/hr)	125,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	121		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	5.32E-07	6.71E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.69E-07	2.13E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.02E-08	1.28E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.03E-07	1.30E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.45E-07	1.83E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	3.39E-10	4.27E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	2.18E-04	2.74E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	4.60E-08	5.79E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	3.15E-08	3.96E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.33E-07	1.68E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	7.38E-08	9.30E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	3.15E-04	3.96E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	2.90E-09	3.66E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	4.11E-07	5.18E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.78E-07	3.51E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	3.51E-06	4.42E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	2.42E-08	3.05E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	2.54E-07	3.20E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	1.45E-09	1.83E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.45E-10	1.83E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.33E-07	1.68E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	9.08E-06	1.14E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	2.54E-07	3.20E-08	2.70E-05	no
			0.001	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4H : Gas-Fired Break Room - Carrier HVAC TOXIC AIR POLLUTANT EMISSION RATE

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)	0.3333	0.056	m
Input Heat Capacity (BTU/hr)	250,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	242		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.06E-06	1.34E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	3.39E-07	4.27E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	2.03E-08	2.56E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	2.06E-07	2.59E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.90E-07	3.66E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	6.78E-10	8.54E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	4.36E-04	5.49E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	9.20E-08	1.16E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	6.29E-08	7.93E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.66E-07	3.35E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.48E-07	1.86E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	6.29E-04	7.93E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	5.81E-09	7.32E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	8.23E-07	1.04E-07	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	5.57E-07	7.01E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	7.02E-06	8.84E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	4.84E-08	6.10E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	5.08E-07	6.40E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.90E-09	3.66E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.90E-10	3.66E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.66E-07	3.35E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.82E-05	2.29E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	5.08E-07	6.40E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4I : Gas-Fired Blend Room - Carrier HVAC #1 TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)		0.056	m
Input Heat Capacity (BTU/hr)	180,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	174		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Toxic Air Pollutants -- Non-Carcinogenic						
Barium	4.40E-03	lb/10^6 scf	7.67E-07	9.66E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.44E-07	3.07E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.46E-08	1.84E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.48E-07	1.87E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.09E-07	2.63E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	4.88E-10	6.15E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.14E-04	3.95E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	6.62E-08	8.34E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	4.53E-08	5.71E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.06E-07	1.34E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	4.53E-04	5.71E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.18E-09	5.27E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	5.92E-07	7.46E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.01E-07	5.05E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.05E-06	6.37E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.48E-08	4.39E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.09E-09	2.63E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.09E-10	2.63E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.31E-05	1.65E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4J : Gas-Fired Blend Room - Carrier HVAC #2 TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)	0.3333	0.056	m
Input Heat Capacity (BTU/hr)	180,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	174		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	7.67E-07	9.66E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.44E-07	3.07E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.46E-08	1.84E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.48E-07	1.87E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.09E-07	2.63E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	4.88E-10	6.15E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.14E-04	3.95E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	6.62E-08	8.34E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	4.53E-08	5.71E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.06E-07	1.34E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	4.53E-04	5.71E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.18E-09	5.27E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	5.92E-07	7.46E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.01E-07	5.05E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.05E-06	6.37E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.48E-08	4.39E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.09E-09	2.63E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.09E-10	2.63E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.31E-05	1.65E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4K : Gas-Fired Blend Room - Carrier HVAC #3 TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)	0.3333	0.056	m
Input Heat Capacity (BTU/hr)	180,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	174		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	7.67E-07	9.66E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.44E-07	3.07E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.46E-08	1.84E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.48E-07	1.87E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.09E-07	2.63E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	4.88E-10	6.15E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.14E-04	3.95E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	6.62E-08	8.34E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	4.53E-08	5.71E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.06E-07	1.34E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	4.53E-04	5.71E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.18E-09	5.27E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	5.92E-07	7.46E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.01E-07	5.05E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.05E-06	6.37E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.48E-08	4.39E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.09E-09	2.63E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.09E-10	2.63E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.31E-05	1.65E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4L : Gas-Fired Blend Room - Carrier HVAC #4 TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)		0.056	m
Input Heat Capacity (BTU/hr)	180,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	174		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	7.67E-07	9.66E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.44E-07	3.07E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.46E-08	1.84E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.48E-07	1.87E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.09E-07	2.63E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	4.88E-10	6.15E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.14E-04	3.95E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	6.62E-08	8.34E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	4.53E-08	5.71E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.06E-07	1.34E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	4.53E-04	5.71E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.18E-09	5.27E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	5.92E-07	7.46E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.01E-07	5.05E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.05E-06	6.37E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.48E-08	4.39E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.09E-09	2.63E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.09E-10	2.63E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.31E-05	1.65E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	3.66E-07	4.61E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR4M : Gas-Fired Shop - Carrier HVAC TOXIC AIR POLLUTANT EMISSION RATES

Combustion Source Characteristics		Stack Data	Existing Source	
Burner	Carrier	Stack Height (ft)	6.9	m
Model	not specified	Stack Diameter (ft)	0.056	m
Input Heat Capacity (BTU/hr)	45,000	Exit Gas Temperature (°F)	130	
Fuel	Natural Gas	Exit Gas Moisture Content		
Heating Value (BTU/scf)	1,033	Wet Actual Flow Rate (wacf/min)		
Product Consumption (scf/hr)	44	Wet Standard Flow Rate (wscf/min)		
		Dry Standard Flow Rate (dscf/min)		
Process Characteristics		Stack Velocity (m/s)		
		Fd (dscf stack gas/BTU)		
		Fw (wscf stack gas/BTU)	UTM North	UTM East
			m	m
Actual Hours of Operation (hr/yr)	4,380	**Site Information**		
		Jerome Barometric Pressure (mm H	663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.92E-07	2.42E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	6.10E-08	7.68E-09	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	3.66E-09	4.61E-10	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	3.70E-08	4.67E-09	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	5.23E-08	6.59E-09	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	1.22E-10	1.54E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	7.84E-05	9.88E-06	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	1.66E-08	2.09E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	1.13E-08	1.43E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	4.79E-08	6.04E-09	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	2.66E-08	3.35E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	1.13E-04	1.43E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	1.05E-09	1.32E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	1.48E-07	1.87E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	1.00E-07	1.26E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	1.26E-06	1.59E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	8.71E-09	1.10E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	9.15E-08	1.15E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	5.23E-10	6.59E-11	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	5.23E-11	6.59E-12	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	4.79E-08	6.04E-09	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	3.27E-06	4.12E-07	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	9.15E-08	1.15E-08	2.70E-05	no
			0.000	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7A : Gas-Fired East Side - Modine Unit Heater Down TOXIC AIR POLLUTANT EMISSION RATES

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.3632	m
Model	not specified		Stack Diameter (ft)		0.1016	m
Input Heat Capacity (BTU/hr)	225,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	218		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	9.58E-07	1.21E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	3.05E-07	3.84E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.83E-08	2.31E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.85E-07	2.33E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.61E-07	3.29E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	6.10E-10	7.68E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.92E-04	4.94E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	8.28E-08	1.04E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	5.66E-08	7.14E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.40E-07	3.02E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.33E-07	1.67E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	5.66E-04	7.14E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	5.23E-09	6.59E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	7.41E-07	9.33E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	5.01E-07	6.31E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	6.32E-06	7.96E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	4.36E-08	5.49E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	4.57E-07	5.76E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.61E-09	3.29E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.61E-10	3.29E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.40E-07	3.02E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.63E-05	2.06E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	4.57E-07	5.76E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7b : Gas-Fired East Side - Modine Unit Heater Up TOXIC AIR POLLUTANT EMISSION

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.54	m
Model	not specified		Stack Diameter (ft)		0.152	m
Input Heat Capacity (BTU/hr)	200,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	194		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	8.52E-07	1.07E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.71E-07	3.42E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.63E-08	2.05E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.65E-07	2.07E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.32E-07	2.93E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	5.42E-10	6.83E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.48E-04	4.39E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	7.36E-08	9.27E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	5.03E-08	6.34E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.13E-07	2.68E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.18E-07	1.49E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	5.03E-04	6.34E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.65E-09	5.85E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	6.58E-07	8.29E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.45E-07	5.61E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.61E-06	7.07E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.87E-08	4.88E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	4.07E-07	5.12E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.32E-09	2.93E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.32E-10	2.93E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.13E-07	2.68E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.45E-05	1.83E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	4.07E-07	5.12E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7C : Gas-Fired Phase 1 - ADP Unit Heater #1 TOXIC AIR POLLUTANT EMISSION RAT

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		6.4	m
Model	not specified		Stack Diameter (ft)		0.152	m
Input Heat Capacity (BTU/hr)	230,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	223		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	9.80E-07	1.23E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	3.12E-07	3.93E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.87E-08	2.36E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.89E-07	2.38E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.67E-07	3.37E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	6.23E-10	7.86E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	4.01E-04	5.05E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	8.46E-08	1.07E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	5.79E-08	7.29E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.45E-07	3.09E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.36E-07	1.71E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	5.79E-04	7.29E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	5.34E-09	6.73E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	7.57E-07	9.54E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	5.12E-07	6.45E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	6.46E-06	8.14E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	4.45E-08	5.61E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	4.68E-07	5.89E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.67E-09	3.37E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.67E-10	3.37E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.45E-07	3.09E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.67E-05	2.10E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	4.68E-07	5.89E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7D : Gas-Fired Phase 1 - ADP Unit Heater #2 TOXIC AIR POLLUTANT EMISSION RAT

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		6.4	m
Model	not specified		Stack Diameter (ft)		0.152	m
Input Heat Capacity (BTU/hr)	230,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	223		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	9.80E-07	1.23E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	3.12E-07	3.93E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.87E-08	2.36E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.89E-07	2.38E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.67E-07	3.37E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	6.23E-10	7.86E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	4.01E-04	5.05E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	8.46E-08	1.07E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	5.79E-08	7.29E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.45E-07	3.09E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.36E-07	1.71E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	5.79E-04	7.29E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	5.34E-09	6.73E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	7.57E-07	9.54E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	5.12E-07	6.45E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	6.46E-06	8.14E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	4.45E-08	5.61E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	4.68E-07	5.89E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.67E-09	3.37E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.67E-10	3.37E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.45E-07	3.09E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.67E-05	2.10E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	4.68E-07	5.89E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7E : Gas-Fired Phase 2 - ADP Unit Heater #1 TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)	0.3333	0.152	m
Input Heat Capacity (BTU/hr)	345,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	334		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.47E-06	1.85E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	4.68E-07	5.89E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	2.81E-08	3.53E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	2.84E-07	3.58E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	4.01E-07	5.05E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	9.35E-10	1.18E-10	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	6.01E-04	7.57E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	1.27E-07	1.60E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	8.68E-08	1.09E-08	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	3.67E-07	4.63E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	2.04E-07	2.57E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	8.68E-04	1.09E-04	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	8.02E-09	1.01E-09	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	1.14E-06	1.43E-07	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	7.68E-07	9.68E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	9.69E-06	1.22E-06	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	6.68E-08	8.42E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	7.01E-07	8.84E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	4.01E-09	5.05E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	4.01E-10	5.05E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	3.67E-07	4.63E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	2.50E-05	3.16E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	7.01E-07	8.84E-08	2.70E-05	no
			0.003	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7F : Gas-Fired Phase 2 - ADP Unit Heater #2 TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)	0.3333	0.152	m
Input Heat Capacity (BTU/hr)	345,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	334		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.47E-06	1.85E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	4.68E-07	5.89E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	2.81E-08	3.53E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	2.84E-07	3.58E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	4.01E-07	5.05E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	9.35E-10	1.18E-10	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	6.01E-04	7.57E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	1.27E-07	1.60E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	8.68E-08	1.09E-08	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	3.67E-07	4.63E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	2.04E-07	2.57E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	8.68E-04	1.09E-04	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	8.02E-09	1.01E-09	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	1.14E-06	1.43E-07	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	7.68E-07	9.68E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	9.69E-06	1.22E-06	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	6.68E-08	8.42E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	7.01E-07	8.84E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	4.01E-09	5.05E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	4.01E-10	5.05E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	3.67E-07	4.63E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	2.50E-05	3.16E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	7.01E-07	8.84E-08	2.70E-05	no
			0.003	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

ource NR7G : Gas-Fired Phase 3 - ADP Unit Heater #N-1 TOXIC AIR POLLUTANT EMISSION R

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		5.6	m
Model	not specified		Stack Diameter (ft)	0.3333	0.152	m
Input Heat Capacity (BTU/hr)	195,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	189		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	8.31E-07	1.05E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.64E-07	3.33E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.59E-08	2.00E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.60E-07	2.02E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.27E-07	2.85E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	5.29E-10	6.66E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.40E-04	4.28E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	7.17E-08	9.04E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	4.91E-08	6.18E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.08E-07	2.62E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.15E-07	1.45E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	4.91E-04	6.18E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.53E-09	5.71E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	6.42E-07	8.09E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.34E-07	5.47E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.47E-06	6.90E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.78E-08	4.76E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	3.96E-07	4.99E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.27E-09	2.85E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.27E-10	2.85E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.08E-07	2.62E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.42E-05	1.78E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	3.96E-07	4.99E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7H : Gas-Fired Phase 3 - ADP Unit Heater #N-2 TOXIC AIR POLLUTANT EMISSION F

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Carrier		Stack Height (ft)		5.6	m
Model	not specified		Stack Diameter (ft)	0.3333	0.152	m
Input Heat Capacity (BTU/hr)	195,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	189		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants – Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	8.31E-07	1.05E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	2.64E-07	3.33E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	1.59E-08	2.00E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	1.60E-07	2.02E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	2.27E-07	2.85E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	5.29E-10	6.66E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	3.40E-04	4.28E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	7.17E-08	9.04E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	4.91E-08	6.18E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	2.08E-07	2.62E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	1.15E-07	1.45E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	4.91E-04	6.18E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	4.53E-09	5.71E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	6.42E-07	8.09E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	4.34E-07	5.47E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	5.47E-06	6.90E-07	6.67E-01	no
Toxic Air Pollutants – Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	3.78E-08	4.76E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	3.96E-07	4.99E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	2.27E-09	2.85E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	2.27E-10	2.85E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	2.08E-07	2.62E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	1.42E-05	1.78E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	3.96E-07	4.99E-08	2.70E-05	no
			0.002	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7I : Gas-Fired Phase 3 - ADP Unit Heater #S-1 TOXIC AIR POLLUTANT EMISSION RA

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	ADP		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)	0.3333	0.152	m
Input Heat Capacity (BTU/hr)	390,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	378		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.66E-06	2.09E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	5.29E-07	6.66E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	3.17E-08	4.00E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	3.21E-07	4.04E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	4.53E-07	5.71E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	1.06E-09	1.33E-10	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	6.80E-04	8.56E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	1.43E-07	1.81E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	9.82E-08	1.24E-08	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	4.15E-07	5.23E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	2.30E-07	2.90E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	9.82E-04	1.24E-04	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	9.06E-09	1.14E-09	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	1.28E-06	1.62E-07	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	8.68E-07	1.09E-07	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	1.09E-05	1.38E-06	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	7.55E-08	9.51E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	7.93E-07	9.99E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	4.53E-09	5.71E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	4.53E-10	5.71E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	4.15E-07	5.23E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	2.83E-05	3.57E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	7.93E-07	9.99E-08	2.70E-05	no
			0.004	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7J : Gas-Fired Phase 3 - ADP Unit Heater #S-2 TOXIC AIR POLLUTANT EMISSION R

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	ADP		Stack Height (ft)		10.7	m
Model	not specified		Stack Diameter (ft)	0.3333	0.152	m
Input Heat Capacity (BTU/hr)	390,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	378		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North m	UTM East m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic

Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	1.66E-06	2.09E-07	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	5.29E-07	6.66E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	3.17E-08	4.00E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	3.21E-07	4.04E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	4.53E-07	5.71E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	1.06E-09	1.33E-10	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	6.80E-04	8.56E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	1.43E-07	1.81E-08	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	9.82E-08	1.24E-08	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	4.15E-07	5.23E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	2.30E-07	2.90E-08	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	9.82E-04	1.24E-04	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	9.06E-09	1.14E-09	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	1.28E-06	1.62E-07	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	8.68E-07	1.09E-07	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	1.09E-05	1.38E-06	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	7.55E-08	9.51E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	7.93E-07	9.99E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	4.53E-09	5.71E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	4.53E-10	5.71E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	4.15E-07	5.23E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	2.83E-05	3.57E-06	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	7.93E-07	9.99E-08	2.70E-05	no
			0.004	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7K: Gas-Fired East Shop - Modine Unit Heater #1 TOXIC AIR POLLUTANT EMISSIOI

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Modine		Stack Height (ft)		7.3	m
Model	unspecified		Stack Diameter (ft)		0.152	m
Input Heat Capacity (BTU/hr)	100,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	97		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		Site Information			
			Jerome Barometric Pressure (mm H	663.93		

Toxic Air Pollutants -- Non-Carcinogenic						
Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	4.26E-07	5.37E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.36E-07	1.71E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	8.13E-09	1.02E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	8.23E-08	1.04E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.16E-07	1.46E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	2.71E-10	3.42E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.74E-04	2.20E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	3.68E-08	4.64E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	2.52E-08	3.17E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.06E-07	1.34E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	5.91E-08	7.44E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	2.52E-04	3.17E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	2.32E-09	2.93E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	3.29E-07	4.15E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.23E-07	2.81E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	2.81E-06	3.54E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.94E-08	2.44E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	2.03E-07	2.56E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	1.16E-09	1.46E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.16E-10	1.46E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.06E-07	1.34E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	7.26E-06	9.15E-07	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	2.03E-07	2.56E-08	2.70E-05	no
			0.001	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available

Source NR7L : Gas-Fired East Shop - Modine Unit Heater #2 TOXIC AIR POLLUTANT EMISSIO

Combustion Source Characteristics			Stack Data	Existing Source		
Burner	Modine		Stack Height (ft)		6.7	m
Model	unspecified		Stack Diameter (ft)		0.152	m
Input Heat Capacity (BTU/hr)	100,000		Exit Gas Temperature (°F)		130	
Fuel	Natural Gas		Exit Gas Moisture Content			
Heating Value (BTU/scf)	1,033		Wet Actual Flow Rate (wacf/min)			
Product Consumption (scf/hr)	97		Wet Standard Flow Rate (wscf/min)			
			Dry Standard Flow Rate (dscf/min)			
Process Characteristics			Stack Velocity (m/s)			
			Fd (dscf stack gas/BTU)			
			Fw (wscf stack gas/BTU)	UTM North	UTM East	
				m	m	
Actual Hours of Operation (hr/yr)	4,380		**Site Information**			
			Jerome Barometric Pressure (mm H		663.93	

Toxic Air Pollutants -- Non-Carcinogenic						
Pollutant	Emission Factor [a]	Emission Factor Unit	Potential Emissions (lb/hr)	Potential Emissions (g/s)	Emission Limit[b] (lb/hr)	Modeling Required?[c]
Barium	4.40E-03	lb/10^6 scf	4.26E-07	5.37E-08	3.30E-02	no
Chromium	1.40E-03	lb/10^6 scf	1.36E-07	1.71E-08	3.30E-02	no
Cobalt	8.40E-05	lb/10^6 scf	8.13E-09	1.02E-09	3.30E-03	no
Copper	8.50E-04	lb/10^6 scf	8.23E-08	1.04E-08	3.33E-01	no
Dibutylphthalate	FNA	lb/10^6 scf	NA	NA	6.70E-02	no
Dichlorobenzene	1.20E-03	lb/10^6 scf	1.16E-07	1.46E-08	2.00E+01	no
Ethylbenzene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Fluorene	2.80E-06	lb/10^6 scf	2.71E-10	3.42E-11	1.33E-01	no
Hexane	1.80E+00	lb/10^6 scf	1.74E-04	2.20E-05	1.20E+01	no
Manganese	3.80E-04	lb/10^6 scf	3.68E-08	4.64E-09	3.33E-01	no
Mercury	2.60E-04	lb/10^6 scf	2.52E-08	3.17E-09	3.00E-03	no
Molybdenum	1.10E-03	lb/10^6 scf	1.06E-07	1.34E-08	3.33E-01	no
Napthalene	6.10E-04	lb/10^6 scf	5.91E-08	7.44E-09	3.33E+00	no
Pentane	2.60E+00	lb/10^6 scf	2.52E-04	3.17E-05	1.18E+02	no
Phenol	FNA	lb/10^6 scf	NA	NA	1.27E+00	no
Selenium	2.40E-05	lb/10^6 scf	2.32E-09	2.93E-10	1.30E-02	no
Toluene	3.40E-03	lb/10^6 scf	3.29E-07	4.15E-08	2.50E+01	no
Vanadium	2.30E-03	lb/10^6 scf	2.23E-07	2.81E-08	3.00E-03	no
o-Xylene	FNA	lb/10^6 scf	NA	NA	2.90E+01	no
Zinc	2.90E-02	lb/10^6 scf	2.81E-06	3.54E-07	6.67E-01	no
Toxic Air Pollutants -- Carcinogenic						
Arsenic	2.00E-04	lb/10^6 scf	1.94E-08	2.44E-09	1.50E-06	no
Benzene	2.10E-03	lb/10^6 scf	2.03E-07	2.56E-08	8.00E-04	no
Beryllium	1.20E-05	lb/10^6 scf	1.16E-09	1.46E-10	2.80E-05	no
Benzo(a)pyrene	1.20E-06	lb/10^6 scf	1.16E-10	1.46E-11	2.00E-06	no
Bis (2-ethylhexyl)phthalate	FNA	lb/10^6 scf	NA	NA	2.80E-02	no
Cadmium	1.10E-03	lb/10^6 scf	1.06E-07	1.34E-08	3.70E-06	no
Formaldehyde	7.50E-02	lb/10^6 scf	7.26E-06	9.15E-07	5.10E-04	no
Nickel	2.10E-03	lb/10^6 scf	2.03E-07	2.56E-08	2.70E-05	no
			0.001	TOTAL TAPs (tpy)		

Notes:

(a) Emission Factors from AP-42 Chapter 1.4, "Natural Gas Combustion".

(b) IDAPA 58.01.01.585 and 586

(c) IDAPA 58.01.01.210.05(b)

* FNA - Factor Not Available