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DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

Bill Rogers
Idaho Department of Environmental Quality
1410 North Hilton
Boise, ID 83706-1255

ALK-Abelló Source Materials, Inc.
327 East Pacific Avenue
Spokane, WA 99202
USA

T (+1) 509 456 7794
F (+1) 509 455 7965
W alk-abello.com

Post Falls,
28-Dec-15
MSAUS

Page 1/1

RE: Permit application, convert permit P-2008-0176 to PTC permit.

Dear Bill:

Attached please find the permit application files to modify our existing PTC to include planned construction of a second MITIZAX® dust mite facility (MTX Cell 2). Also enclosed are electronic copies of all permit forms, and a check in the amount of \$1000.

This project barely exceeded the limits for BRC and with the exception of the 1-hour NOx, was under the modelling thresholds. Per discussion with Kevin Shilling of your office, no ambient air modelling was conducted as discussed in Attachment 3.

Since I am retiring at the end of next month, I have noted new permit and responsible official contacts in form GI. I will however be available for consultation throughout the year and may be contacted for any questions. My email address and cell phone numbers will be active for the coming year.

Thank you for your consideration of this matter and your responsiveness to this permit application.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Mike Sawatzky', written over a light blue grid background.

Mike Sawatzky

T 208-777-3364
M 509-979-4342
E michael.sawatzky@alk-abello.com



DEQ AIR QUALITY PROGRAM

1410 N. Hilton, Boise, ID 83706

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	ALK-Abello Source Materials, Inc.		
2. Facility Name	ALK-Abello Source Materials, Inc.	3. Facility ID No.	055-00072
4. Brief Project Description - One sentence or less	Construct MITIZAX® Cell 2facility		

PERMIT APPLICATION TYPE	
5. <input type="checkbox"/> New Source	<input checked="" type="checkbox"/> New Source at Existing Facility
<input type="checkbox"/> Unpermitted Existing Source	<input type="checkbox"/> Facility Emissions Cap
<input type="checkbox"/> Required by Enforcement Action: Case No.: _____	
<input type="checkbox"/> PTC for a Tier I Source Processed Pursuant to IDAPA 58.01.01.209.05.c <input checked="" type="checkbox"/> Modify Existing Source: Permit No.: <u>P-2008.0176</u> Date Issued: <u>5/29/2013</u>	
6. <input checked="" type="checkbox"/> Minor PTC	<input type="checkbox"/> Major PTC

FORMS INCLUDED			
Included	N/A	Forms	DEQ Verify
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form CSPTC – Cover Sheet	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form GI – Facility Information	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form EU0 – Emissions Units General	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form EU1– Industrial Engine Information	Please specify number of EU1s attached: <u>1</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU2– Nonmetallic Mineral Processing Plants	Please specify number of EU2s attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU3– Spray Paint Booth Information	Please specify number of EU3s attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU4– Cooling Tower Information	Please specify number of EU4s attached: _____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form EU5 – Boiler Information	Please specify number of EU5s attached: <u>1</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CBP– Concrete Batch Plant	Please specify number of CBPs attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form HMAP – Hot Mix Asphalt Plant	Please specify number of HMAPs attached: _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PERF – Portable Equipment Relocation Form	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form AO – Afterburner/Oxidizer	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CA – Carbon Adsorber	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CYS – Cyclone Separator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form ESP – Electrostatic Precipitator	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form BCE– Baghouses Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form SCE– Scrubbers Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form VSCE – Venturi Scrubber Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CAM – Compliance Assurance Monitoring	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Forms EI– Emissions Inventory	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PP – Plot Plan	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Forms MI1 – MI4 – Modeling	(Excel workbook, all 4 worksheets)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form FRA – Federal Regulation Applicability	<input type="checkbox"/>

Instructions for Form CSPTC

This form is the cover sheet for an air quality permit application. It provides DEQ with basic information regarding the company and the proposed permitting action. This form helps DEQ efficiently determine whether the application is administratively complete. This form also provides the applicant with a list of forms available to aid the applicant to successfully submit a complete application.

Company Name, Facility Name, and Facility ID Number

- 1-3. Provide the name of your company, the name of the facility (if different than company name), and the facility identification (ID) number (Facility ID No.) in the boxes provided. The facility ID number is also known as the AIRS number or AIRS/AFS number (example: 095-00077). If you already have a permit, the facility ID number is located in the upper right hand corner of the cover page. The facility ID number must be provided unless your facility has not received one, in which case you may leave this box empty. **Use these same names and ID number on all forms.** This is useful in case any pages of the application are separated.
4. Provide a brief description of this permitting project in one sentence or less. Examples might be "Install/construct a new boiler" or "Increase the allowable process throughput." **This description will be used by DEQ as a unique identifier for this permitting project, in conjunction with the name(s) and ID number referenced in 1-3.** You will need to put this description, using the exact same words, on all other forms that are part of this project application. This is useful in case any pages of the application are separated.

Permit Application Type

5. Provide the reason you are submitting the permit application by checking the appropriate box (e.g., a new facility being constructed, a new source being constructed at an existing facility, an unpermitted existing source (as-built) applying for a permit for the first time, a permitted source to be modified, or the permit application is the result of an enforcement action, in which case provide the case number). If you are modifying an existing permitted source, provide the number and issue date of the most recent permit.

If this PTC is for a Tier I source issued pursuant to the procedures contained at IDAPA 58.01.01.209.05.c, the source or modification may operate upon submittal of a Tier I Administrative Amendment issued pursuant to IDAPA 58.01.01.381.

6. Indicate if the application is a minor permit to construct application or a major permit to construct application by checking the appropriate box (e.g., major PTC or minor PTC). If the permit to construct application is for a major new source or major modification, you must ensure that all necessary information required by IDAPA 58.01.01.202, and .204, or .205, as applicable, is provided.

Forms Included

Check the "Included" box for each form included in this permit to construct application. If there are multiples of a form for multiple units of that type, check the box and fill in the number of forms in the blank provided.

The "N/A" box should only be checked if the form is absolutely unnecessary to complete the application. Additional information may be requested.

Application Fee

All applicants for a PTC shall submit a PTC application fee of \$1000.00 to DEQ at the time of the original submission of the application as required by IDAPA 58.01.01.224. An application fee is not required for exemption applicability determinations, typographical errors, and name or ownership changes. An application fee can be paid by check, credit card, or Electronic Funds Transfer (EFT). If you choose to pay by credit card or EFT, call DEQs Fiscal Office to complete the necessary paperwork. Paper checks must be submitted with the original application as described below.

Submit Application

When complete, enclose a check for the application fee along with the hardcopy application certified by a responsible official (as defined in IDAPA 58.01.01.006.94), and send to:

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255



DEQ AIR QUALITY PROGRAM

1410 N. Hilton, Boise, ID 83706

For assistance, call the

Air Permit Hotline: 1-877-5PERMIT

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: ALK-Abello Source Materials, Inc.
2. Existing facility identification number: 055-00072
Check if new facility (not yet operating) []
3. Brief project description: Construct Mitizax Cell 2 facility

Facility Information

4. Primary facility permitting contact name: Warren Miller, Contact type: Facility permitting contact, Telephone number: (208) 777-3394, E-mail: wmius@alk.net
5. Alternate facility permitting contact name: Stephanie Weathers, Alternate contact type: Facility permitting contact, Telephone number: (208) 777-3365, E-mail: sweus@alk.net
6. Mailing address where permit will be sent: 448 S. Lochsa St., Post Falls, Kootenai, ID, 83854
7. Physical address of permitted facility: Same
8. Is the equipment portable? [] Yes* [X] No *If yes, complete and attach PERF; see instructions.
9. NAICS codes: Primary NAICS 325414, Secondary NAICS 111422
10. Brief business description and principal product produced: Allergenic source material producer, grow, collect, and purify biological allergenic materials for use by others to produce allergy treatments and diagnostic kits.
11. Identify any adjacent or contiguous facility this company owns and/or operates: []

12. Specify type of application [X] 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: Tim Davis, Official's title: Facility Manager
Official's address: 448 S. Lochsa St. Post Falls, ID 83854
Telephone number: (208) 777-3341, E-mail: tdaus@alk.net
Official's signature: [Signature], Date: 21 DEC 2015

[X] 14. Check here to indicate that you want to review the draft permit before final issuance.

Instructions for Form GI

This form is used by DEQ to identify a company or facility, equipment locations, and personnel involved with the permit application. Additional information may be required.

Identification

1. Provide the facility name. If the facility is *doing business as* (dba) a facility different in name than the primary facility, provide the dba name.
2. If the facility is an existing permitted facility in Idaho, provide the facility identification number. If the facility is new and not yet operating, check the box.
3. Provide a brief project description as on Form CS, Cover Sheet. This is useful in case any pages of the application are separated.

Facility information

4. Provide name of the *primary* person who should be contacted regarding this permit. Provide telephone number and e-mail address for the primary person.
5. Provide name of an *alternate* person who should be contacted if the person listed in 4 is not available. Provide telephone number and e-mail address for the alternate person.
6. Provide the mailing address where DEQ should mail the permit.
7. Provide the physical address where the equipment is located (if different than 6).
8. Indicate if the permitted equipment is portable by checking the appropriate box. If the permitted equipment is portable, complete and attach the Portable Equipment Relocation Form (PERF) to this application. The PERF is available from DEQ's website at http://www.deq.idaho.gov/media/576773-ptc_relocation.pdf or http://www.deq.idaho.gov/media/576769-ptc_relocation.doc (for Word format).
9. Provide the North American Industry Classification System (NAICS) code for your facility. NAICS codes can be found at <http://www.census.gov/epcd/naics02/naicod02.htm>.
10. Describe the primary activity and principal product of your business as it relates to the NAICS code listed in 9.
11. Identify and describe any other sources or equipment owned and operated by the primary facility that are located on contiguous or adjacent properties and the role the source or equipment plays in supporting the primary facility.
12. Check the box describing the type of permit application.

Important note: If application is for a permit to construct (PTC), include the application fee of \$1,000 when submitting the application. Per IDAPA 58.01.01.226.02, DEQ cannot process the application without the fee, which must be submitted with the application.

For existing Tier I facilities that are applying for a PTC, the applicant must specify how the PTC will be incorporated into the Tier I permit (IDAPA 58.01.01.209.05). If you have questions, call the Air Permit Hotline at 1-877-573-7648.

Certification

13. Provide the name, title, address, telephone number, and e-mail of the facility's responsible official. Responsible official is defined in IDAPA 58.01.01.006.99. The responsible official must sign and date the application before it is submitted to DEQ.
14. Check this box to indicate that you want to review a draft before the final permit is issued.



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

IDENTIFICATION

1. Company Name: ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc	3. Facility ID No: 055-00072
4. Brief Project Description: Construct MITIZAX® Cell 2 facility		

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	HOUSE VACUUM 2		
6. EU ID Number:	EF-VAC 2		
7. EU Type:	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	SPENCER		
9. Model:	S249209B OR EQUIVALENT		
10. Maximum Capacity:	491 CFM		
11. Date of Construction:			
12. Date of Modification (if any):			
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	NA, Integral to vacuum system (included HEPA filter)		
15. Date of Installation:	NA	16. Date of Modification (if any):	NA
17. Manufacturer and Model Number:	NA		
18. ID(s) of Emission Unit Controlled:	NA		
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)	

Control Efficiency	Pollutant Controlled					
	PM	PM10	SO ₂	NO _x	VOC	CO
NA	NA	NA	NA	NA	NA	NA

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. NA

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

22. Actual Operation:	18 HOURS PER DAY, 5 DAYS/WEEK, 52 WEEKS PER YEAR
23. Maximum Operation:	24 HOURS PER DAY, 7 DAYS/WEEK, 52 WEEKS PER YEAR

REQUESTED LIMITS

24. Are you requesting any permit limits?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):		
<input type="checkbox"/> Production Limit(s):		
<input type="checkbox"/> Material Usage Limit(s):		
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports	
<input type="checkbox"/> Other:		
25. Rationale for Requesting the Limit(s):		

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

- 1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.
5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.
6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.
7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.
8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.
9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.
10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.
11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

Construction fabrication, erection, or installation of an affected facility.

Commenced an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.
13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.
14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.
16. If the air pollution control equipment has been modified, provide the date of the modification.
17. Provide the name of the manufacturer and the model number for the air pollution control equipment.
18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.



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

IDENTIFICATION

1. Company Name: ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc	3. Facility ID No: 055-00072
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4. Brief Project Description: Construct MITIZAX® Cell 2 facility

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	CELL 2 MTX ETHANOL DRYING CABINETS (SEE EU02 LIST)		
6. EU ID Number:	EF16-3		
7. EU Type:	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	HYDROFAB		
9. Model:	NA		
10. Maximum Capacity:	3000 CFM		
11. Date of Construction:	NA		
12. Date of Modification (if any):	NA		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	
5. 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)

Control Efficiency	Pollutant Controlled					
	PM	PM10	SO ₂	NO _x	VOC	CO

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 HOURS/YR
23. Maximum Operation:	8760 HOURS/YR

REQUESTED LIMITS

24. Are you requesting any permit limits?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	

25. Rationale for Requesting the Limit(s):

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

- 1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.
5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.
6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.
7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.
8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.
9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.
10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.
11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

Construction fabrication, erection, or installation of an affected facility.

Commenced an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.
13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.
14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.
16. If the air pollution control equipment has been modified, provide the date of the modification.
17. Provide the name of the manufacturer and the model number for the air pollution control equipment.
18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.

EU02

List of Equipment for Source EF 16-3

<u>Location</u>	<u>Name</u>	<u>Mfr</u>	<u>Flow</u>	<u>Install Date (est)</u>
MTX1118	Drying Cabinet 1	Hydrofab	500 cfm	2016
MTX1118	Drying Cabinet 2	Hydrofab	500 cfm	2016
MTX1118	Drying Cabinet 3	Hydrofab	500 cfm	2016
MTX1119	Drying Cabinet 1	Hydrofab	500 cfm	2016
MTX1119	Drying Cabinet 2	Hydrofab	500 cfm	2016
MTX1119	Drying Cabinet 3	Hydrofab	500 cfm	2016



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

IDENTIFICATION

1. Company Name: ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc	3. Facility ID No: 055-00072
4. Brief Project Description: Construct MITIZAX® Cell 2 facility		

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	CELL 2 MTX PURIFICATION 1 HOOD		
6. EU ID Number:	EF16-4		
7. EU Type:	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	HYDRAFAB		
9. Model:	NA		
10. Maximum Capacity:	725 CFM		
11. Date of Construction:			
12. Date of Modification (if any):			
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:						
5. 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? <input type="checkbox"/> Yes <input type="checkbox"/> No						
20. Does the manufacturer guarantee the control efficiency of the control equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)						
Control Efficiency	Pollutant Controlled					
	PM	PM10	SO ₂	NO _x	VOC	CO

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:	18 HOURS/DAY, 5 DAYS/WEEK, 52 WEEKS/YEAR
23. Maximum Operation:	24 HOURS/DAY, 7 DAYS/WK, 52 WEEKS/YEAR

REQUESTED LIMITS

24. Are you requesting any permit limits?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

- 1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.
5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.
6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.
7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.
8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.
9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.
10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.
11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

Construction fabrication, erection, or installation of an affected facility.

Commenced an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.
13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.
14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.
16. If the air pollution control equipment has been modified, provide the date of the modification.
17. Provide the name of the manufacturer and the model number for the air pollution control equipment.
18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.



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

IDENTIFICATION

1. Company Name: ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc	3. Facility ID No: 055-00072
4. Brief Project Description: Construct MITIZAX® Cell 2 facility		

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	MTX CELL 2 LAB HOODS, (See EU01 List)		
6. EU ID Number:	EF16-5		
7. EU Type:	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	LABCONCO		
9. Model:	PROTECTOR EXTREME		
10. Maximum Capacity:	4110 CFM		
11. Date of Construction:	NA		
12. Date of Modification (if any):	NA		
13. Is this a Controlled Emission Unit?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	NA					
15. Date of Installation:	NA	16. Date of Modification (if any):	NA			
17. Manufacturer and Model Number:	NA					
18. ID(s) of Emission Unit Controlled:	NA					
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes <input type="checkbox"/> No					
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)					
	Pollutant Controlled					
	PM	PM10	SO ₂	NO _x	VOC	CO
Control Efficiency	NA	NA	NA	NA	NA	NA

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. NA

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

22. Actual Operation:	8760 HOURS/YEAR
23. Maximum Operation:	8760 HOURS/YEAR

REQUESTED LIMITS

24. Are you requesting any permit limits?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)	
<input type="checkbox"/> Operation Hour Limit(s):		
<input type="checkbox"/> Production Limit(s):		
<input type="checkbox"/> Material Usage Limit(s):		
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports	
<input type="checkbox"/> Other:		

25. Rationale for Requesting the Limit(s):	
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Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

- 1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.
5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.
6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.
7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.
8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.
9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.
10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.
11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

Construction fabrication, erection, or installation of an affected facility.

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Modification any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted to the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) to the atmosphere not previously emitted.

12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.
13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.
14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.
16. If the air pollution control equipment has been modified, provide the date of the modification.
17. Provide the name of the manufacturer and the model number for the air pollution control equipment.
18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.

EU01

List of Equipment for Source EF16-5

Emission Sources				Install Date (estimated)
MTX1116	Fume Hood 1	Labconco Protoctor Extreme	1370 cfm	2019
MTX1116	Fume Hood 2	Labconco Protoctor Extreme	1370 cfm	2019
MTX1116	Fume Hood 3	Labconco Protoctor Extreme	1370 cfm	2019



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

IDENTIFICATION

1. Company Name: ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc	3. Facility ID No: 055-00072
4. Brief Project Description: Construct MITIZAX® Cell 2 facility		

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

5. Emissions Unit (EU) Name:	CELL 2 MTX FLUID BED DRYER		
6. EU ID Number:	EF19-1		
7. EU Type:	<input checked="" type="checkbox"/> New Source	<input type="checkbox"/> Unpermitted Existing Source	Date Issued:
	<input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #:		
8. Manufacturer:	VECTOR		
9. Model:	VFC-30 OR EQUIVALENT		
10. Maximum Capacity:	120 KG/DAY		
11. Date of Construction:	TBD		
12. Date of Modification (if any):			
13. Is this a Controlled Emission Unit?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.		

EMISSIONS CONTROL EQUIPMENT

14. Control Equipment Name and ID:	Internal cartridge filters followed by a HEPA filter		
15. Date of Installation:	16. Date of Modification (if any):		
17. Manufacturer and Model Number:	VECTOR CARTRIDGES AND FLANDERS/FFI HEPA		
18. ID(s) of Emission Unit Controlled:	EF19-1		
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)		

Control Efficiency	Pollutant Controlled					
	PM	PM10	SO ₂	NO _x	VOC	CO

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:	18 HOURS/DAY, 5 DAYS/WEEK, 52 WEEKS/YEAR
23. Maximum Operation:	14 HOURS/DAY, 7 DAYS/WEEK, 52 WEEKS/YEAR

REQUESTED LIMITS

24. Are you requesting any permit limits?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	

25. Rationale for Requesting the Limit(s):	
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Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

- 1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.
5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.
6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.
7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.
8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.
9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.
10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.
11. The date of construction is the month, day, and year in which construction or modification was commenced.

Definitions:

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12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.
13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.
14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.
16. If the air pollution control equipment has been modified, provide the date of the modification.
17. Provide the name of the manufacturer and the model number for the air pollution control equipment.
18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.



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

IDENTIFICATION		
1. Company Name: ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc	3. Facility ID No: 055-00072
4. Brief Project Description: Construct MITIZAX® Cell 2 facility		

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION	
5. Emissions Unit (EU) Name:	CELL 2 MTX MINOX SCREENER
6. EU ID Number:	BH20-1
7. EU Type:	<input checked="" type="checkbox"/> New Source <input type="checkbox"/> Unpermitted Existing Source <input type="checkbox"/> Modification to a Permitted Source -- Previous Permit #: _____ Date Issued: _____
8. Manufacturer:	MINOX
9. Model:	1200
10. Maximum Capacity:	480 KG/DAY
11. Date of Construction:	
12. Date of Modification (if any):	
13. Is this a Controlled Emission Unit?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If Yes, complete the following section. If No, go to line 22.

EMISSIONS CONTROL EQUIPMENT						
14. Control Equipment Name and ID:	BH20-1					
5. Date of Installation:	16. Date of Modification (if any):					
17. Manufacturer and Model Number:	United Air Specialists, Model SFC-6-3					
18. ID(s) of Emission Unit Controlled:	Cell 2 MTX Minox Screener					
19. Is operating schedule different than emission units(s) involved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
20. Does the manufacturer guarantee the control efficiency of the control equipment?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, attach and label manufacturer guarantee)					
Control Efficiency	Pollutant Controlled					
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 14.28%;">PM</td> <td style="width: 14.28%;">PM10</td> <td style="width: 14.28%;">SO₂</td> <td style="width: 14.28%;">NO_x</td> <td style="width: 14.28%;">VOC</td> <td style="width: 14.28%;">CO</td> </tr> </table>	PM	PM10	SO ₂	NO _x	VOC
PM	PM10	SO ₂	NO _x	VOC	CO	

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. NA

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)	
22. Actual Operation:	18 HOURS/DAY, 5 DAYS/WEEK, 52 WEEKS/YEAR
23. Maximum Operation:	24 HOURS/DAY, 7 DAYS/WEEK, 52 WEEKS/YEAR

REQUESTED LIMITS	
24. Are you requesting any permit limits?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If Yes, indicate all that apply below)
<input type="checkbox"/> Operation Hour Limit(s):	
<input type="checkbox"/> Production Limit(s):	
<input type="checkbox"/> Material Usage Limit(s):	
<input type="checkbox"/> Limits Based on Stack Testing:	Please attach all relevant stack testing summary reports
<input type="checkbox"/> Other:	
25. Rationale for Requesting the Limit(s):	

Instructions for Form EU0

This form provides DEQ with information about an emissions unit. An emissions unit is the equipment or process that generates emissions of regulated air pollutant(s). This form is used by the permit writer to become familiar with the emissions unit (EU). This form is also used by DEQ to identify the control equipment and the emission point (stack or vent) used for the emission unit(s) proposed in this permit application. This form also asks for supporting documents to verify stated control efficiencies and details about the emission point. Additional information may be requested.

- 1 - 4. Provide the same company name, facility name (if different), facility ID number, and brief project description as on Form CS in the boxes provided. This is useful in case any pages of the application get separated.
5. Provide the name of the emissions unit (EU), such as "Union boiler," etc. A separate EU0 form is required for each emissions unit.
6. Provide the identification (ID) number of the EU. It can be any unique identifier you choose; however, this ID number should be unique to this EU and should be used consistently throughout this application and any other air quality permit application(s) (e.g., operating permit application) to identify this EU.
7. Indicate the type of EU by checking the appropriate box (e.g., a new source to be constructed, an unpermitted existing source (as-built) applying for the first time, or an existing permitted source to be modified). If the EU is being modified, indicate on the form the most recent permit issued for the EU.
8. Provide the manufacturer's name for the EU. If the EU is custom-designed or homemade, indicate so.
9. Provide the model number of the EU. If the EU is custom-designed or homemade, indicate so.
10. Provide the maximum capacity of the EU. For example, a boiler's rated capacity may be modified in units of MMBtu/hr in terms of heat input of natural gas; an assembly line capacity may be in parts produced per day. Capacity should be based on a rated nameplate or as stated in the manufacturer's literature.
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Definitions:

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12. If the EU has been or will be modified, provide the month, day, and year of the most recent or future modification as defined in IDAPA 58.01.01.006.
13. Indicate if emissions from the EU are controlled by air pollution control equipment. If the answer is yes, complete the next section. If the answer is no, go to line 18.
14. Provide the name of the air pollution control equipment (e.g., wet scrubber) and the control equipment's identification number. This identification number should be unique to this air pollution control equipment and should be used consistently throughout this and all other air quality permit applications (e.g., operating permit application) to identify this air pollution control equipment.

15. Provide the date the air pollution control equipment was installed.
16. If the air pollution control equipment has been modified, provide the date of the modification.
17. Provide the name of the manufacturer and the model number for the air pollution control equipment.
18. If this air pollution control equipment controls emissions from more than this EU, provide the identification number(s) of the other EU(s).
19. Indicate if this air pollution control equipment operates on a schedule different from the EU(s) it controls.
20. Indicate if the air pollution control manufacturer guarantees the control efficiency of the control equipment. If the answer is yes, attach the manufacturer's guarantee and label it with the air pollution control equipment identification number. Indicate the control efficiency for the target pollutant(s).
21. If the control efficiency of the air pollution control equipment is not guaranteed, attach the design specifications and any performance data to support the control efficiency stated in part 16. Label the supporting documentation with the air pollution control equipment identification number.
22. Provide the projected actual operating schedule for the emission unit in hours/day, hours/year, or other.
23. Provide the maximum operating schedule for the emission unit in hours/day, hours/year, or other.
24. If you are requesting to have limits placed on this EU, mark "Yes." Then, check the applicable requested limit(s) and provide the limit(s). For example, production limits may be in terms of parts produced per year, material usage limits may be in gallons per day.
25. Please provide the reason you are requesting limits, if any. This helps DEQ and the applicant determine whether the limits are necessary, and if they will accomplish the desired purpose. Provide supporting documentation (calculations, modeling assessment, regulatory review, etc.) for each limit requested.



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

IDENTIFICATION

1. Company Name	2. Facility Name:
ALK-Abello Source Materials, Inc.	ALK-Abello Source Materials, Inc.
3. Brief Project Description:	Construct MITIZAX® Cell 2 facility

IC ENGINE DESCRIPTION AND SPECIFICATIONS

4. Type of unit: New unit Unpermitted existing unit Modification to an existing permitted unit? Permit number: _____

Full-time operation (non-emergency standby use)?

Emergency standby use only (operation limited to 100 hrs/yr for maintenance and testing and emergency use only)?

Emergency fire pump use only?

Stationary test cell/stand operation only (as defined in NSPS Subpart ZZZZ)?

National security operation only (as defined in NSPS Subpart ZZZZ)?

Institutional emergency standby IC engine (as defined in NSPS Subpart ZZZZ)?

IC ENGINE SPECIFICATIONS

Questions 5 through 15 apply to all IC engines.

5. IC Engine Manufacturer: Detroit Diesel/MTU or equivalent 6. Model: 16V2000G84R163-8A36 7. Date manufactured: TBD 8. Model year: 2016 anticipated

9. Date of installation (if an existing IC engine): TBD 10. IC Engine cylinder displacement: 16 cylinders, 1.99 liters per cylinder

11. Maximum rated horsepower (per the data plate/manufacture specifications): 1495 bhp

12. EPA Certification: Tier certification number FMDLL35.8GRR-003 or None/not tier certified

13. Ignition type: Spark Compression

14. Fuel combusted in the IC engine? Distillate fuel oil Natural gas/LNG LPG/propane
 If distillate fuel oil (#1, #2, or a mixture) is used, what is the maximum sulfur content? 15 ppm (0.0015% by weight) 500 ppm (0.05% by weight)

15. IC engine exhaust stack parameters: Diameter TBD inches Height TBD feet Temperature 1022 °F Flow rate 7840 acfm

IC ENGINE EMISSIONS PARAMETERS

Questions 16 through 27 apply to **full-time** non-Tier certified IC engines or Tier certified IC engines manufactured prior to July 11, 2005. If you are proposing a Tier certified IC engine manufactured on and after July 11, 2005 or an emergency standby IC engine do not answer questions 17 through 27.

16. Testing schedule (for emergency standby IC engines only): _____ hrs/day 1.2 hrs/mon _____ hrs/qtr _____ hrs/yr

17. Maximum daily operation: _____ hrs/day 18. Maximum annual operation: 500 hrs/yr **Note:** These operational limits will be placed in the permit.

19. Will CO emissions be limited to a specific ppmvd (i.e. 49 or 23 ppmvd)? Yes No 20. What will the CO emissions limit be? _____ ppmvd

21. Will CO emissions be reduced by 70% or more? Yes No

22. Will a CEMS (Continuous Emissions Monitoring System) be used to measure pollutants in the IC engine exhaust stream? Yes No

23. Will a CPMS (Continuous Parameters Monitoring System) be used to measure parameters of the IC engine exhaust stream? Yes No

24. Will the IC engine be equipped with an oxidation catalyst? Yes No

25. If applicable, will the oxidation catalyst be equipped with a temperature measurement system to ensure it is operating properly? Yes No

26. Will the IC engine be equipped with a diesel particulate filter? Yes No

27. If applicable, will the diesel particulate filter be equipped with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached? Yes No

Instructions for Form EU1

Please refer to IDAPA 58.01.01.220 for a list of the general exemption criteria for Permit to Construct exemptions.

- 1 – 3. Provide the same company name, facility name (if different), and brief project description as on Form GI. This is useful if the application pages are separated.

USE ATTACHMENT IF ADDITIONAL SPACE IS REQUIRED.

General Information:

4. Indicate whether the IC engine is a new unit, unpermitted existing unit, being modified, and whether it will be permitted to operate full-time or for emergency use only.

IC Engine Specifications:

- 5-8. Provide the IC engine manufacturer, model, date the IC engine was manufactured, and the model year (used for EPA certification purposes) of the IC engine.
9. Provide the date of installation of the IC engine.
10. Provide the IC engine cylinder displacement (i.e. 12 liter engine with 8 cylinders = 1.5 liters per cylinder).
11. Provide the maximum horsepower of the IC engine (per the data plate) in bhp.
12. Provide the EPA Tier certification number of the IC engine (i.e. 1, 2, 3, or 4).
13. Provide the IC engine ignition type.
14. Check which fuel is combusted in the IC engine. If distillate fuel oil is combusted, check the maximum proposed sulfur content of the fuel.
15. Provide the IC engine exhaust stack parameters. The temperature and flow rate should be per the IC engine manufacturer. If the stack height is very tall, provide a justification for the exhaust gas temperature.

IC Engine Emissions Parameters:

Questions 16 through 27 apply to **full-time** non-Tier certified IC engines or Tier certified IC engines manufactured prior to July 11, 2005. If you are proposing a Tier certified IC engine manufactured on and after July 11, 2005 or an emergency standby IC engine do not answer questions 17 through 27.

16. For emergency IC engines only, propose a testing schedule.
17. Propose a maximum daily IC engine hourly limit. **Note:** Unless it is 24 hours per day of operation, this proposed daily hourly limit will be placed in the permit.
18. Propose a maximum annual IC engine hourly limit. **Note:** Unless it is 8,760 hours per year of operation, this proposed annual hourly limit will be placed in the permit.
- 19-21. Subpart ZZZZ requires that CO emissions in the exhaust from existing non-Tier certified IC engines are either limited to a specific concentration, 49 ppmvd for engines rated at 300 bhp to ≤ 500 bhp or 23 ppmvd for engines rated at > 500 bhp, or are to reduce the CO concentration by 70% or more. Therefore, "yes" should only be answered to one of these two questions.
- 22-23. Subpart ZZZZ requires that, for IC engines rated at > 500 bhp, Applicants either install a CEMS (Continuous Emissions Monitoring System) or a CPMS (Continuous Parameters Monitoring System) in the exhaust stream to demonstrate compliance with the emissions limitations. Therefore, "yes" should only be answered to one of these two questions.
24. Specify if the IC engine is equipped, or will need to be equipped, with an oxidation catalyst to comply with the emissions limitations of Subpart ZZZZ.
25. Specify if the oxidation catalyst will be equipped with a temperature measurement system to ensure that is operating properly to comply with the emissions limitations of Subpart ZZZZ.
26. Specify if the IC engine is equipped, or will need to be equipped, with a diesel particulate filter to comply with the emissions limitations of Subpart ZZZZ.
27. Specify if the diesel particulate filter will be equipped with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.



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

IDENTIFICATION		
1. Company Name: ALK-Abello Source Materials, Inc	2. Facility Name: ALK-Abello Source Materials, Inc.	3 Facility ID No: 055-00072
4. Brief Project Description: Construct MITIZAX® Cell 2 facility		

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: <input checked="" type="checkbox"/> New Unit <input type="checkbox"/> Unpermitted Existing Unit <input type="checkbox"/> Modification to a Unit with Permit #:		
6. Use of Boiler: <input type="checkbox"/> % Used For Process <input type="checkbox"/> % Used For Space Heat <input type="checkbox"/> % Used For Generating Electricity <input checked="" type="checkbox"/> Other: Building humidity control		
7. Boiler ID Number: SB-1	8. Rated Capacity: <input checked="" type="checkbox"/> 2.863524 Million British Thermal Units Per Hour (MMBtu/hr) <input type="checkbox"/> 1,000 Pounds Steam Per Hour (1,000 lb steam/hr)	
9. Construction Date: NA	10. Manufacturer: Cleaver Brooks or equivalent	11. Model: FLX700-300
12. Date of Modification (if applicable):	13. Serial Number (if available):	14. Control Device (if any): NA Note: Attach applicable control equipment form(s)

FUEL DESCRIPTION AND SPECIFICATIONS				
15. Fuel Type	<input type="checkbox"/> Diesel Fuel (#) (gal/hr)	<input checked="" type="checkbox"/> Natural Gas 2727 (cf/hr)	<input type="checkbox"/> Coal (unit: /hr)	<input type="checkbox"/> Other Fuels (unit: /hr)
16. Full Load Consumption Rate		2727		
17. Actual Consumption Rate		1364		
18. Fuel Heat Content (Btu/unit, LHV)		1050		
19. Sulfur Content wt%		Negligible		
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	<input type="checkbox"/> Saturated <input type="checkbox"/> Superheated	<input type="checkbox"/> Saturated <input type="checkbox"/> Superheated

OPERATING LIMITS & SCHEDULE	
25. Imposed Operating Limits (hours/year, or gallons fuel/year, etc.):	NA
26. Operating Schedule (hours/day, months/year, etc.):	NA
27. NSPS Applicability: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If Yes, which subpart:

Instructions for Form EU5

Please refer to IDAPA 58.01.01.222 for a list of industrial boilers which are exempt from the Permit to Construct requirements.

- 1 – 4. Provide the same company name, facility name (if different), and facility ID number as on Form CS. This is useful in case any pages of the application are separated.

Boiler Description and Specification:

5. Indicate whether the unit is new, existing but unpermitted, or being modified.
6. Indicate the percentage of the steam used for process, space heat, generating electricity, or others.
7. Provide the boiler identification (ID) number. Each boiler in the application must have its own number. If boilers included in this permit application are not identical in make and model, fill out a separate EU5 form for each boiler. If the boilers are identical, attach a separate sheet labeled EU5A listing them by ID number and date of construction or modification. The boiler ID numbers should match the boiler ID numbers used on other construction permit applications and within this application. It can be any number. However, if you submitted an operating permit application, the numbers used for identification purposes in this application should be consistent with the ID numbers used in your operating permit application.
8. The boiler's rated capacity should be read from the boiler's nameplate or from the manufacturer's literature.
9. The date of construction of the emission unit is the date, month, and year in which construction or modification begins as defined in EU0 Form Instruction item 7.
10. Provide the name of the manufacturer of the boiler.
11. Provide the model number of the boiler. This number should be available from the nameplate of the boiler.
12. If the boiler has been or will be modified, give the date, month and year of the most recent or future modification.
13. Provide the manufacturer's serial number for this boiler, if available.
14. Provide the control device name and number if a pollution control device is attached to this emission unit. The name and number of the control device should be consistent with control equipment forms throughout the application. **Note: a separate control equipment form(s) should be attached for all applicable control equipment serving this unit.**

Fuel Description and Specifications:

15. Indicate the fuel type used by the boiler. If diesel fuel is used, you need to indicate the ranking number. If the boiler is a dual-fuel engine, please check all appropriate fuel type boxes in this row.
16. The full-load consumption rate is the fuel consumption rate at the boiler's rated capacity.
17. The actual consumption rate is the fuel consumption rate (usually daily average) under typical operational conditions.
18. Provide fuel net or lower heating value (LHV).
19. Provide the weight percentage of the sulfur content in the fuel.
20. Provide the weight percentage of the ash content in the fuel. For gaseous fuel, this information is not required.

Steam Description and Specifications:

21. Provide the steam heat content. This information is not required for gaseous or liquid fuel.
22. Provide the steam temperature in °F. This information is not required for gaseous or liquid fuel.
23. Provide the steam pressure in pound per square inch (psi). This information is not required for gaseous or liquid fuel.
24. Provide the steam type (i.e. saturated or superheated). This information is not required for gaseous or liquid fuel.

Operation Limits:

25. If any, indicate the operating limits you imposed on this boiler in the units of operating hours per year, or gallons fuel per hour, per year, etc.
26. Indicate your operation schedule for the projected maximum operation of the engine.
27. Provide NSPS (new source performance standards) applicability determination and, if applicable, subpart reference.



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

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 ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc.
3. Brief Project Description: Construct MITIZAX® Cell 2 facility	

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: Vector (Fluid Bed dryer with internal cartridge filters followed by a HEPA filter)	5. Baghouse Model: NA, internal cartridge filters followed by HEPA	6. Baghouse Equipment ID: NA, included in Fluid Bed, EF19-1)
7 (a). Baghouse particulate matter emission concentration. Note: Provide information in 7(a)-(c) or answer question #8 below.	<u>0.005</u> gr/dscf	<i>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.</i>
7 (b). Percentage PM ₁₀ Or Provide PM ₁₀ Emission Concentration	<u>100% PM10, 50% PM2.5</u> % _____ gr/dscf	<i>What percentage of the PM concentration listed in question #7(a) is PM₁₀. You must provide documentation as to how the percentage was determined (i.e per the baghouse manufacturer). Without documentation the application is not complete.</i>
7 (c). Baghouse flow rate	<u>1700</u> dscfm	<i>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.</i>
8. Baghouse particulate matter control efficiency. Note: Not needed if section #7 is completed.	_____ % PM control _____ % PM ₁₀ control	<i>Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM₁₀. 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.</i>
9. Is the baghouse equipped with a bag leak detector?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<i>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.</i>

Instructions for Form BCE

- 1 – 3. Provide the same company name, facility name, and brief project description as on the application cover sheet Form CS**. This is useful if application pages are separated.

USE ATTACHMENT IF ADDITIONAL SPACE IS REQUIRED.

Baghouse Information:

- 4-5. Provide the baghouse manufacturer name and the model number.
6. Provide an identification number for the baghouse stack. This number is assigned by the applicant and must be provided on any other application materials which are submitted that include baghouse information.
- 7-9. Follow the instructions in the form. All documentation provided must be sufficient so that DEQ can verify the validity of the information provided. Provide the Baghouse Equipment ID number on all submitted documentation. If documentation is not provided the application is incomplete.



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Air Permit Hotline – 1-877-5PERMIT

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 ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc.
3. Brief Project Description: Construct MITIZAX® Cell 2 facility	

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: United Air Specialists	5. Baghouse Model: SFC-6-3	6. Baghouse Equipment ID: BH20-1
7 (a). Baghouse particulate matter emission concentration. Note: Provide information in 7(a)-(c) or answer question #8 below.	<u>0.005</u> gr/dscf	<i>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.</i>
7 (b). Percentage PM ₁₀ Or Provide PM ₁₀ Emission Concentration	<u>100% PM10, 50% PM2.5</u> % _____ gr/dscf	<i>What percentage of the PM concentration listed in question #7(a) is PM₁₀. You must provide documentation as to how the percentage was determined (i.e. per the baghouse manufacturer). Without documentation the application is not complete.</i>
7 (c). Baghouse flow rate	<u>1000</u> dscfm	<i>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.</i>
8. Baghouse particulate matter control efficiency. Note: Not needed if section #7 is completed.	_____ % PM control _____ % PM ₁₀ control	<i>Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM₁₀. 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.</i>
9. Is the baghouse equipped with a bag leak detector?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<i>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.</i>

Instructions for Form BCE

- 1 – 3. Provide the same company name, facility name, and brief project description as on the application cover sheet Form CS**. This is useful if application pages are separated.

USE ATTACHMENT IF ADDITIONAL SPACE IS REQUIRED.

Baghouse Information:

- 4-5. Provide the baghouse manufacturer name and the model number.
6. Provide an identification number for the baghouse stack. This number is assigned by the applicant and must be provided on any other application materials which are submitted that include baghouse information.
- 7-9. Follow the instructions in the form. All documentation provided must be sufficient so that DEQ can verify the validity of the information provided. Provide the Baghouse Equipment ID number on all submitted documentation. If documentation is not provided the application is incomplete.



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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 ALK-Abello Source Materials, Inc.	2. Facility Name: ALK-Abello Source Materials, Inc.
3. Brief Project Description: Construct MITIZAX® Cell 2 facility	

BAGHOUSE INFORMATION

4. Baghouse Manufacturer: Spencer, (integral to vacuum) Flanders HEPA	5. Baghouse Model: NA, integral to vacuum	6. Baghouse Equipment ID: EF-Vac 2
7 (a). Baghouse particulate matter emission concentration. Note: Provide information in 7(a)-(c) or answer question #8 below.	<u>0.005</u> gr/dscf	<i>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.</i>
7 (b). Percentage PM ₁₀ Or Provide PM ₁₀ Emission Concentration	<u>100% PM10, 50% PM2.5</u> % _____ gr/dscf	<i>What percentage of the PM concentration listed in question #7(a) is PM₁₀. You must provide documentation as to how the percentage was determined (i.e. per the baghouse manufacturer). Without documentation the application is not complete.</i>
7 (c). Baghouse flow rate	<u>491</u> dscfm	<i>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.</i>
8. Baghouse particulate matter control efficiency. Note: Not needed if section #7 is completed.	_____ % PM control _____ % PM ₁₀ control	<i>Applicant's providing the control efficiency of the baghouse must provide control efficiency for both PM and PM₁₀. 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.</i>
9. Is the baghouse equipped with a bag leak detector?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<i>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.</i>

Instructions for Form BCE

- 1 – 3. Provide the same company name, facility name, and brief project description as on the application cover sheet Form CS**. This is useful if application pages are separated.

USE ATTACHMENT IF ADDITIONAL SPACE IS REQUIRED.

Baghouse Information:

- 4-5. Provide the baghouse manufacturer name and the model number.
6. Provide an identification number for the baghouse stack. This number is assigned by the applicant and must be provided on any other application materials which are submitted that include baghouse information.
- 7-9. Follow the instructions in the form. All documentation provided must be sufficient so that DEQ can verify the validity of the information provided. Provide the Baghouse Equipment ID number on all submitted documentation. If documentation is not provided the application is incomplete.

Permitted & Future Combustion Equipment List				EMISSION FACTORS																POTENTIAL EMISSIONS															
Equip. Tag	Location	Service	Description	CAPACITY	CAPACITY UNITS	NOx	Units	Referenc e	CO	Units	Referenc e	PM10	Units	Referenc e	SOx	Units	Referenc e	Fuel Heating Value	Fuel Heating Value	Fuel Usage Per hour ¹	Operating Hrs per year	Fuel Usage Per Year ¹	NOx		CO		PM10		VOC		SOx				
																							lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy			
HB-1	1st Fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 125 BHP	5,103,000	Btu/hr	50	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	84.0	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	4,860	8,760	42,573,600	0.24	1.1	0.4	1.8	0.04	0.16	0.03	0.12	0.003	0.013
HB-2	1st Fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 125 BHP	5,103,000	Btu/hr	50	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	84.0	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	4,860	8,760	42,573,600	0.24	1.1	0.4	1.8	0.04	0.16	0.03	0.12	0.003	0.013
HB-3	1st Fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 125 BHP. (Future)	5,103,000	Btu/hr	50	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	84.0	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	4,860	8,760	42,573,600	0.24	1.1	0.4	1.8	0.04	0.16	0.03	0.12	0.003	0.013
GB-1	1st fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 300,000BTU/hr	300,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	42 Section	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	285.7143	8760	2502857.14	0.014286	0.062571	0.024	0.10512	0.002171	0.009511	0.001571	0.006883	0.000171	0.000751
GB-2	1st fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 300,000BTU/hr	300,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	42 Section	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	285.7143	8760	2502857.14	0.014286	0.062571	0.024	0.10512	0.002171	0.009511	0.001571	0.006883	0.000171	0.000751
MAU-9-1	Roof	Tablet Pollen Area	100% OA, DX packaged rooftop AHU, indirect gas fired	450,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	42 Section	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	428.5714	8760	3754285.71	0.021429	0.093857	0.036	0.15768	0.003257	0.014266	0.002357	0.010324	0.000257	0.001126
SB-2	1st Fir	Humidification	Natural gas-fired, fire-tube steam boiler, 30 BHP.	1,360,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	8	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	6	lb/MMCF	42 Section	1	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1,050	Btu/SCF	1,295	8,760	11,346,286	0.0648	0.2837	0.1088	0.4765	0.0098	0.0431	0.0071	0.0312	0.0008	0.0034
EG-1	Ground	Emergency	1000 kW Generator (1)	1,000	kW	5.61	g/kW-hr	40 CFR §60.4205(b)	3.5	g/kW-hr	40 CFR §60.4205(b)	0.2	g/kW-hr	40 CFR §60.4205(b)	0.79	g/kW-hr	40 CFR §60.4205(b)	15	ppm	40 CFR §60.4207	140000	Btu/gallon	71.3	500	35,650	12.36	3.09	7.72	1.93	0.44	0.11	1.75	0.44	0.02	0.00

Future Sources

¹ Natural Gas External Combustion is in SCF and IC Engine is gallons

Totals 13.21 6.79 9.13 8.14 0.57 0.67 1.84 0.84 0.03 0.05

Actual & Future Combustion Equipment List				EMISSION FACTORS																POTENTIAL EMISSIONS															
Equip. Tag	Location	Service	Description	CAPACITY	CAPACITY UNITS	NOx	Units	Referenc e	CO	Units	Referenc e	PM10	Units	Referenc e	SOx	Units	Referenc e	Fuel Heating Value	Fuel Heating Value	Fuel Usage Per hour ¹	Operating Hrs per year	Fuel Usage Per Year ¹	NOx		CO		PM10		VOC		SOx				
																							lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy			
HB-1	1st Fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 125 BHP	5,103,000	Btu/hr	50	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	84.0	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	4,860	8,760	42,573,600	0.24	1.1	0.4	1.8	0.04	0.16	0.03	0.12	0.003	0.013
HB-2	1st Fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 125 BHP	5,103,000	Btu/hr	50	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	84.0	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	4,860	8,760	42,573,600	0.24	1.1	0.4	1.8	0.04	0.16	0.03	0.12	0.003	0.013
HB-3	1st Fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 125 BHP. (Future)	5,103,000	Btu/hr	50	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	84.0	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	4,860	8,760	42,573,600	0.24	1.1	0.4	1.8	0.04	0.16	0.03	0.12	0.003	0.013
GB-1	1st fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 300,000BTU/hr	300,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	42 Section	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	285.7143	8760	2502857.14	0.014286	0.062571	0.024	0.10512	0.002171	0.009511	0.001571	0.006883	0.000171	0.000751
GB-2	1st fir	Heating Hot Water system	Natural gas-fired, fire-tube hot water boiler, 300,000BTU/hr	300,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	42 Section	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	285.7143	8760	2502857.14	0.014286	0.062571	0.024	0.10512	0.002171	0.009511	0.001571	0.006883	0.000171	0.000751
MAU-9-1	Roof	Tablet Pollen Area	100% OA, DX packaged rooftop AHU, indirect gas fired	450,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	42 Section	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	428.5714	8760	3754285.71	0.021429	0.093857	0.036	0.15768	0.003257	0.014266	0.002357	0.010324	0.000257	0.001126
AHU-20	Roof	Cell 2	Minox Dehumidifier	54,300	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	7.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	5.5	lb/MMCF	42 Section	0.6	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1050	Btu/SCF	51.71429	8760	453017.143	0.002586	0.011325	0.004344	0.019027	0.000393	0.001721	0.000284	0.001246	3.1E-05	0.000136
SB-2	1st Fir	Humidification	Natural gas-fired, fire-tube steam boiler, 30 BHP.	1,360,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	8	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	6	lb/MMCF	42 Section	1	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1,050	Btu/SCF	1,295	8,760	11,346,286	0.0648	0.2837	0.1088	0.4765	0.0098	0.0431	0.0071	0.0312	0.0008	0.0034
SB-1	1st Fir	Humidification	Natural gas-fired, fire-tube steam boiler, 70 BHP.	3,000,000	Btu/hr	50	lb/MMCF	42 Section	84	lb/MMCF	42 Section	8	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	6	lb/MMCF	42 Section	1	lb/MMCF	USEPA, AP-42 Section 1.4, 07/98	1,050	Btu/SCF	2,857	8,760	25,028,571	0.1429	0.6257	0.2400	1.0512	0.0217	0.0951	0.0157	0.0688	0.0017	0.0075
EG-1	Ground	Emergency	1000 kW Generator (1)	1,000	kW	5.61	g/kW-hr	40 CFR §60.4205(b)	3.5	g/kW-hr	40 CFR §60.4205(b)	0.2	g/kW-hr	40 CFR §60.4205(b)	0.79	g/kW-hr	40 CFR §60.4205(b)	15	ppm	40 CFR §60.4207	140000	Btu/gallon	71.3	500	35,650	12.36	3.09	7.72	1.93	0.44	0.11	1.75	0.44	0.02	0.00
EG-2	Ground	Emergency	1000 kW Generator (2)	1,000	kW	5.61	g/kW-hr	40 CFR §60.4205(b)	3.5	g/kW-hr	40 CFR §60.4205(b)	0.2	g/kW-hr	40 CFR §60.4205(b)	0.79	g/kW-hr	40 CFR §60.4205(b)	15	ppm	40 CFR §60.4207	140000	Btu/gallon	71.3	500	35,650	12.36	3.09	7.72	1.93	0.44	0.11	1.75	0.44	0.02	0.00

New Sources

Permitted but not installed yet

¹ Natural Gas External Combustion is in SCF and IC Engine is gallons

Totals 25.71 10.51 17.09 11.14 1.03 0.88 3.60 1.35 0.04 0.06

2013 Installed and Permitted particulate emission sources								
Potential Emissions								
	EU#	CE#	Source	CFM	Hours/yr	gr/dscf	lb/hr	ton/yr
House Vacuum	EF-Vac	HEPA	EF-Vac	491	8760	0.005	0.02	0.09
USM Hoods	EF 2-1		EF 2-1	1995	8760	0.001	0.02	0.07
SSM Hoods	EF 3-1		EF 3-1	6845	8760	0.001	0.06	0.26
SMD Hoods	EF 4-1		EF 4-1	3140	8760	0.001	0.03	0.12
Class 2 B2	EF 3-4	HEPA	EF 3-4	1104	8760	0.001	0.01	0.04
TPA Lab Hoods	EF 9-4	HEPA	EF 9-4	4760	8760	0.001	0.04	0.18
MTX Lab Hoods	EF 10-1		EF 10-1	3770	8760	0.001	0.03	0.14
Minox Screener	EF 10-2	C10-2	EF 10-2	1000	8760	0.005	0.04	0.19
Mitizax Fluid Bed Dryer	EF 10-3	HEPA	EF 10-3	1700	8760	0.005	0.07	0.32
MITIZAX® Purification 1 hood	EF 10-4		EF 10-4	825	8760	0.001	0.01	0.03
Combustion Sources							0.57	0.67
Totals							0.90	2.11

2016 Installed and Proposed Particulate Emission Sources									Actual Emissions				
Potential Emissions									Actual Emissions				
	EU#	CE#	Source	CFM	Hours/yr	gr/dscf	lb/hr	ton/yr	CFM	Hours/yr	gr/dscf	lb/hr	ton/yr
House Vacuum	EF-Vac	HEPA	EF-Vac	491	8760	0.005	0.02	0.09	491	4680	0.005	0.02	0.05
USM Hoods	EF 2-1		EF 2-1	1995	8760	0.001	0.02	0.07	1995	2600	0.001	0.02	0.02
SSM Hoods	EF 3-1		EF 3-1	6845	8760	0.001	0.06	0.26	6845	2600	0.001	0.06	0.08
SMD Hoods	EF 4-1		EF 4-1	3140	8760	0.001	0.03	0.12	3140	2600	0.001	0.03	0.03
Class 2 B2	EF 3-4	HEPA	EF 3-4	1104	8760	0.001	0.01	0.04	1104	2600	0.001	0.01	0.01
TPA Lab Hoods	EF 9-4	HEPA	EF 9-4	4760	8760	0.001	0.04	0.18	4760	8760	0.001	0.04	0.18
MTX Lab Hoods	EF 10-1		EF 10-1	3770	8760	0.001	0.03	0.14	3770	4680	0.001	0.03	0.08
Minox Screener	EF 10-2	C10-2	EF 10-2	1000	8760	0.005	0.04	0.19	1000	4680	0.005	0.04	0.10
Mitizax Fluid Bed Dryer	EF 10-3	HEPA	EF 10-3	1700	8760	0.005	0.07	0.32	1700	4680	0.005	0.07	0.17
MITIZAX® Purification 1 hood	EF 10-4		EF 10-4	825	8760	0.001	0.01	0.03	825	4680	0.001	0.01	0.02
House Vacuum 2	EF-Vac 2	HEPA	EF-Vac 2	491	8760	0.005	0.02	0.09	491	4680	0.005	0.02	0.05
Cell 2 MTX Lab Hoods	EF 16-5		EF 16-5	4110	8760	0.001	0.035229	0.154301	4110	4680	0.001	0.035229	0.082435
Cell 2 MTX Ethanol Dry Cab	EF 16-3		EF 16-3	3000	8760	0.001	0.03	0.11	3000	4680	0.001	0.03	0.06
Cell 2 Minox Screener	BH 20-1	BH 20-1	BH 20-1	1000	8760	0.005	0.04	0.19	1000	4680	0.005	0.04	0.10
Cell 2 MTX Fluid Bed Dryer	EF 19-1	HEPA		1760	8760	0.005	0.08	0.33	1760	4680	0.005	0.08	0.18
Cell 2 MTX Purification 1 hood	EF 16-4		EF 16-4	725	8760	0.001	0.01	0.03	725	4680	0.001	0.01	0.01
Combustion Sources							1.03	0.88				0.99	0.413
Totals							1.57	3.22			1.53	1.63	

* Actual ton/yr emissions for combustion sources based on 3; HW Boilers at 2000 hour/yr and 2 Emerg Gen at 500 hour/yr , 2 Steam Boilers at 50%, 1 Greenhouse boiler at 50% and MAU9-1 and AHU20-1 at 50%

New Source

Proposed Minor Modification to an existing Minor Facility
Change in Potential to Emit

November, 2015

Table 1 Pre-Project Potential to Emit for Regulated Pollutants

Description	Emissions Unit	NOx		CO		PM10		PM2.5		VOC		SOx		Pb		Acetone		Ethanol		Methanol		IPA		Perc	
		lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	NA	NA	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr
HW Boiler 1	HB-1	0.24	1.06	0.41	1.79	0.04	0.16	0.02	0.08	0.03	0.12	0.0029	0.0128	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HW Boiler 2	HB-2	0.24	1.06	0.41	1.79	0.04	0.16	0.02	0.08	0.03	0.12	0.0029	0.0128	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HW Boiler 3	HB-3	0.24	1.06	0.41	1.79	0.04	0.16	0.02	0.08	0.03	0.12	0.0029	0.0128	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greenhouse Boiler 1	GB-1	0.01	0.06	0.02	0.11	0.00	0.01	0.00	0.00	0.00	0.01	0.0002	0.0008	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greenhouse Boiler 2	GB-2	0.01	0.06	0.02	0.11	0.00	0.01	0.00	0.00	0.00	0.01	0.0002	0.0008	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Makeup air unit 9-1	MAU-9-1	0.02	0.09	0.04	0.16	0.00	0.01	0.00	0.01	0.00	0.01	0.0003	0.0011	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steam Boiler 1	SB-2	0.06	0.28	0.11	0.48	0.01	0.04	0.00	0.02	0.01	0.03	0.0008	0.0034	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Generator 1	EG-1	12.36	3.09	7.72	1.93	0.44	0.11	0.22	0.06	1.75	0.44	0.0156	0.0039	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
House Vacuum 1	EF-Vac	0.00	0.00	0.00	0.00	0.02	0.09	0.01	0.05	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USM Hoods	EF 2-1	0.00	0.00	0.00	0.00	0.02	0.07	0.01	0.04	0.18	0.23	0.00	0.00	NA	NA	0.00	0.00	0.15	0.19	0.01	0.01	0.02	0.03	0.00	0.00
SSM Hoods	EF 3-1	0.00	0.00	0.00	0.00	0.06	0.26	0.03	0.13	1.09	0.38	0.00	0.00	NA	NA	1.85	2.40	0.00	0.00	0.00	0.00	0.23	0.30	0.86	0.08
SMD Hoods	EF 4-1	0.00	0.00	0.00	0.00	0.03	0.12	0.01	0.06	0.08	0.10	0.00	0.00	NA	NA	0.61	0.80	0.05	0.06	0.00	0.00	0.03	0.04	0.00	0.00
Class 2 B2	EF 3-4	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.02	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TPA Lab Hoods	EF 9-4	0.00	0.00	0.00	0.00	0.04	0.18	0.02	0.09	0.23	0.30	0.00	0.00	NA	NA	10.92	14.22	0.00	0.00	0.00	0.00	0.23	0.30	0.00	0.00
MTX Lab Hoods	EF 10-1	0.00	0.00	0.00	0.00	0.03	0.14	0.02	0.07	0.78	1.92	0.00	0.00	NA	NA	0.00	0.00	0.62	1.45	0.03	0.08	0.13	0.30	0.00	0.00
Minox Screener	EF 10-2	0.00	0.00	0.00	0.00	0.04	0.19	0.02	0.09	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mitizax Fluid Bed Dryer	EF 10-3	0.00	0.00	0.00	0.00	0.07	0.32	0.04	0.16	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MITIZAX® Purification 1 hood	EF 10-4	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.02	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		13.21	6.79	9.13	8.14	0.90	2.11	0.45	1.06	4.20	3.77	0.0257	0.0483	NA	NA	13.38	17.42	0.82	1.70	0.04	0.09	0.64	0.97	0.86	0.08

Permitted but not yet installed

Acetone emissions for MAU 9-4 assumes running 20 hr/day Birch or Ragweed

Table 2 Post-Project Potential to Emit for Regulated Pollutants

Description	Emissions Unit	NOx		CO		PM10		PM2.5		VOC		SOx		Pb		Acetone		Ethanol		Methanol		IPA		Perc	
		lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	NA	NA	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr
HW Boiler 1	HB-1	0.24	1.06	0.41	1.79	0.04	0.16	0.02	0.08	0.03	0.12	0.0029	0.0128	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HW Boiler 2	HB-2	0.24	1.06	0.41	1.79	0.04	0.16	0.02	0.08	0.03	0.12	0.0029	0.0128	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HW Boiler 3	HB-3	0.24	1.06	0.41	1.79	0.04	0.16	0.02	0.08	0.03	0.12	0.0029	0.0128	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greenhouse Boiler 1	GB-1	0.01	0.06	0.02	0.11	0.00	0.01	0.00	0.00	0.00	0.01	0.0002	0.0008	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greenhouse Boiler 2	GB-2	0.01	0.06	0.02	0.11	0.00	0.01	0.00	0.00	0.00	0.01	0.0002	0.0008	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Makeup air unit 9-1	MAU-9-1	0.02	0.09	0.04	0.16	0.00	0.01	0.00	0.01	0.00	0.01	0.0003	0.0011	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steam Boiler 2	SB1	0.14	0.63	0.24	1.05	0.02	0.10	0.01	0.05	0.02	0.07	0.0017	0.0075	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steam Boiler 1	SB-2	0.06	0.28	0.11	0.48	0.01	0.04	0.00	0.02	0.01	0.03	0.0008	0.0034	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Generator 1	EG-1	12.36	3.09	7.72	1.93	0.44	0.11	0.22	0.06	1.75	0.44	0.0156	0.0039	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Generator 2	EG-2	12.36	3.09	7.72	1.93	0.44	0.11	0.22	0.06	1.75	0.44	0.0156	0.0039	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
House Vacuum 1	EF-Vac	0.00	0.00	0.00	0.00	0.02	0.09	0.01	0.05	0.00	0.00	0.0000	0.0000	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
House Vacuum 2	EF-Vac 2	0.00	0.00	0.00	0.00	0.02	0.09	0.01	0.05	0.00	0.00	0.0000	0.0000	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell 2 Minox Dehumidifier	AHU 20	0.002586	0.011325	0.004344	0.019027	0.000393	0.001721	0.0002	0.0009	0.0003	0.0012	0.0000	0.0001	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USM Hoods	EF 2-1	0.00	0.00	0.00	0.00	0.02	0.07	0.01	0.04	0.18	0.23	0.00	0.00	NA	NA	0.00	0.00	0.15	0.19	0.01	0.01	0.02	0.03	0.00	0.00
SSM Hoods	EF 3-1	0.00	0.00	0.00	0.00	0.06	0.26	0.03	0.13	1.09	0.38	0.00	0.00	NA	NA	1.85	2.40	0.00	0.00	0.00	0.00	0.23	0.30	0.86	0.08
SMD Hoods	EF 4-1	0.00	0.00	0.00	0.00	0.03	0.12	0.01	0.06	0.08	0.10	0.00	0.00	NA	NA	0.61	0.80	0.05	0.06	0.00	0.00	0.03	0.04	0.00	0.00
Class 2 B2	EF 3-4	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.02	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TPA Lab Hoods	EF 9-4	0.00	0.00	0.00	0.00	0.04	0.18	0.02	0.09	0.23	0.30	0.00	0.00	NA	NA	10.92	14.22	0.00	0.00	0.00	0.00	0.23	0.30	0.00	0.00
MTX Lab Hoods	EF 10-1	0.00	0.00	0.00	0.00	0.03	0.14	0.02	0.07	0.78	1.83	0.00	0.00	NA	NA	0.00	0.00	0.62	1.45	0.03	0.08	0.13	0.30	0.00	0.00
Minox Screener	EF 10-2	0.00	0.00	0.00	0.00	0.04	0.19	0.02	0.09	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mitizax Fluid Bed Dryer	EF 10-3	0.00	0.00	0.00	0.00	0.07	0.32	0.04	0.16	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MITIZAX® Purification 1 hood	EF 10-4	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.02	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTX Cell 2 Lab Hoods	EF 16-5	0.00	0.00	0.00	0.00	0.035229	0.154301	0.02	0.08	1.76	4.13	0.00	0.00	NA	NA	0.00	0.00	1.51	3.53	0.08	0.19	0.17	0.41	0.00	0.00
Cell 2 MTX Ethanol Dry Cab	EF 16-3	0.00	0.00	0.00	0.00	0.025714	0.112629	0.01	0.06	0.35	0.82	0.00	0.00	NA	NA	0.00	0.00	0.17	0.39	0.01	0.02	0.17	0.41	0.00	0.00
Cell 2 Minox Screener	EF 20-1	0.00	0.00	0.00	0.00	0.042857	0.187714	0.02	0.09	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell 2 MTX Fluid Bed Dryer	EF 19-1	0.00	0.00	0.00	0.00	0.075429	0.330377	0.04	0.17	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell 2 MTX Purification 1 hood	EF 16-4	0.00	0.00	0.00	0.00	0.006214	0.027219	0.00	0.01	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		25.71	10.51	17.09	11.14	1.57	3.22	0.78	1.61	8.07	9.14	0.0431	0.05												

Table 3 Changes in Potential to Emit for Regulated Pollutants (Totals)

November, 2015

Description	Emissions Unit	NOx		CO		PM10		PM2.5		VOC		SOx		Pb		Acetone		Ethanol		Methanol		IPA		Perc	
		lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr	lb/hr	Ton/yr								
HW Boiler 1	HB-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HW Boiler 2	HB-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HW Boiler 3	HB-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greenhouse Boiler 1	GB-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greenhouse Boiler 2	GB-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Makeup air unit 9-1	MAU-9-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steam Boiler 2	SB1	0.14	0.63	0.24	1.05	0.02	0.10	0.01	0.05	0.02	0.07	0.00	0.01	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steam Boiler 1	SB-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Generator 1	EG-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Generator 2	EG-2	12.36	3.09	7.72	1.93	0.44	0.11	0.22	0.06	1.75	0.44	0.02	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
House Vacuum 1	EF-Vac	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
House Vacuum 2	EF-Vac 2	0.00	0.00	0.00	0.00	0.021043	0.092168	0.010521	0.046084	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell 2 Minox Dehumidifier	AHU 20	0.002586	0.011325	0.004344	0.019027	0.000393	0.001721	0.000197	0.000861	0.000284	0.001246	3.1E-05	0.000136	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USM Hoods	EF 2-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SSM Hoods	EF 3-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SMD Hoods	EF 4-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Class 2 B2	EF 3-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TPA Lab Hoods	EF 9-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTX Lab Hoods	EF 10-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minox Screener	EF 10-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mitizax Fluid Bed Dryer	EF 10-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MITIZAX@ Purification 1 hood	EF 10-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTX Cell 2 Lab Hoods	EF 16-5	0.00	0.00	0.00	0.00	0.035229	0.154301	0.017614	0.077151	1.76	4.13	0.00	0.00	NA	NA	0.00	0.00	1.51	3.53	0.08	0.19	0.17	0.41	0.00	0.00
Cell 2 MTX Ethanol Dry Cab	EF 16-3	0.00	0.00	0.00	0.00	0.025714	0.112629	0.012857	0.056314	0.35	0.82	0.00	0.00	NA	NA	0.00	0.00	0.17	0.39	0.01	0.02	0.17	0.41	0.00	0.00
Cell 2 Minox Screener	EF 20-1	0.00	0.00	0.00	0.00	0.042857	0.187714	0.021429	0.093857	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell 2 MTX Fluid Bed Dryer	EF 19-1	0.00	0.00	0.00	0.00	0.075429	0.330377	0.037714	0.165189	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cell 2 MTX Purification 1 hood	EF 16-4	0.00	0.00	0.00	0.00	0.006214	0.027219	0.003107	0.013609	0.00	0.00	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		12.51	3.73	7.96	3.00	0.67	1.11	0.33	0.56	3.87	5.55	0.0174	0.0115	0.00	0.00	0.00	0.00	1.68	3.92	0.09	0.21	0.34	0.82	0.00	0.00

New Sources

Toxic Air Pollutant Emissions Inventory
Pre and Post Project Non-Carcinogenic TAP Emissions Summary, Potential to Emit, lb/hour
Table 1

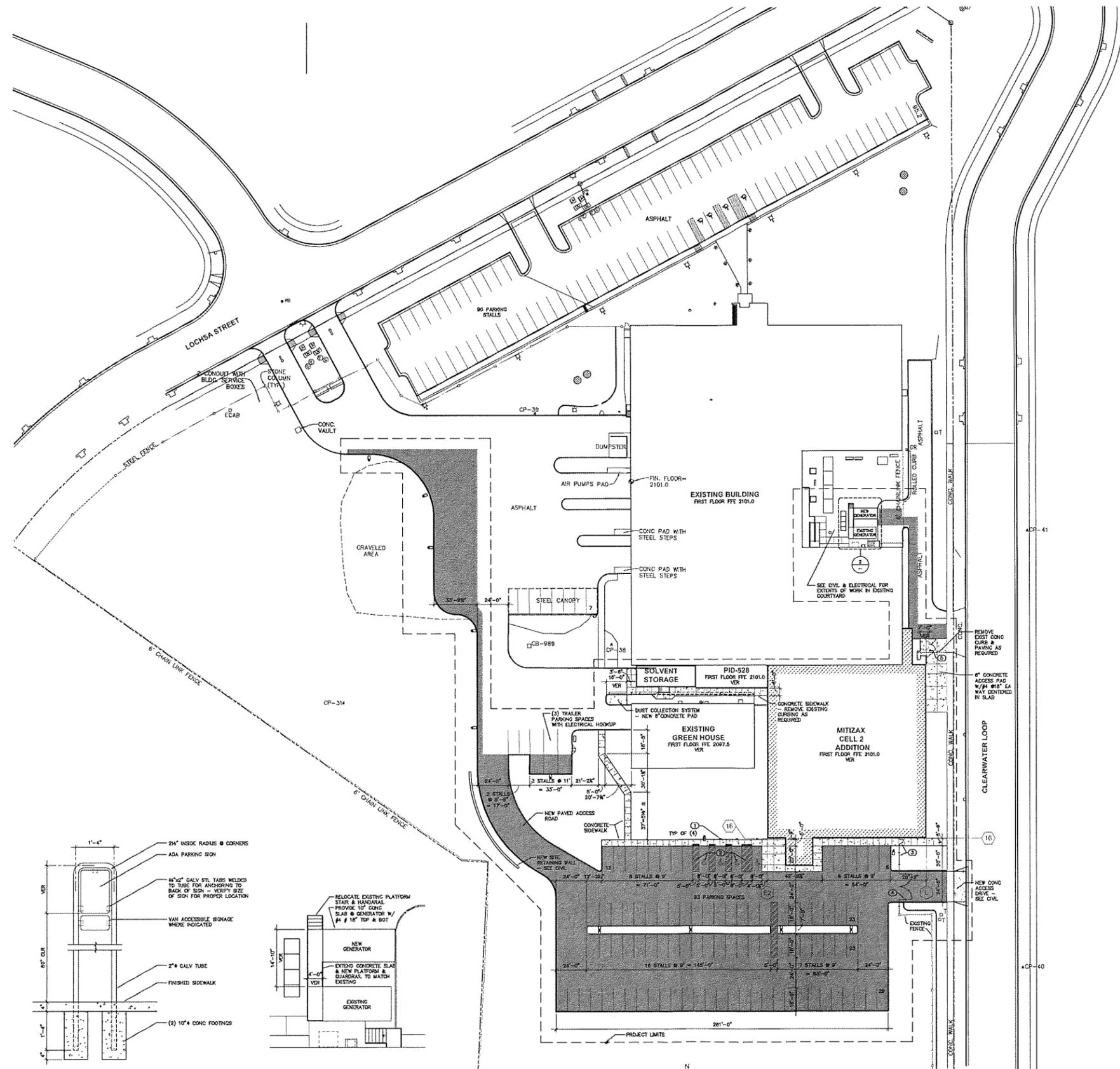
Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hour Average Emission Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)	Change exceeds 10% of Screening Level? (BRC)
Acetone	13.38	13.38	0.00	119	No	No
Ethanol	0.82	2.50	1.68	125	No	No
Isopropyl Alcohol	0.64	0.98	0.34	65.3	No	No
Methanol	0.04	0.13	0.09	17.3	No	No

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hour Average Emission Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)	Change exceeds 10% of Screening Level? (BRC)
Tetrachloroethylene	0.86	0.86	0.00	0.013	No	No

Facility Wide Hazardous Air Pollutant Potential to Emit

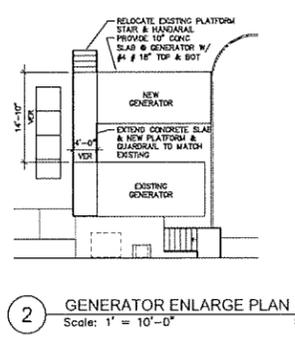
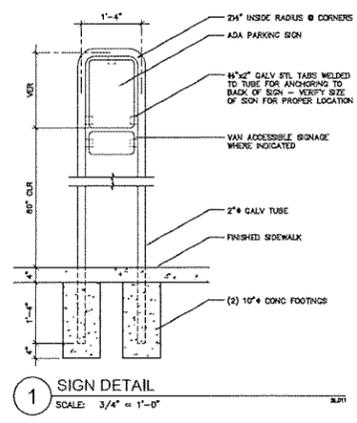
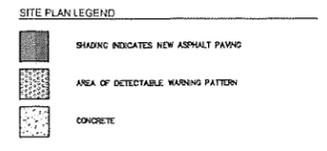
Table x HAP Potential to Emit Emissions Summary

HAP Pollutants	PTE (T/yr)
Methanol	0.30
Tetrachloroethylene	0.08



- GENERAL SITE PLAN NOTES**
1. WORK UNDER THIS CONTRACT INCLUDES ALL WORK WITHIN THE LIMITS OF CONSTRUCTION & ANY WORK IN CIVIL, LANDSCAPE, MECHANICAL, OR ELECTRICAL THAT IS OUTSIDE OF THE LIMITS INDICATED IN THEIR PLANS OR SPECIFICATIONS.
 2. DIMENSIONS ARE TYPICALLY TO FACE OF CONCRETE FOUNDATION, EDGE OF WALK OR PAVING SIDE OF CURB.
 3. LOCATE SIDEWALK CONTROL OR EXPANSION JOINTS AS SHOWN BY WALLS & SLAB JOINTS TO BE EQUALLY SPACED AS SHOWN BETWEEN INTERSECTION POINTS. ALIGN WITH BUILDING COLUMNS & PERKS. BUILDING SPINEETS CENTER ON OPENINGS OR ALIGN WITH OTHER BUILDING ELEMENTS AS SHOWN. LOCATE CONTROL JOINTS @ 5'-0" OC MAX AND EXPANSION JOINTS @ 20'-0" OC MAX LONG.
 4. SEE CIVIL FOR EXTENTS OF DEMOLITION.

- CODED SITE PLAN NOTES**
- (1) ADA ACCESSIBLE PARKING SIGN PER 1
 - (2) PAINTED TRAFFIC STRIPES AND/OR GRAPHICS ACCESSIBLE ADA PARKING STALLS TO COMPLY WITH CITY OF SPOKANE STANDARD PLAN 554 & 555A.
 - (3) ALUMINUM OR EQUAL WELDED STEEL FENCE TO MATCH EXISTING - CONTRACTOR OPTION TO MODIFY & RE-USE EXISTING FENCING TO BE REACHED AS REQUIRED. PROVIDE 3'-4" HIGH ACCESS GATE AT SIDEWALK TO MATCH EXISTING WITH CARBON ACCESS GATE & LOCKING HARDWARE.
 - (4) TWO TWELVE FOOT WIDE EMERGENCY ACCESS GATES WITH LOCKED ALK ACCESS & FIRE DEPARTMENT ACCESS LOCK - CENTERED IN ACCESS DRIVE.
 - (5) EXTEND VINYL COATED CHAIN LINK FENCE WITH VINYL SLATS FROM GRADE UP TO 250.0 - PROVIDE 8' DOUBLE GATE & 3'-0" ACCESS GATE W/FLAT PLATE FOR DOOR HARDWARE AS REQUIRED - MATCH EXISTING COURT YARD FENCING.



1 SIGN DETAIL
Scale: 3/4" = 1'-0"

2 GENERATOR ENLARGE PLAN
Scale: 1" = 10'-0"

SITE PLAN
Scale: 1" = 30'-0"

REVISIONS



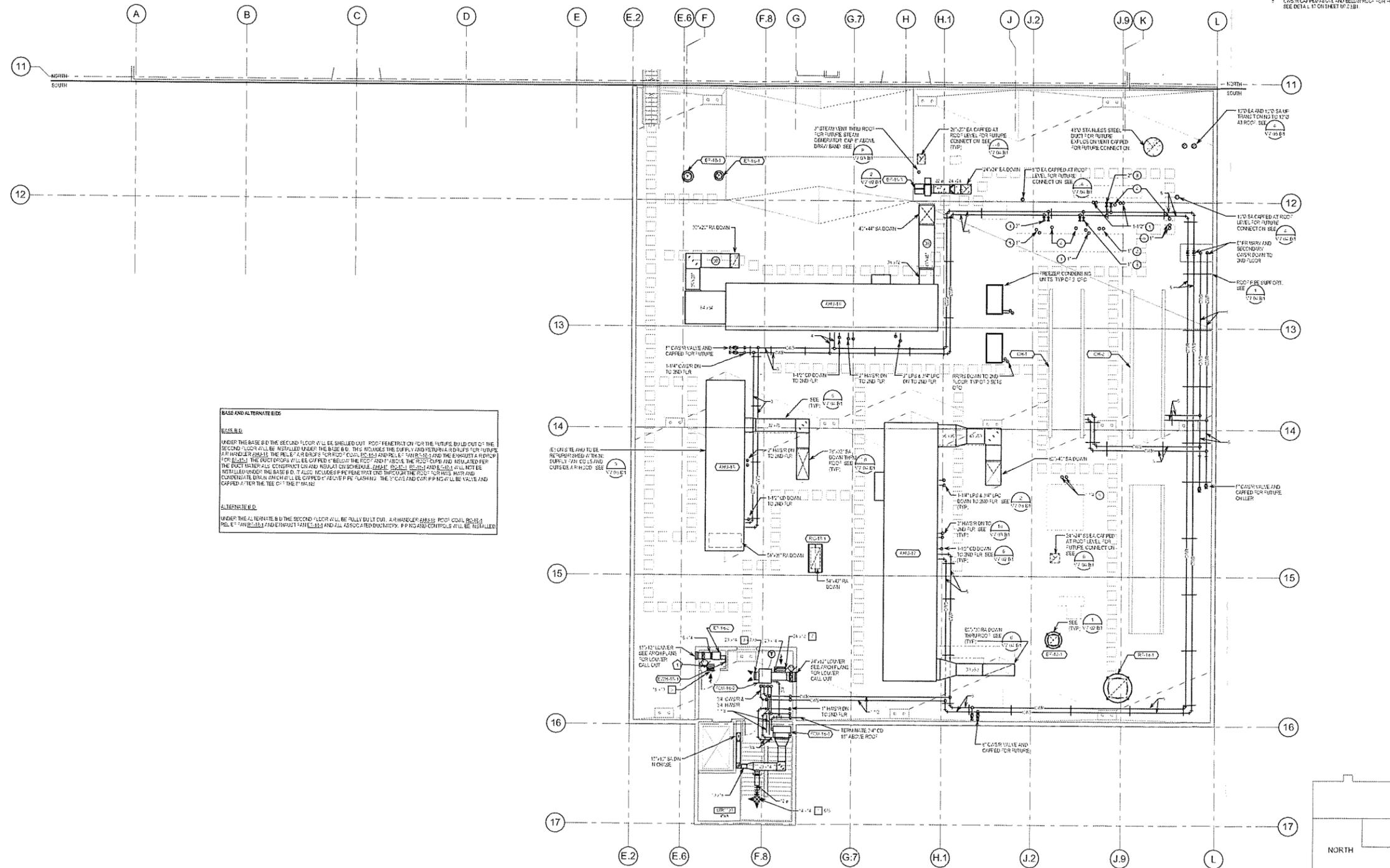
Source Materials Inc
MITIZAX® CELL #2 PRODUCTION FACILITY
408 S. LOCHSA STREET, FALLS, ID, 83426

ARK
ABELLO
MITIZAX® CELL #2 PRODUCTION FACILITY
NAC ARCHITECTURE

DATE	11-14-08
BY	A1-02
PROJECT	JCE
DATE	JCE
DATE	3-6-2016

A1.02.B1

PARTIAL SITE PLAN



- KEY NOTES:**
1. GAS PIPE CAPPED ABOVE ROOF FOR FUTURE. SEE DETAIL 12 ON SHEET M3.16B1. CAP ABOVE ROOF AND VALVE BELOW ROOF.
 2. 24" LIPS PPE CAPPED ABOVE ROOF FOR FUTURE. SEE DETAIL 13 ON SHEET M3.16B1.
 3. GAS PIPE VALVE AND CAPPED FOR FUTURE.
 4. 24" COAGULANT DRUM CAPPED ABOVE AND BELOW ROOF FOR FUTURE. SEE DETAIL 13 ON SHEET M3.16B1.
 5. GAS PIPE CAPPED ABOVE AND BELOW ROOF FOR FUTURE. SEE DETAIL 13 ON SHEET M3.16B1.

BASE AND ALTERNATE BIDS

BASE B.I.D.
 UNDER THE BASE B.I.D. THE SECOND FLOOR WILL BE SHELD OUT. ROOF PENETRATION FOR THE FUTURE BUILD OUT OF THE SECOND FLOOR WILL BE INSTALLED UNDER THE BASE B.I.D. THIS INCLUDES THE SUPPLY AND RETURN AIR DUCTS FOR FUTURE AIR HANDLER ABOVE THE 1ST FLOOR. AIR HANDLER ABOVE THE 1ST FLOOR SHALL BE INSTALLED UNDER THE BASE B.I.D. THE DUCT DROPS WILL BE CAPPED BELOW THE ROOF AND ABOVE THE ROOF CURB AND INSULATED PER THE PROJECT'S CONSTRUCTION AND INSULATION SPECIFICATIONS. THESE DUCTS SHALL HAVE 2" POLYURETHANE INSULATION INSTALLED UNDER THE BASE B.I.D. IT ALSO INCLUDES PENETRATION THROUGH THE ROOF FOR GAS MAIN AND CONDENSATE DRAIN WHICH WILL BE CAPPED ABOVE AND BELOW THE ROOF. THE 1" GAS AND CONDENSATE VALVE AND CAPPED ABOVE THE ROOF. THE 1" GAS VALVE AND CAPPED ABOVE THE ROOF.

ALTERNATE B.I.D.
 UNDER THE ALTERNATE B.I.D. THE SECOND FLOOR WILL BE FULLY BUILT OUT. AIR HANDLER ABOVE ROOF CURB, BASE 1 PPE, 1" GAS MAIN AND CONDENSATE DRAIN AND ALL ASSOCIATED DUCTWORK, PIPING AND CONTROLS WILL BE INSTALLED.

ROOF PLAN - SOUTH - MECHANICAL
 1/8" = 1'-0"

REVISIONS



Source Materials Inc
MITIZAX CELL 2 PRODUCTION FACILITY BP-1



NAC ARCHITECTURE

NO: 111-14028
 DATE: 3/6/2015
 DRAWN: TRR
 CHECKED: KEK

ROOF PLAN - SOUTH - MECHANICAL
BP-1
M3.16.B1



IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
 1410 N. Hilton, Boise, ID 83706
 For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Preapplication Meeting Information
Form FRA (Federal Requirements Applicability) -
Regulatory Review

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

IDENTIFICATION	
1. Company Name: ALK – Abello Source Materials, Inc.	2. Facility Name: ALK – Abello Post Falls Facility
3. Brief Project Description: Construct MITIZAX® Cell 2 facility	
APPLICABILITY DETERMINATION	
4. List all applicable subparts of the New Source Performance Standards (NSPS) (40 CFR part 60). List all non-applicable subparts of the NSPS which may appear to apply to the facility but do not. Examples of NSPS-affected emissions units include internal combustion engines, boilers, turbines, etc. Applicant must thoroughly review the list of affected emissions units.	List of all applicable subpart(s): 40 CFR 60 Subpart IIII List of all non-applicable subpart(s) which may appear to apply but do not: <input type="checkbox"/> Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR part 61 and 40 CFR part 63). List all non-applicable subparts of the NESHAP which may appear to apply to the facility but do not. Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. Reference EPA's webpage on NESHAPs for more information.	List of all applicable subpart(s): List of all non-applicable subpart(s) which may appear to apply but do not: 40 CFR 63 Subpart GGG 40 CFR 63 Subpart ZZZZ 40 CFR 63 Subpart JJJJJJ <input type="checkbox"/> Not Applicable
6. For each subpart identified above, conduct a complete regulatory analysis using the instructions and referencing the example 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 does or does not apply. Regulatory reviews submitted with insufficient detail will be determined incomplete.	<input checked="" type="checkbox"/> A detailed regulatory review is provided (Follow instructions and example). <input type="checkbox"/> DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

**IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS, CALL THE AIR PERMIT HOTLINE AT
1-877-5PERMIT.**

It is emphasized that it is the applicant's responsibility to satisfy all technical and regulatory requirements, and that DEQ will help the applicant understand those requirements prior to submittal of the application but that DEQ will not perform the required technical or regulatory analyses on the applicant's behalf.

MITIZAX® CELL 2 FACILITY
ALK-ABELLÓ SOURCE MATERIALS, INC.
FEDERAL AND IDAHO STATE REGULATORY APPLICABILITY

Table 1 – Applicable Requirements

Table 2 – Non-Applicable Requirements

TABLE 1: FEDERAL AND IDAHO STATE APPLICABLE REQUIREMENTS

Regulatory Citation	Applicable Requirement*	Required Monitoring, Recordkeeping, Reporting or Test Methods	Proposed Monitoring, Recordkeeping, Reporting or Test Methods Adequate to Assure Compliance
IDAPA 58.01.01 - Rules for the Control of Air Pollution in Idaho			
003	Administrative Appeals		Annual Certification by a responsible official.
004	Catchlines		Annual Certification by a responsible official.
005 - 011	Definitions		Annual Certification by a responsible official.
106	Abbreviations		Annual Certification by a responsible official.
107	Incorporations by Reference		Annual Certification by a responsible official.
121	Compliance Requirements by Department		Annual Certification by a responsible official.
122	Information Orders by the Department		Annual Certification by a responsible official.
123	Certification of Documents	Certification by a responsible individual of 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. 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.	
124	Truth, Accuracy And Completeness of Documents		Annual Certification by a responsible official.
125	False Statements		Annual Certification by a responsible official.
126	Tampering		Annual Certification by a responsible official.
127	Format of Responses		Annual Certification by a responsible official.
128	Confidential Information		Annual Certification by a responsible official.
130	Startup, Shutdown, Scheduled Maintenance, Safety Measures, Upset And Breakdown		Annual Certification by a responsible official.
131	Excess Emissions		Annual Certification by a responsible official.
132	Correction of Condition		Annual Certification by a responsible official.
133	Startup, Shutdown And Scheduled Maintenance Requirements		Annual Certification by a responsible official.

Regulatory Citation	Applicable Requirement*	Required Monitoring, Recordkeeping, Reporting or Test Methods	Proposed Monitoring, Recordkeeping, Reporting or Test Methods Adequate to Assure Compliance
133.01	General Provisions	Notify the Department of any startup, shutdown, or scheduled maintenance event that is expected to cause an excess emissions event no later than two (2) hours prior to the start of the excess emissions event.	
133.02	Excess Emissions Procedures	Prepare, implement and file with the Department specific procedures which will be used to minimize excess emissions during such events.	
133.03	Amendments to Procedures.	Amend the procedures from time to time to and as deemed reasonably necessary to ensure that the procedures are and remain consistent with good pollution control practices.	
134	Upset, Breakdown And Safety Requirements		
134.02	Excess Emissions Minimization and Notification	Notify the Department of any upset/breakdown/safety event that results in excess emissions no later than twenty-four hours after the event.	
134.04	Excess Emissions Procedures	Prepare, implement, and file with the Department specific procedures.	
134.05	Amendments to Procedures.	Amend the procedures from time to time and as deemed reasonably necessary to ensure that the procedures are and remain consistent with good pollution control practices.	
135	Excess Emissions Reports	A written report for each excess emissions event shall be submitted to the Department no later than fifteen (15) days after the beginning of each such event.	
136	Excess Emissions Records	Maintain excess emissions records at the facility for the most recent five (5) calendar year period.	
140 - 149	Variances		Annual Certification by a responsible official.
155	Circumvention		Annual Certification by a responsible official.
156	Total Compliance		Annual Certification by a responsible official.

Regulatory Citation	Applicable Requirement*	Required Monitoring, Recordkeeping, Reporting or Test Methods	Proposed Monitoring, Recordkeeping, Reporting or Test Methods Adequate to Assure Compliance
157	Test Methods And Procedures	Any source test performed to satisfy a performance test requirement imposed by state or federal regulation, rule, permit, order, or consent decree, must be conducted as specified.	
157.04	Reporting Requirements	For any source test performed to satisfy a performance test requirement imposed by state or federal regulation, rule, permit, order, or consent decree, submit a written report to the Department within sixty (60) days of the completion of the test.	
160	Provisions Governing Specific Activities And Conditions		Annual Certification by a responsible official.
161	Toxic Substances		Annual Certification by a responsible official.
200 - 203	Procedures And Requirements For Permits To Construct	A permit to construct must be obtained prior to the commencement of construction or modification of any stationary source, facility, major facility or major modification.	
206 - 213	Procedures And Requirements For Permits To Construct	A permit to construct must be obtained prior to the commencement of construction or modification of any stationary source, facility, major facility or major modification.	
220 - 223	General Exemption Criteria for Permit to Construct Exemptions		Annual Certification by a responsible official.
224 - 228	Procedures And Requirements For Permits To Construct		Annual Certification by a responsible official.
510 - 516	Stack Heights And Dispersion Techniques		Annual Certification by a responsible official. Facility does not rely on a stack height in excess of GEP stack height in its dispersion modeling analysis.
561	General Rules		Annual Certification by a responsible official.
562	Specific Emergency Episode Abatement Plans For Point Sources		Annual Certification by a responsible official.
585	Toxic Air Pollutants Non-carcinogenic Increments		Annual Certification by a responsible official.
586	Toxic Air Pollutants Carcinogenic Increments		Annual Certification by a responsible official.

Regulatory Citation	Applicable Requirement*	Required Monitoring, Recordkeeping, Reporting or Test Methods	Proposed Monitoring, Recordkeeping, Reporting or Test Methods Adequate to Assure Compliance
587	Listing Or Delisting Toxic Air Pollutant Increments		Annual Certification by a responsible official.
590	New Source Performance Standards		Annual Certification by a responsible official.
600	Rules For Control of Open Burning		Annual Certification by a responsible official.
601	Fire Permits, Hazardous Materials, And Liability		Annual Certification by a responsible official.
602	Nonpreemption of Other Jurisdictions		Annual Certification by a responsible official.
603	General Restrictions		Annual Certification by a responsible official.
606	Categories of Allowable Burning		Annual Certification by a responsible official.
607	Recreational And Warming Fires		Annual Certification by a responsible official.
609	Training Fires		Annual Certification by a responsible official.
625	Visible Emissions		Annual Certification by a responsible official.
650	Rules For Control of Fugitive Dust		Annual Certification by a responsible official.
651	General Rules		Annual Certification by a responsible official.
700	Particulate Matter -- Process Weight Limitations		Annual Certification by a responsible official.
701	Particulate Matter -- New Equipment Process Weight Limitations		Annual Certification by a responsible official.
725	Rules For Sulfur Content of Fuels.	Maintain fuel oil supplier certification records verifying compliance with ASTM D 396-05.	
775 - 776	Rules For Control of Odors		Annual Certification by a responsible official.
Federal Requirements			
40 CFR 52 Subpart N	Idaho State SIP		Annual Certification by a responsible official.
40 CFR 60 Subpart IIII	New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units	Applies to emergency generator only. Maintain a record of the time of operation of the engine and the reason the engine was in operation during that time.	
40 CFR 82 Subparts E	Protection of stratospheric ozone – labeling of products containing		Annual Certification by a responsible official.
40 CFR 82 Subparts F	Protection of stratospheric ozone – recycling and emissions reduction		Annual Certification by a responsible official.

* All applicable requirements apply facility wide with the exception of 40 CFR 60 Subpart IIII, which applies only to the emergency generator.

TABLE 2: FEDERAL AND IDAHO STATE NON-APPLICABLE REQUIREMENTS

Regulatory Citation	Requirement	Explanation of Non-Applicability
IDAPA 58.01.01 - Rules for the Control of Air Pollution in Idaho		
000	Legal Authority	Applies to Board of Environmental Quality only.
001	Title and Scope	Administrative description of Rules
002	Written Interpretations	Administrative discussion of interpretation of rules.
012 - 105	<i>(Reserved)</i>	
108 - 120	<i>(Reserved)</i>	
129	<i>(Reserved)</i>	
137 - 139	<i>(Reserved)</i>	
150 - 154	<i>(Reserved)</i>	
158 - 159	<i>(Reserved)</i>	
162	Modifying Physical Conditions	Administrative function of Board
163	Source Density	Administrative function of Board
164	Polychlorinated Biphenyls (PCBs)	Facility does not burn any materials containing PCBs
165 - 174	<i>(Reserved)</i>	
175-181	Procedures and requirements for Permits Establishing a Facility Emissions Cap	Facility is not seeking a permit establishing a facility emissions cap.
182 - 199	<i>(Reserved)</i>	
204 - 205	Permit Requirements for Major Facilities of Major Modifications	Facility is not a major facility.
214	Demonstration of Preconstruction Compliance for New and Reconstructed Major Sources of Hazardous Air Pollutants	Facility is not a major source of hazardous air pollutants.
215	Mercury Emission Standards for New or Modified Sources	Facility modification will not result in an increase in annual potential emissions of mercury of twenty-five pounds or more.
216 - 219	<i>(Reserved)</i>	
229 - 299	<i>(Reserved)</i>	
300 - 397	Procedures And Requirements For Tier I Operating Permits	Facility is not a major source and thus not subject to Tier I permitting.
398 - 399	<i>(Reserved)</i>	
400 - 410	Procedures And Requirements For Tier II Operating Permits	Facility is not requesting a Tier II operating permit.
411 - 439	<i>(Reserved)</i>	
440	Requirements For Alternative Emission Limits (Bubbles)	Facility is not proposing an alternative emission limit.
441	Demonstration of Ambient Equivalence	Facility is not proposing emission trades.
442 - 459	<i>(Reserved)</i>	
460	Requirements For Emission Reduction Credit	Facility is not requested emission reduction credits.
461	Requirements For Banking Emission Reduction Credits (ERC's)	Facility is not requesting to bank emission reduction credits.
462 - 499	<i>(Reserved)</i>	
500	Registration Procedures And Requirements For Portable Equipment	Facility does not operate portable equipment
501 - 509	<i>(Reserved)</i>	
517 - 527	Motor Vehicle Inspection And Maintenance Program	Requirements apply to specified counties, not individual sources.

Regulatory Citation	Requirement	Explanation of Non-Applicability
528 - 549	<i>(Reserved)</i>	
550 - 560	Air Pollution Emergency Rule	Administrative rules defining air pollution emergencies.
563 - 574	Transportation Conformity	Administrative rules for adoption and implementation of CAA Section 176 (c) and 23 USC 109(j).
575 - 582	Air Quality Standards And Area Classification	Rules requiring the state to establish ambient air quality standards and classification areas
583 - 584	<i>(Reserved)</i>	
588 - 589	<i>(Reserved)</i>	
591	National Emission Standards For Hazardous Air Pollutants	The facility does not fall under any National Emission Standards for Hazardous Air Pollutants under 40 CFR 61 or 40 CFR 63.
592 - 598	Stage I Vapor Collection	Facility does not meet applicability requirements.
599	Gasoline Cargo Tanks	Facility does not operate gasoline cargo tanks.
604 - 605	<i>(Reserved)</i>	
608	Weed Control Fires	Facility does not utilize weed control fires.
610	Industrial Flares	Facility does not contain industrial flares.
611	Residential Solid Waste Disposal Fires	Facility is not a residential facility.
612	Landfill Disposal Site Fires	Facility is not a landfill disposal site.
613	Orchard Fires	Facility does not utilize orchard fires.
614	Prescribed Burning	Facility does not perform prescribed burning.
615	Dangerous Material Fires	Facility does not conduct dangerous materials burning.
616	Infectious Waste Burning	Facility does not handle infectious waste.
617 - 624	Crop Residue Disposal	Facility does not conduct crop residue burning.
626	General Restrictions On Visible Emissions From Wigwam Burners	Facility does not utilize wigwam burners.
627 - 649	<i>(Reserved)</i>	
652	Agricultural Activities	Facility does not conduct agricultural activities.
653 - 664	<i>(Reserved)</i>	
665 - 668	Regional Haze Rules	Facility is not located in a Class I Area
669 - 674	<i>(Reserved)</i>	
675 - 681	Fuel Burning Equipment - Particulate Matter	No sources at the facility were constructed prior to October 1, 1979 and all facility boilers have a maximum rated heat input less than 10 MMBtu / hr or more.
682 - 699	<i>(Reserved)</i>	
702 - 703	Particulate Matter -- Existing Equipment Process Weight Limitations	Facility was constructed after the October 1, 1979 applicability date.
704 - 724	<i>(Reserved)</i>	
726 - 749	<i>(Reserved)</i>	
750 - 751	Rules For Control of Fluoride Emissions	Facility does not include a phosphate fertilizer plant.
752 - 759	<i>(Reserved)</i>	
760 - 764	Rules For The Control of Ammonia From Dairy Farms	Facility does not include a dairy farm.
765 - 774	<i>(Reserved)</i>	
777 - 784	<i>(Reserved)</i>	
785 - 787	Rules For Control of Incinerators	Facility does not include an incinerator.

Regulatory Citation	Requirement	Explanation of Non-Applicability
788 - 789	<i>(Reserved)</i>	
790 - 799	Rules For The Control of Nonmetallic Mineral Processing Plants	Facility does not include a nonmetallic mineral processing plant.
800 - 802	Registration Fee For Permit By Rule	Facility does not include any operations covered by a permit by rule.
803 - 804	<i>(Reserved)</i>	
805 - 808	Rules For Control of Hot-Mix Asphalt Plants	Facility does not include a hot-mix asphalt plant.
809 - 814	<i>(Reserved)</i>	
815 - 818	Rules For Control of Kraft Pulping Mills	Facility does not include a kraft pulping mill.
819 - 834	<i>(Reserved)</i>	
835 - 839	Rules For Control of Rendering Plants	Facility does not include a rendering plant.
840 - 844	<i>(Reserved)</i>	
845 - 848	Rules For Control of Sulfur Oxide Emissions From Sulfuric Acid Plants	Facility does not include a sulfuric acid plant.
849 - 854	<i>(Reserved)</i>	
855 - 858	Combined Zinc And Lead Smelters	Facility does not include a combined zinc and lead smelter.
859 - 860	Standards of Performance For Municipal Solid Waste Landfills	Facility does not include a municipal solid waste landfill.
861 - 999	<i>(Reserved)</i>	
Federal Requirements		
40 CFR 52.21	Prevention of Significant Deterioration (PSD)	Facility is not a major source, thus PSD requirements do not apply.
40 CFR 60	New Source Performance Standards (NSPS), except 40 CFR 60 Subpart IIII	Facility does not contain specified sources except for a small industrial-commercial-institutional steam generating unit which falls under 40 CFR 60 Subpart IIII.
40 CFR 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Facility does not operate steam generating units with heat input greater than 10 MMBtu/hr.
40 CFR 61	National Emission Standards for Hazardous Air Pollutants (NESHAPS)	Facility does not contain or process specified toxic chemicals.
40 CFR 63	National Emission Standards for Hazardous Air Pollutants (NESHAP), except as designated below	Facility not subject to these standards except as listed below.
40 CFR 63 Subpart GGG	National Emission Standards for Pharmaceuticals Production	Facility is not a major source, and thus it is not subject to this rule.
40 CFR 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.	According to Subpart ZZZZ, §63.6590(c)(1), as a new stationary RICE located at an area source meeting the requirements of 40 CFR 60 Subpart IIII, no further requirements apply under this subpart.
40 CFR 63 Subpart JJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	Facility is not subject to this rule as the facility utilizes only gas-fired boilers as defined in the regulation.
40 CFR 64	Compliance Assurance Monitoring	Facility is not a major facility having at least one controlled emission with pre-control emissions in excess of the major source threshold.
40 CFR 68	Chemical Accident Prevention Provisions	Facility does not use regulated materials above threshold quantities, thus the Chemical Accident Prevention Provisions do not apply.

Regulatory Citation	Requirement	Explanation of Non-Applicability
40 CFR 70	Standard permit requirements	Facility is not a major source, and thus not required to obtain a Title V operating permit.

40 CFR 60 Subpart III

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6695, January 30, 2013; and 79 FR 11251, February 27, 2014.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

ALK-Abelló operates one Kohler Model 1000REOZDC generator with a displacement of less than 30 liters per cylinder, constructed in 2007, and is thus subject to Subpart IIII requirements. The generator is for emergency backup service only. ALK-Abelló does not meet the exemptions listed in §60.4200(b)-(e).

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part

94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

- (1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and
- (2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

ALK-Abelló is not a stationary compressed ignition internal combustion engine manufacturer, and thus the requirements of §60.4201 are not applicable.

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine

power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

ALK-Abelló is not a stationary compressed ignition internal combustion engine manufacturer, and thus the requirements of §60.4202 are not applicable.

§ 60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

ALK-Abelló is not a stationary compressed ignition internal combustion engine manufacturer, and thus the requirements of §60.4203 are not applicable.

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

ALK-Abelló does not operate any non-emergency engines. As defined in this §63.4219, ALK-Abelló operates one emergency standard internal combustion engine. Thus the requirements of §60.4204 are not applicable.

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

ALK-Abelló does not operate any stationary compression ignition internal combustion engines with a model year pre-2007.

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

ALK-Abelló operates one 2007 model year or later emergency stationary compressed ignition internal combustion engine with a displacement of less than 30 liters per cylinder, and is thus subject to the emission standards in §60.4202. Manufacturer certification is on file at facility.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

ALK-Abelló does not operate any fire pump engines.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

- (i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;
- (ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and
- (iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

- (i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;
- (ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and
- (iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

ALK-Abelló does not operate any stationary compressed ignition engines with a displacement of greater than or equal to 30 liters per cylinder.

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per

cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

ALK-Abelló is not required to conduct performance tests pursuant to §60.4211.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

ALK-Abelló does not operate any modified or reconstructed stationary compression ignition internal combustion engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

ALK-Abelló acknowledges that the emission standards as required in §60.4205 must be met over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

As an owner and operator of a stationary compression ignition internal combustion engine subject to this subpart, beginning June 1, 2007, ALK-Abelló must meet the following per gallon standards, according to 40 CFR 80.510(a):

- (1) Sulfur content. 500 parts per million (ppm) maximum.*
- (2) Cetane index or aromatic content, as follows:
 - (i) A minimum cetane index of 40; or*
 - (ii) A maximum aromatic content of 35 volume percent.**

Documentation is maintained at the facility.

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

As of June 1, 2010, ALK-Abelló must meet the following per gallon standards, according to 40 CFR 80.510(b):

- (1) Sulfur content. 15 ppm maximum for nonroad diesel fuel.*
- (2) Cetane index or aromatic content, as follows:
 - (i) A minimum cetane index of 40; or*
 - (ii) A maximum aromatic content of 35 volume percent.**

Documentation is maintained at the facility.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

ALK-Abelló does not operate as stationary compressed ignition internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

ALK-Abelló does not have a national security exemption under §60.4200(d), thus this exemption does not apply.

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

ALK-Abelló acknowledges the requirements for importing or installing stationary compressed ignition internal combustion engines produced in previous model years.

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

The ALK-Abelló emergency generator is equipped with a non-resettable hour meter, which was installed prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

As an emergency stationary compression ignition internal combustion engine, the ALK-Abelló generator is not subject to the emission standards of §60.4204.

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as

appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words "stationary" must be included instead of "nonroad" or "marine" on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words "and stationary" after the word "nonroad" or "marine," as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to

each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as "Fire Pump Applications Only".

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

ALK-Abelló is not a stationary compression ignition internal combustion engine manufacturer, and thus the requirements of §60.4210 are not applicable.

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

As the owner or operator of a stationary compression ignition internal combustion engine, ALK-Abelló operates in compliance with the requirements of §60.4211(a)(1)-(2).

The emergency generator does not meet the applicability requirements for "nonroad" compression ignition engines under 40 CFR part 89, nor the applicability requirements of "marine" compression ignition engines in 40 CFR part 94. The emergency generator does not meet the applicability requirements under 40 CFR 1068, as the engine does not require performance testing or certification using the provisions of 40 CFR 1039 as indicated in this subpart (40 CFR 60 Subpart IIII).

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

- (1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
- (2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.
- (3) Keeping records of engine manufacturer data indicating compliance with the standards.
- (4) Keeping records of control device vendor data indicating compliance with the standards.
- (5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

ALK-Abelló does not operate any stationary compressed ignition internal combustion engine with a model year pre-2007, and is thus not subject to the requirements of §60.4211(b).

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

As the owner or operator of a 2007 model year and later stationary compressed ignition internal combustion engine, ALK-Abelló has purchased an engine certified to the emission standards in §60.4205(b). Manufacturer certification is on file at facility.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_x and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_x and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

ALK-Abelló does not operate any stationary compression ignition engines with a displacement of greater than or equal to 30 liters per cylinder, and is thus not subject to the requirements of §60.4205(d).

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

ALK-Abelló does not operate any modified or reconstructed stationary compressed ignition internal combustion engines.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency

situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

ALK Abelló recognizes that operation of the emergency stationary internal combustion engine for maintenance checks and readiness testing is limited to 100 hours per year; and operation for non-emergency situations is limited to 50 hours of the 100 hours per year

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you

must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

The ALK-Abelló engine is installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions. Therefore, §60.4211(g) does not apply.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad (\text{Eq. 1})$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

ALK-Abelló is not required to conduct performance tests pursuant to §60.4211.

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 2})$$

Where:

C_i = concentration of NO_x or PM at the control device inlet,

C_o = concentration of NO_x or PM at the control device outlet, and

R = percent reduction of NO_x or PM emissions.

(2) You must normalize the NO_x or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O₂) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO₂) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \% O_2} \quad (\text{Eq. 3})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O₂.

C_d = Measured concentration of NO_x or PM, uncorrected.

5.9 = 20.9 percent O₂ - 15 percent O₂, the defined O₂ correction value, percent.

%O₂= Measured O₂concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O₂and CO₂concentration is measured in lieu of O₂concentration measurement, a CO₂correction factor is needed. Calculate the CO₂correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_ovalue for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 4})$$

Where:

F_o= Fuel factor based on the ratio of O₂volume to the ultimate CO₂volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O₂, percent/100.

F_d= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³ /J (dscf/10⁶ Btu).

F_c= Ratio of the volume of CO₂produced to the gross calorific value of the fuel from Method 19, dsm³ /J (dscf/10⁶ Btu).

(ii) Calculate the CO₂correction factor for correcting measurement data to 15 percent O₂, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

X_{CO₂}= CO₂correction factor, percent.

5.9 = 20.9 percent O₂-15 percent O₂, the defined O₂correction value, percent.

(iii) Calculate the NO_xand PM gas concentrations adjusted to 15 percent O₂using CO₂as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 6})$$

Where:

C_{adj}= Calculated NO_xor PM concentration adjusted to 15 percent O₂.

C_d= Measured concentration of NO_xor PM, uncorrected.

%CO₂= Measured CO₂concentration, dry basis, percent.

(e) To determine compliance with the NO_xmass per unit output emission limitation, convert the concentration of NO_xin the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 7})$$

Where:

ER = Emission rate in grams per KW-hour.

C_d= Measured NO_xconcentration in ppm.

1.912x10⁻³= Conversion constant for ppm NO_xto grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 8})$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

ALK-Abelló does not operate any stationary compressed ignition engines with a displacement of greater than or equal to 30 liters per cylinder, and is thus not subject to the requirements of §60.4213.

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

ALK-Abelló does not operate a non-emergency stationary compressed ignition internal combustion engine and is thus not subject to the requirements of §60.4214(a).

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

As ALK-Abelló operates an emergency stationary internal combustion engine, no initial notification is required. The internal combustion engine does not fall within the model years listed in Table 5. Thus, no recordkeeping or reporting is required.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

The ALK-Abelló stationary compressed ignition internal combustion engine is not equipped with a diesel particulate filter.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

The ALK-Abelló stationary compressed ignition internal combustion engine is not rated for more than 100 HP nor is it contractually obligated to be available to provide non-emergency power.

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013]

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

- (a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.
- (b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.
- (c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:
- (1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:
- (i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;
 - (ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and
 - (iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.
- (2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:
- (i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;
 - (ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and
 - (iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.
- (3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

The ALK-Abelló internal combustion engine is located in Post Falls, Idaho and thus not subject to the requirements of §60.4215.

§ 60.4216 What requirements must I meet for engines used in Alaska?

- (a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.
- (b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§60.4201(f) and 60.4202(g) of this subpart.
- (c) Manufacturers, owners and operators of stationary CI ICE that are located in areas of Alaska not accessible by the FAHS may choose to meet the applicable emission standards for emergency engines in §60.4202 and §60.4205, and not those for non-emergency engines in §60.4201 and §60.4204, except that

for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §60.4201 and §60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011]

The ALK-Abelló internal combustion engine is located in Post Falls, Idaho and thus not subject to the requirements of §60.4216.

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

The ALK-Abelló engine does not use special fuels, and thus is not subject to the requirements of §60.4217.

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

ALK-Abelló acknowledges the general provisions listed in Table 8 as applicable to the internal combustion engine, except that §60.8 and §60.13 do not apply since the emergency generator does not have a displacement \geq 30 liters per cycle, and §60.7 does not apply as the generator is not subject to §60.4214(a).

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary

CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA

requirements that is used to provide power to pump water for fire suppression or protection.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means the calendar year in which an engine is manufactured (see "date of manufacture"), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see "date of manufacture"), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see "date of manufacture").

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

ALK-Abelló acknowledges the definitions above as applicable to the internal combustion engine.

Subpart means 40 CFR part 60, subpart III.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013]

Table 1 to Subpart III of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO _x	HC	NO _x	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart III of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder
 [As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO _x + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

[71 FR 39172, July 11, 2006]

Table 3 to Subpart III of Part 60—Certification Requirements for Stationary Fire Pump Engines
 As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d) ¹
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

¹Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

Table 4 to Subpart III of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO _x	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ ¹	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ ¹	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+ ²	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ ³	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ ³	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

¹For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

²For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

³In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

[71 FR 39172, July 11, 2006]

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

[71 FR 39172, July 11, 2006]

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed ¹	Torque (percent) ²	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

¹Engine speed: ±2 percent of point.

²Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

[71 FR 39172, July 11, 2006]

Table 7 to Subpart III of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥ 30 Liters per Cylinder

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥ 30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder	a. Reduce NO _x emissions by 90 percent or more	i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤ 6 inches in diameter may be sampled at a single point located at the duct centroid and ducts > 6 and ≤ 12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is > 12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO _x concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. (continued)	b. Limit the concentration of NO _x in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurement for NO _x concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO _x concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. (continued)	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. (continued)	d. (continued)	iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[71 FR 39172, July 11, 2006, as amended 79 FR 11251, Feb. 27, 2014]

Table 8 to Subpart III of Part 60—Applicability of General Provisions to Subpart III

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
<u>§60.1</u>	<u>General applicability of the General Provisions</u>	<u>Yes</u>	
<u>§60.2</u>	<u>Definitions</u>	<u>Yes</u>	<u>Additional terms defined in §60.4219.</u>
<u>§60.3</u>	<u>Units and abbreviations</u>	<u>Yes</u>	
<u>§60.4</u>	<u>Address</u>	<u>Yes</u>	
<u>§60.5</u>	<u>Determination of construction or modification</u>	<u>Yes</u>	
<u>§60.6</u>	<u>Review of plans</u>	<u>Yes</u>	
<u>§60.7</u>	<u>Notification and Recordkeeping</u>	<u>Yes</u>	<u>Except that §60.7 only applies as specified in §60.4214(a).</u>
<u>§60.8</u>	<u>Performance tests</u>	<u>Yes</u>	<u>Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.</u>
<u>§60.9</u>	<u>Availability of information</u>	<u>Yes</u>	
<u>§60.10</u>	<u>State Authority</u>	<u>Yes</u>	
<u>§60.11</u>	<u>Compliance with standards and maintenance requirements</u>	<u>No</u>	<u>Requirements are specified in subpart III.</u>
<u>§60.12</u>	<u>Circumvention</u>	<u>Yes</u>	
<u>§60.13</u>	<u>Monitoring requirements</u>	<u>Yes</u>	<u>Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.</u>
<u>§60.14</u>	<u>Modification</u>	<u>Yes</u>	
<u>§60.15</u>	<u>Reconstruction</u>	<u>Yes</u>	
<u>§60.16</u>	<u>Priority list</u>	<u>Yes</u>	
<u>§60.17</u>	<u>Incorporations by reference</u>	<u>Yes</u>	
<u>§60.18</u>	<u>General control device requirements</u>	<u>No</u>	
<u>§60.19</u>	<u>General notification and reporting requirements</u>	<u>Yes</u>	

[71 FR 39172, July 11, 2006]

ATTACHMENT 1.0

PROJECT DESCRIPTION

- 1.1 PROJECT BACKGROUND
- 1.2 PROCESS DESCRIPTION
 - 1.2.1 Boilers
 - 1.2.2 Electric Generator
 - 1.2.3 Cell 2 Mitizax Dust Mite (Large Scale Mite Processing)
 - 1.2.4 House Vacuum Systems
- 1.3 PROJECT TIMING/SCHEDULE

FIGURES

Figure 1-1 Mitizax Dust Mites (MTX) Process Flow

1.0 PROJECT DESCRIPTION

1.1 PROJECT BACKGROUND

This project is to add a second MITIZAX® processing cell (Cell 2) to the existing production area permitted under PTC P-2008.01.176 and to add the final Hot Water boiler already permitted in the above permit.

ALK-Abelló Source Materials, Inc (ALK) operates an allergen source material purification facility in an industrial park on Lochsa Street in Post Falls, Idaho. The facility receives and purifies harvested pollens, hairs, insects, and other allergenic materials from various sources for further processing elsewhere to produce a vaccine for individuals with allergies. Two additional processes at the facility involve the growing, harvesting and purification of dust mites for similar processing into a vaccine at other facilities.

The facility was constructed under PTC P-2008.01.176 and is a minor source of air pollutant emissions, for which the appropriate permit is a Permit to construct, pursuant to IDAPA 58.01.01.200. To obtain the maximum operating flexibility, ALK requested a Facility Emission Cap (FEC) permit, pursuant to IDAPA 58.01.01.176-181. Modifications and additions to the permitted equipment have been installed during the term of the original permit with notification and approval from DEQ. A greenhouse is also located on-site and is used to grow difficult to collect pollens and start plants for transplant in order to extend the growing season. In July 2012 the FEC permit was converted to a stand-alone permit to construct.

The primary function of the facility is to purify allergens and in the case of dust mites, grow and then purify the allergens.

Emission control equipment includes MERV 15 Cartridge Baghouses on the Minox Sieve. High efficiency particulate air (HEPA) filters are present prior to discharge on the new fluidized bed dryers, and a second house vacuum used for facility cleanup. All facility emission rates are below the applicability thresholds of the PSD and non-attainment New Source Review programs.

1.2 PROCESS DESCRIPTION

1.2.1 Boilers

The facility currently includes five boilers – (i) two 125-hp, fire-tube, natural gas-fired package boilers (Cleaver Brooks), (ii) two stacked 300,000 BTU/hour condensing boilers in the Greenhouse and (iii) a 30 hp fire tube steam boiler used for humidification. Future plans include an already permitted third 125 hp Cleaver Brooks hydronic boiler to be used for facility heating. This project will add a new 70 hp fire tube steam boiler also used for humidification. The rated heat input for each of the existing and permitted 125-hp boilers is 5.1 MMBTU/hr and maximum natural gas consumption is 4,860 cubic feet per hour. The 30-hp boiler has a rated heat input of 1.36 MMBTU/hr and will burn 1,295 cubic feet of natural gas per hour. The new 70 hp steam

boiler has a rated heat input of 3 MMBTU/hr maximum natural gas consumption is 2857 cubic feet per hour. The boilers will be equipped with low-NO_x burners. All boilers are located in the Boiler Room, UTL-1007. The hot water boilers are used exclusively to satisfy space heating needs, and will generate hot water, not steam. The stacks for the hot water boilers are 12 inches in diameter and discharge 39 feet above grade. The Burnham steam boiler is used for humidification purposes and has a 8" stack also discharging 39 feet above grade. The new 70 hp boiler will have a 12 inch diameter stack discharging 39 feet above grade.

1.2.2 Electric Generator

A second emergency generator, identical or functionally equivalent to the existing Kohler Power Systems 1000, diesel-fired, 1,000-kW electric generator will be located in the Utility yard. The maximum diesel fuel firing rate is 71.3 gallons per hour. The unit provides back-up electricity to the facility in the event that the two primary power supplies are interrupted. In addition to emergency operation, it is tested for approximately ½ hour every 2 weeks, under no load.

1.2.3 Cell 2 Mitizax Mites (MTX) Processing

The Cell 2 Mitizax Mites production process is identical to the existing MITIZAX® (Cell 1) process permitted earlier. The process involves media preparation, mites inoculation, growth, killing, and cleaning. A Vector Fluid Bed dryer and a Minox Sieve are used to dry and mechanically clean the dust mites after growth. The fluid bed utilizes integral cartridge filters followed by a hepa filter system to remove particulate from the air stream. The Minox sieve includes a cyclone that is process equipment rather than emission controls. The cyclone recovers a specific allergen product from the sieving operation. Final emission control from the Minox is provided by baghouse BH 20-1 which contains MERV 15 filters. The final cleaning process uses glycerine and alcohol similar or identical to the existing Cell 1 process.

A sampling hood, (EF16-4) is used to collect particulate emissions when sampling the product from the Purification 1 stage.

Figure 1-1 presents a general flow diagram for the Cell 2 Mitizax (MTX) Dust Mite process.

1.2.4 House Vacuum Systems

The project will add one Spencer, vacuum system for housekeeping purposes. This unit is identical to the existing Spencer Vacuum system. This unit contains 19 nylon filter bags with a total filter area of 75 square feet followed by a HEPA filter. The rated air flow is 491 scfm and operates at a vacuum of 8.4 inches of mercury.

1.3 Project Timing/Schedule

The MITIZAX® Cell 2 project will be conducted in 2 overlapping phases.

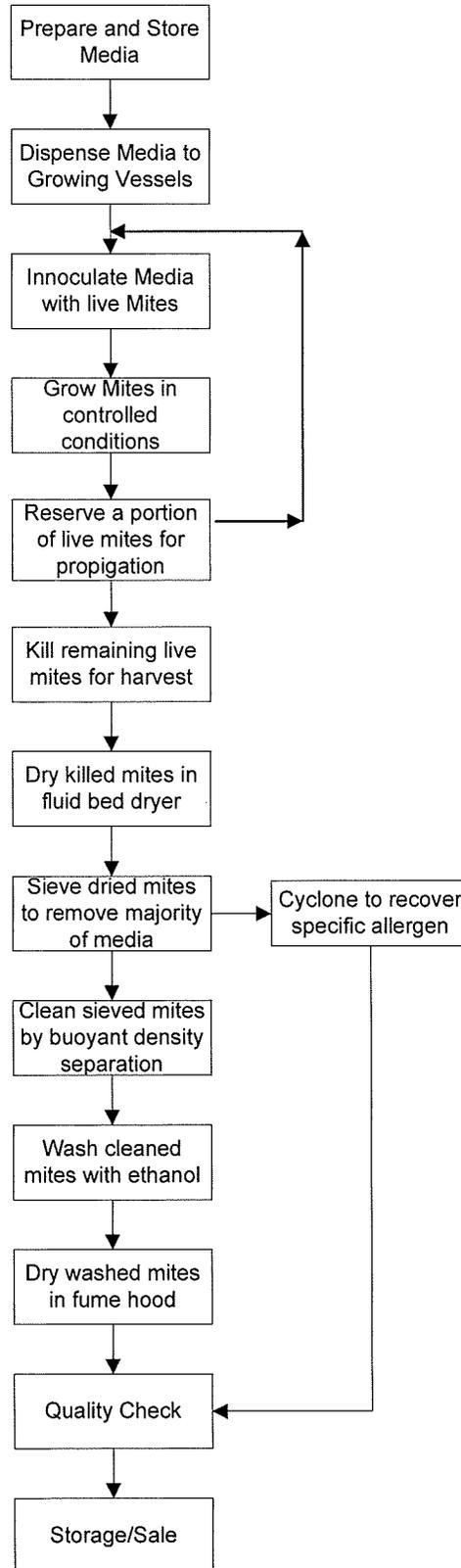
1.3.1 Phase 1 Building Shell, Office areas, Inoculation, an already permitted Hot Water boiler, a new Steam Boiler, a second house vacuum, a portion of Cultivation, Ethanol drying, Wash Suite and Equipment Storage.

- Site Preparation starts in May, 2016 and construction completion and Certificate of Occupancy expected in June, 2017.
- Install of 4-6 Mite Growing Chambers and chamber and building validation runs from June 2017 thru April 2018.
- Commercial production starts April 2018
- Install of 4-6 additional growing chambers in 2018
- Install of 0-4 additional growing chambers in 2019

1.3.2 Phase 2: Purification 1 and 2, Media Preparation, Waste Handling, the Minox dehumidifier, and Solvent Delivery.

- Construction starts Mid 2018 and construction completion expected December 2019
- Equipment install and qualification Q4 2019 – Q1 2021
- Start of commercial media production and Cell 2 purification operations Q1 2021
- Additional growing chamber install as market demand requires until all 43 chambers are installed and operating.

Figure 1-1 Cell 2 Mitizax Mite Processing Flow



ATTACHMENT 2
EMISSION CALCULATIONS – November 2015

Emissions of regulated (criteria and toxic) air pollutants from each source or source group are calculated below. Potential emissions represent the maximum theoretical emissions that would occur if the source was operated at its full capacity on a continuous basis (8,760 hours per year). Actual emissions represent the expected baseline emissions, which reflect the actual operating level and schedule of each source. The related emission spreadsheets located in Section EI show the existing and proposed combustion and particulate emission rates and the pre and post project potential to emit rates for NSR, TAP, and HAP emissions. Where emission factors calculate PM, ALK assumed all PM was PM-10 and 50% of the PM-10 was PM-2.5.

BOILERS

This project will add one 71 hp firetube, natural gas-fired steam boiler, equipped with low-NO_x burner which will be used for humidification control.

Emissions are calculated using emission factors in the EPA publication, AP-42, A Compilation of Air Pollutant Emission Factors, 5th Edition, Volume I, Section 1.4, Natural Gas Combustion:

NO _x	50 lb/10 ⁶ cf natural gas
CO	84 lb/10 ⁶ cf natural gas
SO _x	0.6 lb/10 ⁶ cf natural gas
PM	7.6 lb/10 ⁶ cf natural gas
VOC	5.5 lb/10 ⁶ cf natural gas

Actual hourly and annual emissions are summarized in the table on the following page

Humidification Boiler, Source SB-1

A new 70 hp natural gas fired steam boiler will be installed to provide humidification needs to the facility. Humidification requirements increase in the winter months and decrease in the summer. It is estimated that the humidification boiler will operate at an average of 50% of capacity on an annual basis.

Maximum Actual Hourly Emissions:

NO_x 50 lb/10⁶ cf x 2,857 cf/hr = 0.143 lb/hr
CO 84 lb/10⁶ cf x 2,857 cf/hr = 0.24 lb/hr
SO_x 0.6 lb/10⁶ cf x 2,857 cf/hr = 0.0017 lb/hr
PM 7.6 lb/10⁶ cf x 2,857 cf/hr = 0.022 lb/hr
VOC 5.5 lb/10⁶ cf x 2,857 cf/hr = 0.016 lb/hr

Actual Annual Emissions:

NO_x 0.143 lb/hr x .5 x 8,760 hr/yr x 1 ton/2,000 lb = 0.31 ton/yr
CO 0.24 lb/hr x .5 x 8,760 hr/yr x 1 ton/2,000 lb = 0.53 ton/yr
SO_x 0.0017 lb/hr x .5 x 8,760 hr/yr x 1 ton/2,000 lb = 0.0037 ton/yr
PM 0.022 lb/hr x .5 x 8,760 hr/yr x 1 ton/2,000 lb = 0.048 ton/yr
VOC 0.016 lb/hr x .5 x 8,760 hr/yr x 1 ton/2,000 lb = 0.035 ton/yr

NEW ELECTRIC GENERATOR – Source No. EG-2

ALK will install a second electric generator rated at 1,000 kW (1 MW), which is equivalent to 1,495 brake horsepower (bhp). It will fire diesel fuel at a rate of 71.3 gal/hr at 100% load. SO_x emissions are calculated using the NSPS regulatory limit of 15 ppm. NO_x, non-methane hydrocarbons (NMHC), CO, and PM emissions are based on the allowable limits established in the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII):

NO _x + NMHC	6.4 gm/kW-hr ^a
CO	3.5 gm/kW-hr
PM	0.2 gm/kW-hr

^a It is assumed that NO_x represents approximately 88 percent of the total (5.61 gm/kW-hr) and NMHC represents 12 percent of the total 0.79 gm/kW-hr). These fractions are derived from the EPA Tier 1 standards for each pollutant.

Potential Emissions

The engine will serve strictly as an emergency power source. Therefore, in accordance with EPA guidance, potential emissions are based on 500 hours of operation per year. The potential emissions are presented in the following spreadsheet, which also lists the boiler and air handler emissions.

Actual Emissions

ALK will limit the generator operation to no more than 500 hours per year, including ½ hr of testing every other week and emergency power generation when the primary power supply to the facility is interrupted.

1000 KW Generator

Hourly Actual Emissions

NO _x :	5.61 gm/kW-hr x 1,000 kW x 1 lb/453.59 gm = 12.36 lb/hr
CO:	3.5 gm/kW-hr x 1,000 kW x 1 lb/453.59 gm = 7.72 lb/hr
SO _x :	71.3 gal/hr x 7.3 lb/gal x 0.000015 lb S/lb oil x 2 lb SO ₂ /lb S = 0.0156 lb/hr
PM:	0.20 gm/kW-hr x 1,000 kW x 1 lb/453.59 gm = 0.44 lb/hr
VOC:	0.79 gm/kW-hr x 1,000 kW x 1 lb/453.59 gm = 1.75 lb/hr

Annual Actual Emissions

Annual actual emissions are based on the generator operating 500 hr/yr

NO_x: 12.36 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 3.09 ton/yr

CO: 7.72 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 1.93 ton/yr

SO_x: 0.0156 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 0.0039 ton/yr

PM: 0.44 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 0.11 ton/yr

VOC: 1.75 lb/hr x 500 hr/yr x 1 ton/2,000 lb = 0.44 ton/yr

New Minox Dehumidifier unit, Source Nos AHU-20

Minox dehumidifier unit AHU-20 will be installed as a part of this project. It functions to dry the air sent to the Minox sieve and utilizes a rotating wheel of dessicant to absorb the moisture in the air sent to the Minox. The dessicant wheel is regenerated using a gas fired heater that fires at a maximum rate of 54,300 btu/hour or 51.71 scf/hr natural gas. Potential emissions presented below are based on AP-42 emission factors.

Actual Emissions

Actual emissions are calculated using the same emission factors and the assumption that this unit will operate for the equivalent of maximum capacity for 4680 hr/yr. The following tables summarize the actual maximum hourly emissions and actual annual emissions from AHU-20

Maximum Actual Hourly Emissions:

NO_x 50 lb/10⁶ cf x 51.7 cf/hr = 0.0026 lb/hr
 CO 84 lb/10⁶ cf x 51.7 cf/hr = 0.0043 lb/hr
 SO_x 0.6 lb/10⁶ cf x 51.7 cf/hr = 0.00003 lb/hr
 PM 7.6 lb/10⁶ cf x 51.7 cf/hr = 0.0004 lb/hr
 VOC 5.5 lb/10⁶ cf x 51.7 cf/hr = 0.0003 lb/hr

Actual Annual Emissions:

NO_x 0.0026 lb/hr x 4,680 hr/yr x 1 ton/2,000 lb = 0.006 ton/yr
 CO 0.0043 lb/hr x 4,680 hr/yr x 1 ton/2,000 lb = 0.010 ton/yr
 SO_x 0.00003 lb/hr x 4,680, hr/yr x 1 ton/2,000 lb = 0.00007 ton/yr
 PM 0.0004 lb/hr x 4,680 hr/yr x 1 ton/2,000 lb = 0.0009 ton/yr
 VOC 0.0003 lb/hr x 4,680 hr/yr x 1 ton/2,000 lb = 0.0007 ton/yr

Combustion Equipment Actual Emissions Summary

Source	NO _x		CO		SO _x		PM-10		VOC	
	Lb/hr	Ton/yr	Lb/hr	Ton/yr	Lb/hr	Ton/yr	Lb/hr	Ton/yr	Lb/hr	Ton/yr
Boiler SB-1	0.143	0.31	0.24	0.53	.0017	0.0037	0.0217	0.048	.0157	0.035
Emerg. Generator, EG- 2	12.4	3.09	7.7	1.93	.0156	.004	.44	.11	1.74	.44
Air Handler AHU-20	.0026	.006	.0043	.010	.00003	.00007	.0004	.0009	.0003	.0007
Totals:	12.55	3.41	7.94	2.47	0.02	0.01	0.46	0.16	1.76	0.48

PROCESS EMISSIONS:

MITIZAX DUST MITE, (Cell 2 MTX) AREA, SOURCES EF 16-5, EF 16-3, EF 10-3 and EF 20-1, EF 19-1, and EF 16-4:

Mitizax dust mite processing includes preparing the food for the dust mites, growing, killing, and harvesting the mites, and purifying the mites from the mite media following harvest. Particulate emissions are generated when making media (food) for the mites and when drying, sieving and purifying the mites following harvest. Ethanol and Methanol emissions are generated when purifying the dried and sieved mites and Isopropyl Alcohol emissions are generated from cleaning and disinfecting the work spaces and equipment.

In the Cell2 MTX processing area it was decided to add a separate exhaust fan (EF16-3) to exhaust the air from the drying cabinets where in Cell 1 both the Lab Hoods and the Drying Cabinets exhaust thru a common exhaust fan. As a result, Ethanol, Methanol, and Isopropanol emissions are split between these two systems. The majority of the Ethanol and Methanol (90%) is lost through the Fume Hoods with the remaining 10% exhausting through the Drying Cabinets. Since Isopropanol is used for disinfection, the split for Isopropanol emissions is 50/50 between the Lab Hoods and the Drying Cabinets.

Particulate

MTX Cell 2 particulate emission rates are based on 4680 hours per year at the respective air flow rates and the appropriate gr/dscf emission rates. ALK also estimates that PM2.5 is 50% of the PM 10.

Potential Particulate Emissions, 8760 hours/yr

Source ID	Source	gr/dscf	Exhaust Air Flow, cfm /	Potential Emissions	
				lb/hr	ton/yr
EF19-1	Cell 2MTX Fluid Bed Dryer	.005	1760	0.08	0.33
EF16-5	Cell 2 MTX Lab Hoods	.001	4110	0.035	0.15
EF16-3	Cell 2 MTX Drying Cabinets	.001	3000	0.03	0.11
BH20-1	Cell 2 MTX Minox Screener	.005	1000	0.04	0.19
EF16-4	Cell 2 MTX sampling hood	.001	725	0.01	0.03

Actual Particulate Emissions, 4680 hours/yr

Source ID	Source	gr/dscf	Exhaust Air Flow, cfm	Actual Emissions	
				lb/hr	ton/yr
EF19-1	Cell 2MTX Fluid Bed Dryer	.005	1760	0.08	0.18
EF16-5	Cell 2 MTX Lab Hoods	.001	4110	0.035	0.08
EF16-3	Cell 2 MTX Drying Cabinets	.001	3000	0.03	0.06
BH20-1	Cell 2 MTX Minox Screener	.005	1000	0.04	0.10
EF16-4	Cell 2 MTX sampling hood	.001	725	0.01	0.01

Solvent Emissions

(Ethanol, Methanol, and Isopropyl Alcohol)

Cell 2 MTX has a capacity of 43 mite growing chambers where Cell 1 has a capacity of only 16 chambers. We estimate the solvent requirements as a direct ratio of the increase in production capacity over Cell 1 or $43/16 = 2.69$ times Cell 1 solvent emissions. We estimate 90% of the ethanol and methanol losses will be from the Lab Hoods and 10% from the Drying Cabinets. We estimate the Isopropyl Alcohol losses to be split evenly between the lab hoods and the drying cabinets.

Compound	VOC	HAP	TAP
Isopropyl Alcohol	X		Non-Carcinogen
Ethanol	X		Non-Carcinogen
Methanol	X	X	Non-Carcinogen

Ethanol

Total denatured ethanol from Cell 1 = 3072 lb/yr
 $2.69 * 3072 \text{ lb/yr} = 8264 \text{ lb/yr (Cell 2)}$
 $8264 \text{ lb/yr} * 95 \div 4680 \text{ hr/yr} = 1.68 \text{ lb/hr (Cell 2 MTX)}$
 $1.68 \text{ lb/hr} * 0.9 = 1.51 \text{ lb/hr (Lab Hoods)}$
 $1.68 \text{ lb/hr} * 0.1 = 0.17 \text{ lb/hr (Drying Cabinets)}$

Methanol

Methanol emissions are 5% of denatured ethanol emissions or:
 $.05 * 8264 \text{ lb/yr} = 413 \text{ lb/yr}$
 $413 \text{ lb/yr} \div 4680 \text{ hr/hr} = 0.088 \text{ lb/hr (Cell 2 MTX)}$
 $0.088 * 0.9 = 0.079 \text{ lb/hr (Lab Hoods)}$
 $0.088 * 0.1 = 0.009 \text{ lb/hr (Drying Cabinets)}$

Isopropyl Alcohol

$2.69 * 600 \text{ lb/yr} = 1614 \text{ lb/yr}$
 $1614 \text{ lb/year} \div 4680 \text{ hr/yr} = 0.344 \text{ lb/hr (Cell 2 MTX)}$
 $0.344 * 0.5 = 0.172 \text{ lb/hr (Lab Hoods)}$
 $0.344 * 0.5 = 0.172 \text{ lb/hr (Drying Cabinets)}$

HOUSE VACUUM SYSTEM 2 - Source EF-Vac-2

ALK plans to install a duplicate of the present house vacuum system which has an initial baghouse followed by a hepa filter. Potential emissions from the vacuum systems are based on an outlet concentration of 0.005 gr/dscf and 8760 hours per year as summarized in the following table.

Potential Particulate Emissions, 8760 hours/yr

Source ID	Source	gr/dscf	Exhaust Air Flow, cfm	Potential Emissions	
				lb/hr	ton/yr
EF-Vac	House Vacuum	.005	491	0.021	0.09

The vacuum systems is used for keeping the labs and processing areas as free of airborne and settled particulate matter as possible. It is conservatively estimated that this unit will run 4680 hours per year and emit particulate at a rate of 0.005 gr/dscf. Actual emissions are estimated in the following table:

Actual Particulate Emissions, 4680 hours/yr

Source ID	Source	gr/dscf	Exhaust Air Flow, cfm	Actual Emissions	
				lb/hr	ton/yr
EF-Vac-2	House Vacuum 2	.005	491	0.021	0.05

EMISSIONS SUMMARY

See Section EI, Emission Inventory Forms

Attachment 3 Air Quality Analysis

Per the attached spreadsheet, all pollutant emission rates from this project are below regulatory concern, (BRC) except for VOCs. Additionally all emission rates are below the Level I or II modeling thresholds except for the 1-hour NOx Level I and II thresholds.

Per DEQ guidance, (Doc ID AQ-011(Sept 2013)), P 11, "If a permitting action would qualify for a below regulatory concern (BRC) exemption (Idaho Air Rules Section 221) except for the emissions quantities of some specific criteria pollutants, then modeling is not required for those pollutants having emissions rates below the BRC threshold. Therefore ALK believes modeling is not required for any pollutant except VOCs.

Furthermore, per DEQ guidance, (Doc ID AQ-011(Sept 2013)), P 13, "Emissions of NOx from intermittent testing of engines powering emergency generators and fire suppression water pumps can typically be excluded from the modeling applicability determination for 1-hour NO2 NAAQS compliance demonstrations." Since 99% of the 1-hour NOx emissions are due to the Emergency Generator and the remaining NOx emissions are well below the Level 1 NOx modeling threshold, ALK believes modeling is not required for NOx.

Finally, the above referenced guidance document, does not discuss modeling for VOCs but discussions with DEQ's Kevin Schilling indicated that DEQ does not require modeling for VOCs unless the area is in non-attainment for ozone. Therefore, since this area is not in non-attainment for ozone, ALK believes modeling is not required for VOCs.

ALK's permit, P-2008.0176 limits emissions of Tetrachloroethylene to 0.166 T/yr and any other individual HAP to 0.4 T/yr and the aggregate total HAPs to 0.5 T/yr. This permit application does not propose to change those limits therefore no additional analysis is required due to an increased permit limit.

Based on the above analyses, no modeling has been conducted for this permit application.

BRC Evaluation - ALK Source Materials, Inc. MITIZAX® Cell 2 addition new emission sources. - November, 2015

Model ID	Source Description	NOx		CO		PM2.5		PM10		VOC		SO2		Ethanol		Methanol		Isopropyl Alcohol		Install date
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	
EF-Vac 2	House Vacuum 2	NA	NA	NA	NA	0.01	0.046	0.02	0.092	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2017
EF 16-5	Cell 2 MTX Lab Hoods	NA	NA	NA	NA	0.02	0.077	0.04	0.154	1.76	4.12	NA	NA	1.51	3.53	0.08	0.19	0.17	0.40	2019
EF 16-3	Cell 2 MTX Ethanol Drying Cabinets	NA	NA	NA	NA	0.01	0.056	0.03	0.113	0.35	0.82	NA	NA	0.17	0.39	0.01	0.02	0.17	0.40	2017
EF 20-1	Cell 2 Minox Screener	NA	NA	NA	NA	0.02	0.094	0.04	0.188	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2019
EF 19-1	Cell 2 MTX Fluid Bed Dryer	NA	NA	NA	NA	0.04	0.165	0.08	0.330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2019
EF 16-4	Cell 2 MTX Purification 1 hood	NA	NA	NA	NA	0.00	0.014	0.01	0.027	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2019
AHU 20	Cell 2 MTX Minox dehumidifier	0.003	0.011	0.004	0.019	0.000	0.001	0.000	0.002	0.000	0.001	0.000	0.000	NA	NA	NA	NA	NA	NA	2019
SB-1	New Steam Boiler (70 BHP)	0.143	0.626	0.240	1.051	0.011	0.048	0.022	0.095	0.016	0.069	0.002	0.008	NA	NA	NA	NA	NA	NA	2017
EG-2	New Emergency Generator ⁽³⁾	12.363	3.091	7.716	1.929	0.220	0.055	0.441	0.110	1.747	0.437	0.016	0.004	NA	NA	NA	NA	NA	NA	2017
Totals		12.51	3.73	7.96	3.00	0.33	0.56	0.67	1.11	3.87	5.45	0.02	0.01	1.68	3.93	0.09	0.21	0.34	0.81	
BRC Thresholds			4		10		1		1.5	NA	4		4	12.5		1.73		6.53		
Modeling Thresholds																				
Level I		0.2	1.2	15	NA	0.054	0.35	0.22	NA	NA	NA	0.21	1.2	125	NA	17.3	NA	65.3	NA	
Level II		2.4	14	175	NA	0.63	4.1	2.6	NA	NA	NA	2.5	14	NA	NA	NA	NA	NA	NA	
Assumptions																				

- PM emissions = PM-10 emissions.
- PM 2.5 emissions are 50% of PM10 emissions
- New emergency generator runs for emergencies, maintenance, and testing only. Not to exceed 100 hr/yr for maint and testing, not to exceed 500 hours/year total
- New Steam Boiler (3,000,000 btu/hr) is an exempt source under IDAPA 58.01.01222.02.c
- New Emergency Generator (1000 KWh, 1495 bhp) is an exempt source under IDAPA 58.01.01.222.01.d (diesel fuel, used for emergencies only, <500 hr/yr)
- New dehumidifier (54,300 btu/hr) is an exempt source under IDAPA 58.01.01..222.02.c
- IPA emissions split 50/50 between drying cabinets and fume hoods
- EtOH and MeOH emissions split 90/10 between fume hoods and drying cabinets
- Cell 1 ethanol permitted emissions = 3072 lb/yr with capacity of 16 growth chambers (Permit P-2008.0176, issued 5/29/13)
- Cell 2 will have maximum of 43 chambers so solvent emissions are 43/16 or 2.69 times Cell 1 permitted emissions.
- Cell 2 will operate a maximum of 4680 hr/year (18 hours/day, 5 days/week, 52 weeks/yr)
- This SS excludes HB3 which is already permitted and modeled.
- Cell 1 permitted isopropyl alcohol emissions = 600 lbs.

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.
- 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:
- 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 TAP emission limits contained in the permit or, if there are no emission limits in the permit, by determining what the emission rate is under the physical or operational limitations contained in the permit.
 - The emission increase determination for TAPs described above only applies to determine what emissions increases are for comparing to the TAP exemption thresholds. This method shall not be used to determine if a modification will occur. Emissions increases for modifications are determined in accordance with IDAPA 58.01.01.006.63 and IDAPA 58.01.01007.04 (projected actual emissions are subtracted from baseline actual emissions to determine if an emissions increase will occur for modification determinations).

- 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 shall be combined and considered as one TAP equivalent in potency to benzo(a)pyrene:

Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a, h)anthracene, 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 to the PAH increment listed in Rules Section 586.

- 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.

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.
- 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 BIPinput 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.

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.

**Department of Environmental Quality - Air Quality Division
Toxic Air Pollutant (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)pyrene:
 - Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a, h)anthracene, 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. 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.
- 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.

- 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.

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.

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.

C. TAP Compliance Using Controlled Ambient Concentrations (Rules Section 210.08)

- Determine the controlled emissions from new emissions units and the controlled emission increase from modified emissions units. Show all calculations and state all assumptions, including the control methods.
- Model the controlled emissions of each TAP from new emissions units and the increase in controlled emissions from all modified emissions units.

TAP emissions levels (EL) included in Rules Section 585 and 586 are derived based on generic modeling. If the sum the of emissions from new and modified sources is below the EL compliance is demonstrated without the need to conduct site-specific dispersion modeling.

- If the controlled ambient concentration from emission increases from new emissions units and modified emissions units is less than the applicable acceptable ambient concentration no further procedures for demonstrating preconstruction compliance are required.
- The Department shall include an emission limit for the TAP 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 (Rules Section 210.08.c).

In some instances the Department may consider a throughput limit or other inherently-limiting operational restriction in a permit as an effective emission limit for the TAP, rather than including a specific emission rate limit.. Note that the applicant may model uncontrolled emissions as described in compliance Method B in an attempt to avoid TAPs emissions limitations.

D. TAPs Compliance for NSPS and NESHAP Sources (Rules Section 210.20)

- If the owner or operator demonstrates that the TAP emissions from the source or modification is regulated by 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63, no further procedures for demonstrating preconstruction compliance will be required for that TAP.
- Provide a demonstration that the TAP is regulated under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63. This demonstration must be specific for each TAP emitted.

E. TAP Compliance Using Net Emissions (Rules Section 210.09)

An applicant may use TAP net emissions to show preconstruction compliance; however this analysis may require more work than some of the others procedures available to demonstrate preconstruction compliance. When netting, all emissions increases and decreases of the TAP that have occurred within five years must be included in the analysis as described below.

- Determine the net emission increase for a TAP. A net emissions increase shall be an emission increase from a particular modification plus any other increase and decreases in actual emissions at the facility that are creditable and contemporaneous with particular modification (Rules Section 210.09). Show all calculations and state all assumptions.
- A creditable increase or decrease in actual emissions is contemporaneous with a particular modification if it occurs within five (5) years of the commencement of the construction or modification (Rules Section 210.09.a).

Actual emissions are (Rules Section 006.03):

- In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of normal source operation. The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, productions rates, and types of materials processed, stored, or combusted during the selected time period.
- The Department may presume that the source-specific allowable emissions for the unit are equivalent to actual emissions of the unit.
- For any emission unit (except electric utility steam generating units) that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.
- Do not include emissions increases from emission units that have an uncontrolled emission rate that is 10% or less than the applicable screening emission level (EL) in Rules Section 585 and 586 (Rules Section 007.09.c.ii) and do not include emission increases from environmental remediation sources (Rules Section 007.09.c.iii). Show all calculations and state all assumptions.
- If the net emission increase is less than or equal to the applicable screening emissions level (EL) listed in Rules Section 585 and 586, no further procedures for demonstrating preconstruction compliance will be required (Rules Section 210.09.c).
- The Department shall include emission limits and other permit terms for the TAP in the permit to construct that will assure that the facility will be operated in the manner described in the preconstruction compliance demonstration (Rules Section 210.09.d).

In some instances the Department may consider a throughput limit or other inherently-limiting operational restriction in a permit as an effective emission limit for the TAP, rather than including a specific emission rate limit..

F. TAP Compliance Using Net Ambient Concentration (Rules Section 210.10)

- Determine the emission increase from the new source or modification, and all other creditable emission increases and decrease using the methods described above in compliance Method E.
- Model the emissions increases and decreases for each TAP. Modeling TAP decreases is accomplished by using negative valued emissions rates in the model input.
- If the net ambient concentration is less than or equal to the applicable ambient concentration increment listed in Rules Section 585 and 586, no further procedures for demonstrating preconstruction compliance are required.
- The Department shall include emission limits and other permit terms for the TAP in the permit to construct that will assure that the facility will be operated in the manner described in the preconstruction compliance demonstration (Rules Section 210.10.d).

In some instances the Department may consider a throughput limit or other inherently-limiting operational restriction in a permit as an effective emission limit for the TAP, rather than including a specific emission rate limit..

G. TAP Compliance Using T-RACT Ambient Concentration for Carcinogens (Rules Section 210.12)

The applicant may use T-RACT to demonstrate preconstruction compliance for TAPs listed in Rules Section 586 only.

T-RACT is an emissions standard based on the lowest emission of TAPs that a particular source is capable of meeting by application of control technology that is reasonably available, as determined by the Department, considering technological and economic feasibility. If control technology is not feasible, the emission standard may be based on the application of a design, equipment, work practice or operational requirement, or combination thereof (Rules Section 007.16).

T-RACT Submittal Requirements

- The applicant shall submit the following information to the Department identifying and documenting which control technologies or other requirements the applicant believes to be T-RACT (Rules Section 210.14).

The technical feasibility of a control technology or other requirements for a particular source shall be determined considering several factors including but not limited to:

- Process and operating procedures, raw materials and physical plant layout.
- The environmental impacts caused by the control technology that can not be mitigated, including but not limited to, water pollution and the production of solid wastes.
- The energy requirements of the control technology.

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:

- Capital costs.
- Cost effectiveness, which is the annualized cost of the control technology divided by the amount of emission reduction.
- The difference in costs between the particular source and other similar sources, if any, that have implemented emissions reductions.
- Compare the source's or modification's approved T-RACT ambient concentration to the applicable acceptable ambient concentration increment listed in Rules Section 586 multiplied by a factor of 10. If the sources approved T-RACT concentration is less than or equal to 10 times the applicable acceptable ambient concentration increment listed in Rules Section 586, no further procedures for demonstrating preconstruction compliance will be required.
- If an application is submitted to the Department without T-RACT and determined complete, and T-RACT is later determined to be applicable the completeness determination of the 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 (Rules Section 210.13.b).
- If the Department determines that the source has proposed T-RACT, the Department shall develop emission standards to be incorporated into a permit to construct.

In some instances, the Department may consider a throughput limit or other inherently limiting operational restriction in a permit as an effective emission limit for the TAP, rather than including a specific emission rate limit.

H. TAP Compliance Using the Short Term Source Factor (Rules Section 210.15)

- For short term sources, the applicant may utilize a short term adjustment factor of ten (10) only for a carcinogenic pollutant listed in Rules Section 586. For a carcinogen listed in Rules Section 586 multiply either the applicable acceptable ambient concentration increment or the screening emission rate (EL), but not both, by ten (10) to demonstrate preconstruction compliance (Rules Section 210.15).
- A short term source is any new stationary source or modification to an existing source, with an operational life no greater than five (5) years from the inception of any operations to cessation of actual operations (Rules Section 210.15).

I. TAP Compliance for Environmental Remediation Sources (Rules Section 210.16)

- For remediation sources subject to or regulated by the Resource Conservation and Recovery Act and the Idaho Rules and Standard for Hazardous Waste, or the comprehensive Environmental Response, Compensation and Liability Act or a consent order, if the estimated ambient concentration is greater than the acceptable ambient impact increment listed in Rules Section 585 and 586, Best Available Control Technology shall be applied and operated until the estimated uncontrolled emission from the remediation source are below the applicable acceptable ambient concentration increment (Rules Section 210.16).

J. TAP Compliance Using Offset Ambient Concentration (Rules Section 210.11)

- Contact the Department prior to proposing to utilize Offset Ambient Concentrations to demonstrate preconstruction compliance.
- Emission offsets must satisfy the requirements for emission reduction credits (Rules Section 460).
 - The proposed level of allowable emissions must be less than the actual emissions of the emissions units providing the offsets (Rules Section 460.01).
 - An air quality permit must be issued that restricts the potential to emit of the emission unit providing the offset.
 - Emission reduction imposed by local, state or federal regulations or permits shall not be allowed.
- Compare the source's or modifications approved emission offset ambient concentration to the applicable acceptable ambient concentration listed in Rules Section 585 and 586. If the source's or modifications approved offset concentration is less than the acceptable ambient concentration listed in Rules Section 585 and 586, no further procedures for demonstrating preconstruction compliance will be required.
- The Department shall include emission limits and other permit terms for the TAP in the permit to construct that will assure that the facility will be operated in the manner described in the preconstruction compliance demonstration (Rules Section 210.10.d).



Department of Environmental Quality - Air Quality Division Minor Source Permit to Construct Application Completeness Checklist

This checklist is designed to aid the applicant in submitting a complete permit to construct application. In addition to the items in this checklist, information requested by DEQ during review of the application should be provided in accordance with IDAPA 58.01.01.202.03, or the application may be denied.

I. Actions Recommended Before Submitting Application

- Refer to the Rule. Read the Permit to Construct requirements contained in IDAPA 58.01.01.200-228, Rules for the Control of Air Pollution in Idaho. The Rules are available on the Department of Administration's website (go to <http://adminrules.idaho.gov/rules/current/58/0101.pdf>).
- Refer to DEQ's Permit to Construct Guidance Document. DEQ has developed a guidance document to aid applicants in submitting a complete permit to construction application. The guidance document is located on DEQ's website (go to <http://www.deq.idaho.gov/media/656219-applicant-deq-responsibilities.pdf>).
- Consult with DEQ Representatives. It is recommended that the applicant schedule a pre-application meeting with DEQ to discuss application requirements before submitting the permit to construct application. The meeting can be in person or on the phone. Contact DEQ's Air Quality Hotline at **877-5PERMIT** to schedule the pre-application meeting.
- Submit Ambient Air Quality Modeling Protocol. It is strongly recommended that an ambient air quality modeling protocol be submitted to DEQ at least two (2) weeks before the permit to construct application is submitted. Contact DEQ's Air Quality Hotline at **877-5PERMIT** for information about the protocol.

II. Application Content

Application content should be prepared using the checklist below. The checklist is based on the requirements contained in IDAPA 58.01.01.202.

- 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/permitting/air-quality-permitting/forms-checklists.aspx>.
- Permit to Construct Application Fee. The permit to construct application fee of \$1000 must be submitted at the time the original permit to construct application is submitted. Refer to IDAPA 58.01.01.224. If the permit to construct application is withdrawn or denied and a new application is submitted, a new \$1,000 application fee is 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 permit to construct application.
- Process Description(s). The process or processes for which construction 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.
- Equipment List. All equipment that will be used for which construction 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 construction is requested must be clearly labeled on the process flow diagram.
- Potential to Emit. Submit the uncontrolled potential to emit (pre-control equipment emissions estimates) and the controlled potential to emit (post-control equipment emissions estimates) for all equipment for which construction is requested. Any limit on the equipment for which is construction is requested may become a



limit on that equipment in the permit to construct.

See BRC
Analysis

- Potential to Emit 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, 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.
- 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.
- Schedule for Construction. A schedule for construction is required, including proposed dates for commencement and for completion. For phased projects, proposed dates are required for each phase of the project.
- List all Applicable Requirements. All applicable requirements must be cited by the rule or regulation section/subpart that applies for each emissions unit.
- Certification of Permit to Construct Application. The permit to construct 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 58.01.01.123.
- Submit the Permit to Construct Application. Submit the permit to construct application and application fee to the following address:

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255