

Statement of Basis

Permit to Construct No. P-2016.0025
Project ID 61715

P4 - QUARTZITE QUARRY
Soda Springs, Idaho

Facility ID 029-00043

Final

September 12, 2016

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Permit Writer



The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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FACILITY INFORMATION

Description

At the P4-Quartzite facility, quartzite containing rock is crushed to -1 1/2" to +3/16" size. Raw quartzite rock is hauled from the pit, emptied into a dump hopper, and screened into the primary jaw crusher. The larger material is crushed and all the smaller material is conveyed to the secondary cone crusher. The primary triple deck screens sort the material from the secondary crusher into finished rock, re-crush rock, and waste streams. The finished material passes through a wet screen and is stockpiled for shipping.

Permitting History

This is the initial PTC for a new 970 ton per hour (T/hr) rock crusher that replaces a 713 T/hr rock crusher that had been operating since the early 1970's as a grandfathered unit, thus there is no permitting history.

Application Scope

This is the initial permit to construct (PTC) for the replacement of the primary Jaw Crusher and for the existing Secondary Cone Crusher and Primary Triple Deck Screens, which have been operating at the quartzite quarry since the 1970s as components of a grandfathered source that did not require a permit to construct or operate. This PTC also includes NSPS requirements for the replacement primary crusher. Present emission levels are maintained by throughput limits on the replacement primary Jaw Crusher.

Application Chronology

May 3, 2016	DEQ received an application and an application fee.
May 12 – May 27, 2016	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
May 13, 2016	DEQ determined that the application was complete.
June 28, 2016	DEQ made available the draft permit and statement of basis for peer and regional office review.
July 12, 2016	DEQ made available the draft permit and statement of basis for applicant review.
July 18, 2016	DEQ received the permit processing fee.
July 28 – August 29, 2016	DEQ provided a public comment period on the proposed action.
September 12, 2016	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Emissions Units / Processes	Control Devices	Emission Points
Primary Jaw Crusher Manufacturer: Metso Model: Norberg C150 Year Manufactured: 2015 Capacity: 970 T/hr	Baghouse BH-01 Manufacturer: OptiFlo Model: 1646868-001 Flowrate: 10,000 dscfm	BH-01 stack
Secondary Cone Crusher Manufacturer: Metso Model: Norberg Symons Year Manufactured: 1968 Capacity: 410 T/hr	Baghouse BH-02 Manufacturer: OptiFlo Model: 1646892-001 Flowrate: 7,150 dscfm	BH-02 stack
Primary Triple Deck Screens Manufacturer: JCI Model: 6203S-32LT Year Manufactured: 2011-2012 Capacity: 713 T/hr	Baghouse BH-03 Manufacturer: OptiFlo Model: 1646892-001 Flowrate: 6,200 dscfm	BH-03 stack

Emissions Inventories

Potential to Emit

IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Using this definition of Potential to Emit an emission inventory was developed for the Rock Crushing Equipment.

Uncontrolled Potential to Emit

Using the definition of Potential to Emit, uncontrolled Potential to Emit is then defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall **not** be treated as part of its design **since** the limitation or the effect it would have on emissions **is not** state or federally enforceable.

The following table presents the Potential to Emit for regulated air pollutants as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. For this rock crushing operation uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 8760 hr/yr. Since the facility is operated on line power and there are no combustions sources at the facility, the only criteria pollutants emitted are PM10 and PM2.5.

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀	PM _{2.5}
	T/yr	T/yr
Primary Jaw Crusher	10.20	1.89
Secondary Cone Crusher	4.31	0.80
Primary Triple Deck Screens	27.17	1.84
Total	41.68	4.53

Since the total PM10 and PM2.5 are less than the major source thresholds of 100 ton/yr, the facility is considered to be minor source for criteria pollutants.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. This is an existing facility that has been operating as a grandfathered facility since the early 1970's. Furthermore, the throughput limit in the permit is going to limit production to historical rates. Therefore, the change in potential to emit is zero.

TAP Emissions

The TAP of concern from the P4 Quartzite Quarry operations is crystalline silica in quartz form. Like HAP emissions, TAP emissions are also proportional to TAP-specific concentration in the processed material and particulate emissions.

IDAPA 58.01.01.210 requires that all sources applying for a PTC must demonstrate preconstruction compliance with toxic standards. IDAPA 58.01.01.210.09 (a) allows the owner or operator to net emissions increases to demonstrate preconstruction compliance as provided by IDAPA 58.01.01.007.06 which defines a net emissions increase as an emissions increase from a particular modification plus any other increases and decreases in actual emissions at the facility that are creditable and contemporaneous with the particular modification. In this case, the proposed primary crusher replacement is the particular modification and the future potential emissions are decreased due to the throughput limits and baghouse; therefore, when netted, actual emissions are decreased and there are no further procedures required for demonstrating preconstruction compliance for TAPs.

HAP Emissions

In the absence of HAP emission factors, the HAP PTE emissions are conservatively estimated using PM_{2.5} as a surrogate to demonstrate that the facility-wide HAP emissions will be significantly less than the major source thresholds of 10 ton/yr of a single HAP and 25 ton/yr of combined HAP. Fugitives count as HAPs as fine mineral fibers if their size is <1µm in average diameter. Considering the amount of PM_{2.5} as surrogate of this HAP, there would be at least this much, and no more counted towards HAP for facility classification purposes. Furthermore, only a fraction of the PM_{2.5} would have a diameter <1 µm, so it is a very conservative estimation of HAP emissions. The following table presents the post project potential to emit for HAP pollutants facility-wide as indicated by PM_{2.5}. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 3 FACILITYWIDE HAP POTENTIAL TO EMIT

Source	Mineral Fiber <1µm
	T/yr
Point Sources	
Primary Jaw Crusher	1.89
Secondary Cone Crusher	0.80
Primary Triple Deck Screens	1.84
Fugitive Sources	
Truck dump at primary crusher	0.014
Material transfer to coarse stockpile	0.97
Screen discharge (3 streams combined)	0.97
Material transfer to rejects stockpile	0.97
Material transfer to product stockpile	0.041
Material transfer to product bins	0.041
Truck loadout	0.088
Total HAP	7.62

Since the particles of this size are less than the major source thresholds of 10ton/yr for any single HAP, the facility is considered to be minor source.

Ambient Air Quality Impact Analyses

The applicant has demonstrated pre-construction compliance to DEQ's satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard. Through the replacement of the old crusher, which did not have a baghouse, with the new crusher that includes a baghouse, the actual PM emissions are decreased. The applicant has also demonstrated pre-construction compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP). A summary of TAPs netting provided in Appendix B demonstrates compliance with increments by showing a decrease in TAPs and PM with the throughput restriction applied as permitted.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Caribou County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information. P4 has multiple locations around the Soda Springs area in Caribou County. This quarry is not contiguous with any other P4 site.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For THAPs (Total Hazardous Air Pollutants) Only:

- A = Use when any one HAP has actual or potential emissions ≥ 10 T/yr or if the aggregate of all HAPS (Total HAPs) has actual or potential emissions ≥ 25 T/yr.
- SM80 = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the permit sets limits ≥ 8 T/yr of a single HAP or ≥ 20 T/yr of THAP.
- SM = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the potential HAP emissions are limited to < 8 T/yr of a single HAP and/or < 20 T/yr of THAP.
- B = Use when the potential to emit without permit restrictions is below the 10 and 25 T/yr major source threshold
- UNK = Class is unknown

For All Other Pollutants:

- A = Actual or potential emissions of a pollutant are ≥ 100 T/yr.
- SM80 = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are ≥ 80 T/yr.
- SM = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are < 80 T/yr.
- B = Actual and potential emissions are < 100 T/yr without permit restrictions.
- UNK = Class is unknown.

Table 4 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	<100	12.09	100	B
PM ₁₀ /PM _{2.5}	<100	12.09	100	B
SO ₂	<100	0	100	B
NO _x	<100	0	100	B
CO	<100	0	100	B
VOC	<100	0	100	B
HAP (single)	<10	<10	10	B
HAP (Total)	<25	<25	25	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201.....Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the proposed new (replacement) emissions source (rock crusher). Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228. A PTC is required per Sections 220 through 223 of the Rules because TAP in the form of silica were greater than BRC listed in section 585.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401.....Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625.....Visible Emissions

The sources of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is included at Permit Condition 2.3.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301.....Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for PM₁₀, SO₂, NO_x, CO, and VOC or 10 tons per year for any one HAP or 25 tons per year for all HAPs combined as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

Refer to detailed breakdown of the Form FRA in Appendix C. Because the primary jaw crusher replacement is considered an affected facility, constructed after April 22, 2008, the crusher and associated baghouse BH-01 are subject to nonmetallic mineral processing NSPS requirements apply to this facility:

- 40 CFR 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing applicability analysis is attached in appendix C.

NESHAPS Applicability (40 CFR 61)

The proposed source is not an affected source subject to NESHAP in 40 CFR 61, and this permitting action does not alter the applicability status of existing affected sources at the facility.

MACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63.

Permit Conditions Review

This section describes the permit conditions for this initial permit.

Permit Condition 2.3

40 CFR 60, subpart OOO requires source testing on new units. For this permitting action, the replacement crusher is considered an affected facility as defined in 60.670 and 60.671 and must meet the requirements of 40 CFR 60.672 and Table 2 of this subpart. All further discussions regarding the affected facility are in reference to the new crusher.

Permit Condition 2.4

This limit restricts opacity to 20% from all baghouse stacks as required by IDAPA 58.01.01.625.

Permit Condition 2.5

Throughput limits on the primary crusher are put in place to maintain the actual rate of emissions from all activities at the site. The new primary jaw crusher is able to operate at a higher rate of 970 T/hr, compared to the old jaw crusher throughput of 713 T/hr. This replacement would essentially debottleneck the process and increase emissions from all subsequent processes downstream if the throughput limit were not imposed. A throughput restriction equivalent to past actual rates serves to limit emissions from future operations so that there is not an emissions increase. Limiting the new crusher to the throughput rate of the old crusher protects Toxic Air Pollutant (TAPs) silica increment in IDAPA 58.01.01.585 as allowed in IDAPA 58.01.01.210.09 for netting TAPs. Additionally, there has been a baghouse added to the new crusher, which was not present on the old crusher. The resulting controlled emission shows an overall emission reduction compared to the uncontrolled emission, as demonstrated in the application. Appendix B has a complete description of the netting analysis.

Permit Conditions 2.6

This is DEQ's standard language for baghouses. Requirements include the development of Baghouse System Procedures document within 60 days of permit issuance, weekly observations for visible emissions, corrective action schedule and procedures, and recordkeeping requirements for emission units with baghouses as emission controls.

Permit Conditions 2.7

The monitoring requirements for the calendar day total tons limit are to make limits federally and practically enforceable. The calendar day total tons are estimated either by truckload actual weight, using the maximum weight rating for the truck, or a DEQ approved method.

Permit Condition 2.8

Visible emissions monitoring is required on the new jaw crusher by 40 CFR 60, Subpart OOO, and is to be performed according to applicable sections of 40 CFR 60.8. Additionally, the applicant requested alternate language to accommodate the seasonal nature of the operation and alternative method of checking visible emissions language in accordance with 60.674 (c) and (i), respectively.

Permit Condition 2.9

Initial performance test for PM required by 40 CFR 60, subpart OOO is to be performed according to 40 CFR 60.8 and 60.675. Additionally, flexibility was added at the request of the applicant to address the seasonal startup.

Permit Condition 2.10

40 CFR 60, Subpart OOO reporting requirements for initial PM source test in accordance with 60.676. Additional recordkeeping requirement was added at the request of the applicant to accommodate seasonal operation.

Permit Condition 2.11

Reporting requirements are in place for the permittee to send the Baghouse System Procedures to DEQ Regional Office.

Permit Condition 2.12 and 2.13

Fugitive dust containment of sources listed in the emissions inventory provided by the applicant prompted the re-statement of IDAPA codes regarding fugitive dust control. At the requests of the applicant, precautions and Best Management Practices (BMP) were added to the permit to accommodate operator convenience.

Permit Condition 2.14

This is included to mitigate any discrepancies between the Permit Conditions and 40 CFR 60, subpart OOO. Should there be any conflict between the requirements of the permit condition and the requirements of the subpart, the requirements of the subpart shall govern, including any amendments to that regulation.

Initial Permit Condition 3.1

The duty to comply general compliance provision requires that the permittee comply with all of the permit terms and conditions pursuant to Idaho Code §39-101.

Initial Permit Condition 3.2

The maintenance and operation general compliance provision requires that the permittee maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 3.3

The obligation to comply general compliance provision specifies that no permit condition is intended to relieve or exempt the permittee from compliance with applicable state and federal requirements, in accordance with IDAPA 58.01.01.212.01.

Initial Permit Condition 3.4

The inspection and entry provision requires that the permittee allow DEQ inspection and entry pursuant to Idaho Code §39-108.

Initial Permit Condition 3.5

The permit expiration construction and operation provision specifies that the permit expires if construction has not begun within two years of permit issuance or if construction has been suspended for a year in accordance with IDAPA 58.01.01.211.02.

Initial Permit Condition 3.6

The notification of construction and operation provision requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.03.

Initial Permit Condition 3.7

The performance testing notification of intent provision requires that the permittee notify DEQ at least 15 days prior to any performance test to provide DEQ the option to have an observer present, in accordance with IDAPA 58.01.01.157.03.

Initial Permit Condition 3.8

The performance test protocol provision requires that any performance testing be conducted in accordance with the procedures of IDAPA 58.01.01.157, and encourages the permittee to submit a protocol to DEQ for approval prior to testing.

Initial Permit Condition 3.9

The performance test report provision requires that the permittee report any performance test results to DEQ within 30 days of completion, in accordance with IDAPA 58.01.01.157.04-05.

Initial Permit Condition 3.10

The monitoring and recordkeeping provision requires that the permittee maintain sufficient records to ensure compliance with permit conditions, in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 3.11

The excess emissions provision requires that the permittee follow the procedures required for excess emissions events, in accordance with IDAPA 58.01.01.130-136.

Initial Permit Condition 3.12

The certification provision requires that a responsible official certify all documents submitted to DEQ, in accordance with IDAPA 58.01.01.123.

Initial Permit Condition 3.13

The false statement provision requires that no person make false statements, representations, or certifications, in accordance with IDAPA 58.01.01.125.

Initial Permit Condition 3.14

The tampering provision requires that no person render inaccurate any required monitoring device or method, in accordance with IDAPA 58.01.01.126.

Initial Permit Condition 3.15

The transferability provision specifies that this permit to construct is transferable, in accordance with the procedures of IDAPA 58.01.01.209.06.

Initial Permit Condition 3.16

The severability provision specifies that permit conditions are severable, in accordance with IDAPA 58.01.01.211.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided from May 12 to May 27, 2016 in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there was a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

Public Comment Period

A public comment period was made available to the public in accordance with IDAPA 58.01.01.209.01.c. During this time, comments were submitted in response to DEQ's proposed action. Refer to the chronology for public comment period dates.

A response to public comments document has been crafted by DEQ based on comments submitted during the public comment period. That document is part of the final permit package for this permitting action.

APPENDIX A – EMISSIONS INVENTORIES

NSR Pollutant PTE Summaries

Table 1. POTENTIAL TO EMIT FOR NSR REGULATED POLLUTANTS

Emissions Unit	PM ₁₀	PM _{2.5}
	ton/yr	ton/yr
Point Sources		
Primary Jaw Crusher	0.55	0.55
Secondary Cone Crusher	0.13	2.5E-2
Primary Triple Deck Screens	0.18	1.2E-2
Fugitive Sources		
Truck dump at primary crusher	4.0E-3	1.1E-3
Material transfer to coarse stockpile	0.27	7.7E-2
Screen discharge (3 streams combined)	0.27	7.7E-2
Material transfer to rejects stockpile	9.1E-2	2.6E-2
Material transfer to product stockpile	7.6E-3	2.1E-3
Material transfer to product bins	7.6E-3	2.1E-3
Truck loadout	1.6E-2	4.7E-3
Totals	1.54	0.78

Toxic Air Pollutant Emissions Inventory

Table 2: PRE- AND POST PROJECT NON-CARCINOGENIC TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Average Emissions Rates for Units at the Facility (lb/hr)	Change in Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
<p>TAP emissions are addressed qualitatively to demonstrate that the proposed primary crusher replacement will not result in a net emissions increase for TAP emissions. Details are provided in Section 1.6 and Appendix B.</p>					

Table 3: PRE- AND POST PROJECT CARCINOGENIC TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Average Emissions Rates for Units at the Facility (lb/hr)	Change in Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
N/A					

Facility Wide Hazardous Air Pollutant Potential to Emit

Table 4: HAP POTENTIAL TO EMIT EMISSIONS SUMMARY

HAP Pollutants	PTE (ton/yr)
<p>In the absence of HAP emission factors the HAP PTE emissions are addressed qualitatively to demonstrate that the facility-wide HAP emissions will be significantly less than the major source thresholds of 10 ton/yr of a single HAP and 25 ton/yr of combined HAP. Details are provided in Section 1.5.</p>	

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES – TAPS ANALYSIS

PRECONSTRUCTION COMPLIANCE DEMONSTRATION WITH TOXIC STANDARDS

PREPARED FOR: Molly Prickett, P4 Production, LLC
PREPARED BY: Ejaz Memon, Air Sciences Inc.
PROJECT NO.: 303-2-1
COPIES: Randall Cooper and Cody Allen, P4 Production, LLC
DATE: April 26, 2016

1.0 Summary

In accordance with the IDAPA 58.01.01.007, 203, and 210 methods for evaluating toxic air pollutant (TAP) emissions from a modified stationary source, Air Sciences Inc. believes that by demonstrating that the proposed primary crusher modification/ replacement results in a net emissions decrease for TAP, no further procedures for demonstrating preconstruction compliance will be required for TAP per IDAPA 58.01.01.210.09 for the P4 Production, LLC (P4) Quartzite Quarry facility located in Soda Springs, Idaho.

2.1 TAP Analysis for Permitting

Evaluation of TAP emissions is required by IDAPA 58.01.01.203 [*emphasis added*]:

PERMIT REQUIREMENTS FOR NEW AND MODIFIED STATIONARY SOURCES.

No permit to construct shall be granted for a new or modified stationary source unless the applicant shows to the satisfaction of the Department all of the following:

- 1. Emission Standards. The stationary source or modification would comply with all applicable local, state or federal emission standards.*
- 2. NAAQS. The stationary source or modification would not cause or significantly contribute to a violation of any ambient air quality standard.*

03. Toxic Air Pollutants. Using the methods provided in Section 210, the emissions of toxic air pollutants from the stationary source or modification would not injure or unreasonably affect human or animal life or vegetation as required by Section 161. Compliance with all applicable toxic air pollutant carcinogenic increments and toxic air pollutant non-carcinogenic increments will also demonstrate preconstruction

compliance with Section 161 with regards to the pollutants listed in Sections 585 and 586.

The methods for evaluating TAP emissions and compliance demonstration are provided in IDAPA 58.01.01.210 [*emphasis added*]:

DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS.

In accordance with Subsection 203.03, the applicant shall demonstrate preconstruction compliance with Section 161 to the satisfaction of the Department. The accuracy, completeness, execution and results of the demonstration are all subject to review and approval by the Department.

1. *Identification of Toxic Air Pollutants*
2. *Quantification of Emission Rates....*
3. *Quantification of Ambient Concentrations....*
4. *Preconstruction Compliance Demonstration. The applicant may use any of the Department approved standard methods described in Subsections 210.05 through 210.08, and may use any applicable specialized method described in Subsections 210.09 through 210.12 to demonstrate preconstruction compliance for each identified toxic air pollutant.*
5. *Uncontrolled Emissions....*
6. *Uncontrolled Ambient Concentration....*
7. *Controlled Emission and Uncontrolled Ambient Concentration*
8. *Controlled Ambient Concentration*
9. *Net Emissions.*
 - a. *As provided in Section 007 (definition of net emissions increase) and Sections 460 and 461, the owner or operator may net [sic] emissions to demonstrate preconstruction compliance.*

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

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

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

The definition of Net Emissions Increase from IDAPA 58.01.01.007.06 is as follows [*emphasis added*]:

Net Emissions Increase. For purposes of Sections 204 and 205, a net emissions increase shall be defined by the federal regulations incorporated by reference. For purposes of Section 210, a net emissions increase shall be an emissions increase from a particular modification plus any other increases and decreases in actual emissions at the facility that are creditable and contemporaneous with the particular modification, where:

a. A creditable increase or decrease in actual emissions is contemporaneous with a particular modification if it occurs between the date five (5) years before the commencement of construction or modification on the particular change and the date that the increase from the particular modification occurs. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed one hundred and eighty (180) days;

b. A decrease in actual emissions is creditable only if it satisfies the requirements for emission reduction credits (Section 460) and has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular modification, and is federally enforceable at and after the time that construction of the modification commences.

c. The increase in toxic air pollutant emissions from an already operating or permitted source is not included in the calculation of the net emissions increase for a proposed new source or modification if:

- i. The already operating or permitted source commenced construction or modification prior to July 1, 1995; or
- ii. The uncontrolled emission rate from the already operating or permitted source is ten per cent (10%) or less of the applicable screening emissions level listed in Section 585 or 586; or
- iii. The already operating or permitted source is an environmental remediation source subject to or regulated by the Resource Conservation and Recovery Act (42 U.S.C. Sections 6901-6992k) and IDAPA 58.01.05, "Idaho Rules and Standards for Hazardous Waste," (IDAPA 58.01.05.000 et seq.) or the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 6901-6992k) or a consent order.

3.0 Net Emissions Increase Analysis for TAP

P4 is proposing to replace a grandfathered primary crusher rated at 713 tons per hour (ton/hr) with a new crusher rated at 970 ton/hr and equipped with a baghouse that is subject to the emission and compliance standards of 40 CFR 60, Subpart OOO. The emission calculations provided herein for net emissions increase purposes are based on an actual average hourly throughput rate of 540.4 tons per hour (ton/hr) of material processed. This operation rate was derived from actual activity spanning over a 24-month consecutive period from July 2013 through June 2015 (see Attachment A). This analysis is provided based on hourly emissions because the TAP screening limits provided in IDAPA 58.01.01.585 and 586 are hourly emission rates.

Using the actual hourly throughput rate of 540.4 ton/hr and the PM₁₀ emission factor of 0.0024 pounds per ton from AP-42, Table 11.19.2-2, the estimated actual PM₁₀ emissions for the old crusher are as follows:

$$PM_{10} = 1.3 \frac{\text{lb}}{\text{hr}} = 0.0024 \frac{\text{lb}}{\text{ton}} \times 540.4 \frac{\text{ton}}{\text{hr}}$$

For the new crusher, using the baghouse design flow rate of 10,000 standard cubic feet per minute and the applicable 40 CFR 60, Subpart OOO emission standard of 0.014 grains per dry standard cubic foot, a conservative estimate of the actual PM₁₀ emissions is:

$$PM_{10} = 1.2 \frac{\text{lb}}{\text{hr}} = \frac{0.014 \frac{\text{gr}}{\text{ft}^3}}{7,000 \frac{\text{gr}}{\text{lb}}} \times 10,000 \frac{\text{ft}^3}{\text{min}} \times 60 \frac{\text{min}}{\text{hr}}$$

Therefore, this replacement will result in a net emissions increase of (1.2 - 1.3) -0.1 lb/hr, or a decrease in emissions. The TAP of concern for this activity is crystalline silica. Crystalline silica

emissions are a function of particulate or PM₁₀ emissions; therefore, a decrease in PM₁₀ emissions will result in a decrease in crystalline silica emissions.

It is important to note that the replacement crusher has a higher design rate than the old crusher; however, the projected average hourly process rate is not expected to increase from the historical actual average hourly process rate presented in this analysis. Therefore, the projected actual emissions associated with the other existing equipment – that is, the secondary crusher, and the primary screening and transfers at this facility – are not expected to change. Also, there are no additional process fugitive emissions associated with this modification or any other emission increases at this facility during last five years.

This analysis shows that the proposed primary crusher replacement at the P4 Quartzite Quarry facility is expected to result in a net emissions decrease of crystalline silica emissions. Thus, no further procedures for demonstrating preconstruction compliance are required for crystalline silica as part of the application process per IDAPA 58.01.01.210.09.

Table A-1. Actual Operations Data (July 2013 to June 2015)

Month	Year	Total Primary Crusher Tons	Total Primary Crusher Hours
7	2013	90,576	178
8	2013	105,672	172
9	2013	82,688	142
10	2013	3,060	10
11	2013	0	0
12	2013	0	0
1	2014	0	0
2	2014	0	0
3	2014	0	0
4	2014	9,316	20
5	2014	69,632	140
6	2014	83,368	157
7	2014	91,528	162
8	2014	66,028	125
9	2014	66,096	130
10	2014	27,540	55
11	2014	0	0
12	2014	0	0
1	2015	0	0
2	2015	0	0
3	2015	4,692	11
4	2015	91,936	163
5	2015	85,136	153
6	2015	111,860	215
Total (24 months)		989,128	1,831
Average (12 months)		494,564	915

Average Hourly (ton/hr)

540.4

APPENDIX C – FRA SUBPART 000
ELECTRONIC CODE OF FEDERAL REGULATIONS
e-CFR data is current as of March 8, 2016

Title 40 → Chapter I → Subchapter C → Part 60 → Subpart 000

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart 000—Standards of Performance for Nonmetallic Mineral Processing Plants

SOURCE: 74 FR 19309, Apr. 28, 2009, unless otherwise noted.

§60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

See comment under §60.670(e).

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in §60.674).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart.

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.674, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.674, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.674, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.674, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

~~(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).~~

~~(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.~~

~~(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.~~

~~(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.~~

The proposed new/replacement primary crusher at P4 Quartzite Quarry is an affected facility per §60.670(a)(1) and meets the requirement of §60.670(e) and therefore is subject to this subpart.

The existing secondary crusher, screens, conveying system and storage bins at P4 Quartzite Quarry were installed prior to August 31, 1983, and therefore not subject to this subpart.

§60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crush or Crushing means to reduce the size of nonmetallic mineral material by means of physical impaction of the crusher or grinding mill upon the material.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor,

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

(10) Boron, including Borax, Kernite, and Colemanite.

(11) Barite.

(12) Fluorospar.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

(18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in 860.670 (h) and (c).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Saturated material means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for purposes of this definition.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

Seasonal shut down means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing

or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

Wet material processing operation(s) means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

Wet mining operation means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

Wet screening operation means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

P4 Production, LLC has read and understands these definitions and used them in providing this regulatory analysis.

§60.672 Standard for particulate matter (PM).

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

The proposed new/replacement primary crusher at P4 Quartzite Quarry is subject to §60.672(a) and will meet the stack emission limits and compliance requirements in Table 2 of this subpart.

~~§60.673 Reconstruction.~~

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§60.674 Monitoring of operations.

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 pascals ± 1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, appendix A-7). The Method 22 (40 CFR part 60, appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, appendix A-7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible

(d) As an alternative to the periodic Method 22 (40 CFR part 60, appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of table 6 to subpart AAAAA of 40 CFR part 63.

The proposed new/replacement primary crusher at P4 Quartzite Quarry is subject to §60.674(c) as it will be constructed after April 22, 2008, and it uses a baghouse to control particulate emissions. It will meet the monitoring requirements in accordance with §60.674(c) or §60.674(d).

§60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in §60.672(a) as follows:

(2) Method 9 of appendix A-4 of this part and the procedures in §60.11 shall be used to determine opacity

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121°C (250°F), to prevent water condensation on the filter.

cedures in §60.11 shall be used to determine opacity

(c)(1) In determining compliance with the particulate matter standards in §60.672(b) or §60.672(e)(1), the owner or operator shall use Method 9 of appendix A-4 of this part and the procedures in §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of appendix A-4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9 (40 CFR part 60, appendix A-4), the duration of the Method 9 (40 CFR part 60, appendix A-4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, appendix A-4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) or §60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in §60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(4) If the building encloses any affected facility that commences construction, modification, or reconstruction

on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, appendix A-4) performance test according to this section and §60.11.

If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, appendix A-7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in §60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, appendix A-4) performance test according to this section and §60.11 to show compliance with the opacity limit in §60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper vision position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 51 of appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 51 (40 CFR part 60, appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of appendix A-1 of this part [i.e., velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (e.g., from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_v = \frac{Q_f}{A_v} \quad (\text{Eq. 1})$$

Where:

V_v = average building vent velocity (feet per minute);

Q_f = average fan flow rate (cubic feet per minute); and

A_v = area of building vent and measurement location (square feet).

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(e) using the monitoring devices in §60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 appendix A-4) testing, the owner or operator may reduce the 30-day advance notification of performance test in §60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in §60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected

facility.

The proposed new/replacement primary crusher at P4 Quartzite Quarry will meet the test methods and procedures requirements in accordance with §60.675(a) and (e) or §60.675(b); and §60.675(i).

§60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to §60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in §60.672(b) and the emission test requirements of §60.11.

(h) The subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to §60.4(h).

The proposed new/replacement primary crusher at P4 Quartzite Quarry will meet the applicable reporting and recordkeeping requirements of §60.676(b), (f), (h), (i), (j), and (k).

Table 1 to Subpart 000 of Part 60—Exceptions to Applicability of Subpart A to Subpart 000

Subpart A reference	Applies to subpart 000	Explanation
60.4, Address	Yes	Except in §60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, appendix A-4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, appendix A-4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§60.675(c)), Method 9 (40 CFR part 60, appendix A-4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

P4 Production, LLC acknowledges that this table applies to the proposed new/replacement primary crusher at P4 Quartzite Quarry.

Table 2 to Subpart OOO of Part 60—Stack Emission Limits for Affected Facilities With Capture Systems

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) ^a	7 percent for dry control devices ^b	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e).
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf) ^a	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e); and
			Monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b).

^aExceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

^bThe stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

The proposed new/replacement primary crusher at P4 Quartzite Quarry will be an affected facility with a capture system and commence modification after April 22, 2008. Therefore it will be subject to a PM limit of 0.032 g/dscm (0.014 gr/dscf) and an initial performance test requirements in accordance with applicable sections of §60.8 of this part and §60.675 of his subpart. Baghouse monitoring will comply with §60.674(c) or (d).

Table 3 to Subpart OOO of Part 60—Fugitive Emission Limits

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.

<p>For * * *</p>	<p>The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671) * * *</p>	<p>The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *</p>	<p>The owner or operator must demonstrate compliance with these limits by conducting * * *</p>
<p>Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008</p>	<p>7 percent opacity</p>	<p>12 percent opacity</p>	<p>An initial performance test according to §60.11 of this part and §60.675 of this subpart; and Periodic inspections of water sprays according to §60.674(b) and §60.676(b); and</p>
			<p>A repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.</p>

The proposed new/replacement primary crusher at P4 Quartzite Quarry is not a fugitive source and therefore not subject to Table 3 of this subpart.

APPENDIX D – FACILITY DRAFT COMMENTS

The following comments were received from the facility on July 22, 2016:

Facility Comment: Changes to the language of the scope section in red:

This is the initial permit to construct (PTC) for a replacement primary Jaw Crusher and the existing Secondary Cone Crusher and Primary Triple Deck Screens, which have been operating at the quartzite quarry since the 1970s as components of a grandfathered source that did not require a permit to construct or operate. This PTC also includes NSPS requirements for the replacement primary crusher. Present emission levels are maintained by throughput limits on the replacement primary Jaw Crusher.

DEQ Response: Suggested changes were made to Permit Condition 2.3 40 CFR 60.672, Subpart OOO - Standard for particulate matter.

Facility Comment: Changes to the language of the 40 CFR 60.672, Subpart OOO - Standard for particulate matter section in red:

Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 60.8, emissions from the primary jaw crusher and baghouse BH-01 stack shall not exceed 0.032 g/dscm (0.014 gr/dscf) in accordance with 40 CFR 60.672.

DEQ Response: Suggested changes were made to Permit Condition 2.3 of the 40 CFR 60.672, Subpart OOO - Standard for particulate matter.

Facility Comment: Changes to the language Throughput Monitoring section in red.

Quartzite rock emptied into the dump hopper feeding the primary jaw crusher shall be monitored on a calendar day basis to determine compliance with the calendar day throughput limit. Permittee shall either (a) estimate

The dump hopper input shall be estimated by truckloads hauled to the dump hopper that feeds the primary jaw crusher, with:

The capacity of each truckload hauled to the dump hopper that feeds the primary jaw crusher shall be based on the maximum rated capacity of the truck in tons, or (b):

estimate dump hopper input by an alternate method, including but not limited to determining the actual throughput of quartzite rock emptied into the dump hopper feeding the primary jaw crusher, provided that the permittee obtain DEQ's prior written approval of any such alternate method.

DEQ Response: Suggested changes were considered and a new permit condition was drafted to attempt to meet the applicant's

Facility Comment: Addition of IDADA reference suggested for Federal Incorporation of Federal Requirements by Reference section in red.

For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NSPS), should there be any conflict between the requirements of the permit condition and the requirements of the document, the requirements of the document shall govern, including any amendments to that regulation incorporated by IDAPA 58.01.01.107.03.

DEQ Response: Suggested reference added to Permit Condition 2.16

APPENDIX E – PROCESSING FEE

PTC Fee Calculation

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: P4 - Quartzite Quarry
Address: 1973 Government Dam Road
City: Soda Springs
State: Idaho
Zip Code: 83276
Facility Contact: Molly Prickett
Title: Environmental Engineer
AIRS No.: 029-00043

- N** Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
- Y** Did this permit require engineering analysis? Y/N
- N** Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.0	0	0.0
SO ₂	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	0.0
Fee Due	\$ 1,000.00		

Comments: TAP silica netted out, PM10=0.02 T/yr increase