State of Idaho
Department of Environmental Quality
Air Quality Division

AIR QUALITY PERMIT
STATEMENT OF BASIS

Permit to Construct No. P-2009.0071

Final

Masco dba Knife River

Boise, Idaho (initial location)

Facility ID No. 777-00386

August 14, 2009

Harbi Elshafei H.E.

Air Quality Permitting Analyst 3

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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Acronyms, Units, and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	carbon monoxide
cy	cubic yards
DEQ	Department of Environmental Quality
dba	doing business as
EL	screening emission level in accordance with IDAPA 58.01.01.585 and 586
gr	grain (1 lb = 7,000 grains)
dscf	dry standard cubic feet
sdcfm	dry standard cubic feet per minute
EPA	U.S. Environmental Protection Agency
HAP	hazardous air pollutant
hr	hour(s)
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
lb/quarter	pounds per quarter
MACT	Maximum Achievable Control Technology
$\mu g/m^3$	micrograms per cubic meter
MMBtu/hr	million British thermal units per hour
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PC	permit condition
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
Rules	Rules for the Control of Air Pollution in Idaho
SIP	State Implementation Plan
SO_2	sulfur dioxide
TAP	toxic air pollutant
T/yr	tons per year
VOC	volatile organic compound
Wt %	weight percentage

1. FACILITY INFORMATION

1.1 Facility Description

Masco dba Knife River (Knife River) is a portable truck ready mix concrete batch plant. The ready mix concrete batch plant consists of four-compartment aggregate storage bin with an integral batcher, two storage silos, four baghouses, conveyors, PIG portable horizontal cement storage silo, and 2.8 MMBtu/hr diesel hot water heater. The maximum production rate is 300 cubic yards (cy) of concrete per hour. The plant combines sand, gravel, cement, fly ash or cement supplement, and water to produce concrete. Electrical power will be supplied to the ready mix plant from the local power grid.

The point sources of emissions at the facility are four baghouses that pick up dust from cement storage silos, fly ash silo, cement batcher, truck mix loading, and the hot water heater.

1.2 Permitting Action and Facility Permitting History

This PTC is a revision of an existing permit No. P-060021, issued to Masco, Inc. on October 13, 2006. The revision is to add a diesel hot water heater and a PIG portable horizontal cement storage silo to the process for the facility located in Boise. The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

- October 13, 2006 — PTC No. P-060021, initial PTC for a portable concrete batch plant issued to Masco, Inc. located in Boise, (A)

2. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

2.1 Application Scope

This Permit to Construct (PTC) is a modification to PTC No. P-060021, issued October 13, 2006. The modification is to add a 2.8 MMBtu/hr diesel hot water heater and a portable horizontal cement storage silo to the process. The applicant has also requested to operate the 2.8 MMBtu/hr diesel-fired hot water heater for 24 hours per day and 1,100 hours per year.

2.2 Application Chronology

May 21, 2009	DEQ received the application
May 21, 2009	DEQ received the application fees
May 26, 2009	DEQ received application supplement
June 5, 2009	DEQ determined application complete
June 18, 2009	DEQ issued draft permit for applicant review
June 30, 2009	DEQ provided the permit for public comment
June 29, 2009	DEQ received the processing fees ($1,000.00)
June 30, 2009	Public comment period started
July 30, 2009	Public comment ended
August 14, 2009	DEQ issued the final PTC to the applicant

3. TECHNICAL ANALYSIS

3.1 Emission Unit and Control Device

Table 3.1 CONCRETE BATCH PLANT DESCRIPTION

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Cement I storage bin (PIG) Horizontal cement silo	PJC-300S silo dust control system/baghouse Control efficiency (PM and PM_{10}): 99.9%	Stack height: 45 ft Equivalent stack diameter: 0.9 ft. Exit air flow rate : 1,500 cfm for cement, or 1,000 cfm for fly ash
Cement II Mobile storage silo	PJC-300S silo dust control system/baghouse Control efficiency (PM and PM_{10}): 99.9%	Stack height: 56 ft Equivalent stack diameter: 0.9 ft. Exit air flow rate : 1,500 cfm for cement, or 1,000 cfm for fly ash
Cement batcher	BV-14 batcher dust control system/baghouse Control efficiency (PM and PM_{10}): 99.9%	Stack height: 16 ft Equivalent stack diameter: 0.65 ft Exit air flow rate : 180 cfm
Truck mix loading	PJ-980 dust control system/baghouse Control efficiency (PM and PM_{10}): 99.9%	Stack height: 38 ft Equivalent stack diameter: 1.7 ft. Exit air flow rate : 5,880 cfm
2.8 MMBtu/hr diesel hot water heater	None	Stack height: 10 ft Stack diameter: 10 inches Stack temperature: 761 degrees F Exit flow: 885 acfm

3.2 Emissions Inventory

The emissions inventory for the 2.8 million British thermal units per hour (MMBtu/hr) diesel-fired hot water heater is submitted in the application using emissions factors in AP-42 Section 1.3 (9/98) for diesel combustion. Emissions estimates from the diesel-fired hot water heater are included in Appendix B of this statement of basis. Operation of the diesel-fired hot water heater is proposed for a maximum of 24 hours per day and 1,100 hours per year. The applicant requested to use ultra low sulfur content in the No. 2 diesel fuel of 15 ppm (0.0015%). The sulfur content in the diesel fuel and the hours of operations are included as permit conditions for this permitting action.

Emissions from the exhaust of the PIG horizontal cement silo are routed to an existing silo baghouse. The applicant did not request to increase the existing concrete production limit and the cement or flyash stored in the PIG horizontal cement silo, which is not typically transferred into the existing silos prior to use. It is simply an additional storage silo. There is no increase in emissions associated with adding the PIG horizontal cement silo. Therefore, no emissions estimate from the PIG was required to include in the application from this source. Existing permit No. P-060021, issued on October 13, 2006 contains concrete production limits of 7,200 cy/day and 2,628,000 cy/yr. It also contains emissions limits for PM_{10}, arsenic, and nickel. These permit conditions are carried over into this permit. Additionally, the statement of basis of permit No. P-060021 contains an emission inventory for a hot mix asphalt plant (HMA). It should be noted that the HMA plant operates under different permit, that is permit No. P-050011, issued June 24, 2005.

Table 3.2 summaries the emissions from the 2.8 MMBtu/hr diesel-fired hot water heater.

Detailed emissions calculations of criteria air pollutants, TAPs, and HAPs can be found in Appendix B.

Table 3.2 EMISSIONS ESTIMATES OF CRITERIA POLLUTANTS

Emissions Unit	PM_{10}		SO_2		NO_x		CO		VOC		LEAD
	lb/hr, Max.	T/yr	lb/hr, Max.	T/yr	lb/hr, Max.	T/yr	lb/hr, Max.	T/yr	lb/hr, Max.	T/yr	lb/quarter
2.8 MMBtu/hr Diesel-fired Boiler	0.066	0.036 (limited to 1,100 hrs/yr)	0.005	0.003	0.480	0.264	0.10	0.055	0.011	0.006	0.0069

3.3 Ambient Air Quality Impact Analysis

As shown in the emission inventory submitted by the permittee, the increase in emissions of criteria air pollutants from the diesel hot water heater does not exceed any applicable DEQ modeling threshold. Additionally, the increase in emissions of toxic air pollutants (TAPs) is below each applicable screening emission level (EL) listed in IDAPA 58.01.01.585 or 586. Therefore, no further demonstration of compliance is required. However, a permit condition to limit the hours of operations of the hot water heater is included in the permit to limit the TAPs emissions.

4. REGULATORY REVIEW

4.1 Attainment Designation (40 CFR 81.313)

The facility will initially be located in Ada County which is designated as attainment or unclassifiable for PM_{10}, $PM_{2.5}$, CO, NO_2, SO_X, and Ozone. Reference 40 CFR 81.313.

4.2 Permit to Construct (IDAPA 58.01.01.201)

The facility's proposed project does not meet the permit to construct exemption criteria contained in Sections 220 through 223 of the Rules; therefore, a PTC is required.

4.3 Tier II Operating Permit (IDAPA 58.01.01.401)

The facility did not apply for Tier II operating permit. This section does not apply.

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

The potential to emit of regulated pollutants are less than major source thresholds; therefore, the facility is not subject to the Title V program. The AIRS classification is "B."

4.5 PSD Classification (40 CFR 52.21)

The facility is classified as a minor source for PSD because without limits on the potential to emit, all emissions are less than PSD major source thresholds; therefore, it is not subject to PSD.

4.6 NSPS Applicability (40 CFR 60)

The provisions of Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, do not apply to stand-alone screening operations at plants without crushers or grinding mills. The facility is therefore not subject to this NSPS.

4.7 NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements.

4.8 MACT Applicability (40 CFR 63)

The facility is not subject to any MACT requirements.

4.9 CAM Applicability (40 CFR 64)

The facility is not a title V source; therefore, it is not subject to CAM requirements.

4.10 Permit Conditions Review

This section describes the permit conditions (PC) for this revised PTC or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action..

Permit Condition 2.4 establishes PM emissions limit for the diesel-fired boiler in accordance with IDAPA 58.01.01.675. The hot water heater is in compliance with the limit as long as it is fired by distillate fuel oil as specified in PC 2.11. The hot water PM emissions is estimated at 0.066 lb/hr – see Appendix B. The grain-loading limit specified in Permit Condition 2.4 will not necessitate monitoring the hot water heater emissions when distillate fuel oil is used because at the maximum rate of operation, the calculated PM concentration does not exceed the grain-loading limit, as follows:

(0.066 lb /1 hr) x (1 / 885 acfm) x (1 hr/ 60 min) x (7,000 gr /1 lb) = 0.009 gr/acfm. The resulting grain-loading value is compared to the regulatory limit of 0.05 gr/dscf (standard). The conversion from actual to dry standard cubic feet is unlikely to result in a difference that would result in the standard being exceeded.

Permit Condition 2.5 contains an opacity limit in accordance with IDAPA 58.01.01.625. To comply with the limit, the permittee is required to:

- use fuel type as specified in PC 2.11
- operate and inspect baghouse/dust collectors as specified in PCs 2.7 and 2.13
- conduct monthly visible emissions monitoring as specified in PC 2.13
- monitor fuel type as specified in PC 2.16

Permit Conditions 2.10 and 2.11 establish daily and annual operating hour limits for the 2.8 MMBtu/hr diesel-fired hot water heater; and fuel type and fuel sulfur content. To demonstrate compliance with these requirements, the permittee is required to:

- monitor and record operating hours of the diesel hot water heater as specified in PC 2.15
- monitor fuel type as specified in PC 2.16

Permit Condition 2.13 (Records) existed in PTC No. P-060021, issued October 13, 2006 is deleted in this permit. This permit condition is now part of PTC General Provisions 7.

5. PERMIT FEES

Table 5.1 lists the processing fee associated with this permitting action. In accordance with IDAPA 58.01.01.225, the facility is subject to a processing fee of $1,000 because its increase in emissions is less than one (1) ton per year. Refer to the chronology for fee receipt dates.

Table 5.1 PROCESSING FEE TABLE

Emissions Inventory			
Pollutant	**Annual Emissions Increase (T/yr)**	**Annual Emissions Reduction (T/yr)**	**Annual Emissions Change (T/yr)**
NO_X	0.264	0	0.264
SO_2	0.003	0	0.003
CO	0.055	0	0.055
PM_{10}	0.036	0	0.036
VOC	0.006	0	0.006
HAPs	0.001	0	0.001
Total:	**0.365**	0	**0.365**
Fee Due	**$ 1,000**		

6. PUBLIC COMMENT

An opportunity for public comment period on the PTC application was provided from June 1, 2009, to June 16, 2009, in accordance with IDAPA 58.01.01.209.01.c. During this time, there were no comments on the application. There was a request for a public comment period on DEQ's proposed action. A public comment period was provided from June 30, 2009, to July 30, 2009. During this time, comments were submitted in response to DEQ's proposed action. 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 – AIRS Information

AIRS/AFS Facility-wide Classification Form

Facility Name: Masco dba Knife River

Facility Location: Boise, Idaho (initial location)

Facility ID: 777-00386 **Date:** 06-09-09

Project/Permit No.: P-2009.0071 **Completed By:** Harbi Elshafei

☐ Check if there are no changes to the facilitywide classification resulting from this action. (compare to form with last permit)

☐ Yes, this facility is an SM80 source.

Identify the facility's area classification as A (attainment), N (nonattainment), or U (unclassified) for the following pollutants:

	SO_2	PM_{10}	VOC	
Area Classification:	A/U	A/U	A/U	DO NOT LEAVE ANY BLANK

Check one of the following:

☒ **SIP** [0] - Yes, this facility is subject to SIP requirements. (do not use if facility is Title V)

OR

☐ **Title V** [V] - Yes, this facility is subject to Title V requirements. (If yes, do not also use SIP listed above.)

For SIP or TV, identify the classification (A, SM, B, C, or ND) for the pollutants listed below. Leave box blank if pollutant is not applicable to facility.

	SO_2	NOx	CO	PM_{10}	PT (PM)	VOC	THAP
Classification:	B	B	B	B	B	B	B

☐ **PSD** [6] - Yes, this facility has a PSD permit.

If yes, identify the pollutant(s) listed below that apply to PSD. Leave box blank if pollutant does not apply to PSD.

	SO_2	NOx	CO	PM_{10}	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **NSR - NAA** [7] - Yes, this facility is subject to NSR nonattainment area (IDAPA 58.01.01.204) requirements.

Note: As of 9/12/08, Idaho has no facility in this category.

If yes, identify the pollutant(s) listed below that apply to NSR-NAA. Leave box blank if pollutant does not apply to NSR - NAA.

	SO_2	NOx	CO	PM_{10}	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **NESHAP** [8] - Yes, this facility is subject to NESHAP (Part 61) requirements. (THAP only)

If yes, what CFR Subpart(s) is applicable?

☐ **NSPS** [9] - Yes, this facility is subject to NSPS (Part 60) requirements.

If yes, what CFR Subpart(s) is applicable?

If yes, identify the pollutant(s) regulated by the subpart(s) listed above. Leave box blank if pollutant does not apply to the NSPS.

	SO_2	NOx	CO	PM_{10}	PT (PM)	VOC	THAP
Classification:	☐	☐	☐	☐	☐	☐	☐

☐ **MACT** [M] - Yes, this facility is subject to MACT (Part 63) requirements. (THAP only)

If yes, what CFR Subpart(s) is applicable?

Appendix B – Emissions Inventory

EMISSION INVENTORY: CONCRETE BATCH PLANT'S DIESEL-FIRED HOT WATER HEATER

DIESEL COMBUSTION, AP-42 SECTION 1.3 (9/98)

2.8 MMBtu/hr / 140 MMBtu/10^3 gal = 2.00E-02 10^3 gal/hr **Fuel Use:**

Operating Assumptions: **24** hr/day **480.00 gal/day**

1,100 hr/yr **22,000 gal/year**

0.0015% sulfur

Criteria Air Pollutants	Emission Factor	Emissions			Modeling Threshold		Modeling Required ?	Modeling Threshold		Modeling Required ?
	lb/10^3 gal	lb/hr	T/yr		2002 Guidance			Case-by-Case		
NO2	24	4.80E-01	2.64E-01		1	T/yr	No	7	T/yr	No
CO	5	1.00E-01	5.50E-02		14	lb/hr	No	70	lb/hr	No
PM10 (filterable + condensab	3.3	6.60E-02	3.63E-02		0.2	lb/hr	No	0.9	lb/hr	No
		6.60E-02	3.63E-02		1	T/yr	No	7	T/yr	No
SOx (SO2 + SO3)	0.2385	4.77E-03	2.62E-03		0.2	lb/hr	No	0.9	lb/hr	No
		4.77E-03	2.62E-03		1	T/yr	No	7	T/yr	No
VOC (TOC)	0.556	1.11E-02	6.12E-03		40	T/yr	No			
Lead EF = 9 lb/10^{12} Btu	9	2.52E-05	1.39E-05		0.6	T/yr	No			
Lead, continued			6.93E-03	lb/quarter	**10**	lb/mo	No			
		TOTAL	3.64E-01	T/yr						

Note: 100 lb/mo Pb in guidance reduced by factor of 10 based on latest Pb NAAQS (reduced in 2008 from 1.5 ug/m3 to 0.15 ug/m3)

Hazardous Air Pollutants (HAPs) and Toxic Air Pollutants (TAPs)				Exceeds EL/ Modeling Required?
	lb/10^3 gal	lb/hr	EL (lb/hr)	
PAH HAPs				
Acenaphthene	2.11E-05	**5.30E-08**	9.10E-05	No
Acenaphthylene	2.57E-07	**6.45E-10**	9.10E-05	No
Anthracene	1.22E-06	**3.06E-09**	9.10E-05	No
Benzo(a)anthracene	4.01E-06	**1.01E-08**		See POM
Benzo(a)pyrene			2.00E-06	See POM
Benzo(b,k)fluoranthene	1.48E-06	**3.72E-09**		See POM
Benzo(g,h,i)perylene	2.26E-06	**5.68E-09**	9.10E-05	No
Benzo(k)fluoranthene	0.00E+00	**0.00E+00**		See POM
Chrysene	2.38E-06	**5.98E-09**		See POM
Dibenzo(a,h)anthracene	1.67E-06	**4.19E-09**		See POM
Dichlorobenzene			9.10E-05	No
Fluoranthene	4.84E-06	**1.22E-08**	9.10E-05	No
Fluorene	4.47E-06	**1.12E-08**	9.10E-05	No
Indeno(1,2,3-cd)pyrene	2.14E-06	**5.37E-09**		See POM
Naphthalene	1.13E-03	2.84E-06	3.33	No
Naphthalene	1.13E-03	**2.84E-06**	9.10E-05	No
Phenanathrene	1.05E-05	**2.64E-08**	9.10E-05	No
Pyrene	4.25E-06	**1.07E-08**	9.10E-05	No
Polycyclic Organic Matter (POM) 7-PAH Group		**2.93E-08**	2.00E-06	No
Non-PAH HAPs				
Benzene	2.14E-04	**5.37E-07**	8.00E-04	No
Ethyl benzene	6.36E-05	1.27E-06	2.90E+01	No
Formaldehyde	3.30E-02	**8.29E-05**	5.10E-04	No
Hexane	1.80E+00	3.60E-02	12	No
Toluene	6.20E-03	1.24E-04	25	No
o-Xylene	1.09E-04			
Metals (HAPs)	lb/10^{12} Btu			
Arsenic	4.00E+00	**1.41E-06**	1.50E-06	No
Barium			0.033	No
Beryllium	3.00E+00	**1.05E-06**	2.80E-05	No
Cadmium	3.00E+00	**1.05E-06**	3.70E-06	No
Chromium	3.00E+00	8.40E-06	0.033	No
Cobalt			0.0033	No
Copper	6.00E+00	1.68E-05	0.013	No
Manganese	6.00E+00	1.68E-05	0.067	No
Mercury	3.00E+00	8.40E-06	0.003	No
Molybdenum			0.333	No
Nickel	3.00E+00	**1.05E-06**	2.70E-05	No
Selenium	1.50E+01	4.20E-05	0.013	No
Vanadium			0.003	No
Zinc	4.00E+00	1.12E-05	0.667	No

Case-by-Case Modeling Thresholds may be used ONLY with DEQ Approval

NOTE: TAPs lb/hr emissions are 24-hour averages unless shown in bold. Bold emissions are annual averages for carcinogens.

1,1,1-Trichloroethane 2.36E-04 Not a HAP (1,1,2 TCA is a HAP). Not a 585 or 586 TAP.

Appendix C – Ambient Air Quality Impact Analysis

MEMORANDUM

DATE: June 9, 2009

TO: Harbi Elshafei, Permit Engineer, Air Quality Division

FROM: Cheryl Robinson, P.E., Air Quality Engineer/Modeling Analyst, Air Quality Division

PROJECT NUMBER: P-2009.0071

SUBJECT: **Modeling Review for Masco dba Knife River, Idaho Falls, Facility ID 777-00386**
Project: Modify PTC for a Portable Concrete Batch Plant – Storage Pig and Small Boiler

1.0 Summary

Masco, Inc., doing business as (dba) Knife River, Inc., submitted an application to modify the Permit to Construct (PTC) for this portable concrete batch plant, which was received by DEQ on May 21, 2009. Supplemental information was received on May 26, 2009 requesting that the maximum sulfur content of the fuel for the diesel boiler be reduced from 0.5% to 0.0015%. The requested modifications were limited to adding:

- A storage pig for cement or flyash storage. The exhaust from the vent on the pig will be routed to the existing silo baghouse. No increase in concrete production was requested, and cement or flyash stored in the pig will not typically be transferred into the existing silo(s) prior to use. There is no increase in emissions associated with adding this additional storage capacity.
- A diesel-fired boiler rated at 2.8 million British thermal units per hour (MMBtu/hr) used to heat the process water (water to be mixed with the dry cement and aggregate) during cold weather. Operation of the boiler is proposed for a maximum of 24 hours per day and 1,100 hours per year.

As shown in the emission inventory submitted by the applicant on May 26, 2009, the increase in emissions of criteria pollutants from operation of this small boiler does not exceed any applicable DEQ modeling threshold. The increase in emissions of toxic air pollutants (TAPs) is below each applicable screening emission level (EL) listed in IDAPA 58.01.01.585 or 586. In accordance with IDAPA 58.01.01.210.08, no further demonstration of compliance is required, but per Section 210.08.c, DEQ must include an emission limit for these TAPs in the permit.

The submitted information, in combination with DEQ's analyses: 1) utilized appropriate methods and models; 2) was conducted using reasonably accurate or conservative model parameters and input data; 3) adhered to established DEQ guidelines for new source review dispersion modeling; and 4) showed that predicted pollutant concentrations from emissions associated with the proposed facility modification were below applicable regulatory thresholds. Key assumptions that should be considered in the development of the permit are presented in Table 1.

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES

Criteria/Assumption/Result	Explanation/Consideration
The diesel-fired boiler should be limited to: • 2.8 MMBtu/hr rating. • Diesel (ASTM #1, #2, or mix of #1 and #2 fuel oil) with maximum 15 ppm (0.0015%) sulfur by weight. • Operations not to exceed 1,100 hours per year at full rated capacity or annual fuel use not to exceed 22,000 gallons per year.	The determination that modeling was not required for criteria pollutants was based on these parameters, plus operation at 24 hours per day (a daily limit is therefore not required). Demonstration that TAPs emissions do not require modeling was based on these "controlled" operating parameters. An emission limit (or an operating or production limit as a surrogate emission limit) is required.

Appendix D – Response to Public Comments

Air Quality Permitting
Response to Public Comments

August 10, 2009

Permit to Construct No. P-2009.0071

Masco dba Knife River
Boise, Idaho

Facility ID No. 777-00386

Prepared by:
Harbi Elshafei, Permit Writer
AIR QUALITY DIVISION

Final

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1. BACKGROUND

As deemed appropriate by the Director, the Department of Environmental Quality (DEQ) provided for public comment the proposed installation of a new 2.8 MMBtu/hr diesel hot water heater and a portable horizontal cement storage silo permit to construct (PTC) P-2009.0071 for Masco dba Knife River, initially located in Boise, Idaho.

An opportunity for public comment was provided from June 1, 2009, through June 16, 2009. During this time, a member of the public requested a public comment period. DEQ provided the comment period from June 30, 2009, through July 30, 2009. Comments were provided via e-mail. Each comment and DEQ's response is provided in the following section. Comments with a common theme have been grouped together as one comment and responded to as one comment. All comments submitted in response to DEQ's proposed action are included as the appendix of this document.

2. PUBLIC COMMENT AND RESPONSES

Public comments regarding the permit analysis and air quality aspects of the proposed permit are summarized below. Due to the similarity of many of the comments received, the summary presented below combines and/or paraphrases some comments in order to eliminate duplication and to provide a more concise summary. Questions, comments, and/or suggestions received during the comment period that did not relate to the air quality aspects of the permit application, the Department's technical analysis, or the proposed permit are not addressed.

Comment 1: Assurance to comply with the requirements of IDAPA 58.01.01.203.02 or IDAPA 58.01.01.203.03.

Response 1: According to the submitted emissions inventory for the new 2.8 MMBtu/hr hot water heater, the facility did not trigger modeling for any of the regulated air pollutants. The increase in emissions of toxic air pollutants (TAPs) is below each applicable screening emission level listed in IDAPA 58.01.01.585 or 586. In accordance with IDAPA 58.01.01.210.08, no further demonstration of compliance is required. An hour of operations limit of 1,100 hours per year, per Permit Condition 2.10 is included in the permit to limit the TAPs emissions.

According to the PTC application the purpose of the new portable cement storage silo is to add a storage capability at the plant and there is no increase in any regulated air pollutants that are existing in permit No. P-060021, issued on October 13, 2006. Emissions from the exhaust of the cement storage silo are routed to an existing silo baghouse. The permittee did not request to increase the already permitted concrete production limit of the cement or flyash stored in the portable cement silo. The new portable silo is simply an additional storage silo. There is no increase in emissions associated with adding the cement silo. Existing permit No. P-060021, issued on October 13, 2006 contains concrete production limits of 7,200 cubic yards (cy) per day and 2,628,000 cy/yr. It also contains emissions limits for PM_{10}, arsenic, and nickel. These existing permit conditions are carried over into this new permit.

The facility is required to monitor and record the production of the concrete batch plant daily and annually to show compliance with the production limits in the permit. The production rate is used to estimate the amount of emissions, so limiting the production rate also limits the estimated emissions.

The facility is required to use air pollution control equipment and reasonable control measures to ensure that the emissions are properly controlled. The permit also requires that the control equipment be inspected and maintained regularly.

Result: *No changes made to the permit or statement of basis.*

Comment 2: The facility should obtain a Tier II operating permit and draft PTC.

Response 2: This permitting action is to construct a new hot water heater and a new portable cement silo. Therefore, the permitting action for this project is a PTC action in accordance with IDAPA 58.01.01.201 (*Permit to Construct Required*).

Result: *No changes made to the permit or statement of basis.*

Comment 3: Analysis must be conducted and publically available to clarify that facility operations have not contributed to violations of any ambient air quality standards in the area and to ensure compliance with Toxic Substances Rules (IDAPA 58.01.01.161)

Response 3: The emission rates of the criteria and toxic air pollutants were estimated using the production rate and emission factors published by the U. S. Environmental Protection Agency, Compilation of Air Pollutant Emission Factors (AP-42). The emissions were then compared to the regulatory limits. All emissions estimates were below the regulatory requirements that trigger modeling. See the emissions inventory in Appendix B of the statement of basis which shows the modeling threshold and whether modeling is required. No criteria or toxic air pollutants triggered any modeling thresholds. Therefore, modeling is not required for this project.

With regard to TAPs and in accordance with IDAPA 58.01.01.203.03, which states "...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 regard to the pollutants listed in Sections 585 and 586." Since the increase in emissions of TAPs from the hot water heater is below each applicable screening emission level listed in IDAPA 58.01.01.585 or 586, then this will demonstrate compliance with 161, per IDAPA 58.01.01.203.03.

Result: *No changes made to the permit or statement of basis.*

–END–

Appendix

Public Comments Submitted for

Masco dba Knife River

Adding a Hot Water Heater and a Portable Cement Storage Silo

P-2009.0071

Idaho Department of Environmental Quality July 30, 2009

Harbi Elshafei
1410 North Hilton
Boise, Idaho 83706
RE: Idaho Conservation League Comments on the proposed Permit to Construct (PTC) for Masco (Knife River) facility in Boise, Id

Dear Mr. Elshafei:

For thirty-four years, the Idaho Conservation League has been Idaho's voice for clean water, clean air, and wilderness—values that are the foundation to Idaho's extraordinary quality of life. As Idaho's largest state-based conservation organization we represent over 9,800 members, many of whom have a deep personal interest in protecting air quality. Based on our review of the proposed revisions to the Masco (Knife River) permit and the original permit (No. P-060021) the Department of Environmental Quality (DEQ) should require this facility to obtain a Tier II Permit. Additionally, no assurance is provided within the public record that the facility has complied with the requirements of IDAPA 58.01.01.203.02 or IDAPA 58.01.01.203.03. These sections state that DEQ must be provided documents to assure that stationary sources associated with this facility have not significantly contributed to violations of any ambient air quality standards in Ada County. Without such a demonstration DEQ cannot grant a permit for modified stationary sources.

Tier II Operating Permits are required when it is determined that "specific emission standards, or requirements on operation or maintenance are necessary to ensure compliance with any applicable emission standard or rule." (IDAPA 58.01.01.401.3b) The operational limits included within the draft PTC are meant to reduce toxic air pollutant (TAP) emissions. Operational limits of this kind are used to keep a facility from being classified as a major/Title 5 source. According to the potential emissions shown in the existing Masco (Knife River) PTC (No. P-060021), this is a major facility using controls and operational limits to qualify for minor classification. Therefore, this facility should obtain a Tier II permit and a draft PTC.

Additionally, analysis must be conducted and publically available to clarify that facility operations have not contributed to violations of any ambient air quality standards in the area and to ensure compliance with Toxic Substances Rule (IADAPA 58.01.01.161).

Pursuant to IDAPA 58.01.01.401.3b, and to ensure air quality and human health are preserved and protected, operational limits must be enshrined through a Tier II permitting process. We look forward to DEQ addressing our concerns. We believe this facility needs a Tier II permit and that the Tier II permit be released for public comment. Additionally, documents should be provided that demonstrate the existing facility has not contributed to air quality violations in Ada County. If you have any questions regarding our comments, or if you would like to discuss our concerns in greater detail, please do not hesitate to Contact me.

Sincerely,

Sara Cohn
Community Conservation Associate
Idaho Conservation League
710 N. 6th Street
Boise, Idaho 83702
(208) 345-6942 ex. 23