# APPENDIX D

**The Amalgamated Sugar Company Tier II Operating Permit/ T2-010928**

Grain Loading Compliance Demonstration for Natural Gas Combustion in the Boilers

Idaho Department of Environmental Quality
Office of Technical Services

**CALCULATION SHEET**

Sheet 1 of 1

TASCO, NAMPA TIER II PERMIT Work Order T2-010928 File No.

Calculation GRAIN-LOADING FOR BOILERS W/N.-GAS Prepared By SGR Date 6/26/02

APPENDIX C Checked By Date

KNOWNS: 1) PM EMISSION FACTOR FOR NAT. GAS COMBUSTION (TABLE 1.4-2, AP-42): 7.6 lb/MMscf
2) DRY STANDARD CUBIC FEET (dscf) OF FLUE GAS PRODUCED FROM COMBUSTION OF 1 MMBTU OF NAT. GAS (40 CFR 60, APP. A, METH. 19): 8710 dscf/MMBTU
3) AVE. HEAT CONTENT OF NAT. GAS: 1050 BTU/ft³
4) NAMPA ELEVATION (WWW.TOPOZONE.COM): 2490 ft
5) STANDARD CONDITIONS: 68°F, 29.92 in Hg

CALCULATION: 1) ALTITUDE CORRECTION (IDAPA 58.01.01.680):

$$29.92 \text{ in Hg} - (0.1 \times 24.90) \text{ in Hg} = \underline{27.43 \text{ in Hg}}$$

2) GAS VOLUME CORRECTION (IDEAL GAS LAW W/CONSTANT n, R, AND T):

$$V_2 = \frac{P_1 V_1}{P_2} = \frac{(29.92 \text{ in Hg})(8710 \text{ ft}^3)}{27.43 \text{ in Hg}}$$

$$= \underline{9500.66 \text{ ft}^3}$$

3) FOR 3% $O_2$ (40 CFR 60, APP. A, METH. 19):

$$F_2 = F_1 \left(\frac{20.9}{20.9 - 3.0}\right) = (9500 \text{ ft}^3)\left(\frac{20.9}{20.9 - 3.0}\right)$$

$$= \underline{11093.35 \text{ ft}^3}$$

4) GRAIN-LOADING PER CUBIC FOOT OF FLUE GAS:

$$(7.6 \text{ lb PM}/10^6 \text{ ft}^3 \text{ N.G.})(7000 \text{ gr/lb})\left(\frac{\text{ft}^3 \text{ N.G.}}{1050 \text{ BTU}}\right)\left(\frac{10^6 \text{ BTU}}{11093.35 \text{ dscf}}\right)$$

$$\boxed{= 0.0046 \text{ gr/dscf}}$$

# APPENDIX E

**The Amalgamated Sugar Company Tier II Operating Permit/ T2-010928**

Process Weight Rate Compliance Demonstration for Pellet Mills, Lime Kilns, Drying Granulator, Cooling Granulators, and Lime Kiln Building

Idaho Department of Environmental Quality
Office of Technical Services

**CALCULATION SHEET**

Sheet 1 of 3

TASCO NAMPA TIER II PERMIT Work Order T2-010928 File No.

Calculation PWR FOR COOLERS, GRANULATORS, KILNS, ETC. Prepared By SCB Date 6/26/02

APPENDIX D Checked By Date

ASSUME grain loading OF 0.010 gr/dscf FOR ALL BAGHOUSES (AWMA, 1992)
FLOWRATES FOR EQUIPMENT TAKEN FROM TIER I OR TIER II APPLICATIONS

1. No. 1, 2, 3, 4, & 5 PELLET COOLERS:

A) PWR LIMIT FOR No. 1 & 5 COOLERS:

THRU-PUT: $4.4\ T/hr \left(\frac{2000\ lb}{T}\right) = 8800\ lb/hr$

PWR LIMIT: $E = 0.045(8800)^{0.60} = \underline{10.47\ lb\ PM/hr\ cooler}$

PWR LIMIT FOR No. 2, 3, & 4 COOLERS:

THRU-PUT: $8.8\ T/hr \left(\frac{2000\ lb}{T}\right) = 17600\ lb/hr$

PWR LIMIT: $E = 1.12(17600\ lb/hr)^{0.27} = \underline{15.69\ lb\ PM/hr\ cooler}$

B) TOTAL PM EMISSIONS FOR ALL COOLERS:

$E = 0.010\ gr/dscf \left(\frac{lb}{7000\ gr}\right)\left[\left(2.6579\ \frac{dscf}{min}\right) + \left(3.9869\ \frac{dscf}{min}\right)\right]\left(\frac{60\ min}{hr}\right)$

$= \underline{3.65\ lb\ PM/hr}$ FOR ALL 5 COOLERS

2. A & B LIME KILNS

A) PWR LIMIT FOR A KILN:

THRU-PUT: $238\ T/d \left(\frac{2000\ lb}{T}\right)\left(\frac{d}{24\ hr}\right) = 19833.3\ lb/hr$

PWR LIMIT: $E = 1.12(19833)^{0.27} = \underline{16.2\ lb\ PM/hr}$

PWR LIMIT FOR B KILN:

THRU-PUT: $277\ T/d \left(\frac{2000\ lb}{T}\right)\left(\frac{d}{24\ hr}\right) = 23083.3\ lb/hr$

PWR LIMIT: $E = 1.12(23083)^{0.27} = \underline{16.9\ lb\ PM/hr}$

B) TOTAL PM EMISSIONS FOR BOTH KILNS

$E = 0.010\ gr/dscf \left(\frac{lb}{7000\ gr}\right)(14{,}000\ acfm)^{*}\left(\frac{60\ min}{hr}\right)$

$= \underline{1.2\ lb\ PM/hr}$

* ALTHOUGH ACfm IS USED TO ESTIMATE PM EMISSIONS, THE CONVERSION TO dscfm WOULD RESULT IN LOWER PM EMISSIONS. COMPLIANCE W/ PWR LIMIT IS DEMONSTRATED IN EITHER CASE.

daho Department of Environmental Quality
Office of Technical Services

**CALCULATION SHEET**

Sheet 3 of 3

Work Order _____ File No. _____

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APPENDIX D

Checked By _____ Date _____

5. LIME KILN BUILDING:

A) PWR LIMIT FOR LK BUILDING:

THRU-PUT FOR LIME-KILNS: $(272\ T/d + 238\ T/d)\left(\frac{2000\ lb}{T}\right)\left(\frac{d}{24\ hr}\right)$

$= 42916.7\ lb/hr$

PWR LIMIT: $E = 1.12(42917)^{0.27} = \underline{19.95\ lb\ PM/hr}$

B) TOTAL PM EMISSIONS FROM BUILDING

$E = 0.0108\ gr/dscf\left(\frac{lb}{7000\ gr}\right)(4909\ ACFM)^{*}\left(\frac{60\ min}{hr}\right)$

$= \underline{0.4\ lb\ PM/hr}$

* TAKEN FROM TIER II MODELING ANALYSIS

# APPENDIX F

**The Amalgamated Sugar Company Tier II Operating Permit/ T2-010928**

Ambient Impacts for Selected TAP Emissions

Summary of TAP ambient concentrations

| TAP | 585/586 Listing | Averaging Period | Maximum Ambient Concentration | Applicable Limit(µg/m$^3$) | URF | Risk |
|---|---|---|---|---|---|---|
| Acetaldehyde | carcinogen | 1-hour | 5.29E+00 | | | |
| | | 24-hour | 2.13E+00 | | | |
| | | annual | 1.26E-01 | 4.50E-01 | 2.20E-06 | 2.78E-07 |
| Arsenic | carcinogen | 1-hour | 1.33E-01 | | | |
| | | 24-hour | 3.35E-02 | | | |
| | | annual | 2.67E-03 | 2.30E-04 | 4.30E-03 | 1.15E-05 |
| Beryllium | carcinogen | 1-hour | 1.45E-03 | | | |
| | | 24-hour | 3.60E-04 | | | |
| | | annual | 3.00E-05 | 4.20E-03 | 2.40E-04 | 7.20E-09 |
| Cadmium | carcinogen | 1-hour | 1.50E-03 | | | |
| | | 24-hour | 5.90E-04 | | | |
| | | annual | 6.00E-05 | 5.60E-04 | 1.80E-03 | 1.08E-07 |
| Crotonaldehyde | non-carcinogen | 1-hour | 7.05E-01 | | | |
| | | 24-hour | 2.84E-01 | 2.85E+02 | | |
| | | annual | N/A | | | |
| Formaldehyde | carcinogen | 1-hour | 2.53E+00 | | | |
| | | 24-hour | 1.04E+00 | | | |
| | | annual | 6.09E-02 | 7.70E-02 | 1.30E-05 | 7.92E-07 |
| Mercury | non-carcinogen | 1-hour | 5.22E-02 | | | |
| | | 24-hour | 1.31E-02 | 5.00E-01 | | |
| | | annual | N/A | | | |
| Nickel | carcinogen | 1-hour | 3.75E-02 | | | |
| | | 24-hour | 9.48E-03 | | | |
| | | annual | 7.60E-04 | 4.20E-03 | 2.40E-04 | 1.82E-07 |
| Propionaldehyde | non-carcinogen | 1-hour | 4.82E-03 | | | |
| | | 24-hour | 1.14E-03 | 2.15E+01 | | |
| | | annual | N/A | | | |
| Selenium | non-carcinogen | 1-hour | 1.65E-02 | | | |
| | | 24-hour | 3.90E-03 | 1.00E+01 | | |
| | | annual | N/A | | | |
| All Aldehydes | | 1-hour | 8.54E+00 | | | |
| | | 24-hour | 3.46E+00 | | | |
| | | annual | 2.05E-01 | | | |

Note: The maximum hourly emissions were assumed to occur only during the winter and fall. The emissions were zeroed out for spring and summer.

# APPENDIX G

**The Amalgamated Sugar Company Tier II Operating Permit/ T2-010928**

Responses to Public Comment

September 30, 2002

# STATE OF IDAHO
# DEPARTMENT OF ENVIRONMENTAL QUALITY
# RESPONSE TO PUBLIC COMMENTS
# ON PROPOSED TIER II AND DRAFT AIR QUALITY TIER I OPERATING PERMIT
# FOR THE AMALGAMALGED SUGAR COMPANY, NAMPA, IDAHO

## Introduction

As required by IDAPA 58.01.01.404 and 364 of the *Rules for the Control of Air Pollution in Idaho* (*Rules*), the Idaho Department of Environmental Quality (Department) provided for public notice and comment, including a public hearing, on the proposed Tier II and draft Tier I operating permits for The Amalgamated Sugar Company (TASCO) facility located in Nampa, Idaho. Public comment packages, which included the application materials, the two permits, and associated technical memoranda, were made available for public review at the Nampa Public Library and the Department's State and Regional Offices in Boise. The public comment period was provided from August 12, 2002 through September 12, 2002. A public hearing was held on September 11, 2002 in the Council Chambers of Nampa City Hall. Verbal and/or written comments were received from members of the local community, the Idaho Conservation League, the Clean Air Force, and TASCO. Those comments regarding the air quality aspects of the permits are provided below with the Department's response immediately following.

## Background/Permitting Action Summary

In response to the development of the Northern Ada County $PM_{10}$ Maintenance Plan (Maintenance Plan), the Department determined that TASCO's Nampa facility required federally enforceable emissions rate limits. These emissions rate limits are used in the modeling analysis used to develop the Maintenance Plan and federally enforceable limits are needed in order to maintain the integrity of the Maintenance Plan. In the fall of 2001, TASCO and the Department agreed to develop a facility-wide Tier II operating permit that would contain such emissions rate limits.

TASCO proceeded to develop a facility-wide Tier II permit application that included an air dispersion modeling analysis to demonstrate that potential emissions from the facility did not cause or significantly contribute to a violation of the National Ambient Air Quality Standard (NAAQS) (here in after often referred to as NAAQS compliance), as required by IDAPA 58.01.01.403.02. Initial modeling analyses indicated that the potential emission rates of particulate matter with an aerodynamic diameter of ten microns or less ($PM_{10}$), nitrogen oxides ($NO_x$), and sulfur oxides ($SO_x$) could result in ambient impact estimates that exceeded certain NAAQS. Therefore, as part of the Tier II permit application, TASCO submitted an Emission Reduction Plan. This plan proposed specific impact and emissions rate reductions, to be implemented over a five-year period. Based upon the potential emissions rates after implementation of the Emission Reduction Plan, estimated ambient impacts of all criteria pollutant emissions do not cause or significantly contribute to any violation of the NAAQS. The Department developed a proposed Tier II operating permit based on the future potential emissions rates after implementation of the Emission Reduction Plan, and incorporated the provisions of the Emission Reduction Plan into the proposed Tier II permit as a compliance schedule.

To safe guard the NAAQS standards prior to implementation of the compliance plan, the Department has required that TASCO maintain and operate a system of ambient air monitors. The purpose of these monitors is not to show compliance or non-compliance for TASCO, but rather, to assure that any NAAQS exceedence that may occur is monitored and recorded. In the event monitoring data indicate NAAQS exceedences, the Department will evaluate and determine what necessary corrective action will be taken. Although potential emissions rates of all criteria pollutant emissions have been demonstrated not to cause or significantly contribute to a violation of the NAAQS after implementation of the compliance schedule, the estimated ambient impacts of $PM_{10}$ and carbon monoxide (CO) remain close to applicable NAAQS. As a result, the Department has imposed specific $PM_{10}$ and CO emissions rate limits in the proposed Tier II operating permit to safe guard the NAAQS standards.

## Public Comments and Department Responses

**Comment 1:** **Actual/Permitted Emissions Rates**

**An area resident submitted a comment questioning the relationship between actual emissions rates and permitted emissions rates. The Idaho Conservation League also submitted a comment stating that the total amount of permitted emissions limits for the facility is unacceptably large and fails to maintain and protect airshed quality.**

Response to 1: Both of these comments are addressed together due to the similarity of the response.

TASCO is allowed to request permit emission limits greater than actual emissions. Generally this is to account for variables at the facility (industry growth, process fluctuations, etc). In the event that TASCO desired to increase actual emissions rates above permitted emissions limits, TASCO would be required to submit an application to revise the permit and increase the permit limits prior to the actual emissions increase. To obtain an allowable increase in emissions, TASCO must demonstrate that the predicted ambient impacts of the emissions would not cause or significantly contribute to a violation of an ambient air quality standard.

If TASCO exceeds an emissions limit, then it would be subject to an enforcement action that may include issuance of a notice of violation, a civil enforcement action filed in district court, or a criminal enforcement action, depending on the frequency and severity of the violations. The Department's Enforcement Procedures Manual is available for review on the Internet at:

http://www2.state.id.us/deq/pubs/epm/epm-main.pdf

Although actual emissions rates from the facility are likely to be less the requested permitted limits, the application submitted for the proposed Tier II permit demonstrates compliance with all applicable standards and the NAAQS at the requested permit limits; therefore, the Department has granted TASCO's request.

**Comment 2:** **Stricter Air Quality Standards**

**Two area residents submitted comments implying that stricter air quality standards and/or measures should be applied to TASCO. [These comments do not specify a rule or program that mandates more rigorous permit conditions.]**

Response to 2: The Department is charged by the Environmental Protection and Health Act, Idaho Code § 39-10, to operate a program to issue air pollution permits in accordance with the *Rules*. The purpose of the air program is to safeguard Idaho's air quality by limiting and controlling the emissions of air contaminates from air pollution sources. The Department carefully evaluates facility plans for construction and/or operation of these sources to ensure all are capable of meeting applicable state and federal air quality standards. The proposed and draft permits have been developed in accordance with the *Rules* and satisfy the requirements therein.

**Comment 3:** **Prevention of Significant Deterioration Applicability**

**Comments submitted by the Idaho Conservation League and the Idaho Clean Air Force state that the permits should contain Prevention of Significant Deterioration (PSD) provisions because the facility is permitted at emission rates greater than 250 tons per year.**

Response to 3: In accordance with IDAPA 58.01.01.006.36, TASCO is an existing facility with respect to the provisions of PSD, as it was constructed prior to the development of the PSD program. Although TASCO is subject to the requirements of PSD, due to a potential to emit regulated pollutants at rates greater than 250 tons per year, it does not appear that the facility has triggered applicable PSD requirements based on information currently available. The PSD provisions are part of the New Source Review program, and regulate new or modified sources. The Department administers the New Source Review program in accordance with IDAPA 58.01.01.200-228; the PSD provisions are contained in Section 205.

In order to trigger PSD, TASCO would have to initiate a major modification. A major modification is defined as any physical change or change in the method of operation that would result in a significant net emissions increase of any regulated air pollutant. Currently, the Department is investigating past PSD compliance at the Nampa facility. The Tier I permit compliance plan requires the facility to submit additional information to complete this investigation.

**Comment 4:** **Toxic Air Pollutants Applicability**

**The Idaho Conservation League submitted comments indicating that the Department has failed to limit emissions of toxic air pollutants (TAPs) in accordance with IDAPA 58.01.01.161, 585, and 586. The Idaho Clean Air Force also submitted comments stating that assumptions used in modeling TAPs must be contained in the permit.**

Response to 4: Both of these comments are addressed together due to the similarity of the response.

The provisions of IDAPA 58.01.01.585-586 are only applicable to new or modified stationary sources, and are triggered by IDAPA 58.01.01.203.03. TASCO is not a new source, nor, based on information currently available, has TASCO commenced any modification; therefore, the provisions of Sections 585 and 586 are not applicable and were not included in the proposed Tier II permit or the draft Tier I permit.

Emissions rates of all air pollutants defined as toxic (refer to IDAPA 58.01.01.006.106) were evaluated against the provisions of IDAPA 58.01.01.161. It should be noted that many operational conditions limiting criteria pollutant emissions (i.e., fuel-firing rate, throughput limits, etc.) also serve to limit TAP emissions. Additionally, the Department determined that seasonal constraints were appropriate for consideration in this evaluation, due to the seasonal nature of operations of the facility (e.g., the boilers and most processing equipment are not operated at full potential for 8760 hours per year, but rather, at ranges near potential during only the fall and winter months). Therefore, the TAP emissions estimates used in the evaluation of Section 161 applicability took into account such permit limits and operational constraints. The TAP emissions estimates are presented in Appendix A of the technical memorandum for the proposed Tier II permit.

The Department reviewed these emissions estimates and conducted impact analyses for several TAPs, including arsenic, beryllium, cadmium, mercury, nickel, selenium, acetaldehyde, crotonaldehyde, formaldehyde, propionaldehyde, and total aldehydes. The results of this impact analysis have been added in the Tier II technical memorandum as Appendix F. Based upon these estimated impacts and toxicological exposure data, it was determined that no injury or unreasonable effect, as required by IDAPA 58.01.01.161, would result. Therefore, no specific emissions rate limits for TAPs were required in the Tier II permit.

Comment 5: **Failure to Disclose Pollutants**

**The Idaho Conservation League submitted a comment stating that the Department had failed to include a thorough breakdown of all pollutants emitted by the facility, and requests that the permits be amended to include this information.**

Response to 5: The Department did include a breakdown of all criteria pollutants emitted by TASCO in the Tier II permit, as Table 15.1. This table was included in the permit as a criteria pollutant emissions inventory for informational purposes, and is based upon potential emissions rates after implementation of the compliance schedule, reflecting emissions rate limits and operational constraints in the proposed Tier II permit.

Table 14.1 of the proposed Tier II permit contains federally enforceable $PM_{10}$ and CO emissions limits with which TASCO is required to demonstrate compliance. Although potential emissions rates of all criteria pollutant emissions have been demonstrated not to cause or significantly contribute to a violation of the NAAQS after implementation of the compliance schedule, the estimated ambient impacts of $PM_{10}$ and CO are close to applicable NAAQS. As a result, the Department has imposed specific $PM_{10}$ and CO emissions rate limits in the proposed Tier II operating permit to safe guard these NAAQS.

The Department included a breakdown of all known TAP emissions in Appendix A of the technical memorandum for the proposed Tier II permit. As detailed in the response to Comment 4, there are no specific emissions limits for TAPs in the Tier II permit (although many TAP emissions are, in fact, limited by operational constraints within the permit). Therefore, this information is not appropriate for inclusion in the permit, and has not been added.

Comment 6: **Failure to Call for Best Available Retrofit Technology**

**The Idaho Conservation League submitted a comment stating that the Department should redraft the permits to require TASCO to upgrade the abatement devices on each of its emission units.**

Response to 6: As part of the Tier II permit application, TASCO committed to implementation of a fugitive dust abatement plan, installation of additional controls on the pellet mills, and replacement of the direct coal-fired dryers with an indirect steam dryer system. With these changes, the application submitted by TASCO demonstrated that the facility will be in compliance with all applicable emissions standards and will not cause or significantly contribute to a violation the NAAQS. The permits require that the current equipment will operated to maximize performance, by requiring source testing, development of operations and maintenance manuals, and monitoring of operational

parameters.

The Riley boiler may be subject to Best Available Retrofit Technology (BART); however, there are no applicable requirements for BART at this time. Requirements may be included in Idaho's regional haze implementation plan when submitted to the U.S. Environmental Protection Agency (EPA). The requirements for BART are found under the regional haze rule in 40 CFR Part 51.308. The permits have not been changed in response to this comment.

**Comment 7:** **Failure to Comply with the Strategy for Development of an Airshed Management Program for the Treasure Valley**

**A comment submitted by the Idaho Conservation League states that the *Department failed to comply with the Strategy for Development of an Airshed Management Program for the Treasure Valley (Strategy), in that there are insufficient controls on $NO_x$, $SO_x$, ammonia, and CO.***

Response to 7: Although the Strategy calls for control of particulate matter precursors and CO emissions reductions, these reductions must be implemented in accordance with the *Rules*. At this time, the Rules do not require additional controls for $NO_x$, $SO_x$, ammonia, or CO emissions. The permits have not been changed in response to this comment.

**Comment 8:** **Permit Duration**

**A comment submitted by the Idaho Conservation League states that the *proposed and draft permits do not contain an expiration date.***

Response to 8: The two permits submitted for public comment do not contain expiration dates because the permits have not been issued as final permits. In accordance with IDAPA 58.01.01.322.13 and 405.03, the permit terms will be a five-year period, beginning upon the date of issuance. At such time as the permits are issued as final permits, the issuance date and expiration date will appear on the first page of each permit, and in headers throughout the permits.

**Comment 9:** **Tier I Permit Reliance on the Tier II Permit Requirements**

**A comment submitted by the Idaho Conservation League indicates that it is *inappropriate for the Tier I permit to rely upon requirements in the Tier II permit,* because the Tier II permit is in draft [sic] form.**

Response to 9: Although the Tier II permit is currently in proposed form, the permit should be issued as a final permit after public comments are addressed by the Department. However, after addressing the public comments concerning the draft Tier I permit, this permit will go to the EPA for a 45-day review period. Tier I permits are required to contain all existing permit conditions (refer to IDAPA 58.01.01.322). Since the Tier II permit will be a final permit before the Tier I permit is a final permit, it was necessary to include all Tier II provisions within the Tier I permit. Any changes made to the proposed Tier II permit before final issuance will also be made to the Tier I before EPA review.

**Comment 10:** **Ammonia Emissions**

**A comment submitted by the Idaho Conservation League states that the Tier I**

**and Tier II permits do not control, restrict, or decrease ammonia emissions from TASCO. The comment also points out deleterious health and environmental impacts of ammonia.**

Response to 10: As discussed in the response to Comment 4, IDAPA 58.01.01.585 is not applicable with respect to the Tier I or Tier II permits. The Department evaluated the emission rate of ammonia against IDAPA 58.01.01.161, and determined that these emissions rates will not violate this section of the *Rules*. Although acute exposure to high concentrations of ammonia may result in injury to human health, ammonia dissipates rapidly and estimated ammonia emissions from TASCO do not currently trigger Section 161.

The total ammonia emission rate from TASCO was included in the modeling analysis conducted for the Maintenance Plan. The Maintenance Plan is designed to protect the Treasure Valley airshed and to plan for future developments within the airshed. Since ammonia emissions from TASCO are included within the Maintenance Plan, any regional air quality issues associated with such emissions have been addressed therein.

**Comment 11:** **National Ambient Air Quality Standard Compliance for Particulate Matter with an Aerodynamic Diameter of Ten Microns or Less, Sulfur Dioxide, and Nitrogen Oxides**

**A comment submitted by the Idaho Conservation League states that the proposed and draft permits fail to specify the means for bringing impacts of $PM_{10}$, $SO_2$, and $NO_x$ from TASCO into compliance with the NAAQS.**

Response to 11: The compliance schedule (Section 13 in the proposed Tier II permit and Section 14 in the draft Tier I permit) contains specific provisions that are predicted to reduce the ambient impacts of $PM_{10}$, $SO_2$, and $NO_x$: 1) additional control equipment is to be installed on the pellet mills, 2) emissions from the Riley boiler are to be routed to the B&W boiler stack, 3) and enhanced fugitive dust emission control plan is to be implemented, and 4) the coal-fired dryers will be replaced with a steam dryer system. The provisions of the compliance plan will result in emissions rates that have been demonstrated not to cause or significantly contribute to a NAAQS violation.

**Comment 12:** **Low-Sulfur Coal**

**A comment submitted by the Idaho Conservation League states that Department should go beyond the requirements of IDAPA 58.01.01.729 and require that TASCO use only low-sulfur coal.**

Response to 12: After implementation of the compliance schedule, TASCO has demonstrated that $SO_2$ emissions produced by combustion of coal containing 1% sulfur will not cause or significantly contribute to a violation of the NAAQS. The Rules specify a 1%-maximum standard, and no other emissions standard are violated by the use of coal with 1% sulfur content. The permit has not been changed to incorporate this comment.

**Comment 13:** **Concerns Regarding Boilers**

**The Idaho Conservation League submitted comments expressing the following concerns over emission units S-B1, S-B2, S-B3, and S-B4 (B&W No. 1, B&W No. 2, Riley, and Union boilers, respectively):**

1. **It is unclear weather the numerical limits set forth in permit condition 3.3 and table 3.2 [of the Tier I permit] are for all three boilers [i.e., S-B1, S-B2, and S-B3] combined;**
2. **The permit needs limits for all pollutants including but not limited to $SO_2$ and $NO_x$;**
3. **Newer abatement devices should be required for S-B1, S-B2, and S-B3 to reduce total emissions;**
4. **Unit S-B4 should be required to have a pollution abatement device.**

Response to 13: Permit Condition 3.3 of the Tier I permit and Permit Condition 3.1 of the Tier II permit give one collective emission limit for all three boilers because these boilers will be routed through one common stack. No further clarification is required within either of the permits, because the conditions both state:

> "Emissions of $PM_{10}$ and CO from the B&W No. 1, B&W No.2, and Riley boilers..." [emphasis added]

The Tier II permit specifically establishes $PM_{10}$ and CO emissions rate limits for the boilers because potential, facility-wide emissions rates of these two pollutants, after implementation of the compliance schedule, result in estimated ambient impacts that are very close to the applicable NAAQS limits. As a result, the Department has imposed specific $PM_{10}$ and CO emissions rate limits in the proposed Tier II operating permit to safe guard the NAAQS. As part of the Tier II compliance schedule, a revised Tier II operating permit will be required at which time the Department will again re-evaluate all regulated air pollutant emissions from the facility.

After implementation of the compliance schedule, potential emission rates of other criteria pollutants and TAPs do not result in estimated ambient impacts that threaten any applicable ambient standard. In addition, these emissions will be limited by the operational constraints used to control $PM_{10}$ and CO emissions rates. In this situation, $PM_{10}$ and CO emissions rates are commonly referred to as "limiting pollutants", in that permit conditions limiting emissions of these pollutants serve to limit other pollutant emissions rates.

TASCO submitted a Tier II permit application that demonstrates compliance with all applicable standards, while treating emissions from the Union boiler as uncontrolled. Since TASCO has demonstrated compliance with applicable standards without the need for additional control equipment on the Union boiler, the Department did not require additional control equipment in the permit (also refer to Comment Responses 1 and 12).

No changes have been made to the permits in regard to this comment.

Comment 14: Concerns Regarding the Pulp Dryers

***Comments were submitted from the Idaho Conservation League stating that:***

1. **The Department should require control equipment for Emission Unit S-D1 (South dryer);**
2. **The permit needs limits for all pollutants including but not limited to $SO_2$ and $NO_x$, for S-D1, S-D2, and S-D3 (South, Center, and North dryers, respectively);**
3. **The permit fails to list emission limits for S-D2 and S-D3.**

Response to 14: TASCO has demonstrated compliance with applicable standards without the need for additional control equipment on the South dryer; therefore, the Department did not require additional control equipment in the permit (also refer to Comment Responses 1 and 12).

After implementation of the compliance schedule, potential emission rates of criteria pollutants and TAPs do not result in estimated ambient impacts that exceed any applicable ambient standard. The Department has only imposed specific $PM_{10}$ and CO emissions rate limits in the proposed Tier II operating permit to safe guard the NAAQS standards. Additionally, $PM_{10}$ and CO serve as limiting pollutants for the pulp dryers (refer to the response to Comment 13).

In accordance with the compliance schedule, the Center and North dryers are to be removed from service in the fifth year of the permit (Permit Conditions 13.8 and 14.8 of the Tier II and Tier I permits, respectively). Consequently, no emissions limits were established for these sources in the Emission Unit(s) sections of the permits. However, in order to maintain the integrity of the Maintenance Plan, interim emissions limits for S-D2 and S-D3 are established in the compliance schedule (Permit Conditions 13.2 and 14.2 of the proposed Tier II and draft Tier I permits, respectively). The emissions limits in the compliance schedule correspond to the emissions rates used in the modeling analysis for the Maintenance Plan, and assure that TASCO will not exceed emissions rates used to develop the Maintenance Plan. Upon removal of the two dryers, Permit Conditions 13.2 and 14.2 will no longer be in effect.

No changes have been made to the permits in regard to this comment.

**Comment 15:** **Concerns Regarding the Kilns**

**A comment was submitted by the Idaho Conservation League stating that permitted CO emission rates from S-K1 and S-K2 (A and B lime kilns, respectively) should be reduced. Additionally, the permits need limits for all pollutants including but not limited to $SO_2$ and $NO_x$**

Response to 15: Refer to Comment Response 1. Since TASCO has demonstrated compliance with applicable standards at the requested (i.e., permitted) CO emission rate, the Department has granted the requested permit limits.

After implementation of the compliance schedule, potential emission rates of criteria pollutants and TAPs do not result in estimated ambient impacts that exceed any applicable ambient standard. The Department has only imposed specific $PM_{10}$ and CO emissions rate limits in the proposed Tier II operating permit to safe guard the NAAQS standards. Additionally, $PM_{10}$ and CO serve as limiting pollutants for the kilns (refer to the response to Comment 13).

**Comment 16:** **Additional Emissions Limits in the Tier I Permit**

**A comment was submitted by the Idaho Conservation League stating that the draft Tier I permit should "...provide emissions limits for all expected pollutants for each emission unit."**

Response to 16: The Tier I permit is not intended to establish any new applicable requirement (i.e., emissions limits) for a facility. In accordance with IDAPA 58.01.01.322 .01-03, the Tier

I permit contains only existing applicable requirements (refer to IDAPA 58.01.01.008.03 for a definition of "applicable requirement"). No changes have been made to the Tier I permit in regard to this comment.

For more information on the Tier I permitting process, please refer to the EPA memo entitled "White Paper for Streamlined Development of Part 70 Permit Applications", dated July 10, 1995.

The Tier II permit could be used as a vehicle for implementing additional emission rate limits; however, $PM_{10}$ and CO are limiting pollutants of concern, and permit conditions limiting emissions of these two pollutants serve to limit emissions of other pollutants (refer to Comment Response 13).

**Comment 17:** **Input Based Pollution Limits**

**The Idaho Conservation League submitted a comment in regard to the draft Tier I permit stating:**

> **"DEQ has defined the pollution limits as maximums. DEQ need [sic] to also articulate this in terms of pollution per input unit. For instance, DEQ needs to provide the allowable pounds of pollution at specific emission units per BTU (for boilers) or other appropriate measure of input for other units."**

Response to 17: The emission limits are taken directly from the proposed Tier II permit. Limiting a mass of pollutant on an input variable-basis would constitute a new applicable requirement, and as stated in Comment Response 16, the Tier I permitting process is not intended to establish new applicable requirements.

Although the Tier II permit could be used as a vehicle for implementing input variable-based emissions limits, such limits are not required to satisfy applicable emissions standards. As stated in Comment Response 1, TASCO is allowed to request any emissions rate, so long as a demonstration of compliance with applicable standards is provided. Establishing a requested emission rate on an input variable-basis would only provide an alternate method for regulating emissions.

No changes have been made to the Tier I permit in regard to this comment.

**Comment 18:** **Nitrogen Oxides Ambient Monitoring Requirement**

**The Idaho Conservation League submitted a comment in regard to the draft Tier I permit requesting that TASCO be required to monitor ambient concentrations of $NO_x$ and other pollutants.**

Response to 18: Requiring any additional ambient monitoring would constitute a new applicable requirement, and as stated in Comment Response 16, the Tier I permitting process is not intended to establish new applicable requirements.

Although the Tier II permit could be used to establish additional monitoring requirements, the estimated ambient impact of potential $NO_x$ emissions from TASCO, prior to implementation of the compliance schedule, are only slightly above the annual NAAQS standard for nitrogen dioxide ($NO_2$). Upon completion of Permit Condition

13.4.2 in the compliance schedule contained in the proposed Tier II permit, estimated ambient impacts are well below the $NO_2$ NAAQS.

Although potential $NO_x$ emissions, prior to compliance schedule implementation, resulted in estimated ambient impacts over the standard, it is unlikely that the actual emissions of $NO_x$ will result in impacts that cause or significantly contribute to a NAAQS violation. Additionally, TASCO's emissions estimates make the conservative assumption that all $NO_x$ emissions are $NO_2$ (i.e., the estimated impact is overestimated). It should also be noted that the $NO_2$ NAAQS is an annual standard, and Permit Condition 13.4.2 must be implemented within one year of final Tier II permit issuance. Therefore, a $NO_x$ monitor would not accumulate a year of monitoring data prior to TASCO's implementation of the relevant (i.e., estimated impact-reducing) provision of the compliance schedule.

No changes have been made to the Tier I permit in regard to this comment.

**Comment 19:** **Hazardous Air Pollutant Re-opener**

**The Idaho Conservation League submitted a comment in regard to the draft Tier I permit requesting "...a 're-opener clause' to allow the permit to be re-opened when DEQ does finally propagate additional [hazardous air pollutant] standards and guidelines.**

Response to 19: Permit Condition 15.15 in the draft Tier I General Provisions states:

> "The permittee shall comply with applicable requirements that become effective during the permit term on a timely basis."

No changes have been made to the Tier I permit in regard to this comment.

**Comment 20:** **Enforceable Facility-wide Emissions Limits**

**A comment was submitted by the Idaho Clean Air Force stating:**

> **"Neither the Tier I nor the Tier II permits contain enforceable emission limits for the facility as a whole...Emission limits should be stated in the permit, enforceable monitoring and record keeping mechanisms should be established to assure that these limits are adhered to, and air dispersion modeling should be performed to demonstrate that these limits are protective of public health."**

Response to 20: The emissions limits are established in the Tier II permit; the Tier I permit cannot establish any new applicable requirements for a facility (refer to Comment Response 16). Since the comment addresses emissions limits, associated monitoring and recordkeeping, and dispersion modeling, the response will be directed at the Tier II permit; emissions limits and modeling analyses are not established/conducted within the Tier I permitting process.

The first sentence in this comment appears to imply that facility-wide emissions limits are required in the permits. IDAPA 58.01.01.403 states that a source must demonstrate compliance with applicable emission standards and the NAAQS. IDAPA 58.01.01.006.103 defines a stationary source as "Any building, structure, emissions

unit, or installation which emits or may emit air pollution." A facility is defined by IDAPA 58.01.01.006.37 as:

> "...all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one (1) or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)..."

The Department does not permit facilities, but rather sources at a facility.

The second portion of the quote appears to imply that the permits do not contain emission limits, enforceable monitoring or record keeping in the permit, and that no air dispersion modeling was conducted in conjunction with development of the permits. Federally enforceable emissions limits for sources at the TASCO facility are summarized in Table 14.1 of the Tier II permit. Each of the sources is also addressed in an individual section (Sections 3-12) of the permit, along with emissions limits, and required monitoring and recordkeeping. The monitoring and recordkeeping requirements will be used to determine compliance or non-compliance with the emissions limits. As discussed on page 8 of the technical memorandum, dispersion modeling was conducted with ISC-PRIME to demonstrate that permit limits are protective of public health and the environment (i.e., no NAAQS are exceeded).

**Comment 21:** **Ambient Air Quality Monitoring**

**The Idaho Clean Air Force submitted a comment stating that the Department should not allow ambient air quality monitoring to be used in place of enforceable emission limits.**

Response to 21: The intent of the ambient monitoring requirements is not to demonstrate compliance with the emissions limits within the permits. As stated in the response to Comment 20, monitoring and recordkeeping provisions within the permits will be used to determine TASCO's compliance status with respect to emissions limits.

As required by IDAPA 58.01.01.403, the Tier II permit application and Emission Reduction Plan submitted by TASCO demonstrates compliance with applicable emissions standards and shows that potential emissions from the facility will not cause or significantly contribute to a NAAQS violation. However, the Emission Reduction Plan proposes several major changes at the facility in order to reduce emissions for the compliance demonstration (refer to Comment Response 11). In order to carry out these changes, a five-year plan has been proposed by TASCO. Although it has been demonstrated that potential emissions from the facility will not cause or significantly contribute to a NAAQS violation after the changes are implemented, modeling analyses indicate that potential emissions from the facility could result in ambient impacts that exceed certain NAAQS standards before these changes are completed. Although an actual NAAQS exceedence is still deemed unlikely, the Department has required a system of ambient monitors to be operated by TASCO in order to assure that any exceedence that may occur is monitored and recorded. This is done to safe guard public health and assure that an area of concern is addressed.

It should be noted that the ambient monitors cannot be used for a compliance demonstration for specific stack emissions limits. However, any exceedences measured by the monitors will be evaluated by the Department to determine the cause of such exceedence. Permit Condition 2.5.2 of the proposed Tier II permit requires

that the monitoring sites be placed in locations based upon air dispersion modeling impact analyses (i.e., in areas expected to have high ambient impacts as a result of emissions from TASCO), however, these monitors will show ambient concentrations that result from a variety of sources.

No changes have been made to the permits in regard to this comment.

**Comment 22:** **Compliance Plan Schedule**

**A comment was submitted by the Idaho Clean Air Force stating that the five-year compliance plan should be reduced to six months.**

Response to 22: *Although the Department generally agrees that five years is an excessive time period,* TASCO has demonstrated that a five-year period is warranted from a technical standpoint. Installation and operation of the steam dryer system is the only compliance schedule provision that requires a five-year period; all other provisions not associated with the steam dryer system are required to be complete within one year. Fabrication, installation, and operation of the steam system requires substantial planning and will entail significant operational changes at the facility. The facility must meet annual milestones each year of the five-year schedule to assure installation and operation of the steam system by the end of the schedule.

No changes have been made to the permits in regard to this comment.

**Comment 23:** **Permit Shield**

**A comment submitted by the Idaho Clean Air Force indicates that the permit *shield provision* [General Provision 15.19 of the draft Tier I permit] is inappropriate because the provision "...exempts TASCO from compliance with all *air* quality regulations other than those specifically included in the permit."**

Response to 23: The permit shield provisions are taken from IDAPA 58.01.01.325 and 40 CFR 70.6(f), and are included in all Tier I permits issued by the Department. The permit does not exempt TASCO from compliance with any regulation, but rather, asserts that compliance with the permit is deemed to be compliance with all applicable requirements, provided that such applicable requirements are included and identified in the permit. Refer specifically to IDAPA 58.01.01.325.01(a). No changes have been made to the Tier I permit as a result of this comment.

**Comment 24:** **Odor Concerns**

**A comment was submitted by the Idaho Clean Air Force stating that activities *designed to address odor problems should be added to the compliance* schedule.**

Response to 24: Permit Conditions 2.5 and 2.6 of the Tier I permit contain the applicable requirement for odorous releases, as well as monitoring and recordkeeping necessary to show compliance with the requirement. The Department deems these provisions of the permit as sufficient to enforce compliance with applicable provisions of the *Rules* (refer to IDAPA 58.01.01.775-776). TASCO is not currently classified as out of compliance with IDAPA 58.01.01.755-776; therefore, it is inappropriate to place Permit Conditions 2.5 and 2.6 in the compliance schedule. No changes have been made to the permits

as a result of this comment.

The Department anticipates that removal of the Center and North pulp dryers, along with installation and operation of the steam dryer system (refer to Permit Conditions 14.8 of the Tier I permit) will significantly reduce or eliminate historical odor issues associated with the facility.

Comment 25: Ambient Monitoring Requirements

**TASCO submitted a comment requesting that the ambient air monitoring requirements be removed from the permits. The following justifications were provided:**

1. **The planning and final proposal of the Emission Reduction Plan [contained in the Tier II permit application] was completed in part to avoid the need for ambient air monitoring.**
2. **TASCO's actual measured $PM_{10}$ air quality impacts on air quality in Northern Ada County and Canyon County are not significant.**
3. **TASCO agreed to a five year, $12 million emission reduction plan to reduce emissions from the plant.**
4. **The Department stated that ambient monitoring is justified because NAAQS compliance is not demonstrated until the compliance plan is fully implemented. This presumption of non-compliance during the interim period is not supportable. The Nampa facility cannot by itself violate a NAAQS.**
5. **The purpose for ambient air monitoring is not entirely well founded, particularly since TASCO is located in an attainment area. Ambient air monitoring will not provide additional data that is not currently predicted by modeling.**
6. **Installation of the ambient air monitors is not expressly required in the *Rules*.**
7. **The cost of the ambient air monitors is significant and was not contemplated while developing the Emission Reduction Plan. TASCO is of the opinion that resources of the company are better utilized for emission reduction projects.**

**In the event that the ambient air monitoring requirements are not removed from the permits, TASCO requested the following revisions:**

1. **TASCO requested that only the Tapered Element Oscillating Microbalance (TEOM) $PM_{10}$ monitor be required; the requirement for the high-volume $PM_{10}$ monitor should be removed.**
2. **As an alternative to real-time telemetry requirements, TASCO proposed to provide this data as requested by the Department for purposes of evaluating air stagnation conditions or other episodes.**
3. **TASCO requested that the option to petition the Department for removal of the ambient air monitors be replaced by a permit condition with specific dates for removal of the monitors.**
4. **TASCO requested that the ambient air monitoring requirement for $SO_2$ be removed from the permits. TASCO states that modeling of actual emissions rates after the first year of the implementation plan shows compliance with all $SO_2$ NAAQS standards.**

Response to 25: The intent behind the ambient monitoring requirements has been addressed in the response to Comment 21. TASCO has successfully demonstrated that potential

emissions from the facility will not cause or significantly contribute to a violation of applicable standards after implementation of the compliance schedule; however, prior to compliance schedule implementation, the Tier II permit application fails to demonstrate compliance with IDAPA 58.01.01.403.02. Therefore, the ambient monitoring system is required to fulfill the requirements of Section 403 of the *Rules* and to safe guard public health and the environment. IDAPA 58.01.01.405.01(d) grants the Department the authority to include ambient monitoring requirements in a Tier II permit.

With respect to the revisions requested by TASCO in this comment, the Department concurs that firm dates for removal of the monitoring system are appropriate in the permits. The terms of the proposed Tier II and draft Tier I permits have been modified to include such provisions. Upon completion of relevant compliance schedule provisions, TASCO may cease maintenance and operation of the affected monitor(s).

The two $PM_{10}$ monitors are required because the potential emissions of this pollutant, prior to implementation of the compliance schedule, result in two distinct and separate areas that exhibit estimated ambient $PM_{10}$ concentrations that may cause or contribute to a violation of the NAAQS. The two areas are located northwest and southeast of the facility, and will require two separate monitors (refer to Appendix B of the technical memorandum for the proposed Tier II permit). The two different monitor types are required in order to characterize the nature of the $PM_{10}$ impacts. Similarly, the modeling analysis indicates one area to the southeast of the facility that exhibits estimated ambient $SO_2$ concentrations that may cause or contribute to a violation of the NAAQS. The permits have not been modified as a result of this portion of the comment.

The Department maintains that real-time telemetry for the ambient monitors is a reasonable permit condition, and has not modified the permits in response to this portion of the comment. Details regarding the real-time telemetry will be addressed further in the ambient monitoring protocol required by Permit Condition 2.5.1 of the proposed Tier II permit and Permit Condition 2.17.1 of the draft Tier I permit.

Comment 26: **Permit Condition 1.1 of Tier II Permit**

**TASCO submitted a comment requesting that Permit Condition 1.1 of the proposed Tier II Permit be revised to state:**

> **"This Tier II operating permit establishes facility-wide requirements necessary to ensure that the emissions from the Nampa facility do not cause or significantly contribute to a violation of the NAAQS, in accordance with IDAPA 58.01.01.403.02. This Tier II project initiated to establish enforceable emissions limits to support the Northern Ada County PM10 SIP control strategy."**

Response to 26: The Department concurs with this comment and has added this language to the proposed Tier II permit.

Comment 27: **Permit Condition 2.2.6 of the Tier II and Tier I Permits**

**TASCO submitted a comment requesting that Permit Condition 2.2.6 of the permits be removed. Permit Condition 2.2.6 placed seasonal operating constraints upon two fugitive sources, based on the modeling submitted with the**

**Tier II permit application. TASCO submitted a revised modeling analysis and justification in support of this request.**

Response to 27: The emissions factor originally used to estimate $PM_{10}$ emissions for both of these sources was found to be an emissions factor for total suspended particulate (TSP). Use of the TSP emissions factor resulted in an over-estimation of $PM_{10}$ emissions from the two sources. TASCO re-evaluated $PM_{10}$ emissions rate estimates from the sources using an appropriate $PM_{10}$ emissions factor, and conducted a modeling analysis to determine facility-wide, estimated ambient impacts without seasonal constraints on these two sources. This modeling analysis successfully demonstrates that seasonal constraints are not required on these sources in order to assure that TASCO does not cause or contribute to a NAAQS violation.

The Department has reviewed and approved the modeling analysis submitted with this comment. Attachment 1 of this document contains a summary of the review. Based upon approval of the revised modeling analysis, the Department has removed Permit Condition 2.2.6 from the proposed Tier II and draft Tier I permits.

Comment 28: Exceptions to Permit Condition 2.2.2 of the Tier II and Tier I Permits

**TASCO submitted a comment requesting that two exceptions be incorporated into Permit Condition 2.2.2 of the proposed Tier II and draft Tier I permits. TASCO accepts the provisions of the conditions for all equipment, with the exceptions of the Coal Rolling Packer and temporary Rental Equipment.**

Response to 28: The Department concurs with this comment and has added these exceptions to the Tier II and Tier I permits.

Comment 29: Permit Condition 2.2.5 of the Tier II and Tier I Permits

**TASCO submitted a comment requesting that Permit Condition 2.2.5 of the permits be changed to require application of water to the coal storage area twice a week, with a surfactant application once per year, after the coal storage area has reached final grade.**

Response to 29: The Department has determined that TASCO's request is reasonable and has modified the permits accordingly. It should be noted that TASCO is still subject to IDAPA 58.01.01.650-651, and should the proposed control methodology prove insufficient, TASCO may have to apply surfactants to the coal storage area on a more frequent basis to maintain compliance with these provisions of the *Rules*.

Comment 30: Performance Test Reporting Requirements

**TASCO submitted a comment asserting that there is no provision within the *Rules* specifically requiring source test data and performance testing reports to be reported to EPA. Therefore, TASCO requested that this requirement be removed from Permit Conditions 3.11, 4.9, 5.14, 6.11, 7.10, 8.10, 9.10, 10.11, 11.11, and 12.10 of the draft Tier I permit. TASCO also requests a 60-day requirement for submission of source test results after completion of the test. The proposed Tier II and draft Tier I permits specify 30 days.**

Response to 30: The Department concurs with TASCO that the *Rules* do not explicitly require source

test results to be submitted to EPA: therefore, these provisions have been removed from the draft Tier I permit. However, the source test reports submitted to the Department will be made available to EPA upon request.

In accordance with IDAPA 58.01.01.157.04, any source test performed to satisfy a requirement imposed by a state permit must be submitted to the Department within 30 days of completion of the test. Therefore, these permit conditions have not been changed. If TASCO finds that it needs more than 30 days to submit the results of a performance test, it may request that the Department grant an extension.

Comment 31: *Performance Test Schedule*

**TASCO submitted a comment requesting that the language regarding the schedule for conducting performance tests (Permit Conditions 2.10-2.14 in the proposed Tier II permit) be revised to require each test during the first beet campaign following the completion of the compliance task referred to in Section 13.**

Response to 31: With the exception of Permit Condition 2.10.1 of the Tier II permit, The Department concurs with this comment and has modified the permits accordingly.

Permit Condition 2.10.1 requires that TASCO conduct a source test on the dryers within 60 days of permit issuance. This source test is intended to assure compliance with the emissions limits contained in Permit Condition 13.2 of the proposed Tier II permit. Emissions from the dryers will not be reduced by the terms of the compliance schedule for a five-year period. The emissions limits contained in Permit Condition 13.2 were used in the modeling analysis conducted for the Maintenance Plan. In order to assure the integrity of the Maintenance Plan, the Department maintains that this requirement is a reasonable and appropriate condition for the permit and has not changed the condition in either of the permits.

Comment 32: **Permit Condition 2.10.1 of proposed Tier II Permit/Permit Condition 5.9.1 of the draft Tier I Permit**

**TASCO submitted a comment requesting clarification of the term "throughput of dryer" in Permit Condition 2.10.1 of proposed Tier II Permit and Permit Condition 5.9.1 of the draft Tier I Permit. Tons of input to the dryer (i.e., throughput of dryer) should be expressed as an arithmetic total of coal mass combusted, wet pulp mass, and mass of CSB applied.**

Response to 32: The Department concurs with this comment and has clarified this term accordingly in the Tier II and Tier I permits.

Comment 33: *Performance Test Methodology*

**TASCO submitted several comments requesting alternative test methods for $PM_{10}$ performance test requirements contained in the proposed Tier II and draft Tier I permits. Specifically, TASCO requests that EPA Method 5 and Method 202 be specified [the permits currently specify EPA Methods 201a and 202] for performance testing of the dryers, Union boiler, lime slaker system, sugar handling system baghouses, and lime building baghouse,**

Response to 33: The permits specify EPA Methods 201a and 202 or a Department-approved alternative (refer to Permit Condition 2.7 in the proposed Tier II permit and Permit Condition 2.19 in the draft Tier I permit). Should TASCO choose to use alternate test methods for any required performance test(s), the proposed test methodology should be presented to the Department in a test protocol (refer to Permit Condition 2.6 in the proposed Tier II permit and Permit Condition 2.18 in the draft Tier I permit).

Comment 34: Pellet Mill Cyclone Performance Testing Schedule

**TASCO submitted comments requesting that the performance testing requirement for the pellet mills, prior to installation of control equipment as required by the compliance schedule, be removed from the permits. TASCO states that source testing the cyclones would require installation of expensive temporary stacks, platforms, and sampling ports, which must be removed after the tests to facilitate installation of the control equipment.**

Response to 34: The original intent of the pellet mill cyclone source testing requirement was to demonstrate compliance with the interim $PM_{10}$ emissions limits in Permit Condition 13.2 of the proposed Tier II permit. These emissions limits are in effect until the control equipment is installed on the pellet mills, required during the first year of the permit by Permit Condition 13.4.

The Department reviewed the methodology used to calculate $PM_{10}$ emissions rate estimates for the pellet mills (presented in Appendix 2 of TASCO's Tier II permit application). It appears that TASCO was conservative in calculating the pellet mill emissions rate estimates (i.e., the estimated emissions rates are probably greater than actual emissions rates). TASCO used AP-42 emission factors, assumed that all particulate matter is $PM_{10}$, and added a 15% safety factor to the emissions estimates. Due to the temporary status of the current exhaust arrangement of the pellet mills and the conservative nature of the emissions estimates, the Department has removed the pellet mill source testing requirements from the permit (Permit Condition 2.10.2 in the proposed Tier II permit). However, the requirement to conduct a source test for $PM_{10}$ emissions from the pellet mills after installation of the control equipment (Permit Condition 2.11.3 of the proposed Tier II permit) remains in the permit.

Comment 35: Pellet Mill Performance Test Monitoring Requirements

**TASCO submitted comments requesting that the monitoring requirements for the performance test required for the pellet mill (after installation of the control equipment), be changed. The monitoring requirements are found in Permit Condition 2.11.3 of the proposed Tier II permit and Permit Condition 6.7.1 of the draft Tier I permit. TASCO states that the appropriate monitoring parameters are total throughput using the dry shred weight-o-meter and applicable control device parameter(s).**

Response to 35: The Department concurs with this comment and has clarified these terms accordingly in the Tier II and Tier I permits.

Comment 36: Union Boiler Source Test

**TASCO submitted comments requesting that the source test requirements for the Union boiler be removed based upon: 1) natural gas is a "clean fuel", 2) total**

**emissions from the boiler represent less than 0.4% of the emissions at the facility, and 3) emission rates from the boiler would not reasonably be expected to significantly contribute to any potential NAAQS concerns at the facility. This requirement appears as Permit Condition 2.12.1 in the proposed Tier II permit, and as Permit Condition 4.6 in the draft Tier I permit.**

Response to 36: Although the Department agrees that particulate matter emissions from a natural gas-fired boiler generally do not represent an area of concern, the Department maintains that TASCO must conduct a source test for particulate matter on the Union boiler. The methodology used to estimate $PM_{10}$ emissions rates for the boiler (refer to Appendix 2 of TASCO's Tier II permit application) back-calculates an emissions factor based on the grain loading standard of IDAPA 58.01.01.677. There is little basis for this calculation.

Additionally, the modeling analysis submitted by TASCO in the Tier II permit application indicates that the ambient impact of $PM_{10}$ emissions from the facility are extremely close to applicable NAAQS standards. In this situation, it is appropriate to verify all $PM_{10}$ emissions calculations used in the dispersion analysis.

Finally, the performance test is relied upon to establish a gas-firing rate limit in Permit Condition 4.5 of the Tier proposed II permit and the draft Tier I permit. The performance test is required in order to establish a correlation between fuel-firing rate and emissions rate(s), allowing the use of fuel-firing rate monitoring as a demonstration of compliance for emissions rate limits.

This is a one-time source test requirement that assures accuracy of the emissions estimates and the dispersion modeling. No changes have been made to the permits as a result of this comment.

Comment 37: **Lime Slaker System Source Test**

**TASCO submitted comments requesting that the source test requirements for the lime slaker system be removed based upon: 1) due to the saturated conditions, source testing will be extremely difficult, 2) total emissions from the slakers represent less than 0.04% of the emissions at the facility, 3) the slakers' stack is small and will not accommodate the large apparatus required to conduct the test and 4) emission rates from the slakers would not reasonably be expected to significantly contribute to any potential NAAQS concerns at the facility. This requirement appears as Permit Condition 2.12.2 in the proposed Tier II permit, and as Permit Condition 8.6 in the draft Tier I permit.**

Response to 37: The original intent of the lime slaker source testing requirement was to demonstrate compliance with the $PM_{10}$ emissions limits in Permit Condition 8.3 of the proposed Tier II permit.

Although the Department agrees that particulate matter emissions from the lime slakers generally do not represent an area of concern, the Department maintains that TASCO must conduct a source test for particulate matter on the lime slakers. The performance test is relied upon to establish a throughput rate limit in Permit Condition 8.5 of the Tier proposed II permit and Permit Condition 8.4 of the draft Tier I permit. The performance test is required in order to establish a correlation between throughput rate and emissions rate(s), allowing the use of throughput rate monitoring as a demonstration of compliance for emissions rate limits.

Additionally, the modeling analysis submitted by TASCO in the Tier II permit application indicates that the ambient impact of $PM_{10}$ emissions from the facility are extremely close to applicable NAAQS standards. In this situation, it is appropriate to verify all $PM_{10}$ emissions calculations used in the dispersion analysis.

This is a one-time source test requirement that assures accuracy of the emissions estimates and the dispersion modeling. No changes have been made to the permits as a result of this comment.

Comment 38: Sugar Handling System Baghouse(s) Source Test

**TASCO submitted comments requesting that the source test requirements for the sugar handling system baghouses be removed based upon: 1) emissions from the baghouses are pure sugar and are not proven to pose a health risk, 2) total emissions from the baghouses represent less than 0.07% of the emissions at the facility, and 3) emission rates from the baghouses would not reasonably be expected to significantly contribute to any potential NAAQS concerns at the facility. This requirement appears as Permit Conditions 2.13.1 and 2.13.2 in the proposed Tier II permit, and as Permit Conditions 10.7 and 11.7 in the draft Tier I permit.**

Response to 38: The original intent of the sugar handling system baghouse source testing requirements was to demonstrate compliance with the $PM_{10}$ emissions limits in Permit Condition 11.3 of the proposed Tier II permit.

It should be emphasized that TASCO's argument that sugar emissions are not a health threat has no bearing upon the Department's response to Comment 38. IDAPA 58.01.01.006.72 defines $PM_{10}$ as "all particulate matter in the ambient air with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers...". Emissions of any type of particulate matter, including sugar, that meet this definition are considered $PM_{10}$ from a regulatory standpoint.

Although the Department agrees that particulate matter emissions from the sugar handling system baghouses generally do not represent an area of concern, the Department maintains that TASCO must conduct a source test for particulate matter on these sources. The performance test is relied upon to establish a throughput rate limit in Permit Condition 11.6 of the Tier proposed II permit and Permit Condition 11.5 of the draft Tier I permit. The performance test is required in order to establish a correlation between throughput rate and emissions rate(s), allowing the use of throughput rate monitoring as a demonstration of compliance for emissions rate limits.

Additionally, the modeling analysis submitted by TASCO in the Tier II permit application indicates that the ambient impact of $PM_{10}$ emissions from the facility are extremely close to applicable NAAQS standards. In this situation, it is appropriate to verify all $PM_{10}$ emissions calculations used in the dispersion analysis.

This is a one-time source test requirement that assures accuracy of the emissions estimates and the dispersion modeling. No changes have been made to the permits as a result of this comment.

Comment 39: Lime Building Baghouse Source Test

**TASCO submitted comments requesting that the source test requirements for the lime building baghouse be removed based upon: 1) total emissions from the baghouse represents less than 0.02% of the emissions at the facility, and 3) emission rates from the baghouse would not reasonably be expected to significantly contribute to any potential NAAQS concerns at the facility. This requirement appears as Permit Condition 2.13.3 in the proposed Tier II permit, and as Permit Condition 12.6 in the draft Tier I permit.**

Response to 39: Although the Department agrees that the estimated particulate matter emission rate from the lime kiln building baghouse do not generally represent an area of concern, the Department maintains that TASCO must conduct a source test for particulate matter on the lime kiln building baghouse. The methodology used to estimate $PM_{10}$ emissions rates for the baghouse (refer to Appendix 2 of TASCO's Tier II permit application) uses many assumptions about emissions factors and process variables. No justifications have been provided for these assumptions.

The performance test is also relied upon to establish a throughput rate limit in Permit Condition 12.5 of the Tier proposed II permit and Permit Condition 12.4 of the draft Tier I permit. The performance test is required in order to establish a correlation between throughput rate and emissions rate(s), allowing the use of throughput rate monitoring as a demonstration of compliance for emissions rate limits.

Additionally, the modeling analysis submitted by TASCO in the Tier II permit application indicates that the ambient impact of $PM_{10}$ emissions from the facility are extremely close to applicable NAAQS standards. In this situation, it is appropriate to verify all $PM_{10}$ emissions calculations used in the dispersion analysis.

This is a one-time source test requirement that assures accuracy of the emissions estimates and the dispersion modeling. No changes have been made to the permits as a result of this comment.

Comment 40: Operations and Maintenance Manual Requirements

**TASCO submitted several comments requesting that the requirements for the Operations and Maintenance (O&M) manuals be revised. The general requirements for the O&M manuals appear in Permit Condition 2.15 of the proposed Tier II permit and in Permit Condition 2.22 of the draft Tier I permit, although there are specific O&M manual requirements located throughout the permits (e.g., each emissions unit section and the Tier II General Provisions). Specifically, TASCO requests that:**

1. **Permit language be added specifying that the O&M manuals are specific to the control equipment;**
2. **The requirement to have Department-approval of the O&M manuals be removed from the permits;**
3. **Permit language be added specifying that the content of the O&M manuals include 1) the Monitoring and Maintenance Procedures contained in Section 5C of TASCO's Title V permit application, 2) frequency of inspections for control equipment, and 3) parametric monitoring operating ranges and supporting documentation.**

Response to 40: The Department concurs with the first two requests listed in this comment and has modified these terms accordingly in the Tier II and Tier I permits.

The Department has not modified the permits in response to the third request in this comment. A review of the Monitoring and Maintenance Procedures contained in Section 5C of TASCO's Title V permit application indicates that this information may be out of date and does not accurately address current operations at the facility. Additionally, changes in equipment and control devices resulting from TASCO's Emission Reduction Plan (refer to the Tier II permit application) are not addressed in the Title V permit application. There is no language in the permits that prevents TASCO from using the Title V application material, where appropriate, in the development of O&M manuals; however, it is inappropriate to restrict O&M manual content to items listed in the Title V application. Inspection frequency and monitoring requirements are already included in Permit Conditions 2.15.2 and 2.15.3 of the proposed Tier II permit and in Permit Conditions 2.22.2 and 2.22.3 of the draft Tier I permit.

Comment 41: Carbon Monoxide Emissions Rate Limits

**TASCO submitted comments stating that the CO emissions for the boilers, pulp dryers, and lime kiln have no regulatory basis and should be removed from the permits. TASCO gave the following reasons for removing the emissions limits:**

1. **The Tier II permit is intended to support the Maintenance Plan, and does not include CO;**
2. **The Tier II permit application successfully demonstrated compliance with the NAAQS for CO;**
3. **There are no other emissions standards or rules to which TASCO is subject that can be relied upon to support CO emissions limits at this time.**

Response to 41: Although CO emissions may not be the direct concern of the Maintenance Plan, IDAPA 58.01.01.403.02 requires that TASCO to demonstrate that the facility would not cause or significantly contribute to a violation of any ambient air quality standard (including CO NAAQS) see also IDAPA 58.01.01.577.05. The CO emissions limits were included in the permit because the estimated ambient impact of potential CO emissions from the facility, as demonstrated by the modeling analysis submitted with the Tier II permit application, is extremely close to the 8-hour NAAQS for CO. In order to assure protection of the standard, the Department has included emissions limits in the Tier II permit.

No changes have been made to the permits as a result of this comment.

Comment 42: Pulp Dryer Throughput Limits

**TASCO submitted comments stating that the pulp dryer throughput limits are overly restrictive and unworkable as a constraint. These provisions appear as Permit Condition 5.5 in the proposed Tier II permit and as Permit Condition 5.6 in the draft Tier I permit. TASCO has recommended that the throughput limit be established as 120% of the throughput achieved by the most recent Department-approved test, not to exceed the maximum design limit of each dryer.**

Response to 42: The Department concurs with this comment and has modified these terms accordingly in the Tier II and Tier I permits.

Comment 43: Pulp Dryer Monitoring Requirements

**TASCO submitted comments stating that the monitoring requirements for the pulp dryers would not provide meaningful operating information. The monitoring requirements addressed in this comment are Permit Condition 5.8 in the proposed Tier II permit and Permit Condition 5.7 in the draft Tier I permit. TASCO suggests that the scrubber differential be monitored instead of pressure drop across the cyclone.**

Response to 43: The Department concurs with this comment and has modified these terms accordingly in the Tier II and Tier I permits.

Comment 44: Equipment Operating Requirements

**TASCO submitted comments stating that the requirements to use manufacturer's and O&M manual specifications to establish operating parameters is not appropriate due to the fact that some the affected equipment does not have manufacturer's specifications available. TASCO suggests changing the permit language to specify manufacturer's or O&M manual specifications.**

Response to 44: The Department concurs with this comment and has modified these terms accordingly in the Tier II and Tier I permits.

Comment 45: Dryer and Pellet Mill Emissions Limits

**TASCO submitted comments stating that the permits do not clearly delineate which set of emissions limits (i.e., the limits in the emissions units sections or the emissions limits in the compliance schedule) apply for the dryers and pellet mills.**

Response to 45: The Department concurs with this comment and has added permit language to clarify the intent of these provisions within the Tier II and Tier I permits.

Comment 46: Pulp Dryer Operating Restrictions

**TASCO submitted comments requesting that the permit conditions requiring that the pulp dryers be used only for beets be removed from the permits. These provisions appear as Permit Condition 5.7 in the proposed Tier II permit and as 5.4 in the draft Tier I permit.**

Response to 46: This Permit Condition was originally included in the permit as condition for assuring applicability of IDAPA 58.01.01.703 (refer to IDAPA 58.01.01.702.02(b)) for the pulp dryers. The Department will grant TASCO's request in this matter; however, the requirements of Permit Condition 5.4 in the proposed Tier II permit and Permit Condition 5.3 in the draft Tier I permit will be changed from the requirements of Section 703 to the requirements contained in Section 702 of the *Rules*.

Comment 47: Dryer Scrubber Water Requirements

**TASCO submitted comments requesting that restrictions on the maximum allowable concentration of total dissolved solids (TDS) be removed from the**

**permits and be included in the O&M manual. The provisions regarding TDS appear as Permit Condition 5.9 in the proposed Tier II permit and as Permit Condition 5.8 in the draft Tier I permit.**

Response to 47: The Department concurs with this comment and has removed these conditions from the Tier II and Tier I permits.

**Comment 48:** **Pellet Mill Monitoring Requirements**

**TASCO submitted comments requesting that the requirement to monitor pressure drop across the pellet mill cyclones be removed from the permits. These provisions appear as Permit Condition 6.6 in the proposed Tier II permit and as Permit Condition 6.7.1 in the draft Tier I permit. TASCO states that pressure drop is an indication of cyclone performance and is not important after installation of the control equipment. After installation, the appropriate monitoring parameters will be the based upon the control equipment, not the cyclones.**

Response to 48: The Department concurs with this comment and has modified these terms accordingly in the Tier II and Tier I permits.

**Comment 49:** **Compliance Schedule Language**

**TASCO submitted comments suggesting alternate language for the compliance schedule. Specifically, this request is directed at Permit Condition 13.1 of the proposed Tier II permit and Permit Condition 14.1 of the draft Tier I permit. TASCO requests that the following language be inserted in to the permits:**

> **"To ensure compliance with applicable requirements in the Rules for the Control of Air Pollution in Idaho, 58.01.01.001, et. seq, the permittee shall implement the compliance schedule presented in Table 13.1. Permit Conditions 13.3-13.9 are necessary to ensure that emissions from the Nampa facility do not cause or significantly contribute to a violation of the NAAQS. Any changes in equipment, control technology, or timeframes specified in this compliance schedule must be approved by the Department."**

Response to 49: The Department concurs with this comment and has modified these terms accordingly in the Tier II and Tier I permits.

**Comment 50:** **Compliance Schedule Requirements**

**TASCO submitted a comment requesting that Permit Conditions 14.11-14.16 be removed from the draft Tier I permit.**

Response to 50: The Department maintains that Permit Conditions 14.11-14.16 are necessary for TASCO to demonstrate compliance with the *Rules*. Additional language has been added to the technical memorandum for the Tier II permit in regard to these provisions. Refer to the section of the technical memorandum entitled "Compliance Schedule".

**Comment 51:** **Sulfur Content for Fuel Oil Requirement**

**TASCO submitted a comment requesting that Permit Condition 2.14 and all associated monitoring be removed from the draft Tier I permit. TASCO asserts that it does not use fuel oil at the facility.**

Response to 51: The Department concurs with this comment and has removed this term from the Tier I permit.

**Comment 52:** **Multiple Source Testing Requirements**

**TASCO submitted comments requesting that the multiple source test requirements for the Union boiler, lime slakers, sugar handling system baghouses, and lime kiln building baghouse be removed from the permits. TASCO requests that a single source test showing compliance with applicable requirements should suffice for the permit term.**

Response to 52: The Department concurs with this comment and has modified these terms accordingly in the Tier II and Tier I permits.

**Comment 53:** **Compliance Schedule Reporting Requirements**

**TASCO submitted a comment indicating that there is no requirement within the *Rules* to notify EPA upon completion or delay of compliance tasks containing in the compliance schedule. This requirement is contained in Permit Conditions 14.3.5, 14.4.4, 14.5.3, 14.6.2, 14.7.2, and 14.8.3 of the draft Tier I permit.**

Response to 53: The Department concurs with TASCO that the *Rules* do not explicitly require EPA notification: therefore, these provisions have been removed from the draft Tier I permit. However, the reports and notifications submitted to the Department will be made available to EPA upon request.

**Comment 54:** **Miscellaneous Permit and Technical Memorandum Language and Numbering**

**TASCO submitted several comments noting miscellaneous errors and typographical mistakes within the permits. TASCO also suggested some minor language changes within the permit and technical memorandum for the purpose of clarity.**

Response to 54: The Department concurs with TASCO; therefore the suggestions submitted have been incorporated into the permit and technical memorandum where appropriate. The reference errors in the permit have also been corrected.

**ATTACHMENT NO. 1**
Technical Review of Revised Modeling Analysis

**MEMORANDUM**

**TO:** Steve Ogle, Idaho State Office of Technical Services

**FROM:** George J. Schewe, CCM, QEP, Air Quality Meteorologist under Contract C136
Julie Wagner, EIT, Air Quality Modeler under Contract C136

**SUBJECT:** Air Dispersion Modeling Review for the TASCO Facility Located in Nampa, Idaho Including Proposed Fugitive Dust Source Modifications

**DATE:** September 27, 2002

**cc:** Mary Anderson, Modeling Coordinator, Air Quality Division

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At your request, Environmental Quality Management, Inc. (EQ) under Contract No C136 has reviewed a September 12, 2002 dispersion modeling letter from Mr. Eric Albright (MFG. Inc.) to Mr. Joe Huff (The Amalgamated Sugar Company - TASCO). The purpose of the letter was to document changes made to the air quality modeling developed in support of the Tier II permit application submitted by TASCO to DEQ. The changes to the modeling were based on revised emission factors for coal unloading (Source Nos. FD9, dryer unloading location and FO4, storage unloading location) and revised seasonal distributions of coal unloading (FD9 and FO4) and beet hauling (FO7).

The review was conducted in three steps: 1) emissions and seasonal factors, 2) model input confirmation, and 3) confirmation of modeling results.

**Emissions and Seasonal Factors**

The seasonal redistribution of operations affecting beet hauling and coal unloading was provided by TASCO to MFG. This distribution looks reasonable based on other operations and discussions reviewed previously for the facility. The emission factors selected for use for coal unloading appear to have been selected appropriately and applied correctly. The emission factor of 0.000144 lb $PM_{10}$ per ton of coal unloaded seems rather small but was consistent with AP-42 emission factor applications. The application of an additional 80 percent control for the dryer unloading location (FD9) due to wind screens and bottom unloading also is representative of operations.

**Model Input Confirmation**

All files as provided by MFG for this revised modeling were reviewed. Three differences were noted between what the letter report stated and what was in the input files.

1) The long term FD9 emission rate was stated by MFG to be 7.56E-4 lb/h which included the 80% control but the modeling files had only ½ of that value at 3.78E-4 lb/h.

2) The letter stated that the 80% control was applicable to FD9 but no mention of the same effect due to wind screens or bottom unloading were noted for FO4. The MFG

long-term and short-term model input files took the 80% credit for FO4 and used 7.56E-4 lb/h which should have been 3.78E-3 lb/h (no control).

3) One other input that was questionable was the use of a 10m height of the meteorological data. Data procured from the National Data Climatic Center confirmed that the anemometer ad wind vane height at the Boise Airport for the period of record was 6.1m (20ft).

Modeling performed to confirm the TASCO revised concentration estimates revealed that the two points made above were moot in terms of overall impact (due to the apparent insignificance of the two sources in questions).

**Confirmation of Modeling Results**

Dispersion modeling was performed in two ways to confirm the results presented by MFG in the September 12, 2002 letter to Joe Huff. The first way was to take the identical files provided by MFG and run them with the ISCST3-Prime Model. This resulted in the exact same results as obtained by MFG. The same MFG files were rerun in ISCST3-Prime but correcting the FD9 emission rate to 7.56E-4 lb/h and the FO4 emission rate to 3.78E-3 lb/h in the long-term run. No differences in the modeled concentrations were noted. The same change was made to FO4 in the short-term runs with no differences in modeled concentrations for the MFG analysis.

The second confirmational modeling analysis used the independent modeling performed in the previous model evaluation by EQ (memorandum to Steve Ogle dated July 11, 2002) as a starting point. The changes as stated in the MFG revised modeling were input to the ISCST3-Prime Model (including the differences as noted herein under Model Input Confirmation). For the long-term averages, the EQ $PM_{10}$ concentrations were about 1 $\mu g/m^3$ less than the MFG analysis. For the short-term impacts, the EQ modeling yielded results about 4 $\mu g/m^3$ less than the MFG analysis. These differences are due to a number of slight inconsistencies between the EQ and MFG model setup and include differences in receptor grids and considered the fact that MFG used an incorrect anemometer/vane height (as noted above).

The conclusion concerning the validity of MFG's modeling is that even though a few minor errors were detected, the coincidental modeling performed by EQ on behalf of DEQ confirmed the modeling results show compliance with the National Ambient Air Quality Standards for $PM_{10}$. Thus, the September 12, 2002 modeling documentation and associated revised modeling are acceptable.