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STATE OF NEW MEXICO
BEFORE THE SECRETARY OF THE ENVIRONMENT

IN THE MATTER OF THE APPLICATION
OF ROPER CONSTRUCTION INC. **AQB 21-57 (P)**
FOR AN AIR QUALITY PERMIT
NO. 9295 - ALTO CONCRETE BATCH PLANT

AIR QUALITY BUREAU'S STATEMENT OF INTENT TO PRESENT REBUTTAL TESTIMONY

Pursuant to 20.1.4.300(B)(1) NMAC, the Air Quality Bureau ("Bureau"), within the Environmental Protection Division ("Division") of the New Mexico Environment Department ("Department"), files this Statement of Intent to Present Rebuttal Testimony at the public hearing in this matter in support of the application ("Application") by Roper Construction, Inc. ("Applicant") for an air quality construction permit ("Permit") for Applicant's facility in Alto, New Mexico. The public hearing in this matter is currently scheduled for February 23, 2022, and continuing, if necessary, for additional days. The Bureau submits to the Secretary the following:

1. Party filing this Statement of Intent

The Air Quality Bureau within the Environmental Protection Division of the Department.

2. Division's Recommendation on the application

The Bureau, on behalf of the Division, recommends the approval of the application provided that the Applicant complies with the conditions of the permit. The Bureau reserves the right to recommend additional conditions for the permit. The Bureau also reserves the right to

modify its position based on any comment or testimony presented at the hearing or based on any written comments submitted in connection with the application.

3. Technical Witness Information

The Bureau will call the following witnesses at the hearing to present rebuttal testimony:

A. **Deepika Saikrishnan**, Permit Specialist in the Technical Services Unit of the Permitting Section of the Bureau, 525 Camino de los Marquez, Suite 1, Santa Fe, NM 87505. A copy of Ms. Saikrishnan's rebuttal testimony is attached as NMED Exhibit 1. Ms. Saikrishnan's testimony is estimated to last approximately twenty minutes and will address the Bureau's responses to the written summary of opinions provided by Sonterra's witnesses, Ms. Breanna Bernal and Mr. David Paul Edler.

B. **Eric Peters**, Air Dispersion Modeler for the Bureau, 525 Camino de los Marquez, Suite 1, Santa Fe, NM 87505. Mr. Peters' rebuttal testimony is attached as NMED Exhibit 2. Mr. Peters' testimony is estimated to last approximately twenty minutes and will address the Bureau's responses to the testimony of Sonterra's witness, Dr. Ituarte-Villarreal.

C. **Rhonda Romero**, Minor Source Section Manager for the Bureau, 525 Camino de los Marquez, Suite 1, Santa Fe, NM 87505. A copy of Ms. Romero's rebuttal testimony is attached as NMED Exhibit 3. Her testimony is estimated to last approximately twenty minutes.

D. **Kathleen Primm**, Supervisor in the Minor Source Unit of the Permitting Section of the Bureau, 525 Camino de los Marquez, Suite 1, Santa Fe, NM 87505. A copy of Ms. Primm's rebuttal testimony is attached as NMED Exhibit 4. Her testimony is estimated to last approximately twenty minutes and will discuss the Bureau's responses to the written summary of opinions provided by Sonterra's witness, Mr. Eluid L. Martinez.

4. List of Exhibits and Index

Rebuttal Exhibits that the Bureau intends to offer into evidence are listed below. The Department reserves the right to introduce and move for admission of any other exhibit in support of rebuttal or additional direct testimony at the hearing.

NMED Exhibit 1	Deepika Saikrishnan Rebuttal Testimony
NMED Exhibit 2	Eric Peters Rebuttal Testimony
NMED Exhibit 3	Rhonda Romero Rebuttal Testimony
NMED Exhibit 4	Kathleen Primm Rebuttal Testimony
NMED Exhibit 5	Draft Permit
NMED Exhibit 6	Chart Summarizing Operational Hours and Production Rates
NMED Exhibit 7	Email
NMED Exhibit 8	Email

/s/ Chris Vigil
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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing *Statement of Intent to Present Rebuttal Testimony* was served by email on the following on February 2, 2022:

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Assistant General Counsel

STATE OF NEW MEXICO
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IN THE MATTER OF THE APPLICATION
OF ROPER CONSTRUCTION, INC.
FOR AN AIR QUALITY PERMIT **AQB 21-57 (P)**

TECHNICAL REBUTTAL TESTIMONY OF DEEPIKA SAIKRISHNAN

I. INTRODUCTION

My name is Deepika Saikrishnan. I am a permit specialist in the Technical Services Unit of the Permitting Section of the Air Quality Bureau ("AQB") of the New Mexico Environment Department ("Department"). I present this written technical rebuttal testimony on behalf of the Department for the public hearing on the permit application submitted by Roper Construction, Inc. ("RCI"). Citizens challenge the Department's issuance of Air Quality Permit No. 9295 to RCI for the Alto Concrete Batch Plant ("Alto CBP") in Lincoln County, New Mexico. The Property Owners of Sonterra's Notice of Intent ("Sonterra NOI") to present technical testimony includes testimonies from various witnesses.

My testimony will present the Department's responses to the written summary of opinions provided by Ms. Breanna Bernal and Mr. David Paul Edler.

II. RESPONSES TO SUMMARY OF MS. BERNAL'S AND MR. EDLER'S OPINIONS

Ms. Bernal states in her opinion C that the applicant did not represent the operating schedule consistently throughout the application, specifically that the hours of operation requested in the application did not match the hours used for the modeling. **[Sonterra NOI, page 8]**. The draft permit version 12-30-2021 does not establish permit conditions based on the entry in Section 1-E. Instead, the draft permit establishes production-based limits. The instructions for Section 1-E

state “The 1-E.1 & 1-E.2 operating schedules may become conditions in the permit.” **[AR No. 1, Bates 0004]**.

The 4509 hours per year comes from adding the maximum hours the facility can operate each day of each month if operating at the maximum production capacity of 125 cubic yards per hour. This is represented in the chart Summarizing Allowable Operational Hours and Production Rates **[Exhibit 6].**

Condition A108A of the draft permit sets forth the allowable hours of operation for the facility **[AR No. 9, Bates 0364]**. This condition is based on the permit limits set in the modeling report which represents the time frames within which RCI may operate the facility in the specific months, which is a total of 5422 hours **[AR No. 1, Bates 0025; AR No. 6, Bates 0244; Exhibit 6]**. If RCI operates the facility for all of the hours presented in the permit condition A108A for that specific month, the facility could not operate at the maximum hourly production capacity because of Condition A108B which limits the daily production rate **[AR No. 9, Bates 0364]**. In addition to hourly and daily production limits, Condition A108B also includes an annual production limit of 500,000 cubic yards per year **[AR No. 9, Bates 0364]**.

Since modeling shows that operating at the maximum production rate (125 cubic yards per hour) for each hour between 3:00 AM to 9:00 PM demonstrates compliance with air quality standards, if the facility operated at less than maximum capacity, the emission rates for those hours would be reduced from what was used in the modeling and therefore also demonstrate compliance with air quality standards.

The operating schedule represented in section 1E as 3:00 AM-9:00 PM captures the span of operable hours with respect to all operating scenarios modeled, as presented in Table 3 of section 16K **[AR No.1, Bates 0155]**. This representation is also consistent with Table 1 of section 16K

[AR No.1, Bates 0156], where, all the allowable hours of operation for each month are represented per Condition A108A of the draft permit **[AR No.9, Bates 0364]**.

Ms. Bernal also noted that the weighted average moisture content for sand and gravel is stated to be 2.65% and the values in Section 6 do not match values in the table **[Sonterra NOI, page 9].** The 2.65% weighted average moisture for sand and gravel is the correct value. This was verified in the Section 7 Excel spreadsheet -Material handling cell C65 provided on 08-10-2021 **[AR No. 45, Bates 523]**. The 2.65% weighted average moisture was derived using the formula (1.77% * 118.8 tons/hour + 4.17% * 68.8 tons/hour)/187.5 tons/hour) **[AR No. 45, Bates 523]**. The incorrect values in Section 6 were typographic errors and were updated by the applicant on 01-28-2022 **[Exhibit 7]**.

Ms. Bernal also states that the application improperly used hourly emission factors instead of annual emission factors. **[Sonterra NOI, page 9]**. Section 6, Table 6-1 refers to the pre-controlled emissions material handling particulate emissions. These emissions have been verified to be correct in the updated section 7 calculations spreadsheet provided on 8-10-2021**[AR No. 45, Bates 523]**. The process rate in Table 6-1 had typographic errors and was updated by the applicant on 1-13-2022 **[AR No. 87, Bates 911]**. Ms. Bernal indicated in point G that the maximum haul truck emissions are not supported **[Sonterra NOI, page 9].** The maximum haul truck emissions submitted in the original application double counted the round trips in cell D239-Material handling of the Section 7 calculation spreadsheet. This was corrected and verified in the Section 7 calcs version 8-10-2021 **[AR No. 45, Bates 526]**. That is the basis for the reduction in haul truck emissions.

Mr. Edler in his summary of opinions noted that for the operational plan to mitigate emissions, the application incorrectly identifies asphalt production instead of concrete production

[Sonterra NOI, pages 17-18]. This was a typographic error and was updated by the applicant on 01-28-2021 **[Exhibit 8].**

IV. CONCLUSION

AQB verified all updates to the application provided by the applicant. Draft Permit conditions are based on the contents of the Alto CBP application and conditions necessary to demonstrate compliance with applicable air quality regulations and ambient standards. The Draft Permit ensures the facility operates as stated in the Alto CBP application. This is achieved through monitoring, recordkeeping, and reporting protocols detailed in the Draft Permit. The facility as described and represented in the Alto CBP application demonstrates compliance with federal and state air quality regulations, and the Draft Permit may be issued.

STATE OF NEW MEXICO
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TECHNICAL REBUTTAL TESTIMONY OF ERIC PETERS

Witnesses presented various observations in the Property Owners of Sonterra ("Sonterra") notice of intent to present technical testimony. Keeping in mind the Applicant's responsibility to demonstrate that the permit should be issued (20.2.72.207(D) NMAC: The applicant has the burden of demonstrating that a permit or permit revision should be approved.) and the Applicant's ability to correct mistakes (20.2.72.203(E)(1) NMAC: Prior to a final decision on an application, the applicant shall have a duty to promptly supplement and correct information submitted in the application.), the Department provides the following responses.

1. Meteorological Data

Dr. Ituarte-Villarreal claimed that the modeling is unreliable and cannot support the requested permit because the applicant used the incorrect meteorological data for the modeling (Sonterra NOI at pg. 3).

It is not feasible or necessary to collect meteorological data at every location that a small industrial source proposes to locate. Instead, the best available data in an area is used. The reasons that it is not necessary are that the model was designed to analyze the potential outcome for each hour of a year (or more) of data and that the maximum concentrations are produced for most sources when wind is slow and steady. Over an entire year, every collection of meteorological is likely to have winds pointed in every direction and a

substantial fraction of steady, slow winds (with low turbulence during those hours). The model identifies the maximum concentrations from all the combinations of wind conditions and directions. Because so many hours are analyzed and wind is so variable, the conditions that create the greatest concentrations are expected to be encountered even if the data is not a perfect match.

Sonterra exhibits 8 and 9 depict wind roses of two sets of meteorological data near the proposed Facility. The Holloman Air Force Base data was used in the modeling. Calm hours in exhibits 8 and 9 are 14.2% for Holloman AFB and 13.6% for Ruidoso. The 2-5 mph category shows that Holloman has slow speeds represented in every direction and has significantly more of the speeds in this category than Ruidoso does. Since the maximum concentrations for this type of facility are expected to occur when the winds are slow and steady, turbulence is low, and dispersion is at a minimum, the exhibits show that Holloman AFB would be the more conservative set of data to use for modeling this area. The Holloman AFB data is reliable as it is relatively close to the source and should predict higher maximum concentrations than other available nearby data.

2. Updated Versions of AERMET and AERMOD

Dr. Ituarte-Villarreal noted that the applicant used the incorrect version of AERMET and AERMOD to conduct modeling (Sonterra NOI at pg. 5). Ms. Bernal made a similar observation (Sonterra NOI at pg. 8).

Dates in the submitted modeling files indicate that the Applicant performed the modeling before the updated versions of the models were available. The model is mature, and changes are not expected to be major, though new features were included in the new release. Examination of the bug fixes in AERMOD and AERMAP does not reveal any

changes expected to specifically impact this facility, and no specifics were identified by Dr. Ituarte-Villarreal. The Department has not found justification for requesting the modeling be re-evaluated using the new version of the model.

3. Missing Sources of Emissions

Dr. Ituarte-Villarreal claimed the Applicant failed to include multiple emission sources in the modeling, including "water trucks or sweepers, or from the operations of control measures and other vehicle traffic on the proposed site." (Sonterra NOI at pg.5):

Any delivery trucks, including potential water trucks, are included in the total delivery truck limit, which is enforced by a permit limit. Activities that have little impact or that are not related to the permit are provided with an exemption from permitting as specified in 20.2.72.202 NMAC: "EXEMPTIONS: The following exemptions are made to the following requirements of 20.2.72.200 NMAC - 20.2.72.299 NMAC." The requirement to model equipment is found in 20.2.72.203(A)(4) NMAC, so sources and activities that are exempt from permitting are exempt from modeling because the modeling requirement falls between sections 200 and 299.

4. Modeling of Haul Road Emissions Updates

Dr. Ituarte-Villarreal observed the PM10 and PM2.5 models were not updated to account for revisions to haul road emissions listed in Table 2-E (Sonterra NOI at pg. 6). Ms. Bernal made a similar observation (Sonterra NOI at pg. 11).

The changes reduced the haul road emissions. There is no need to update modeling when emissions are being reduced because the concentrations cannot increase.

5. Reporting of Elevations in Modeling Results

Dr. Ituarte-Villarreal observed the elevations were sometimes reported in meters instead of feet (Sonterra NOI at pg. 6).

Reporting the elevations with the incorrect unit of measure in the results summary does not affect the modeled concentrations.

6. Use of Non-Default Modeling Options

Dr. Ituarte-Villarreal suggested that NMED has never approved use of "non-default" modeling options in AERMET (Sonterra NOI at pg. 6). Ms. Bernal made a similar observation (Sonterra NOI at pg. 8 and 10).

The Facility is a minor source. Approval of a modeling protocol is not required for minor sources, as indicated in the New Mexico Air Quality Bureau Air Dispersion Modeling Guidelines. [A.R. 7, Bates 317]

The non-default option to use flat terrain is suggested by AERMOD Implementation Guide and NM Modeling Guidelines.

The AERMOD Implementation Guide (EPA-454/B-21-006, July 2021, (https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_implementation_guide.pdf) says the following:

> *AERMOD may also tend to underestimate concentrations relative to flat terrain results for cases involving low-level, non-buoyant sources with up-sloping terrain since the horizontal plume component will pass below the receptor elevation. Sears (2003) has examined these situations for low-level area sources and has shown that as terrain slope increases the ratio of estimated concentrations*

from AERMOD to ISC (which assumes flat terrain for area sources) decreases substantially.

To avoid underestimating concentrations in such situations, it may be reasonable in cases of terrain-following plumes in sloping terrain to apply the non-DFAULT option to assume flat, level terrain.

NM Modeling Guidelines [A.R. 7, Bates 303] says:

> *Flat terrain should be used if the source base is higher than all the surrounding terrain or if the facility consists primarily of non-buoyant fugitive sources. Simple and complex terrain should be used for all other scenarios.*

Therefore, the use of the non-default option for flat terrain is not only approved, but recommended.

7. Use of Particle Density Parameters

Dr. Ituarte-Villarreal stated that applicant has not justified the selection and use of particle density parameters (Sonterra NOI at pg. 7). Ms. Bernal also commented on particle density parameters (Sonterra NOI at pg. 9 and 10)

The Department maintains a reference that documents particle distributions and densities of commonly encountered sources. [https://www.env.nm.gov/wp-content/uploads/sites/2/2017/01/ParticlesizedistributionforplumedepletionApr252007.xls] Additional documentation is not expected when this reference is used.

A higher density was used for source ID CSBH, by mistake. The emissions from this source are very small and have minimal impact on the results. Increasing the density for plume depletion in AERMOD does not necessarily decrease the concentration. When

the density is increased, it can lower the plume and increase concentrations very close to the source, where maximum concentrations were reported for this facility.

8. Heater Modeling

Ms. Bernal noted that units 13 and 14 were missing from Section 16-O of the application. (Sonterra NOI at pg. 10).

The three heaters were modeled as a single heater and identified as unit 12 or CBPH. Combining separate emission units into a single point is a conservative approach to modeling because it concentrates the emissions. This combination is acceptable.

9. Wind Speed for Emissions Calculations in Modeling

Mr. Edler suggests the windspeeds used to calculate emissions are lower than actual wind speeds at the facility (Sonterra NOI at pg. 16).

The Department has reviewed studies that relate wind speeds, material handling source emission rates, and predicted concentrations in AERMOD. The maximum emission rates do not correspond with the maximum concentrations in these AERMOD modeling runs because the increase in turbulence and dispersion out-weighs the increase in emission rates. An emission rate based on an annual average is a more realistic, but conservative, method of modeling the relationship between wind speed and dispersion for material handling sources.

10. Conclusions:

Alto Concrete Batch Plant modeling was performed in accordance with the New Mexico Modeling Guidelines. If the facility operates in compliance with the terms and conditions of the draft permit, then it will not cause or contribute to any concentrations

above state or federal ambient air quality standards or PSD increments. The facility has satisfied all modeling requirements and the permit may be issued.

STATE OF NEW MEXICO

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REBUTTAL TESTIMONY OF RHONDA ROMERO

My name is Rhonda Romero. I am the staff manager for the Minor Source Unit of the Permitting Section of the Air Quality Bureau ("AQB" or "Bureau") of the New Mexico Environment Department ("NMED" or "Department"). I present written rebuttal testimony on behalf of the Department for the public hearing on the permit application submitted by Roper Construction, Inc. ("RCI"). My testimony will present my qualifications and the Department's responses to the written summary of opinions provided by Ms. Breanna Bernal and Mr. David Paul Edler.

I have been employed by the Bureau for nine years, five and a half of those years I was a permit specialist. The last three and a half years I have managed the Minor Source Permit Section. I guide staff in the Minor Source Unit through the review of technically complex air quality permit applications, and the development of enforceable air quality permits. I have written and reviewed hundreds of air quality permits to ensure that they are legally enforceable. I interact with various stakeholders including the public, industry, consultants, and internal colleagues at the Bureau. I have a Bachelor of Science in Environmental Geology and a Master of Science in Natural Science with a concentration in Geology from New Mexico Highlands University. Specific qualifications can be found in my resume **[AR No. 13, Bates 0405-0406].**

1. SSM Emissions

The summary of Ms. Bernal's opinions states the application is incomplete because the applicant did not check the box indicating emissions due to routine predictable start-up, shut-down or scheduled maintenance are no higher than those listed on table 2-E. **[Sonterra SOI, Page 9]**

On Page 26 of the original application **[AR No. 1, Bates 0026]**, the applicant indicated that no start-up, shutdown, or maintenance (SSM) emissions are predicted for this site and that maintenance will be performed during periods with no production. Permittees are required to develop and maintain an SSM plan per 20.2.7 NMAC, as acknowledged by the applicant in Section 14 of the application **[AR No. 1, Bates 0148]**, and/or minimize emissions in accordance with 20.2.7.109 NMAC and 20.2.72.203.A(5) NMAC.

2. Baghouse Control Efficiency

Mr. Edler claimed a 99.9% efficiency control of emissions using a baghouse is unrealistic. **[Sonterra SOI, Pages 15-16]**

The bag house manufacturer guarantees up to 99.99% control efficiency **[AR No. 87, Bates 0957-0960]** if the control device is maintained and operated per the manufacturer's recommendations. The permit conditions A503.A, A503.C, and A503.D establish requirements, monitoring, and recordkeeping to demonstrate compliance with a 99.9% control efficiency that the applicant used to calculate allowable emissions. **[AR No. 9, Bates 0370-0372]** These requirements include the installation of a differential pressure gauge, continuous monitoring of the differential pressure across each baghouse, and a no visible emissions requirement for each transfer point as determined by EPA Reference Method 22. If the differential pressure readings are outside of the manufacturer recommended differential pressure range the permit requires the operator to cease operations immediately until the deviation is rectified. In addition, if visible emissions are observed outside of EPA Reference Method 22 requirements the permit requires the operator to

perform a maintenance check on the baghouse and perform all necessary maintenance in accordance with the manufacturer's specifications.

3. Fugitive Dust from Aggregate Handling and Storage Piles

The summary of Mr. Edler's opinions states the applicant's failure to implement emission controls for the aggregate handling and storage piles will cause significant fugitive dust emissions. **[Sonterra SOI, Page 16]**

In Condition A 502.A the permit requires that a wet dust suppression system be used to minimize fugitive emissions from Units 3, 4, 5, 6, and 11. **[AR No. 9, Bates 0369]** In addition, Condition A502.B, in the permit requires a Fugitive Dust Control Plan (FDCP) for minimizing emissions from areas such as aggregate feeders, conveyors, storage piles, and other types of fugitive dust emitting sources. The permit requires that piles be either covered or kept adequately moist to control dust during storage and handling. **[AR No. 9, Bates 0370]**

4. Fugitive Dust Control by Central Dust System

The summary of Mr. Edler's opinions also states the claim in the application that fugitive dust can be controlled by a central dust control system is unrealistic. **[Sonterra SOI, Page 17]**

The central dust collector is a baghouse control device designed to create negative pressure at a dust source point and pull the fugitive material into the collector. Dust is filtered out of the collector and dropped into the hopper at the bottom of the unit so it can be pneumatically sent to the cement silo.

The central dust collector will control both the truck loading area and the cement/fly ash batcher. The central dust collector is designed by the manufacturer to ensure air containing dust flows efficiently into and through the collector, and clean air is processed out of the unit. For truck loading, the concrete truck backs into an enclosed area where the aggregate, cement, fly ash and

water are added into the concrete truck. The enclosed area is designed to be able to capture any fugitive dust generated during truck loading through the baghouse filters. The operator is required to maintain the central dust suppression system per the manufacturers recommendations to ensure the control device is operating efficiently. Permit Conditions A105.A, A503.B, A503.C, and A503.D require that fugitive emissions from the cement/flyash batcher and the concrete truck loading be controlled with the central dust control system and a no visible emissions requirement as determined by EPA Reference Method 22. **[AR No. 9, Bates 0371-0372]**

5. Emissions from Cleaning Operations

Mr. Edler's opinions state the application is incomplete because it does not identify the emissions from the cleaning operations that are necessary at a concrete batch plant. **[Sonterra SOI, Page 18]**

According to the applicant via telephone, a pit will be dug out lower than ground level. When trucks return from deliveries, the trucks will be sprayed with water to wash out the concrete into the pit. The slurry will flow into the pit. When the silt level in the pit reaches a certain height, the slurry waste will be hauled away.

The permit condition A502.B requires that a Fugitive Dust Control Plan (FDCP) be implemented at the facility to minimize fugitive dust. Any observations of visible dust emissions from the pit require that the FDCP be updated in order to address visible fugitive dust emissions. **[AR No. 9, Bates 0370]**

In response to Mr. Elders concerns on the central dust control system, the Department strengthened Condition A503.B, to establish more stringent Requirements on the central dust control system, as well as solid monitoring and recordkeeping requirements to ensure these

requirements are properly performed and documented. The Department is proposing to modify Condition A.503.B as follows:

The header of the Condition was edited to include the central dust control system.

The **Requirement** section was edited to include the following language:

The truck loading of materials (Unit 7) shall be controlled with a central dust control system (Unit 7b) that captures fugitive emissions and routes them through a baghouse. Any dust collected in the baghouse hopper shall be routed to the cement silo. The central dust control system shall be maintained in accordance with the manufacturer specifications.

The Cement/Fly Ash Weigh Batcher (Unit 8) shall be controlled with a central dust control system (Unit 7b) that captures fugitive emissions and routes them through a baghouse. Any dust collected in the baghouse hopper shall be routed to the cement silo. The central dust control system shall be maintained in accordance with the manufacturer specifications.

The Central Dust Control baghouse shall be equipped with a differential pressure gauge. The gauge shall be maintained, replaced and calibrated per manufacturer's specifications so that it consistently provides correct and accurate readings.

The **Monitoring** section was revised to include the following language:

The differential pressure gauge shall be monitored during all concrete truck loading events. Once, during each loading event, compliance with Table 106.A limits shall be demonstrated by ensuring the Central Dust Control System (Unit 7b) differential pressure meets the differential pressure requirement per manufacturer specifications. If a deviation(s) from this requirement is noted, the permittee shall document actions taken to rectify the problem(s).

The **Recordkeeping** section was revised to include the following language:

The permittee shall maintain records of the maintenance checks on the central dust control system, a record of the date and time of each check, the results of the check and if the check indicates whether the central dust control system is operating as required by this condition, as represented in the application, and in accordance with the manufacturer recommendations and the actions taken to repair the central dust control system.
The permittee shall maintain records of operational inspections, maintenance performed, a copy of the manufacturer specifications and in accordance with Section B109.

The Permit Condition A503.D was also revised to include the baghouse Unit 7b. It was inadvertently left out on the previous draft permit.

A draft permit is a dynamic document that changes, depending on available information, throughout the process of reviewing a permit application and developing the final permit. This hearing is part of this process, which will result in this permit being further improved based on suggestions from interested parties within regulatory constraints. **[NMED Exhibit 5]**

6. Conclusion

The AQB verified all updates provided by the applicant. Draft Permit conditions are based on the contents of the Alto CBP application and conditions necessary to demonstrate compliance with applicable air quality regulations and ambient standards. The Draft Permit ensures the facility operates as stated in the Alto CBP application. This is achieved through monitoring, recordkeeping, and reporting protocols detailed in the Draft Permit. The facility as described and represented in the Alto CBP application demonstrates compliance with federal and state air quality regulations. The Department recommends issuance of this permit.

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TECHNICAL REBUTTAL TESTIMONY OF KATHLEEN PRIMM

I. INTRODUCTION

My name is Kathleen Primm. I am a Supervisor in the Minor Source Unit of the Permitting Section of the Air Quality Bureau ("AQB") of the New Mexico Environment Department ("Department"). I present this written technical rebuttal testimony on behalf of the Department for the public hearing on the permit application submitted by Roper Construction, Inc. ("RCI"). Citizens challenge the Department's issuance of Air Quality Permit No. 9295 to RCI for the Alto Concrete Batch Plant ("Alto CBP") in Lincoln County, New Mexico. The Property Owners of Sonterra's Notice of Intent ("Sonterra NOI") to present technical testimony includes testimonies from various witnesses.

My testimony will present my qualifications and the Department's responses to the written summary of opinions provided by Mr. Eluid L. Martinez **[Sonterra NOI, pages 12-14]**.

II. QUALIFICATIONS

I have been an employee of the Bureau for almost fourteen years, working as a Permit Specialist and a Supervisor. Before being promoted to the Supervisor position in April 2021, I was a Permit Writer in the Minor Source Unit of the Permitting Section of the AQB. As a Permit Writer, I performed technical and regulatory review of complex Air Quality Bureau permit applications within regulatory deadlines. I verified emissions calculations; determined applicable state regulations and federal regulations; coordinated with various stakeholders including the public,

industry, consultants, and AQB staff; wrote legally enforceable air permits and technical support documents for the administrative record; entered data into the AQB database; and completed various special projects to achieve AQB goals. I have worked on over 600 permitting actions for the Bureau and trained new staff on regulations, Bureau policies, and application review requirements and procedures for various types of permitting actions. As a Supervisor now, I manage assigned staff in the Minor Source Unit of the Permitting Section of the AQB.

My full background and qualifications are set forth in my resume. **[NMED Exhibit 6]**

III. RESPONSES TO SUMMARY OF MR. MARTINEZ'S OPINIONS

Mr. Martinez noted the RCI application for Alto CBP is incomplete because it lacks the identification of the source of water that constitutes the majority of the emissions control equipment **[Sonterra NOI, page 12]**. The Department does not have the regulatory authority to require RCI to prove that the water resources are available to control the emissions as they represented in the Alto CBP application. The Department does, however, have the regulatory authority to enforce on the failure to apply water as represented in the Alto CBP application, emission calculations, and as required by Draft Permit 9295 version 2021-12-30 (Draft Permit).

Mr. Martinez also states the application is incomplete because it does not identify the amount of water for the "additional moisture content" required to obtain the emissions controls necessary to control emissions at Units 3, 4, 5 and 6 **[Sonterra NOI, page 14]**. Allowable emissions limits are established in Table 106.A of the Draft Permit **[AR 9, Bates 0363]**. Compliance with allowable particulate emission limits for Units 3-6 is demonstrated by maintaining and operating a wet dust suppression system in accordance with the requirements in Condition A502.A of the Draft Permit **[AR 9, Bates 0369-0370]**. On each day of operation, Condition A502.A requires the permittee to inspect the wet dust suppression system for

malfunctions and deficiencies in dust control effectiveness. Any problems with the control devices must be corrected before commencement of operation. The amount of water required to control emissions is not quantified in the Alto CBP application or Draft Permit because the amount of water required to control fugitive particulate emissions depends on multiple variables such as precipitation, wind, and temperature.

Mr. Martinez's remaining opinions relate to the potential of water trucks delivering water from an off-site location to the proposed site, increasing truck traffic and contributing to fugitive haul road emissions **[Sonterra NOI, pages 12-14]**. He notes there are no water storage tanks identified in the Alto CBP application **[Sonterra NOI, page 13]**. Water tanks were not represented in the Alto CBP application and are not authorized in the Draft Permit. Allowable particulate emissions limits from the paved haul road at the proposed facility are established in Table 106.A of the Draft Permit, based on paved haul road calculations in the Alto CBP application **[AR 9, Bates 0363]**. Compliance with those limits is demonstrated by limiting truck traffic and maintaining the paved haul road. Condition A112.A of the Draft Permit limits the truck traffic on the paved roads at this facility to 305 round trips per day **[AR 9, Bates 0366-0367]**. This condition requires the permittee to monitor the total number of round trips per day and keep records of the total number of haul road trips per day. Water trucks are not excluded from this condition.

IV. CONCLUSION

The AQB cannot deny any applicant an air quality permit based on non-air quality issues. The Department does not have the regulatory authority to require RCI to prove that water resources are available to control the emissions as represented in the Alto CBP application. The Department does, however, have the regulatory authority to enforce on the failure to apply water as represented in the Alto CBP application and as required by the Draft Permit. The Draft Permit conditions are

based on the contents of the Alto CBP application and conditions necessary to demonstrate compliance with applicable air quality regulations and ambient standards. The Draft Permit ensures the facility operates as stated in the Alto CBP application. This is achieved through monitoring, recordkeeping, and reporting protocols detailed in the Draft Permit. The facility as described and represented in the Alto CBP application demonstrates compliance with federal and state air quality regulations, and the Draft Permit may be issued.

AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

Sent by Certified Mail
Return Receipt Requested

NSR Permit No:	9295
Facility Name:	Alto Concrete Batch Plant
Facility Owner/Operator:	Roper Construction, Inc.
Mailing Address:	P.O. Box 969 Alto, New Mexico 88312
TEMPO/IDEA ID No:	40076-PRN20210001
AIRS No:	35-027-0299
Permitting Action:	Regular New
Source Classification:	Synthetic Minor
Facility Location:	438,240 m E by 3,697,950 m N, Zone 13; Datum NAD83
County:	Lincoln County
Air Quality Bureau Contact	Deepika Saikrishnan
Main AQB Phone No.	(505) 476-4300

_____ _____

Liz Bisbey-Kuehn **Date**
Bureau Chief
Air Quality Bureau

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Template version: 06/30/2021

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PART A FACILITY SPECIFIC REQUIREMENTS

A100 Introduction

A. This is a new permit.

A101 Permit Duration (expiration)

A. The term of this permit is permanent unless withdrawn or cancelled by the Department.

A102 Facility: Description

A. The 125 cubic yard per hour concrete batch plant.

B. This facility is located approximately 5.1 miles north of Ruidoso, New Mexico in Lincoln County.

C. Tables 102.A and Table 102.B show the total potential emission rates (PER) from this facility for information only. This is not an enforceable condition and excludes emissions from Minor NSR exempt activities per 20.2.72.202 NMAC.

Table 102.A: Total Potential Emission Rate (PER) from Entire Facility

Pollutant	Emissions (tons per year)
Nitrogen Oxides (NOx)	0.3
Carbon Monoxide (CO)	0.2
Volatile Organic Compounds (VOC)	0.03
Sulfur Dioxide (SO_2)	0.003
Particulate Matter 10 microns or less (PM_{10})	1.7
Particulate Matter 2.5 microns or less ($PM_{2.5}$)	0.3

Table 102.B: Total Potential Emissions Rate (PER) for Hazardous Air Pollutants (HAPs) that exceed 1.0 ton per year

Pollutant	Emissions (tons per year)
Total HAPs	<1.0

A103 Facility: Applicable Regulations

A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A.

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Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
20.2.1 NMAC General Provisions	X	Entire Facility
20.2.3 NMAC Ambient Air Quality Standards	X	Entire Facility
20.2.7 NMAC Excess Emissions	X	Entire Facility
20.2.61 NMAC Smoke and Visible Emissions	X	Units 12, 13, and 14
20.2.72 NMAC Construction Permit	X	Entire Facility
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Entire Facility
20.2.75 NMAC Construction Permit Fees	X	Entire Facility
20.2.80 NMAC Stack Heights	X	Units 12, 13, and 14
40 CFR 50 National Ambient Air Quality Standards	X	Entire Facility

A104 Facility: Regulated Sources

A. Table 104.A lists the emission units authorized for this facility. Emission units identified as exempt activities (as defined in 20.2.72.202 NMAC) and/or equipment not regulated pursuant to the Act are not included.

Table 104.A: Regulated Sources List

Unit No.	Source Description	Make	Model	Serial No.	Construction/ Reconstruction Date	Manufacture Date	Permitted Capacity
1	Haul Road	NA	NA	NA	NA	NA	305 trips per day
2	Feeder Hopper	JEL Manufacturing	TBD	TBD	TBD	TBD	187.5 tph
3	Feeder Hopper Conveyor	JEL Manufacturing	TBD	TBD	TBD	TBD	187.5 tph
4	Overhead Aggregate Bins (4)	JEL Manufacturing	TBD	TBD	TBD	TBD	187.5 tph
5	Aggregate Weigh Batcher	JEL Manufacturing	TBD	TBD	TBD	TBD	187.5 tph
6	Aggregate Weigh Conveyor	JEL Manufacturing	TBD	TBD	TBD	TBD	187.5 tph
7	Truck Loading with Baghouse	JEL Manufacturing	TBD	TBD	TBD	TBD	125 yd^3 per hour
8	Cement/Fly Ash weigh Batcher	JEL Manufacturing	TBD	TBD	TBD	TBD	38.8 tph
9	Cement Split Silo	JEL Manufacturing	TBD	TBD	TBD	TBD	30.6 tph

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Table 104.A: Regulated Sources List

Unit No.	Source Description	Make	Model	Serial No.	Construction/ Reconstruction Date	Manufacture Date	Permitted Capacity
10	Fly Ash Split Silo	JEL Manufacturing	TBD	TBD	TBD	TBD	8.25 tph
11	Aggregate/Sand Storage Piles	NA	NA	NA	NA	NA	187.5 tph
12,13, 14	Concrete Batch Plant Heaters (3 in total)	TBD	TBD	TBD	TBD	TBD	0.6 MMBtu/hr (total)

1. All TBD (to be determined) units and like-kind engine replacements must be evaluated for applicability to NSPS and MACT requirements.

A105 Facility: Control Equipment

A. Table 105.A lists all the pollution control equipment required for this facility. Each emission point is identified by the same number that was assigned to it in the permit application.

Table 105.A: Control Equipment List:

Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit Number(s)[1]
3b	Wet Dust Suppression System	PM_{10}, $PM_{2.5}$	3
4b	Wet Dust Suppression System	PM_{10}, $PM_{2.5}$	4
5b	Wet Dust Suppression System	PM_{10}, $PM_{2.5}$	5
6b	Wet Dust Suppression System	PM_{10}, $PM_{2.5}$	6
7b	Baghouse	PM_{10}, $PM_{2.5}$	7, 8
9b	Baghouse	PM_{10}, $PM_{2.5}$	9
10b	Baghouse	PM_{10}, $PM_{2.5}$	10

1. Control for unit number refers to a unit number from the Regulated Equipment List

A106 Facility: Allowable Emissions

A. The following Section lists the emission units and their allowable emission limits. (40 CFR 50, 20.2.72.210.A and B.1 NMAC).

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Table 106.A: Allowable Emissions

Unit No.	NO_x[1] pph	NO_x [1]tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO_2 pph	SO_2 tpy	PM_{10} pph	PM_{10} tpy	$PM_{2.5}$ pph	$PM_{2.5}$ tpy
1	-	-	-	-	-	-	-	-	0.1	0.3	0.03	0.07
2	-	-	-	-	-	-	-	-	0.4	0.6	0.06	0.08
3	-	-	-	-	-	-	-	-	0.009	0.02	0.002	0.005
4	-	-	-	-	-	-	-	-	0.009	0.02	0.002	0.005
5	-	-	-	-	-	-	-	-	0.009	0.02	0.002	0.005
6												
7	-	-	-	-	-	-	-	-	0.02	0.04	0.003	0.006
8												
9	-	-	-	-	-	-	-	-	0.01	0.03	0.003	0.006
10	-	-	-	-	-	-	-	-	0.009	0.02	0.002	0.004
11	-	-	-	-	-	-	-	-	0.5	0.7	0.08	0.1
12	0.06	0.3	0.05	0.2	0.007	0.03	0.0007	0.003	0.005	0.02	0.005	0.02
13												
14												

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO_2
"-" indicates the application represented emissions of this pollutant are not expected.

2 To report excess emissions for sources with no pound per hour and/or ton per year emission limits, see condition B110F.

A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM)

A. Separate allowable SSM emission limits are not required for this facility since the SSM emissions are predicted to be less than the limits established in Table 106.A. The permittee shall maintain records in accordance with Condition B109.C.

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A108 **Facility: Allowable Operations**

A. Allowable Hours of Operation (Facility)

Requirement: Compliance with the emission limiting in Table 106. shall be demonstrated by restricting this facility, including all permitted equipment and related activities such as truck traffic involving movement of product, to operate no more than the hours described below Allowable Hours of Operation 7AM-6PM from November through February, 5AM-7PM March and October, 4AM-9PM April and September and 3AM-9PM May through August.
Monitoring: Daily, the permittee shall monitor the date, startup time, shutdown time, and the total hours of operation of the facility.
Recordkeeping: Daily, the permittee shall record the date, startup time, shutdown time, and the total hours of operation of the facility. The permittee shall maintain records in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

B. Facility Throughput (Facility)

Requirement: Compliance with the allowable emission limits in table 106.A shall be demonstrated by limiting the facility production rates to 125 cubic yards per hour and 500000 cubic yards per year. 1) The concrete production rates shall not exceed 125 cubic yards per hour and 1125 cubic yards per day from November through February. 2) The concrete production rates shall not exceed 125 cubic yards per hour and 1500 cubic yards per day in March and October. 3) The concrete production rates shall not exceed 125 cubic yards per hour and 1750 cubic yards per day in April and September. 4) The concrete production rates shall not exceed 125 cubic yards per hour and 1875 cubic yards per day from May through August. These production rates were specified in the permit application and are the basis for the Department's modeling analysis to determine compliance with the applicable ambient air quality standards.
Monitoring: The permittee shall monitor the daily total production, and, each calendar month, the monthly rolling 12-month total production.
Recordkeeping: The permittee shall: 1) Each day, record the date, start time, and end time of any production activity. 2) Daily, record the daily production total by summing the hourly production totals for that day. 3) Each calendar month, calculate and record the total monthly production and the monthly rolling 12-month total production, and

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4) Maintain on site all records necessary for the calculation of the required hourly, daily, and monthly rolling 12-month production totals.
Reporting: The permittee shall report in accordance with Section B110. This report shall be generated upon request.

C. If the facility ceases operations for any reason for longer than 30 days, the owner or operator shall notify the Permit Program Manager within 45 days of ceasing operations, the reason for ceasing operations, and provide a restart date if the cessation is temporary.

A109 <u>Facility: Reporting Schedules</u>

A. The permittee shall report according to the Specific Conditions and General Conditions of this permit.

A110 <u>Facility: Fuel and Fuel Sulfur Requirements</u>

A. Fuel and Fuel Sulfur Requirements (Units 12, 13 and 14)

Requirement: All combustion emission units shall combust only natural gas containing no more than 0.75 grains of total sulfur per 100 dry standard cubic feet.
Monitoring: No monitoring is required. Compliance is demonstrated through records.
Recordkeeping: 1) The permittee shall demonstrate compliance with the natural gas or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel gas analysis, specifying the allowable limit or less. 2) If fuel gas analysis is used, the analysis shall not be older than one year. 3) Alternatively, compliance shall be demonstrated by keeping a receipt or invoice from a commercial fuel supplier, with each fuel delivery, which shall include the delivery date, the fuel type delivered, the amount of fuel delivered, and the maximum sulfur content of the fuel.
Reporting: The permittee shall report in accordance with Section B110.

A111 <u>Facility: 20.2.61 NMAC Opacity</u>

A. 20.2.61 NMAC Opacity Limit (Units 12, 13 and 14)

Requirement: Visible emissions from all stationary combustion emission stacks shall not equal or exceed an opacity of 20 percent in accordance with the requirements at 20.2.61.109 NMAC.
Monitoring:

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1) Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 9 (EPA Method 9) as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures:

   (a) Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (EPA Method 22). If no visible emissions are observed, no further action is required.

   (b) If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC.

For the purposes of this condition, *Startup mode* is defined as the startup period that is described in the facility's startup plan.

Recordkeeping:

1) If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows:

   (a) For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2.

   (b) For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4.

Reporting: The permittee shall report in accordance with Section B110.

A112 <u>Facility: Haul Roads</u>

A. Truck Traffic

Requirement: Compliance with the allowable particulate emissions in Table 106.A shall be demonstrated by limiting the number of paved haul road round trips to 305 round trips per day.

Monitoring: The permittee shall monitor the total number of paved haul road round trips per day.

Recordkeeping: The permittee shall keep daily records of the total number of haul road trips per day.

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Reporting: The permittee shall report in accordance with Section B110.

B. Haul Road Control

Requirement: Truck traffic areas and haul roads going in and out of the plant site shall be paved and maintained to minimize silt buildup to control particulate emissions. This condition demonstrates compliance with the AP-42, Section 13.2.1 (ver. 01/11) "Paved Roads" emission equation used in the permit application. This control measure shall be used on roads as far as the nearest public road.
Monitoring: The permittee shall monitor the frequency, quantity, and location(s) of the water application, or equivalent control measures, such as sweeping.
Recordkeeping: The permittee shall keep daily records of the frequency, quantity, and location(s) of the water application, or equivalent control measures, such as sweeping.
Reporting: The permittee shall report in accordance with Section B110.

C. Nighttime Truck Traffic

Requirement: Nighttime operation of haul trucks is authorized providing the following requirements are met for the trafficked roads. Haul truck surfaces are paved and maintained to minimize silt buildup.
Monitoring: 1) The permittee shall monitor: (a) the date, time, and water truck odometer/hour meter reading at the commencement of watering activities or date and time of road sweeping; (b) the date, time, and water truck odometer/hour meter reading at the completion of watering activities or date and time of road sweeping; (c) the quantity of water applied; (d) the date and time of commencement and completion of night traffic operations. 2) For each hour of night operation in which the traffic areas were not maintained to minimize silt buildup, the permittee shall monitor the road and off-road surfaces to see if dust is rising higher than the headlights or taillights of a standard haul truck.
Recordkeeping: The permittee shall make a record of each hourly dust monitoring activity to see if additional maintenance is necessary. At a minimum the record shall include the date, the time of the observation, the roads and surfaces observed, the results of the observation, and the name of the person making the observation.
Reporting: Records shall be made available according to reporting requirements of this permit, if the Department requests them.

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A113 Facility: Initial Location Requirements

A. Initial Setback Distance – Not required

B. Co-location

This facility shall not co-locate with another facility without submitting air dispersion modeling and revising the permit.

A114 Facility: Relocation Requirements

A. This facility shall not be relocated.

A115 Governing Requirements During Source Construction, Source Removal, and/or Change in Emissions Control -Not Required

EQUIPMENT SPECIFIC REQUIREMENTS

OIL AND GAS INDUSTRY

A200 Oil and Gas Industry – Not Required

CONSTRUCTION INDUSTRY - AGGREGATE

A300 Construction Industry – Aggregate – Not Required

CONSTRUCTION INDUSTRY – ASPHALT

A400 Construction Industry – Asphalt -Not Required

CONSTRUCTION INDUSTRY - CONCRETE

A500 Construction Industry – Concrete

A. This section has common equipment related to most concrete operations.

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A501 Equipment Substitutions

A. Substitution of aggregate handling equipment is authorized provided the replacement equipment is functionally equivalent and has the same or lower process capacity as the piece of equipment it is replacing in the most recent permit. The replacement equipment shall comply with the opacity requirements in this permit.

B. The Department shall be notified within fifteen (15) days of equipment substitutions using the Equipment Substitution Form provided by the Department and available online.

A502 Process Equipment – Conveyors, Bins, Weigh Batchers and Storage Piles (Units 3, 4, 5, 6 and 11)

A. Wet Dust Suppression System (Units 3, 4, 5, 6 and 11)

Requirement: Compliance with allowable particulate emission limits in Table 106.A shall be demonstrated by:

1) Feeder Hopper Conveyor (Unit 3), Overhead Aggregate Bins (Unit 4), Aggregate Weigh Batcher (Unit 5), Aggregate Weigh Conveyor (Unit 6) shall have a Wet Dust Suppression System installed or additional moisture added at the aggregate/sand storage piles (Unit 11) to minimize fugitive emissions to the atmosphere from emission points and to meet the emission limitations contained in this permit.
2) At any time, if visible emissions at material transfer points are observed, additional water sprays shall be added or if already installed, turned on, or additional moisture will be added to the aggregate/sand storage piles (Unit 11) to minimize the visible emissions.
3) Each Wet Dust Suppression System shall be turned on and properly function at all times the facility is operating or additional moisture shall be added at the aggregate/sand storage piles (Unit 11), unless rain or snow precipitation achieves an equivalent level of dust control. Any problems with the control devices shall be corrected before commencement of operation.

Monitoring:

1) On each day of operation at the commencement of operation of the Wet Dust Suppression System, the permittee shall inspect the Wet Dust Suppression System. At a minimum, the visual inspection shall include checks for malfunctions and deficiencies in dust control effectiveness, such as breaches in the physical barriers controlling dust emissions; spray nozzle clogs; misdirected sprays; insufficient water pressure; and/or any other dust control equipment deficiencies or malfunctions, or
2) On each day of operation when additional moisture is added to the aggregate/sand storage piles, daily visible inspections will be made to determine the additional moisture is adequate to minimize visible emissions.

Recordkeeping:

1) A daily record shall be made of the Wet Dust Suppression System inspection and any maintenance activity that resulted from the inspection. The permittee shall record in

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accordance with Section B109 of this permit and shall also include a description of any malfunction and any corrective actions taken. The record shall be formatted with a description of what shall be inspected to ensure the inspector understands the inspection responsibilities. If the Wet Dust Suppression System is turned off due to rain or snow precipitation that achieve the equivalent level control as the Water Spray Units, it shall be so noted in the daily record. 2) Daily visible observation logs will be maintained and at a minimum the record shall include the date, the time of the observation, the emission point observed, the results of the observation, and the name of the person making the observation.
Reporting: The permittee shall report in accordance with Section B110.

B. Fugitive Dust Control Plan (FDCP)

Requirement: The permittee shall develop a Fugitive Dust Control Plan (FDCP) for minimizing emissions from areas such as aggregate feeders, conveyors, bins, bin scales, storage piles, overburden removal, disturbed earth, buildings, truck loading/unloading, or active pits. Sites of overburden removal and active pit areas shall be watered, dependent on existing wind speeds and soil moisture content, as necessary to minimize dust emissions. Stockpiles must be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
Monitoring: Once each calendar month, the permittee shall inspect each area to ensure that fugitive dust is being minimized and determine if the FDCP plan needs updating. Any observations of visible dust emissions from the above areas shall be considered an indication of the need to update the FDCP.
Recordkeeping: Monthly, the permittee shall make a record of each monthly inspection of each area and revise the plan to address past shortcomings as well as future activities. If no changes are needed, then the permittee shall make a record that the plan needs no changes. The permittee shall make a record of any action taken to minimize emissions as a result of the FDCP or monthly inspections. The permittee shall maintain records in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

A503 <u>Material Handling –Truck Loading from Batch Conveyor and Silos</u>

A. Silos: (Units 9 and 10)

Requirement: Compliance with the allowable particulate emissions in Table 106.A shall be demonstrated by: 1) Ensuring Emissions from each silo (Units Cement Split Silo and Fly Ash Split Silo) shall at all times be routed to and controlled by the Silo Baghouses (Units 9b and 10b). 2) The Silo baghouse shall be equipped with a differential pressure gauge.

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3) The gauge shall be maintained, replaced and calibrated per manufacturer's specifications so that it consistently provides correct and accurate readings.
Monitoring: Once, during each loading event, compliance with Table 106.A limits shall be demonstrated by ensuring the Silo Baghouse (Unit 9b and 10b) differential pressure meets the differential pressure requirement of this condition. If a deviation(s) from this requirement is noted, the permittee shall document actions taken to rectify the problem(s) and whether the repairs were successful.
Recordkeeping: During each loading of Silo (Unit 9 or 10), the monitored differential pressure shall be recorded for each loading operation. The permittee shall maintain records of the maintenance checks on the silo baghouses , a record of the date and time of each check, the results of the check and if the check indicates whether the silo baghouse is operating as required by this condition and as represented in the application and in accordance with the manufacturer recommendations and the actions taken to repair the silo baghouse. The permittee shall maintain records of operational inspections, maintenance performed, and each gauge calibrations and in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

B. Truck Loading -Loading of Aggregate, Sand, Cement and Fly Ash and Central Dust Control System (Unit 7 and Unit 8)

Requirement: Compliance with the particulate emission limits in Table 106.A shall be demonstrated by limiting the loading rate of the aggregate, sand, cement, fly ash and water to 125 cubic yards per hour. The truck loading of materials (Unit 7) shall be controlled with a central dust control system (Unit 7b) that captures fugitive emissions and routes them through a baghouse. Any dust collected in the baghouse hopper shall be routed to the cement silo. The central dust control system shall be maintained in accordance with the manufacturer specifications. The Cement/Fly Ash Weigh Batcher (Unit 8) shall be controlled with a central dust control system (Unit 7b) that captures fugitive emissions and routes them through a baghouse. Any dust collected in the baghouse hopper shall be routed to the cement silo. The central dust control system shall be maintained in accordance with the manufacturer specifications. The Central Dust Control baghouse shall be equipped with a differential pressure gauge. The gauge shall be maintained, replaced and calibrated per manufacturer's specifications so that it consistently provides correct and accurate readings.
Monitoring: 1) The permittee shall monitor the daily loading rates.

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2) The differential pressure gauge shall be monitored during all concrete truck loading events. Once, during each loading event, compliance with Table 106.A limits shall be demonstrated by ensuring the Central Dust Control System (Unit 7b) differential pressure meets the differential pressure requirement per manufacturer specifications. If a deviation(s) from this requirement is noted, the permittee shall document actions taken to rectify the problem(s).
Recordkeeping: The permittee shall: 1) Measure and record the daily loading rate, 2) Date of concrete loading, 3) Determine or calculate the daily and hourly loading rate. Calculate the hourly load rate by dividing the daily loading rate by the total hours of operation per day. 4) Maintain the records necessary to support the calculation of the daily load rate. 5) The permittee shall maintain records of the maintenance checks on the central dust control system, a record of the date and time of each check, the results of the check and if the check indicates whether the central dust control system is operating as required by this condition, as represented in the application, and in accordance with the manufacturer recommendations and the actions taken to repair the central dust control system. 6) The permittee shall maintain records of operational inspections, maintenance performed, a copy of the manufacturer specifications and in accordance with Section B109.
Reporting: The permittee shall report in accordance with Section B110.

C. No Visible Emissions (Units 7, 8, 9 and 10)

Requirement: Compliance with the emission limits in Table 106.A shall be demonstrated by each transfer point exhibiting no visible emissions except for ten (10) seconds during a six minute period as determined by EPA Reference Method 22. The Units (7, 8, 9, and 10) shall be controlled by the associated control devices identified in Table 105.A.
Monitoring: Weekly, during operation of each unit, the permittee shall perform a visible emissions check, if the observer sees visible emissions from a transfer point lasting longer than ten (10) seconds in a six (6) minute period as determined by EPA Reference Method 22 , the permittee shall perform a maintenance check on the control devices/methods and perform any necessary maintenance activities to ensure the controls are maintained per manufacturers specifications and to achieve no visible emissions.
Recordkeeping: The permittee shall maintain the following information: records of visible emission observations and/or repairs and the date and time, occurring as a result of those observations.
Reporting: N/A

D. Requirements for Baghouses (Units 7b, 9b, and 10b)

Requirement: Compliance with the emission limits in table 106.A shall be demonstrated by maintaining a differential pressure across each baghouse within the manufacturer recommended differential pressure range for that dust collector. Units 7, 8, 9, and 10 shall be controlled by the associated control devices as identified in table 105.A. Each baghouse shall be equipped with a differential pressure gauge.

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Gauges shall be maintained in good operating condition per manufacturer maintenance recommendations. Gauges shall be replaced and calibrated as needed to ensure accurate performance as needed to ensure accurate performance and per manufacturer maintenance recommendations. Operations shall cease immediately if the pressure drop is not within the manufacturer specified normal operating range. Operations shall not commence until the cause of the deviation is determined and rectified.
Monitoring: The differential pressure (inches of water) across each dust collector shall be continuously indicated using a differential pressure gauge and shall be monitored once each day.
Recordkeeping: The permittee shall maintain the following information: 1) The manufacturer specified normal differential pressure range for each bag house. 2) Each time cement (Unit 9) or fly ash (Unit 10) silos are loaded, record a reading of the differential pressure during normal operations for each bag house and the name of the person making the record. 3) Any deviation in differential pressure from the manufacturers recommended range, the cause of deviation, the time operations ceased for repairs, the time operations commenced after repairs and the corrective actions taken. 4) Maintain a copy of the manufacturer specification sheet.
Reporting: The permittee shall report in accordance with Section B110.

PART B GENERAL CONDITIONS (Attached)

PART C MISCELLANEOUS: Supporting On-Line Documents; Definitions; Acronyms (Attached)

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AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

GENERAL CONDITIONS AND MISCELLANEOUS

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PART B GENERAL CONDITIONS

B100 Introduction

A. The Department has reviewed the permit application for the proposed construction/modification/revision and has determined that the provisions of the Act and ambient air quality standards will be met. Conditions have been imposed in this permit to assure continued compliance. 20.2.72.210.D NMAC, states that any term or condition imposed by the Department on a permit is enforceable to the same extent as a regulation of the Environmental Improvement Board.

B101 Legal

A. The contents of a permit application specifically identified by the Department shall become the terms and conditions of the permit or permit revision. Unless modified by conditions of this permit, the permittee shall construct or modify and operate the Facility in accordance with all representations of the application and supplemental submittals that the Department relied upon to determine compliance with applicable regulations and ambient air quality standards. If the Department relied on air quality modeling to issue this permit, any change in the parameters used for this modeling shall be submitted to the Department for review. Upon the Department's request, the permittee shall submit additional modeling for review by the Department. Results of that review may require a permit modification. (20.2.72.210.A NMAC)

B. Any future physical changes, changes in the method of operation or changes in restricted area may constitute a modification as defined by 20.2.72 NMAC, Construction Permits. Unless the source or activity is exempt under 20.2.72.202 NMAC, no modification shall begin prior to issuance of a permit. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

C. Changes in plans, specifications, and other representations stated in the application documents shall not be made if they cause a change in the method of control of emissions or in the character of emissions, will increase the discharge of emissions or affect modeling results. Any such proposed changes shall be submitted as a revision or modification. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

D. The permittee shall establish and maintain the property's Restricted Area as identified in plot plan submitted with the application. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

E. Applications for permit revisions and modifications shall be submitted to:

Program Manager, Permits Section
New Mexico Environment Department

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Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505

F. The owner or operator of a source having an excess emission shall, to the extent practicable, operate the source, including associated air pollution control equipment, in a manner consistent with good air pollutant control practices for minimizing emissions. (20.2.7.109 NMAC). The establishment of allowable malfunction emission limits does not supersede this requirement.

B102 Authority

A. This permit is issued pursuant to the Air Quality Control Act (Act) and regulations adopted pursuant to the Act including Title 20, Chapter 2, Part 72 of the New Mexico Administrative Code (NMAC), (20.2.72 NMAC), Construction Permits and is enforceable pursuant to the Act and the air quality control regulations applicable to this source.

B. The Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the delegation and exceptions of Section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).

B103 Annual Fee

A. The Department will assess an annual fee for this Facility. The regulation 20.2.75 NMAC set the fee amount at $1,500 through 2004 and requires it to be adjusted annually for the Consumer Price Index on January 1. The current fee amount is available by contacting the Department or can be found on the Department's website. The AQB will invoice the permittee for the annual fee amount at the beginning of each calendar year. This fee does not apply to sources which are assessed an annual fee in accordance with 20.2.71 NMAC. For sources that satisfy the definition of "small business" in 20.2.75.7.F NMAC, this annual fee will be divided by two. (20.2.75.11 NMAC)

B. All fees shall be remitted in the form of a corporate check, certified check, or money order made payable to the "NM Environment Department, AQB" mailed to the address shown on the invoice and shall be accompanied by the remittance slip attached to the invoice.

B104 Appeal Procedures

A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for hearing before the Environmental Improvement Board. The petition shall be made in writing to the

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Environmental Improvement Board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered and attach a copy of the permitting action for which review is sought. Unless a timely request for hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to: (20.2.72.207.F NMAC)

For Mailing:
Administrator, New Mexico Environmental Improvement Board
P.O. Box 5469
Santa Fe, NM 87502-5469

For Hand Delivery:
Administrator, New Mexico Environmental Improvement Board
1190 St. Francis Drive, Harold Runnels Bldg.
Santa Fe, New Mexico 87505

B105 <u>Submittal of Reports and Certifications</u>

A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to Stacktest.AQB@state.nm.us or as directed by the Department.

B. Excess Emission Reports shall be submitted as directed by the Department. (20.2.7.110 NMAC)

C. Routine reports shall be submitted to the mailing address below, or as directed by the Department:

Manager, Compliance and Enforcement Section
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505

B106 <u>NSPS and/or MACT Startup, Shutdown, and Malfunction Operations</u>

A. If a facility is subject to a NSPS standard in 40 CFR 60, each owner or operator that installs and operates a continuous monitoring device required by a NSPS regulation shall comply with the excess emissions reporting requirements in accordance with 40 CFR 60.7(c), unless specifically exempted in the applicable subpart.

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B. If a facility is subject to a NSPS standard in 40 CFR 60, then in accordance with 40 CFR 60.8(c), emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

C. If a facility is subject to a MACT standard in 40 CFR 63, then the facility is subject to the requirement for a Startup, Shutdown and Malfunction Plan (SSM) under 40 CFR 63.6(e)(3), unless specifically exempted in the applicable subpart.

B107 <u>Startup, Shutdown, and Maintenance Operations</u>

A. The establishment of permitted startup, shutdown, and maintenance (SSM) emission limits does not supersede the requirements of 20.2.7.14.A NMAC. Except for operations or equipment subject to Condition B106, the permittee shall establish and implement a plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan) and shall operate in accordance with the procedures set forth in the plan. (SSM work practice plan) (20.2.7.14.A NMAC)

B108 <u>General Monitoring Requirements</u>

A. These requirements do not supersede or relax requirements of federal regulations.

B. The following monitoring requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in this permit constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in this permit; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer.

C. If the emission unit is shutdown at the time when periodic monitoring is due to be completed, the permittee is not required to restart the unit for the sole purpose of conducting the monitoring. Using electronic or written mail, the permittee shall notify the Department's Compliance and Enforcement Section of a delay in emission tests prior to the deadline for completing the tests. Upon recommencing operation, the permittee shall submit pre-test notification(s) to the Department's Compliance and Enforcement Section and shall complete the monitoring.

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D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke the monitoring period exemption at B108.D(2), hours of operation shall be monitored and recorded.

(1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period.

(2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods.

(3) If invoking the monitoring **period** exemption in B108.D(2), the actual operating time of a unit shall not exceed the monitoring period required by this permit before the required monitoring is performed. For example, if the monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during any five-year period.

E. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be conducted at 90% or greater of the unit's capacity as stated in this permit, or in the permit application if not in the permit, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report.

F. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities. Compliance tests from previous NSR and Title V permits may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions.

G. If monitoring is new or is in addition to monitoring imposed by an existing applicable requirement, it shall become effective 120 days after the date of permit issuance. For emission units that have not commenced operation, the associated new or additional monitoring shall not apply until 120 days after the units commence operation. All pre-existing monitoring requirements incorporated in this permit shall continue to apply from the date of permit issuance.

H. Unless otherwise indicated by Specific Conditions or regulatory requirements, all instrumentation used for monitoring in accordance with applicable requirements including emission limits, to measure parameters including but not limited to flow, temperature, pressure and chemical composition, or used to continuously monitor

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emission rates and/or other process operating parameters, shall be subject to the following requirements:

(1) The owner or operator shall install, calibrate, operate and maintain monitoring instrumentation (monitor) according to the manufacturer's procedures and specifications and the following requirements.

(a) The monitor shall be located in a position that provides a representative measurement of the parameter that is being monitored.

(b) At a minimum, the monitor shall complete one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(c) At a minimum, the monitor shall be spanned to measure the normal range +/- 5% of the parameter that is being monitored.

(d) At least semi-annually, perform a visual inspection of all components of the monitor for physical and operational integrity and all electrical connections for oxidation and galvanic corrosion.

(e) Recalibrate the monitor in accordance with the manufacturer's procedures and specifications at the frequency specified by the manufacturer, or every two years, whichever is less.

(2) Except for malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall operate and maintain all monitoring equipment at all times that the emissions unit or the associated process is operating.

(3) The monitor shall measure data for a minimum of 90 percent of the time that the emissions unit or the associated process is in operation, based on a calendar monthly average.

(4) The owner or operator shall maintain records in accordance with Section B109 to demonstrate compliance with the requirements in B108H (1)-(3) above, as applicable.

B109 General Recordkeeping Requirements

A. The permittee shall maintain records to assure and verify compliance with the terms and conditions of this permit and any other applicable requirements that become effective after permit issuance. The minimum information to be included in these records is as follows:

(1) Records required for testing and sampling:

(a) equipment identification (include make, model and serial number for all tested equipment and emission controls)

(b) date(s) and time(s) of sampling or measurements

(c) date(s) analyses were performed

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(d) the qualified entity that performed the analyses

(e) analytical or test methods used

(f) results of analyses or tests

(g) operating conditions existing at the time of sampling or measurement

(2) Records required for equipment inspections and/or maintenance required by this permit:

(a) equipment identification number (including make, model and serial number)

(b) date(s) and time(s) of inspection, maintenance, and/or repair

(c) date(s) any subsequent analyses were performed (if applicable)

(d) name of the person or qualified entity conducting the inspection, maintenance, and/or repair

(e) copy of the equipment manufacturer's or the owner or operator's maintenance or repair recommendations (if required to demonstrate compliance with a permit condition)

(f) description of maintenance or repair activities conducted

(g) all results of any required parameter readings

(h) a description of the physical condition of the equipment as found during any required inspection

(i) results of required equipment inspections including a description of any condition which required adjustment to bring the equipment back into compliance and a description of the required adjustments

B. Except as provided in the Specific Conditions, records shall be maintained on-site or at the permittee's local business office for a minimum of two (2) years from the time of recording and shall be made available to Department personnel upon request. Sources subject to 20.2.70 NMAC "Operating Permits" shall maintain records on-site for a minimum of five (5) years from the time of recording.

C. Unless otherwise indicated by Specific Conditions, the permittee shall keep the following records for malfunction emissions and routine or predictable emissions during startup, shutdown, and scheduled maintenance (SSM):

(1) The owner or operator of a source subject to a permit shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits, 20.2.70 NMAC - Operating Permits, 20.2.74 NMAC -

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Permits - Prevention of Significant Deterioration (PSD), or 20.2.79 NMAC - Permits - Nonattainment Areas. The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.

(2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, a description of the event, and a description of the cause of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.

(3) If the facility has allowable malfunction emission limits in this permit, the permittee shall record all malfunction events to be applied against these limits. The permittee shall also include the date, the start time, the end time, and a description of the event. **Malfunction means** any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC) The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies. This authorization only allows the permittee to avoid submitting reports under 20.2.7 NMAC for total annual emissions that are below the authorized malfunction emission limit.

(4) The owner or operator of a source shall meet the operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup or shutdown. (20.2.72.203.A(5) NMAC)

B110 <u>General Reporting Requirements</u>
(20.2.72 NMAC Sections 210 and 212)

A. Records and reports shall be maintained on-site or at the permittee's local business office unless specifically required to be submitted to the Department or EPA by another condition of this permit or by a state or federal regulation. Records for unmanned sites may be kept at the nearest business office.

B. The permittee shall notify the Department's Compliance Reporting Section using the current Submittal Form posted to NMED's Air Quality web site under Compliance and Enforcement/Submittal Forms in writing of, or provide the Department with (20.2.72.212.A and B):

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(1) the anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date. Notification may occur prior to issuance of the permit, but actual startup shall not occur earlier than the permit issuance date;

(2) after receiving authority to construct, the equipment serial number as provided by the manufacturer or permanently affixed if shop-built and the actual date of initial startup of each new or modified source within fifteen (15) days after the startup date; and

(3) the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.

C. The permittee shall notify the Department's Permitting Program Manager, in writing of, or provide the Department with (20.2.72.212.C and D):

(1) any change of operators or any equipment substitutions within fifteen (15) days of such change;

(2) any necessary update or correction no more than sixty (60) days after the operator knows or should have known of the condition necessitating the update or correction of the permit.

D. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and C NMAC. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.

E. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.

F. Allowable Emission Limits for Excess Emissions Reporting for Flares and Other Regulated Sources with No Pound per Hour (pph) and/or Ton per Year (tpy) Emission Limits.

(1) When a flare has no allowable pph and/or tpy emission limits in Sections A106 and/or A107, the authorized allowable emissions include only the combustion of pilot and/or purge gas. Compliance is demonstrated by limiting the gas stream to the flare to only pilot and/or purge gas.

(2) For excess emissions reporting as required by 20.2.7 NMAC, the allowable emission limits are 1.0 pph and 1.0 tpy for each regulated air pollutant (except for H2S) emitted by that source as follows:

(a) For flares, when there are no allowable emission limits in Sections A106 and/or A107.

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(b) For regulated sources with emission limits in Sections A106 or A107 represented by the less than sign ("<").

(c) For regulated sources that normally would not emit any regulated air pollutants, including but not limited to vents, pressure relief devices, connectors, etc.

(3) For excess emissions reporting as required by 20.2.7 NMAC for H2S, the allowable limits are 0.1 pph and 0.44 tpy for each applicable scenario addressed in paragraph (2) above.

B111 <u>General Testing Requirements</u>

Unless otherwise indicated by Specific Conditions or regulatory requirements, the permittee shall conduct testing in accordance with the requirements in Sections B111A, B, C, D and E, as applicable.

A. Initial Compliance Tests

The permittee shall conduct initial compliance tests in accordance with the following requirements:

(1) Initial compliance test requirements from previous permits (if any) are still in effect, unless the tests have been satisfactorily completed. Compliance tests may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions. (20.2.72 NMAC Sections 210.C and 213)

(2) Initial compliance tests shall be conducted within sixty (60) days after the unit(s) achieve the maximum normal production rate. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source.

(3) The default time period for each test run shall be **at least** 60 minutes and each performance test shall consist of three separate runs using the applicable test method. For the purpose of determining compliance with an applicable emission limit, the arithmetic mean of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Department approval, be determined using the arithmetic mean of the results of the two other runs.

(4) Testing of emissions shall be conducted with the emissions unit operating at 90 to 100 percent of the maximum operating rate allowed by the permit. If it is not possible to test at that rate, the source may test at a lower operating rate

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(5) Testing performed at less than 90 percent of permitted capacity will limit emission unit operation to 110 percent of the tested capacity until a new test is conducted.

(6) If conditions change such that unit operation above 110 percent of tested capacity is possible, the source must submit a protocol to the Department within 30 days of such change to conduct a new emissions test.

B. EPA Reference Method Tests

The test methods in Section B111.B(1) shall be used for all initial compliance tests and all Relative Accuracy Test Audits (RATAs), and shall be used if a permittee chooses to use EPA test methods for periodic monitoring. Test methods that are not listed in Section B111.B(1) may be used in accordance with the requirements at Section B111.B(2).

(1) All compliance tests required by this permit shall be conducted in accordance with the requirements of CFR Title 40, Part 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by CFR Title 40, Part 60, Appendix A:

(a) Methods 1 through 4 for stack gas flowrate

(b) Method 5 for particulate matter (PM)

(c) Method 6C SO_2

(d) Method 7E for NO_X (test results shall be expressed as nitrogen dioxide (NO_2) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO_2 is equivalent to 1.194 x 10-7 lb/SCF)

(e) Method 9 for visual determination of opacity

(f) Method 10 for CO

(g) Method 19 for particulate, sulfur dioxide and nitrogen oxides emission rates. In addition, Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate. The permittee shall provide a contemporaneous fuel gas analysis (preferably on the day of the test, but no earlier than three months prior to the test date) and a recent fuel flow meter calibration certificate (within the most recent quarter) with the final test report.

(h) Method 7E or 20 for Turbines per §60.335 or §60.4400

(i) Method 22 for visual determination of fugitive emissions from material sources and smoke emissions from flares

(j) Method 25A for VOC reduction efficiency

(k) Method 29 for Metals

(l) Method 30B for Mercury from Coal-Fired Combustion Sources Using Carbon Sorbent Traps

(m) Method 201A for filterable PM_{10} and $PM_{2.5}$

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(n) Method 202 for condensable PM

(o) Method 320 for organic Hazardous Air Pollutants (HAPs)

(2) Permittees may propose test method(s) that are not listed in Section B111.B(1). These methods may be used if prior approval is received from the Department.

C. Periodic Monitoring and Portable Analyzer Requirements for the Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters

Periodic emissions tests (periodic monitoring) shall be conducted in accordance with the following requirements:

(1) Periodic emissions tests may be conducted in accordance with EPA Reference Methods or by utilizing a portable analyzer. Periodic monitoring utilizing a portable analyzer shall be conducted in accordance with the requirements of the current version of ASTM D 6522. However, if a facility has met a previously approved Department criterion for portable analyzers, the analyzer may be operated in accordance with that criterion until it is replaced.

(2) The default time period for each test run shall be **at least** 20 minutes.

Each performance test shall consist of three separate runs. The arithmetic mean of results of the three runs shall be used to determine compliance with the applicable emission limit.

(3) Testing of emissions shall be conducted in accordance with the requirements at Section B108.E.

(4) During emissions tests, pollutant and diluent concentration shall be monitored and recorded. Fuel flow rate shall be monitored and recorded if stack gas flow rate is determined utilizing Reference Method 19. This information shall be included with the test report furnished to the Department.

(5) Stack gas flow rate shall be calculated in accordance with Reference Method 19 utilizing fuel flow rate (scf) determined by a dedicated fuel flow meter and fuel heating value (Btu/scf). The permittee shall provide a contemporaneous fuel gas analysis (preferably on the day of the test, but no earlier than three months prior to the test date) and a recent fuel flow meter calibration certificate (within the most recent quarter) with the final test report. Alternatively, stack gas flow rate may be determined by using EPA Reference Methods 1-4.

(6) The permittee shall submit a notification and protocol for periodic emissions tests upon the request of the Department.

D. Initial Compliance Test and RATA Procedures

Permittees required to conduct initial compliance tests and/or RATAs shall comply with the following requirements:

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(1) The permittee shall submit a notification and test protocol to the Department's Program Manager, Compliance and Enforcement Section, at least thirty (30) days before the test date and allow a representative of the Department to be present at the test. Proposals to use test method(s) that are not listed in Section B111.B(1) (if applicable) shall be included in this notification.

(2) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.

(3) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment.

(4) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed

E. General Compliance Test Procedures

The following requirements shall apply to all initial compliance and periodic emissions tests and all RATAs:

(1) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.

(2) The stack shall be of sufficient height and diameter and the sample ports shall be located so that a representative test of the emissions can be performed in accordance with the requirements of EPA Reference Method 1 or the current version of ASTM D 6522, as applicable.

(3) Test reports shall be submitted to the Department no later than 30 days after completion of the test.

B112 <u>Compliance</u>

A. The Department shall be given the right to enter the facility at all reasonable times to verify the terms and conditions of this permit. Required records shall be organized by date and subject matter and shall at all times be readily available for inspection. The permittee, upon verbal or written request from an authorized representative of the Department who appears at the facility, shall immediately produce for inspection or copying any records required to be maintained at the facility. Upon written request at other times, the permittee shall deliver to the Department paper or electronic copies of any and all required records maintained on site or at an off-site location. Requested records shall be copied and delivered at the permittee's expense within three business days from receipt of request unless the Department allows additional time. Required records may include records required by permit and other information necessary to

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demonstrate compliance with terms and conditions of this permit. (NMSA 1978, Section 74-2-13)

B. A copy of the most recent permit(s) issued by the Department shall be kept at the permitted facility or (for unmanned sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.72.210.B.4 NMAC)

C. Emissions limits associated with the energy input of a Unit, i.e. lb/MMBtu, shall apply at all times unless stated otherwise in a Specific Condition of this permit. The averaging time for each emissions limit, including those based on energy input of a Unit (i.e. lb/MMBtu) is one (1) hour unless stated otherwise in a Specific Condition of this permit or in the applicable requirement that establishes the limit.

B113 <u>Permit Cancellation and Revocation</u>

A. The Department may revoke this permit if the applicant or permittee has knowingly and willfully misrepresented a material fact in the application for the permit. Revocation will be made in writing, and an administrative appeal may be taken to the Secretary of the Department within thirty (30) days. Appeals will be handled in accordance with the Department's Rules Governing Appeals From Compliance Orders.

B. The Department shall automatically cancel any permit for any source which ceases operation for five (5) years or more, or permanently. Reactivation of any source after the five (5) year period shall require a new permit. (20.2.72 NMAC)

C. The Department may cancel a permit if the construction or modification is not commenced within two (2) years from the date of issuance or if, during the construction or modification, work is suspended for a total of one (1) year. (20.2.72 NMAC)

B114 <u>Notification to Subsequent Owners</u>

A. The permit and conditions apply in the event of any change in control or ownership of the Facility. No permit modification is required in such case. However, in the event of any such change in control or ownership, the permittee shall notify the succeeding owner of the permit and conditions and shall notify the Department's Program Manager, Permits Section of the change in ownership within fifteen (15) days of that change. (20.2.72.212.C NMAC)

B. Any new owner or operator shall notify the Department's Program Manager, Permits Section, within thirty (30) days of assuming ownership, of the new owner's or operator's name and address. (20.2.73.200.E.3 NMAC)

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B115 Asbestos Demolition

A. Before any asbestos demolition or renovation work, the permittee shall determine whether 40 CFR 61 Subpart M, National Emissions Standards for Asbestos applies. If required, the permittee shall notify the Department's Program Manager, Compliance and Enforcement Section using forms furnished by the Department.

B116 Short Term Engine Replacement

A. The following Alternative Operating Scenario (AOS) addresses engine breakdown or periodic maintenance and repair, which requires the use of a short term replacement engine. The following requirements do not apply to engines that are exempt per 20.2.72.202.B(3) NMAC. Changes to exempt engines must be reported in accordance with 20.2.72.202.B NMAC. A short term replacement engine may be substituted for any engine allowed by this permit for no more than 120 days in any rolling twelve month period per permitted engine. The compliance demonstrations required as part of this AOS are in addition to any other compliance demonstrations required by this permit.

(1) The permittee may temporarily replace an existing engine that is subject to the emission limits set forth in this permit with another engine regardless of manufacturer, model, and horsepower without modifying this permit. The permittee shall submit written notification to the Department within 15 days of the date of engine substitution according to condition B110.C(1).

(a) The potential emission rates of the replacement engine shall be determined using the replacement engine's manufacturer specifications and shall comply with the existing engine's permitted emission limits.

(b) The direction of the exhaust stack for the replacement engine shall be either vertical or the same direction as for the existing engine. The replacement engine's stack height and flow parameters shall be at least as effective in the dispersion of air pollutants as the modeled stack height and flow parameters for the existing permitted engine. The following equation may be used to show that the replacement engine disperses pollutants as well as the existing engine. The value calculated for the replacement engine on the right side of the equation shall be equal to or greater than the value for the existing engine on the left side of the equation. The permitting page of the Air Quality Bureau website contains a spreadsheet that performs this calculation.

EXISTING ENGINE REPLACMENT ENGINE

$$\frac{[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)]}{q1} <= \frac{[(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)]}{q2}$$

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Where
g = gravitational constant = 32.2 ft/sec^2
h1 = existing stack height, feet
v1 = exhaust velocity, existing engine, feet per second
c = specific heat of exhaust, 0.28 BTU/lb-degree F
T1 = absolute temperature of exhaust, existing engine = degree F + 460
q1 = permitted allowable emission rate, existing engine, lbs/hour
h2 = replacement stack height, feet
v2 = exhaust velocity, replacement engine, feet per second
T2 = absolute temperature of exhaust, replacement engine = degree F + 460
q2 = manufacturer's potential emission rate, replacement engine, lbs/hour

The permittee shall keep records showing that the replacement engine is at least as effective in the dispersion of air pollutants as the existing engine.

(c) Test measurement of NOx and CO emissions from the temporary replacement engine shall be performed in accordance with Section B111 with the exception of Condition B111A(2) and B111B for EPA Reference Methods Tests or Section B111C for portable analyzer test measurements. Compliance test(s) shall be conducted within fifteen (15) days after the unit begins operation, and records of the results shall be kept according to section B109.B. This test shall be performed even if the engine is removed prior to 15 days on site.

i. These compliance tests are not required for an engine certified under 40CFR60, subparts IIII, or JJJJ, or 40CFR63, subpart ZZZZ if the permittee demonstrates that one of these requirements causes such engine to comply with all emission limits of this permit. The permittee shall submit this demonstration to the Department within 48 hours of placing the new unit into operation. This submittal shall include documentation that the engine is certified, that the engine is within its useful life, as defined and specified in the applicable requirement, and shall include calculations showing that the applicable emissions standards result in compliance with the permit limits.

ii. These compliance tests are not required if a test was conducted by portable analyzer or by EPA Method test (including any required by 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) within the last 12 months. These previous tests are valid only if conducted at the same or lower elevation as the existing engine location prior to commencing operation as a temporary replacement. A copy of the test results shall be kept according to section B109.B.

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(d) Compliance tests for NOx and CO shall be conducted if requested by the Department in writing to determine whether the replacement engine is in compliance with applicable regulations or permit conditions.

(e) Upon determining that emissions data developed according to B116.A.1(c) fail to indicate compliance with either the NOx or CO emission limits, the permittee shall notify the Department within 48 hours. Also within that time, the permittee shall implement one of the following corrective actions:

i. The engine shall be adjusted to reduce NOx and CO emissions and tested per B116.A.1(c) to demonstrate compliance with permit limits.

ii. The engine shall discontinue operation or be replaced with a different unit.

(2) Short term replacement engines, whether of the same manufacturer, model, and horsepower, or of a different manufacturer, model, or horsepower, are subject to all federal and state applicable requirements, regardless of whether they are set forth in this permit (including monitoring and recordkeeping), and shall be subject to any shield afforded by this permit.

(3) The permittee shall maintain a contemporaneous record documenting the unit number, manufacturer, model number, horsepower, emission factors, emission test results, and serial number of any existing engine that is replaced, and the replacement engine. Additionally, the record shall document the replacement duration in days, and the beginning and end dates of the short term engine replacement.

(4) The permittee shall maintain records of a regulatory applicability determination for each replacement engine (including 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) and shall comply with all associated regulatory requirements.

B. Additional requirements for replacement of engines at sources that are major as defined in regulation 20.2.74 NMAC, Permits – Prevention of Significant Deterioration, section 7.AG. For sources that are major under PSD, the total cumulative operating hours of the replacement engine shall be limited using the following procedure:

(1) Daily, the actual emissions from the replacement engine(s) of each pollutant regulated by this permit for the existing engine shall be calculated and recorded.

(2) The sum of the total actual emissions since the commencement of operation of the replacement engine(s) shall not equal or exceed the significant emission rates in Table 2 of 20.2.74 NMAC, section 502 for the time that the replacement engine is located at the facility.

C. All records required by this section shall be kept according to section B109.

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PART C MISCELLANEOUS

C100 Supporting On-Line Documents

A. Copies of the following documents can be downloaded from NMED's web site under Compliance and Enforcement or requested from the Bureau.

(1) Excess Emission Form (for reporting deviations and emergencies)

(2) Universal Stack Test Notification, Protocol and Report Form and Instructions

C101 Definitions

A. **"Daylight"** is defined as the time period between sunrise and sunset, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at http://aa.usno.navy.mil/. Alternatively, these times can be obtained from a Farmer's Almanac or from http://www.almanac.com/rise/).

B. **"Decommission"** and **"Decommissioning"** applies to units left on site (not removed) and is defined as the complete disconnecting of equipment, emission sources or activities from the process by disconnecting all connections necessary for operation (i.e. piping, electrical, controls, ductwork, etc.).

C. **"Exempt Sources"** and **"Exempt Activities"** is defined as those sources or activities that are exempted in accordance with 20.2.72.202 NMAC. Note; exemptions are only valid for most 20.2.72 NMAC permitting actions.

D. **"Fugitive Emission"** means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

E. **"Insignificant Activities"** means those activities which have been listed by the department and approved by the administrator as insignificant on the basis of size, emissions or production rate. Note; insignificant activities are only valid for 20.2.70 NMAC permitting actions.

F. **"Malfunction"** for the requirements under 20.2.7 NMAC, means any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC)

G. **"Natural Gas"** is defined as a naturally occurring fluid mixture of hydrocarbons that contains 20.0 grains or less of total sulfur per 100 standard cubic feet (SCF) and is either composed of at least 70% methane by volume or has a gross calorific value of between 950 and 1100 Btu per standard cubic foot. (40 CFR 60.631)

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H. **"Natural Gas Liquids"** means the hydrocarbons, such as ethane, propane, butane, and pentane, that are extracted from field gas. (40 CFR 60.631)

I. **"National Ambient air Quality Standards"** means, unless otherwise modified, the primary (health-related) and secondary (welfare-based) federal ambient air quality standards promulgated by the US EPA pursuant to Section 109 of the Federal Act.

J. **"Night"** is the time period between sunset and sunrise, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at http://aa.usno.navy.mil/. Alternatively, these times can be obtained from a Farmer's Almanac or from http://www.almanac.com/rise/).

K. **"Night Operation** or **Operation at Night"** is operating a source of emissions at night.

L. **"NO2"** or "Nitrogen dioxide" means the chemical compound containing one atom of nitrogen and two atoms of oxygen, for the purposes of ambient determinations. The term **"nitrogen dioxide,"** for the purposes of stack emissions monitoring, shall include nitrogen dioxide (the chemical compound containing one atom of nitrogen and two atoms of oxygen), nitric oxide (the chemical compound containing one atom of nitrogen and one atom of oxygen), and other oxides of nitrogen which may test as nitrogen dioxide and is sometimes referred to as NOx or NO_2. (20.2.2 NMAC)

M. "**NOx**" see NO_2

N. "**Paved Road**" is a road with a permanent solid surface that can be swept essentially free of dust or other material to reduce air re-entrainment of particulate matter. To the extent these surfaces remain solid and contiguous they qualify as paved roads: concrete, asphalt, chip seal, recycled asphalt and other surfaces approved by the Department in writing.

O. **"Potential Emission Rate"** means the emission rate of a source at its maximum capacity to emit a regulated air contaminant under its physical and operational design, provided any physical or operational limitation on the capacity of the source to emit a regulated air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its physical and operational design only if the limitation or the effect it would have on emissions is enforceable by the department pursuant to the Air Quality Control Act or the federal Act.

P. "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.

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Q. **"Shutdown"** for requirements under 20.2.72 NMAC, means the cessation of operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing out of batch process units.

R. **"SSM"** for requirements under 20.2.7 NMAC, means routine or predictable startup, shutdown, or scheduled maintenance.

(1) **"Shutdown"** for requirements under 20.2.7 NMAC, means the cessation of operation of any air pollution control equipment or process equipment.

(2) **"Startup"** for requirements under 20.2.7 NMAC, means the setting into operation of any air pollution control equipment or process equipment.

S. **"Startup"** for requirements under 20.2.72 NMAC, means the setting into operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing in of batch process units.

C102 <u>Acronyms</u>

2SLB ..... 2-stroke lean burn
4SLB ..... 4-stroke lean burn
4SRB ..... 4-stroke rich burn
acfm ..... actual cubic feet per minute
AFR ..... air fuel ratio
AP-42 ..... EPA Air Pollutant Emission Factors
AQB ..... Air Quality Bureau
AQCR ..... Air Quality Control Region
ASTM ..... American Society for Testing and Materials
Btu ..... British thermal unit
CAA ..... Clean Air Act of 1970 and 1990 Amendments
CEM ..... continuous emissions monitoring
cfh ..... cubic feet per hour
cfm ..... cubic feet per minute
CFR ..... Code of Federal Regulation
CI ..... compression ignition
CO ..... carbon monoxides
COMS ..... continuous opacity monitoring system
EIB ..... Environmental Improvement Board
EPA ..... United States Environmental Protection Agency
gr/100 cf ..... grains per one hundred cubic feet
gr/dscf ..... grains per dry standard cubic foot
GRI ..... Gas Research Institute
HAP ..... hazardous air pollutant
hp ..... horsepower
H_2S ..... hydrogen sulfide
IC ..... internal combustion
KW/hr ..... kilowatts per hour

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lb/hr ..... pounds per hour
lb/MMBtu ..... pounds per million British thermal unit
MACT ..... Maximum Achievable Control Technology
MMcf/hr ..... million cubic feet per hour
MMscf ..... million standard cubic feet
N/A ..... not applicable
NAAQS ..... National Ambient Air Quality Standards
NESHAP ..... National Emission Standards for Hazardous Air Pollutants
NG ..... natural gas
NGL ..... natural gas liquids
NMAAQS ..... New Mexico Ambient Air Quality Standards
NMAC ..... New Mexico Administrative Code
NMED ..... New Mexico Environment Department
NMSA ..... New Mexico Statues Annotated
NOx ..... nitrogen oxides
NSCR ..... non-selective catalytic reduction
NSPS ..... New Source Performance Standard
NSR ..... New Source Review
PEM ..... parametric emissions monitoring
PM ..... particulate matter (equivalent to TSP, total suspended particulate)
PM_{10} ..... particulate matter 10 microns and less in diameter
$PM_{2.5}$ ..... particulate matter 2.5 microns and less in diameter
pph ..... pounds per hour
ppmv ..... parts per million by volume
PSD ..... Prevention of Significant Deterioration
RATA ..... Relative Accuracy Test Assessment
RICE ..... reciprocating internal combustion engine
rpm ..... revolutions per minute
scfm ..... standard cubic feet per minute
SI ..... spark ignition
SO_2 ..... sulfur dioxide
SSM ..... Startup Shutdown Maintenance (see SSM definition)
TAP ..... Toxic Air Pollutant
TBD ..... to be determined
THC ..... total hydrocarbons
TSP ..... Total Suspended Particulates
tpy ..... tons per year
ULSD ..... ultra low sulfur diesel
USEPA ..... United States Environmental Protection Agency
UTM ..... Universal Transverse Mercator Coordinate system
UTMH ..... Universal Transverse Mercator Horizontal
UTMV ..... Universal Transverse Mercator Vertical
VHAP ..... volatile hazardous air pollutant
VOC ..... volatile organic compounds

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Chart Summarizing Allowable Operational Hours and Production Rates

A	B	C	D	E	F	G	H
Month	Number of Days in Each Month	**Condition A108B -** Maximum Number of Cubic Yards Allowed Per Day	**Condition A108B -** Maximum Number of Cubic Yards Allowed per Hour	Hours of Operation Allowed at Maximum Production Rate	Hours of Operation Allowed Per Month at Maximum Capacity	**Condition A108A -** Maximum Number of Hours Allowed Per Day	Maximum Total Hours of Operation Allowed per Month
January	31	1125	125	9	279	11	341
February	28	1125	125	9	252	11	308
March	31	1500	125	12	372	14	434
April	30	1750	125	14	420	17	510
May	31	1875	125	15	465	18	558
June	30	1875	125	15	450	18	540
July	31	1875	125	15	465	18	558
August	31	1875	125	15	465	18	558
September	30	1750	125	14	420	17	510
October	31	1500	125	12	372	14	434
November	30	1125	125	9	270	11	330
December	31	1125	125	9	279	11	341
					Total 4509		**Total 5422**
				Note: The values in Column E are calculated by dividing Column C by Column D.	Note: The values in Column F are calculated by multiplying Column B by Column E.		Note: The values in Column H are calculated by multiplying Column B by Column G.

Condition A108B sets the annual production limit to a maximum of 500,000 cubic yards per year.

From: Paul Wade
To: Saikrishnan, Deepika, NMENV; RYAN ROPER; Romero, Rhonda, NMENV; Burns, Tasha, NMENV; lrose@montand.com
Subject: [EXTERNAL] Revised application pages to correct typos
Date: Friday, January 28, 2022 9:31:35 AM
Attachments: A-9295-Section6 Pg2,8.pdf
A-9295-Section14v1.pdf

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Deepika
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In Section 6, the weighted average moisture content calculation for combined aggregate and sand incorrectly listed tons of aggregate and sand. This was a typo. The tons of aggregate and sand for calculation of the weighted average in the emission calculation spreadsheet in Section 7 is correct.

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Please let me know if you have any questions.

Thanks

--

MEG Logo_Signature

Paul Wade

Principal

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Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Uncontrolled Particulate Emission Rates

Estimates for Uncontrolled Material Handling ($PM_{2.5}$, PM_{10} and PM)

Typical composition of one cubic yard of concrete produced at the Alto Concrete Batch Plant (CBP) will be:

Concrete Design Mix for One Cubic Yard

Materials	Weight Per Cubic Yard (in lbs)	Weights Per 125 Cubic Yards (in ton)
Cement	489	30.6
Fly Ash	132	8.3
Water	260	16.3
Coarse Aggregate(gravel)	1900	118.8
Fine Aggregate (sand)	1100	68.8
Total	3881	242.6

Hourly raw material throughputs used in material handling emission equations are based on the tons per hour throughput.

Aggregate/Sand = 187.5 tons/hour
Cement = 30.6 tons/hour
Fly Ash = 8.3 tons/hour

To estimate material handling uncontrolled particulate emission rates for aggregate handling operations (loading storage piles, loading feeder, loading the 4-bin aggregate feeder), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (1/1995), where the k is a constant (PM = 0.74, PM10 = 0.35, PM2.5 = 0.053). Input wind speed for maximum hourly emission rates is the NMED Default of 11 mph and input windspeed for the annual emission rates is the Ruidoso 1996 – 2006 wind speed of 8.3 mph. The moisture content for the aggregate of 1.77% and sand of 4.17% (AP-42 Section 11.12, Table 11.12-2, Footnote b). The weighted average moisture content for sand and aggregate is 2.65% ((1.77 * 118.8 + 4.17 * 68.8)/187.5). To estimate pre-control particulate emissions rates for aggregate handling transfer points (unloading of the feeder, loading and unloading the aggregate bin/weigh batcher), emission factors were obtained from AP-42 Section 11.19.2, Table 11.19.2-2, "Uncontrolled Conveyor Transfer Point". Uncontrolled PM2.5 emission rate is based on the PM2.5/PM10 k factor of 0.053/0.35 found in AP-42 Section 13.2.4 and PM10 emission factor of 0.00110 lbs/ton.

Estimates for Controlled Material Handling Air Pollutants ($PM_{2.5}$, PM_{10}, and PM) (PTE)

No controls will be included for Units 1, 2, or 11 with the exception on limiting annual throughput. Fugitive dust emissions from material handling sources (Units 3, 4, 5, 6) will be controlled by adding water sprays at the exit of the aggregate/sand feed hopper (EPA AP-42 control efficiency of 95.82%).

To estimate material handling control particulate emission rates for aggregate handling operations (loading storage piles, and loading feed hopper), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (1/1995), where the k is a constant (PM = 0.74, PM10 = 0.35, PM2.5 = 0.053). Input wind speed for maximum hourly emission rates is the NMED Default of 11 mph and input windspeed for the annual emission rates is the Ruidoso 1996 – 2006 wind speed of 8.3 mph. The moisture content for the aggregate of 1.77% and sand of 4.17% (AP-42 Section 11.12, Table 11.12-2, Footnote b). The weighted average moisture content for sand and aggregate is 2.65% ((1.77 * 118.8 + 4.17 * 68.8)/187.5). To estimate particulate emissions rates for aggregate handling transfer points (unloading of the feeder, loading and unloading the aggregate bin/weigh batcher), emission factors were obtained from AP-42 Section 11.19.2, Table 11.19.2-2, "Conveyor Transfer Point Controlled". Additional reductions for annual emissions are found in limiting annual production.

To estimate control particulate emission rates for silo loading, cement/fly ash batcher loading operations, and concrete mixer truck loading, emission equations were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 11.12 (06/06), Table 11.12-2 and multiplied by the percent control efficiency of the dust collector baghouse. The dust collector baghouses will control dust to a 99.9 percent efficiency. $PM_{2.5}$ emission rate for concrete mixer truck loading emissions were determined using the ratio of controlled truck loading ratio Table 11.12-3 PM10 lb/hr * PM2.5/PM10 (0.048/0.32). $PM_{2.5}$ emission rate for cement/fly ash batcher loading emissions were determined using the ratio of controlled mixer loading ratio Table 11.12-4 PM10 lbs/hr * PM2.5/PM10 (0.03/0.13). $PM_{2.5}$ emission rate for cement silo emissions loading were determined using the ratio of controlled mixer loading ratio Table 11.12-4 PM10 lbs/hr * PM2.5/PM10 (0.03/0.13). $PM_{2.5}$ emission rate for fly ash silo emissions loading were determined using the ratio of controlled mixer loading ratio Table 11.12-4 PM10 lbs/hr * PM2.5/PM10 (0.03/0.13).

Maximum rated material throughput is 125 cubic yards per hour. Annual emissions in tons per year (tpy) were calculated assuming operation of 500,000 cubic yards per year.

Aggregate Handling Emission Equation – Hourly Emissions

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3} / (M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3} / (1.77/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3} / (1.77/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3} / (1.77/2)^{1.4}$

E_{PM} = 0.00783 lbs/ton; E_{PM10} = 0.00370 lbs/ton; $E_{PM2.5}$ = 0.00056 lbs/ton

Sand Handling Emission Equation – Hourly Emissions

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3} / (M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3} / (4.17/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3} / (4.17/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3} / (4.17/2)^{1.4}$

E_{PM} = 0.00236 lbs/ton; E_{PM10} = 0.00112 lbs/ton; $E_{PM2.5}$ = 0.00017 lbs/ton

Aggregate/Sand Handling Emission Equation – Hourly Emissions

From: Paul Wade
To: Saikrishnan, Deepika, NMENV; RYAN ROPER; Romero, Rhonda, NMENV; Burns, Tasha, NMENV; lrose@montand.com
Subject: [EXTERNAL] Revised application pages to correct typos
Date: Friday, January 28, 2022 9:31:35 AM
Attachments: A-9295-Section6 Pg2,8.pdf
A-9295-Section14v1.pdf

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Thanks

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MEG Logo_Signature

Paul Wade

Principal

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Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

☐ **Title V Sources** (20.2.70 NMAC)**:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

■ **NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

■ **Title V** (20.2.70 NMAC)**, NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

Operational Plan to Mitigate Emissions and **Plan of Work Practices**

Startup
Prior to the production of concrete, the concrete truck mixer loading dust collector will be operational and functioning correctly per applicable permit conditions.

Prior to loading of the cement/fly ash split silo, the correct silo dust collector will be operational and functioning correctly per applicable permit conditions.

Prior to the production of concrete, feeder hopper exit, 4-bin aggregate bin, aggregate weigh batcher and conveyor; water sprays, additional moisture, or other control measures, will be functioning correctly to control fugitive emissions.

Upon visual inspection, all haul roads will be controlled with surfactants or other equivalent control methods, to minimize fugitive dust as required under applicable permit conditions.

Shutdown
All required control equipment will operate until all concrete production ceases.

Maintenance
For the feeder hopper exit, 4-bin aggregate bin, aggregate weigh batcher and conveyor; enclosures or water sprays will be maintained to prevent excess emissions during startup or shutdown. For the concrete truck mixer dust collector and cement/fly ash silo dust collectors will be maintained to prevent excess emissions during startup or shutdown. This facility will not have excess emissions during any maintenance procedures.

Malfunction
Upon malfunction where excess particulate emissions are observed from the feed hopper exit or water sprays, truck loading dust collector, and silo dust collectors, all concrete production will cease until repairs to control equipment are made.

NMED Exhibit 8