New Mexico

Clean Air Act Section 110(l)

Noninterference Demonstration

For

Repeal of 20.2.20 NMAC, *Lime Manufacturing Plants – Particulate Matter*

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CLEAN AIR ACT SECTION 110(l) DEMONSTRATION

1.0 INTRODUCTION

The New Mexico Environment Department, Air Quality Bureau (AQB) is proposing to repeal 20.2.20 NMAC, *Lime Manufacturing Plants – Particulate Matter*, and this demonstration is provided to show that this repeal will not interfere with New Mexico's ability to attain or maintain compliance with the current particulate matter (PM) National Ambient Air Quality Standards (NAAQS).

The Clean Air Act (CAA) contains "anti-backsliding" provisions which prevent the reduction or removal of pollution controls that could potentially allow an area to slip into noncompliance with the CAA. Section 110(l) stipulates that the EPA Administrator "shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and Reasonable Further Progress (RFP) . . . or any other applicable requirement of this chapter", including, but not limited to, attainment of the NAAQS and Rate of Progress (ROP).

"For SIP revisions that will or could potentially lead to a change in emissions or ambient concentrations of a pollutant or its precursors, the Section 110(l) demonstration should address all pollutants whose emissions and/or ambient concentrations may change as a result of the SIP revision." (*Demonstrating Noninterference Under Section 110(l) of the Clean Air Act When Revising a State Implementation Plan*, DRAFT, USEPA, June 8, 2005).

Because 20.2.20 NMAC, is part of the New Mexico State Implementation Plan (SIP), the AQB is required to make a demonstration of noninterference under Section 110(l) to the EPA that the proposed repeal will not negatively affect the attainment or maintenance of any NAAQS, ROP, RFP, etc. This is referred to as a "110(l) demonstration", and entails either:

"1) Substitution of one measure by another with equivalent or greater emissions reductions or air quality benefit; or

2) an air quality analysis showing that removing the measure will not interfere with other applicable requirements." (EPA, 6/8/05)

2.0 BACKGROUND

2.1 Why Repeal 20.2.20 NMAC?

'Recognizing the importance of permitting to environmental protection and conducting business in New Mexico, the New Mexico Environment Department (Department) undertook a review of their permitting processes' in 2012 resulting in the *Improving Environmental Permitting* report (NMED, 11/14/12), which summarized the findings and recommendations related to the AQB construction permit program. The report identified 20.2.20 NMAC as one of several regulations that should be evaluated for potential repeal. This initiated an analysis of the rule which found that most of the emissions standards for lime manufacturing plants cited in this rule were incorporated from the federal New Source Performance Standard (NSPS), *Standards of Performance for Lime Manufacturing Plants*, 40 CFR 60 Subpart HH, promulgated on March 7, 1978 (43 FR 9452, 3/7/78). However, Subpart HH has changed substantively since 20.2.20

NMAC was first adopted on November 15, 1978, while the State rule has not been changed. In addition, the performance standards regulating lime hydrators cited in 20.2.20 NMAC are no longer included in federal performance standards.

In addition, this rule regulates "particulate matter", defined as "any airborne, finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers" (20.2.2.7.Y NMAC). This is an overly broad categorization which includes total suspended particulate matter (TSP), PM_{10} and $PM_{2.5}$, making it problematic to enforce. For example, 20.2.20 NMAC controls TSP, but the federal TSP standards, first promulgated in 1971 (36 FR 8186), have been replaced by PM_{10} as the indicator for particulate matter for ambient standards (52 FR 24634, 7/1/1987); and the State TSP standards (20.2.3.109 NMAC, *Total Suspended Particulates*) are under consideration for repeal by the Department. In addition, [~~there are no TSP monitors in operation in New Mexico~~] the Department discontinued ambient monitoring for TSP in April 1998, therefore, TSP concentrations are not monitored to determine compliance with any of the PM NAAQS. [~~therefore~~] Consequently, compliance with the New Mexico Ambient Air Quality Standards (NMAAQS) must be determined using dispersion model estimates.

Therefore, repealing 20.2.20 NMAC would eliminate a rule that is outdated and at variance with federal standards.

2.2 History of 20.2.20 NMAC

20.2.20 NMAC was first adopted by the Environmental Improvement Board (EIB) as Air Quality Control Regulation (AQCR) 509, *Lime Manufacturing Plants – Particulate Matter*, on November 15, 1978 (effective 12/21/78, although some sections have a 12/31/1980 compliance date). This rule was adopted to address two issues: 1. Establish control measures to address potential exceedances of the TSP standard in the region of Hurley, New Mexico; and 2. Incorporate the contemporaneously promulgated NSPS Subpart HH (affecting any lime manufacturing plants commenced on or after 5/3/77). (43 FR 9452). These NSPS limits were incorporated into AQCR 509 along with an additional ad hoc PM emission limit of 10 lbs. per hour for "existing" Rotary Lime Kilns (constructed and operational, or at which construction was commenced, prior to 5/3/77) to regulate the existing Rotary Lime Kilns at that time, one located at Kennecott Copper Corp. near Hurley, and the other at the Mathis & Mathis lime plant, 10 miles east of Silver City (both have since closed[1]). This limit was set using an estimate of 95% control of emissions from an existing lime kiln.

20.2.20 NMAC established State particulate matter emissions limits for lime manufacturing plants (those that produce lime by calcination in a kiln) and lime hydrators (those that convert quicklime (Calcium Oxide (CaO)) to hydrated lime (Calcium Hydroxide ($Ca(OH)_2$)).

In addition to NSPS Subpart HH, which was substantively revised on April 26, 1984 (49 FR 18080), lime manufacturing is also regulated by 40 CFR Part 63, Subpart AAAAA, *National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants* (NESHAP Subpart AAAAA), which was promulgated on January 5, 2004 (69 FR 394-433). Currently,

[1] The Hurley Mill was shut down in 1982, and the Hurley Smelter stopped operating in January of 2001 and was demolished in the summer of 2007. (Chino Mine Closure / Closeout Plan Update, Golder Associates, 2/14/18, p. 30)

there are no facilities in New Mexico, under the jurisdiction of the Department, subject to either NSPS Subpart HH or NESHAP Subpart AAAAA. There is only one lime hydrator in operation in New Mexico, the Lhoist North America (Lhoist) plant in Belen, NM, which is subject to 20.2.20 NMAC.

3.0 PROPOSED REPEAL OF 20.2.20 NMAC

3.1 Elimination of State performance standards for lime manufacturing plants

Repealing 20.2.20 NMAC would eliminate the State standards for lime manufacturing plants. However, there are no existing lime manufacturing plants in New Mexico (United States Geological Survey (USGS), *Mineral Industry Surveys, Directory of Lime Plants and Hydrating Plants in the U.S. in 2014*). Therefore, there are not any lime manufacturing plants subject to 20.2.20 NMAC which could potentially be affected by this repeal.

All indications are that no lime manufacturing plant will be constructed in New Mexico in the near future. One indicator is that the U.S. lime industry has high barriers to entry (e.g. domination by a few large-scale producers, a scarcity of accessible high-quality limestone deposits, the need for lime plants and facilities to be located close to markets with access to suitable transportation networks to allow for cost-effective production and distribution, environmental regulations, and the high capital cost of the plants and facilities). Another indicator is that there has been only one new U.S. lime plant constructed in the past 20 years (Verona, Kentucky). (M. Miller, 2012 Minerals Yearbook, 'Lime', USGS, p. 43.1).

In addition, lime production in the United States has been flat over the last five years, with production in 2016 reaching 17 million metric tons of quicklime and hydrate being produced. ('Lime' USGS Mineral Commodity Summaries, January 2017, p.98). This is still below the pre-recession production level of 21 million metric tons in 2006. (M. Miller, Lime in The United States 1960 to 2009, Mineral Industry Surveys, USGS, May 2011, p. 5)

"A number of plants that shut down during the 2008-09 recession remained idle for all or the majority of 2012, including five Lhoist North America plants, Alabaster, AL, Douglas, AZ, Tenmile, ID, Grantsville, UT and the hydrating plant at Belen, NM." (Miller, 2012, p. 43.2). The Lhoist plants in Douglas, Tenmile and Grantsville were idle in 2014 as well. (USGS, 2014)

If in the event that a new lime manufacturing plant were to locate in New Mexico, it would be subject to NSPS Subpart HH and NESHAP Subpart AAAAA, which are incorporated by reference at 20.2.77 NMAC, *New Source Performance Standards* and 20.2.82 NMAC, *Maximum Achievable Control Technology Standards for Source Categories of Hazardous Air Pollutants* respectively. It would also be subject to permitting under 20.2.72 NMAC, *Construction Permits*, and the applicant would be required to show compliance with the NAAQS under Section 20.2.72.203 NMAC. 20.2.72 NMAC is included in New Mexico's SIP. A comparison of federal and state standards regulating lime manufacturing and lime hydrators is shown as Table 1.

3.2 Elimination of the particulate matter emissions limit for lime hydrators

A repeal of 20.2.20 NMAC would eliminate the PM emissions limit for lime hydrators (not to exceed 0.15 pounds per ton of lime feed). However, the existing lime hydrator (Lhoist) would still be required to comply with their federally-enforceable permitted emissions limits, and any new facility would also be required to apply for a permit with enforceable emissions limits (pursuant to 20.2.72 NMAC).

Lhoist operates a lime hydrator under an NSR permit (1652-M2-R7), and their Potential to Emit (PTE) for particulate matter is based on a permit limit, which is federally enforceable via SIP-approved 20.2.72 NMAC. Lhoist does not operate a kiln.

If 20.2.20 NMAC were repealed, a permit would still be required for the existing Lhoist lime hydrating facility (or any new facility), because uncontrolled particulate matter emissions from the seasoning chamber (i.e., the lime hydrator), are estimated to be greater than the 10 pounds per hour or 25 tons per year permitting thresholds stipulated in 20.2.72 NMAC. In addition, a permit would be necessary to specifically limit their emissions of Toxic Air Pollutants (quick lime and hydrated lime) as required per 20.2.72.200.A.(4), 400, 402 and 502 NMAC. A comparison of 20.2.20 NMAC requirements and [~~backstop~~] protections unaffected by the proposed repeal are shown in Table 2.

Permit conditions that control emissions of particulate matter will continue to apply after 20.2.20 NMAC is repealed until that permit is revised. This is because enforcement actions rely upon the version of the rule or permit that a source was subject to at the time the permit was issued, even if the rule has been repealed or amended since then. Permit condition #1(d) stipulates that: "the hydrated lime production rate shall not exceed 25 tons per hour." Also, permit condition #2(a), sets specific emission rates for PM_{10}, TSP, CaO and $Ca(OH)_2$ that are enforceable without any reliance upon 20.2.20 NMAC. 20.2.72.210 NMAC, *Permit Conditions*, stipulates that: "The contents of the application specifically identified by the department shall become terms and conditions of the permit or permit revision." Therefore, the Department can set any reasonable permit conditions upon a source. "Any term or condition imposed by the department on a permit or permit revision is enforceable to the same extent as a regulation of the board." (20.2.72.210.D NMAC). This condition is not reliant upon 20.2.20 NMAC.

Should Lhoist apply for a permit revision in response to the repeal of 20.2.20 NMAC (e.g., to remove Permit Condition #1(e) which cites to 20.2.20.109.B, 111, 112, & 113 NMAC), 20.2.72 NMAC [~~requires~~] would require that the applicant show compliance with the NAAQS. ~~With the elimination of 20.2.20 NMAC, these references would no longer refer to existing requirements for lime hydrating plants. However, Permit condition #1(e) subjecting Lhoist to requirements in Section(s) 109B, 111, 112 and 113 will still apply just as if 20.2.20 NMAC were never repealed.~~

A "regulatory compliance discussion" demonstrating Lhoist's compliance with 20.2.20 NMAC, Sections 109B, 111, 112 and 113, is provided in Attachment B of the *Air Quality Permit Application and Notice of Intent Universal (General) To Construct or Modify: Response To NMED-AQB Request for Information (01/18/2000),* Trinity Consultants. This delineates the

emission factors, pollution control technology, and sampling and testing protocols which will remain in place to ensure that Lhoist's operations comply with their permit, even after 20.2.20 NMAC is repealed. Any changes made to their operations would require a permit modification and demonstration of compliance with the NAAQS,

Table 2 delineates other protections unaffected by the repeal that can serve the same or similar functions as 20.2.20 NMAC. In addition, their Permit Condition #1(f), states that: "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, or will increase the discharge of emissions. Any such proposed changes shall be submitted as a revision or modification. . .of this permit." Therefore, a repeal of 20.2.20 NMAC would not enable emissions from the facility to interfere with attainment or maintenance of the NAAQS.

3.3 Modeling demonstration

The previous modeling demonstration conducted for this facility did not address building downwash (stating that 'Building downwash was not included as it is optional for the radius of impact analysis'), and did not model for PM $_{2.5}$; however, the EPA is requiring both of these as part of this 110(l) demonstration. Therefore, the AQB conducted a site visit of this facility to gather spatial data to use as inputs into an updated dispersion modeling analysis, which verified that this facility at its PTE, as constructed and operated, will not cause nor significantly contribute to any exceedances of any applicable air quality standards. This new modeling also utilized the more-current EPA-accepted program "AERMOD" instead of "ISCST3". (See *Revised Air Dispersion Modeling Summary for the Lhoist North America – Belen Chemical Lime Plant, Permit No. 1652 M2-R6*, revised 9/29/17)

4.0 NON-INTERFERENCE WITH THE PM NAAQS

Removal of 20.2.20 NMAC from the SIP is not expected to affect the attainment status of any areas of the state. This is based on monitoring data and attainment status for PM NAAQS in New Mexico. Monitoring data for New Mexico shows that all counties are well below the $PM_{2.5}$ NAAQS, and except for Doña Ana County are well below the NAAQS for PM_{10} as well. For Doña Ana, Luna and San Juan counties, all the exceedances were flagged in AQS as exceptional events (high winds or wildfire). Excluding exceptional events, we would expect our 3-year estimated exceedances to be less than 1. Ambient levels in these counties are so low that even if there were a slight increase, it is not likely to cause a violation of the NAAQS or NMAAQS, hence noninterference is supported.

4.1Monitoring Data

4.1.1 $PM_{2.5}$

Non-Continuous Federal Reference Method (FRM)

The AQB operates three Method 145 $PM_{2.5}$ Thermo Environmental Instruments 2025i series Partisol FRM samplers within the air monitoring network. All three are in Doña Ana County (Air Quality Control Region 6).

Two of the three samplers are at Desert View (AQS# 35-013-0021), which is designated as the AQB's co-location site. The third sampler is located in Anthony (AQS# 35-013-0016).

Continuous

The AQB currently operates five Method 170 Met-One Beta Attenuation Monitoring (BAM)-1020 $PM_{2.5}$ samplers within the air monitoring network designated as State or Local Air Monitoring Stations (SLAMS). The BAM-1020 samplers are continuous and capture particulate data daily as compared to once every third day sampling as with the FRM samplers.

1. Santa Fe Airport (AQS# 35-049-0021); 2. Hobbs Jefferson site (AQS# 35-025-0008) (general background site location); 3. Anthony (AQS# 35-013-0016); 4. Las Cruces Office (AQS# 35-013-0025) (Regional Transport particulate site location); and 5. Taos (AQS# 35-055-0005) (Air Quality Control Region 3).

(NMED AQB 2017 Annual Network Review)

New Mexico has submitted monitoring data showing attainment for the counties with active $PM_{2.5}$ monitors in their jurisdiction. Albuquerque-Bernalillo has submitted its own monitoring data showing attainment for Bernalillo County. All areas in New Mexico (including Bernalillo County) have been designated Attainment / Unclassifiable for the 2012 primary annual $PM_{2.5}$ NAAQS based on air quality monitoring data from 2011-2013 (80 FR 2206, January 15, 2015).

4.1.2 PM_{10}

Non-Continuous FRM:

Anthony (AQCR 6) Thermo Partisol 2025i FRM PM_{10} sampler.

Continuous Met-One BAM-1020 Federal Equivalent Method (FEM)**:**

6CM Anthony (AQS# 35-013-0016); 6ZK Chaparral (AQS# 35-013-0020); 6ZM Desert View (AQS# 35-013-0021); 6ZL Holman Road (AQS# 35-013-0019); 6WM West Mesa (AQS# 35-013-0024); 1H Substation (AQS# 35-045-1005); and 7E Deming Airport (AQS# 35-029-0003).

All counties except for Doña Ana are in attainment or unclassifiable for PM_{10}. Anthony, New Mexico, located in Doña Ana County, was designated nonattainment for PM_{10} and classified as moderate under Sections 107(d)(4)(B) and 188(a) of the CAA, upon enactment of the Clean Air Act Amendments (CAAA) of 1990. (56 FR 56694, 11/6/91; 57 FR 13498, 13537, 4/16/92). On 11/8/91, NMED submitted a SIP revision for the Anthony PM_{10} nonattainment area. NMED determined that all point and area sources of PM_{10} in or affecting the area to be *de minimis*, except for unpaved roads, unvegetated and sparsely vegetated areas, and range lands. The paving of roads was determined to be economically infeasible, the enhancement of ground cover in the region to be technologically infeasible, and emissions from range lands to be non-anthropogenic. (58 FR 18190-7, 4/8/93). Despite continued efforts by the State and Doña Ana County to reduce dust levels in the area, the State was not confident that the implemented control strategies would prevent primarily non-anthropogenic exceedances of the standard. The State requested a waiver of the compliance date, as allowed under Section 188(f) of the CAAA. On 9/9/93 the EPA granted approval of the Anthony, New Mexico, moderate nonattainment area

PM_{10} SIP, submitted 11/8/91, including the waiver of the moderate area attainment date for Anthony. (58 FR 47383). "The overwhelmingly dominant sources of PM_{10} concentrations in the Anthony area are nonanthropogenic emissions from the surrounding desert and residual nonanthropogenic emissions from surrounding rangelands which are not feasibly controllable." (58 FR 47384). This area is still impacted by blowing dust from high winds, and NMED is developing a dust mitigation plan for both Doña Ana and Luna counties, as required by the Exceptional Events Rule. In addition to the dust mitigation plan, NMED is developing a fugitive dust rule that will be applicable in areas of the state requiring a mitigation plan in accordance with 40 CFR Part 51.930. Since elevated PM_{10} levels in Doña Ana County are not due to lime manufacturing or lime hydrators, they would be unaffected by the repeal of 20.2.20 NMAC. Therefore, the repeal of 20.2.20 NMAC will not affect ongoing efforts to reduce PM_{10} levels in Anthony.

4.1.3 TSP

At one time, there was a nonattainment area within Grant County, consisting of a "4.5 mile-radius circle around the Kennecott Copper Smelter which was located near the town of Hurley… Air quality violations resulted from a combination of emissions from the smelter stacks, fugitive emissions, and fugitive dust from storage piles and unpaved roads on the smelter property and within the town of Hurley". (44 FR 46896, 8/9/79). Control strategies were put in place to address particulate matter, including: 20.2.20 NMAC - *Lime Manufacturing Plants – Particulate Matter* (AQCR 509); as well as 20.2.16 NMAC - *Nonferrous Smelters (New and Existing) – Particulate Matter* (AQCR 506); 20.2.21 NMAC - *Fugitive Particulate Matter Emissions From Nonferrous Smelters* (AQCR 510); and 20.2.22 NMAC - *Fugitive Particulate Matter Emissions From Roads Within The Town Of Hurley* (AQCR 511). However, since that time the federal TSP standard has been revoked and the smelter has been closed, so TSP is no longer an issue in this area.

Table 3 shows six recent years of air quality data for PM in New Mexico.

The EPA calculates annual $PM_{2.5}$ design values by first averaging the quarterly $PM_{2.5}$ values to get an annual average and then averaging the annual average $PM_{2.5}$ values over three years to get a design value. The highest monitored design value from 2010 to 2015 for the 24-Hour $PM_{2.5}$ NAAQS was 63% of the standard in 2015 in Lea County; and the highest DV for the Annual standard was 70% in 2013, also in Lea County; both of which are well below the standard. No increase in $PM_{2.5}$ levels are anticipated with a repeal of 20.2.20 NMAC, but there is ample headroom just the same.

Figure 1 shows that the Annual $PM_{2.5}$ design value trends were below the 2012 Annual $PM_{2.5}$ NAAQS of 12.0 $\mu g/m^3$ for all counties with monitors in New Mexico.

Figure 2 shows the 24-Hour $PM_{2.5}$ design value trends were below the 2012 24-Hour $PM_{2.5}$ NAAQS of 35 $\mu g/m^3$ for all counties with monitors in New Mexico

For the 24-Hour PM_{10} standard, the only consistent exceedances are in Doña Ana County, which are caused by wind-blown dust and not by lime manufacturing or lime hydrating plants.

Figure 3 shows the 24-Hour PM_{10} design value trends

Removal of 20.2.20 NMAC from the SIP is not expected to affect the PM attainment status of any area in the state.

5.0 CONCLUSION

The AQB concludes that 20.2.20 NMAC is not needed to comply with Title I of the CAA, *Air Pollution Prevention and Control* Parts A through D.

The AQB concludes that repeal of 20.2.20 NMAC will not interfere with the attainment or maintenance of any applicable NAAQS. All counties are well below the $PM_{2.5}$ NAAQS, and all but one county (Doña Ana) are well below the PM_{10} NAAQS. Exceedances in Doña Ana County are due to windblown dust, and are not due to lime manufacturing or lime hydrators regulated by 20.2.20 NMAC.

20.2.20 NMAC regulates PM emissions at lime manufacturing plants and lime hydrators. There are no lime manufacturing plants in New Mexico, and only one hydrator. No growth is expected in these source categories; however, new or existing sources would be covered by minor NSR or PSD permit programs under 20.2.72 NMAC and 20.2.74 NMAC respectively, which are SIP-approved, as well as by the applicable NSPS and NESHAP for which New Mexico has delegated authority to enforce.

Only one source (Lhoist) is currently subject to 20.2.20 NMAC, and therefore will be the only source potentially impacted by the repeal of 20.2.20 NMAC. An AERMOD dispersion modeling analysis of the Lhoist facility to address building downwash and to demonstrate compliance with the $PM_{2.5}$ NAAQS shows that this facility will not negatively affect the NAAQS as permitted and operated.

Therefore, with this submission, the AQB believes the requirements of Section 110(l) of the Clean Air Act relative to repeal of 20.2.20 NMAC have been met.

TABLE 1

Comparison of 20.2.20 NMAC with Federal Rules:

	20.2.20 NMAC *Lime Manufacturing Plants – Particulate Matter* (adopted November 15, 1978)		**40 CFR 63 Subpart AAAAA, *NESHAP for Lime Manufacturing Plants* (LMP) (adopted 2004)**		**40 CFR 60 Subpart HH, *Standards of Performance for LMP* (April 26, 1984)**
Applicability	**New LMP** (Including Hydrated Lime production): construction or modification commenced *on or after* 5/3/1977	**Existing LMP:** constructed and operational, or at which construction was commenced, *prior* to 5/3/1977	**New Lime Kiln / Processed Stone Handling (PSH)[2] operation:** construction or reconstruction commenced *after* 12/20/2002	**Existing Lime Kiln / PSH operation:** construction commenced on or before 12/20/2002	Commences construction or modification of Rotary Lime Kiln (RLK) *after* 5/3/1977
PM emissions limits for lime kilns	**> 0.30 lb**/ton limestone[3] feed	**> 10 lbs.**/hr. from any Rotary Lime Kiln	0.10 lb./ton stone feed	0.12 lb./ton stone feed (no wet scrubber installed prior to 1/5/04); 0.60 lb./tsf (with scrubber)	any gases which contain PM in excess of **0.60 lb.**/ton of stone feed (limestone feedstock & millscale or other iron oxide additives)
PM emissions limits for Stack Emissions			0.05 grams/dry standard cubic meter PSH Operations		
PM emissions limits from lime hydrators	**> 0.15 lb**./ton lime feed to any lime hydrator	NA	NA	NA	NA
Opacity limit	≧ **10%** from any lime kiln	NA	7% PSH non-scrubber stack or fabric filter; 10% Fugitive emissions		**15%** when exiting from a dry emission control device

[2] **Processed stone** means limestone or other calcareous material that has been processed to a size suitable for feeding into a lime kiln.
[3] **Limestone** means the material comprised primarily of calcium carbonate (referred to sometimes as calcitic or high calcium limestone), magnesium carbonate, and/or the double carbonate of both calcium and magnesium (referred to sometimes as dolomitic limestone or dolomite).

Emissions threshold for applicability	None (all such plants would be subject)	Only LMPs that are major sources or located at, or are part of, a major source of HAP emissions (10/25 TPY) unless LMP is located at a Kraft, soda or sulfite pulp mill, beet sugar plant, or only processes sludge containing calcium carbonate from water softening processes	Any RLK used to manufacture lime after 5/3/1977 (except at Kraft pulp mills)

TABLE 2

Before and after comparison of 20.2.20 NMAC, *Lime Manufacturing Plants - Particulate Matter* proposed to be repealed, with air quality protections unaffected by repeal

Part 20 Citation	**Part 20 Requirements Proposed for Repeal**	**Protections Unaffected by Repeal**
20.2.20.109 NMAC, *EMISSIONS LIMITATIONS - NEW PLANT*	"The owner or operator of a new lime manufacturing plant shall not permit, cause, suffer or allow emissions of particulate matter to the atmosphere to:"	NSPS Subpart HH – *Standards of Performance for Lime Manufacturing Plants*, §60.342 *Standard for particulate matter*. Emissions from any Rotary Lime Kiln not to exceed:
20.2.20.109.A NMAC	**A**. "Exceed 0.30 pounds per ton of limestone feed, or exhibit ten percent opacity or greater, from any lime kiln; or"	0.60 lb. PM/ton of stone feed, or exhibit greater than 15 percent opacity from a dry emission control device. NMED did not revise Part 20 to incorporate these new standards after the remand of the NSPS by the Court of Appeals, which resulted in Part 20 being more restrictive. However, if Part 20 were repealed, the revised NSPS would still be protective of air quality. A new lime manufacturing plant would still be subject to NSPS Subpart HH, *Standards of Performance for Lime Manufacturing Plants* and NESHAP Subpart AAAAA, *National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants*.

20.2.20.109.B NMAC	**B**. "Exceed 0.15 pounds per ton of lime feed to any lime hydrator."	The existing lime hydrating facility, Lhoist North America, in Belen, NM, operates under NSR Permit #1652-M2-R6, which would remain in place after the repeal of Part 20. Therefore, they would still be required to comply with their permitted emissions limits. Their Potential to Emit for particulate matter is based on a permit limit, which is federally enforceable via SIP-approved 20.2.72 NMAC, *Construction Permits* (Part 72). A permit would still be required for the existing Lhoist facility, or any new facility due to uncontrolled PM emissions from the seasoning chamber (i.e. lime hydrator), which are estimated to be greater than the 10 lb./hour or 25 TPY permitting thresholds stipulated by Part 72. In addition, a permit would still be necessary to specifically limit emissions of Toxic Air Pollutants (e.g. quick lime and hydrated lime) as required per 20.2.72.200.A.(4), 400, 402 and 502 NMAC. Should Lhoist apply for a permit revision in reaction to the repeal of Part 20 (e.g. to remove Permit Condition #1(e) which cites to 20.2.20.109.B, 111, 112, and 113 NMAC), Part 72 would still require the applicant to show compliance with the NAAQS. In addition, Permit Condition #1(f) states that: "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, or will increase the discharge of

Part 20 Citation	Part 20 Requirements Proposed for Repeal	Protections Unaffected by Repeal
		emissions. Any such proposed changes shall be submitted as a revision or modification. . .of this permit." Therefore, the repeal of Part 20 would not lessen protections afforded by their permit, and would not enable emissions from the facility to interfere with attainment or maintenance of the NAAQS.
20.2.20.110 NMAC, *EMISSIONS LIMITATIONS - EXISTING PLANT*	"The owner or operator of an **existing** lime manufacturing plant shall not permit, cause, suffer or allow emissions of particulate matter to the atmosphere to exceed 10 pounds per hour from any rotary lime kiln."	There are no "Existing lime manufacturing plants" located in New Mexico. "Existing" is defined as "constructed and operational, or at which construction was commenced, **prior to** 5/3/1977"
20.2.20.111 NMAC, *EMISSION CONTROLS*	"Any person owning or operating a lime manufacturing plant shall equip and maintain all crushers, screens or other size-classification units, hoppers and chutes with:"	
20.2.20.111.A NMAC	**A**. "Systems of enclosures, dust suppressant sprays and other measures as necessary to prevent the release of particulate matter emissions to the atmosphere; **or**"	These control technologies can be incorporated as conditions of a federally-enforceable permit pursuant to: 20.2.72.210.B.(2) NMAC: (2) "A requirement that such source install and operate control technology, determined on a case-by-case basis, sufficient to meet the requirements of the Air Quality Control Act and the federal act and regulations promulgated under either;"
20.2.20.111.B NMAC	**B**. "Equip such process units with hoods, fans, and fabric filters, wet scrubbers or other collection and control systems approved by the Department as at least as effective to reduce particulate matter emissions to the atmosphere."	

Part 20 Citation	Part 20 Requirements Proposed for Repeal	Protections Unaffected by Repeal
20.2.20.112 NMAC, *STACK REQUIREMENTS*	"The owner or operator of lime manufacturing plants shall not permit, cause, suffer or allow emissions of particulate matter to the atmosphere from a lime kiln or lime hydrator except through stacks equipped with sampling ports and platforms in such number, location and size to allow accurate sampling to be performed."	These sampling methods can be incorporated as conditions of a federally-enforceable permit pursuant to: 20.2.72.210.C.(1) - (5) NMAC "(1) Sampling ports of a size, number and location as the department may require; (2) Safe access to each port; (3) Instrumentation to monitor and record emission data including continuous emission monitoring, if appropriate; (4) Any other reasonable sampling, testing and ambient monitoring and meteorological facilities and protocols; and (5) Periodic testing pursuant to 20.2.72.213 NMAC."
20.2.20.113 NMAC, *STACK TESTING*	"Compliance with 20.2.20.109 NMAC and 20.2.20.110 NMAC shall be determined consistent with the method for manual stack testing set forth by the US EPA at 40 CFR, Part 60, Appendix A, Methods 1 through 5, or any other method receiving prior approval from the Department. Upon request of the Department, the owner or operator of lime manufacturing plants shall perform stack testing according to the method stated above and report the results of such tests in the format and time period specified by the Department. The owner or operator shall inform the Department of the dates and times of such testing so that the Department may have opportunity to have an observer present during testing."	After repeal, facilities will still be subject to methods for manual stack testing set forth by the US EPA at 40 CFR Part 60, Appendix A, Methods 1 through 5

Part 20 Citation	Part 20 Requirements Proposed for Repeal	Protections Unaffected by Repeal
20.2.20.114 NMAC, *CONTINUOUS EMISSION MONITORS - NEW PLANT*S	"The owner or operator of a new lime manufacturing plant shall not permit, cause, suffer or allow operation of the new lime manufacturing plant unless the plant is equipped with continuous monitoring systems as specified in 40 CFR, Part 60, Subpart HH, Section 60.343."	A new lime manufacturing plant (i.e. rotary lime kiln) would still be subject to NSPS Subpart HH, §60.343 *Monitoring of emissions and operations*: (a) "The owner or operator of a facility . . . shall install, calibrate, maintain, and operate a continuous monitoring system, except as provided in paragraphs (b) and (c) of this section, to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40 percent opacity. . ." The requirement for continuous monitoring systems can be incorporated as a condition of a federally-enforceable permit pursuant to 20.2.72.210.C.(3) NMAC: (3) "Instrumentation to monitor and record emission data including continuous emission monitoring, if appropriate";

Table 3

Recent Air Quality Data for PM in New Mexico

PM 2.5

Site Name	Site ID & County	Year	24-Hour Design Value	Percent of 24-Hour Standard (35 µg/m^3)[4]	Annual Design Value	Percent of Annual Standard (12 µg/m^3)[5]
	Highest Monitored Design Values					
Las Cruces	35-013-0025 Doña Ana	2010	12	34	5.4	45
Farmington	35-045-0019 San Juan	2011	14	40		
Las Cruces	35-013-0025 Doña Ana	2011			5.3	44
Hobbs	35-025-0008 Lea	2012	17	48	7.6	63
Hobbs	35-025-0008 Lea	2013	22	63	8.4	70
Hobbs	35-025-0008 Lea	2014	21	60	7.8	65
Las Cruces	35-13-0025 Doña Ana	2015	13	37	7.8	65

[4] 98th percentile, averaged over 3 years
[5] Annual mean, averaged over 3 years

PM_{10} (24-hour standard 150 µg/m^3)[6]

Site Name	Site ID & County	Design Value Year	3-Year Estimated Exceedances
	Highest Exceeding Monitors		
Deming	35-029-0003 Luna	2010	9.3
Anthony	35-013-0016 Doña Ana	2011	7.9
Anthony	35-013-0016 Doña Ana	2012	11.3
Anthony	35-013-0016 Doña Ana	2013	12.4
Anthony	35-013-0016 Doña Ana	2014	10.7
Anthony	35-013-0016 Doña Ana	2015	7.6
	Second Highest		
Chaparral	35-013-0020 Doña Ana	2010	8.5
Chaparral	35-013-0020 Doña Ana	2011	7.1
Chaparral	35-013-0020 Doña Ana	2012	9.5
Chaparral	35-013-0020 Doña Ana	2013	9.9
Desert View	35-013-0021 Doña Ana	2014	8.7
Desert View	35-013-0021 Doña Ana	2015	7.1

[6] Not to be exceeded more than once per year on average over 3 years

Figure 1

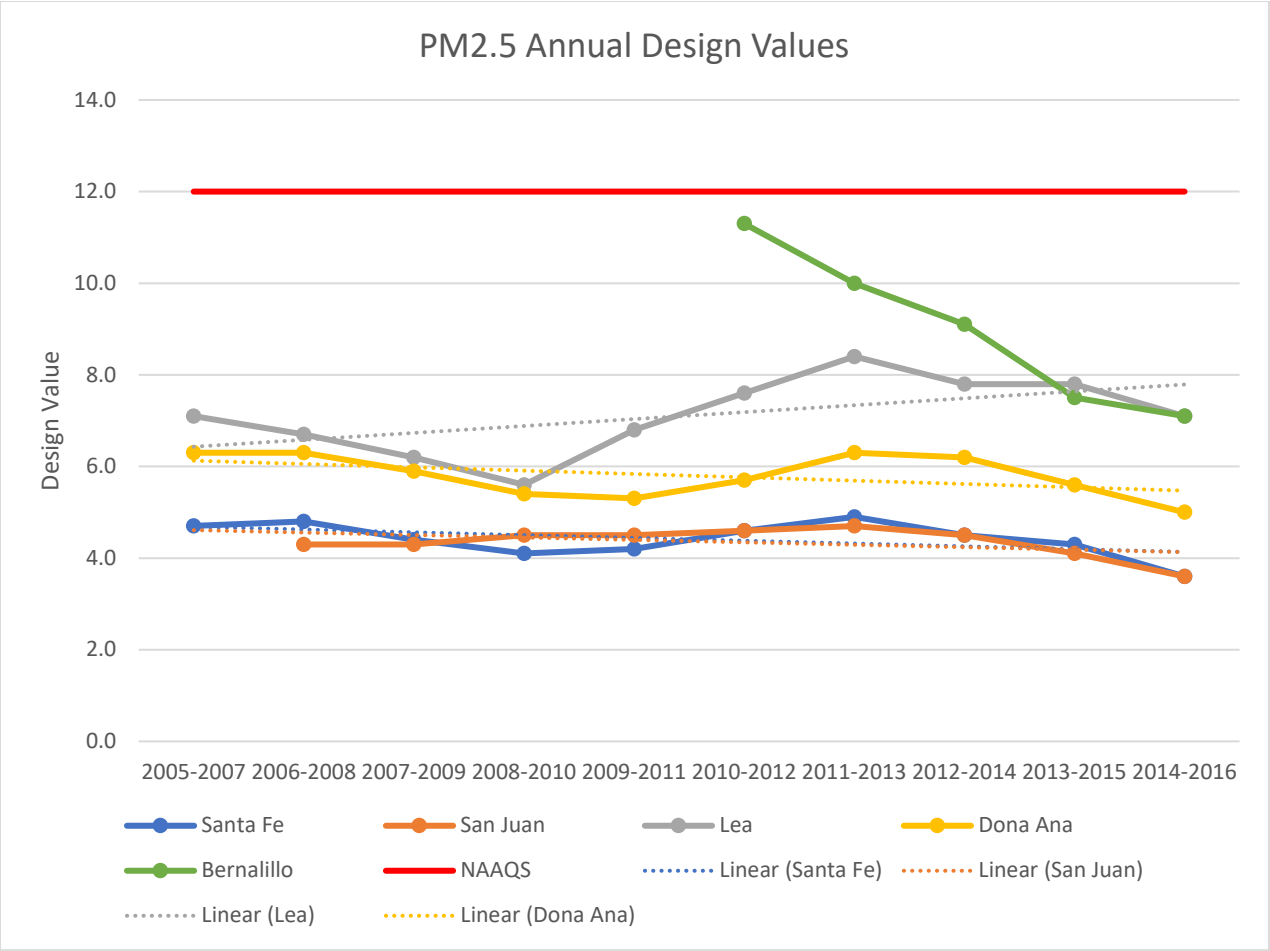

PM2.5 Annual Design Values
Design Value
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
2005-2007
2006-2008
2007-2009
2008-2010
2009-2011
2010-2012
2011-2013
2012-2014
2013-2015
2014-2016
Santa Fe
San Juan
Lea
Dona Ana
Bernalillo
NAAQS
Linear (Santa Fe)
Linear (San Juan)
Linear (Lea)
Linear (Dona Ana)

Figure 2

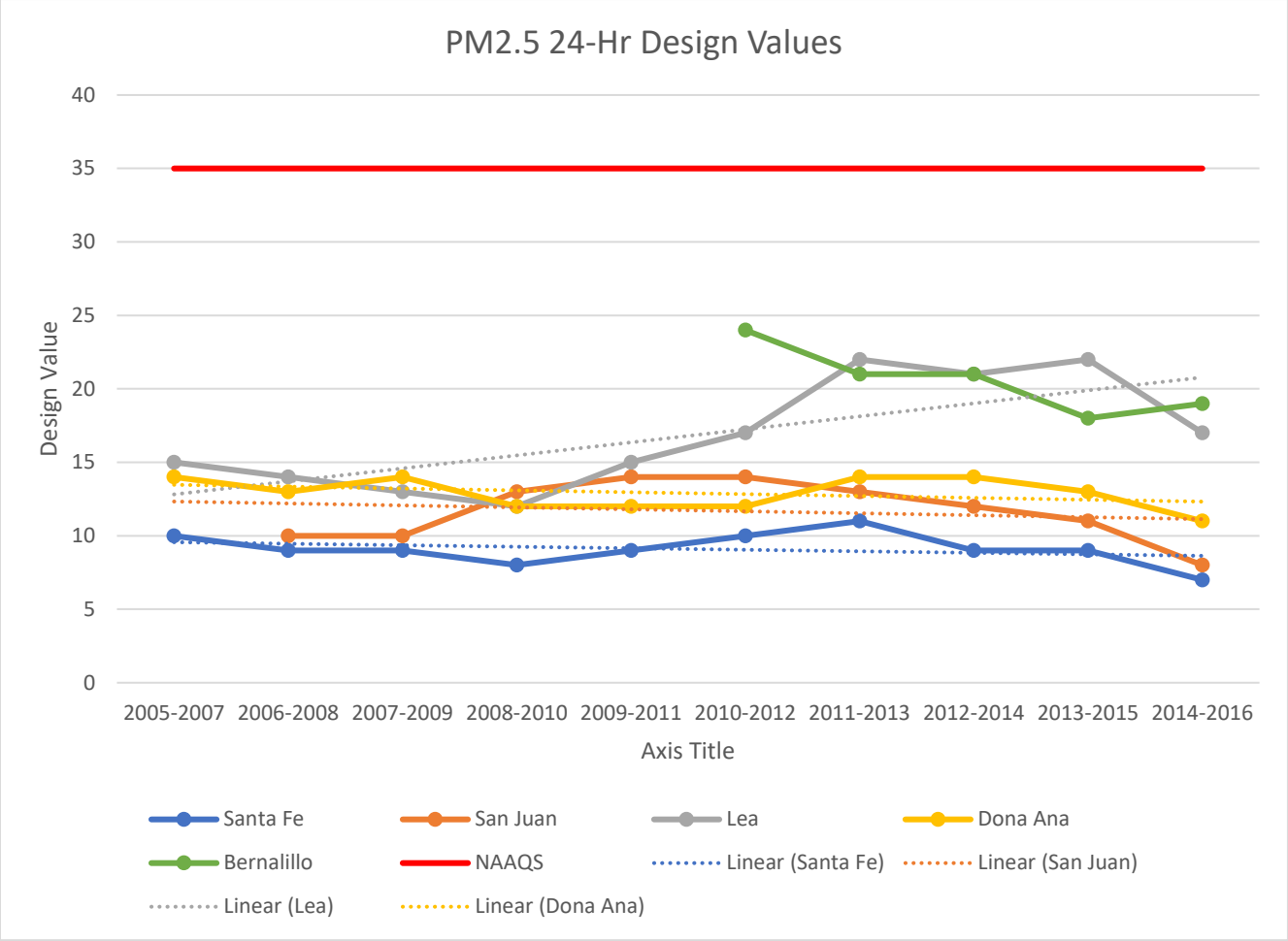
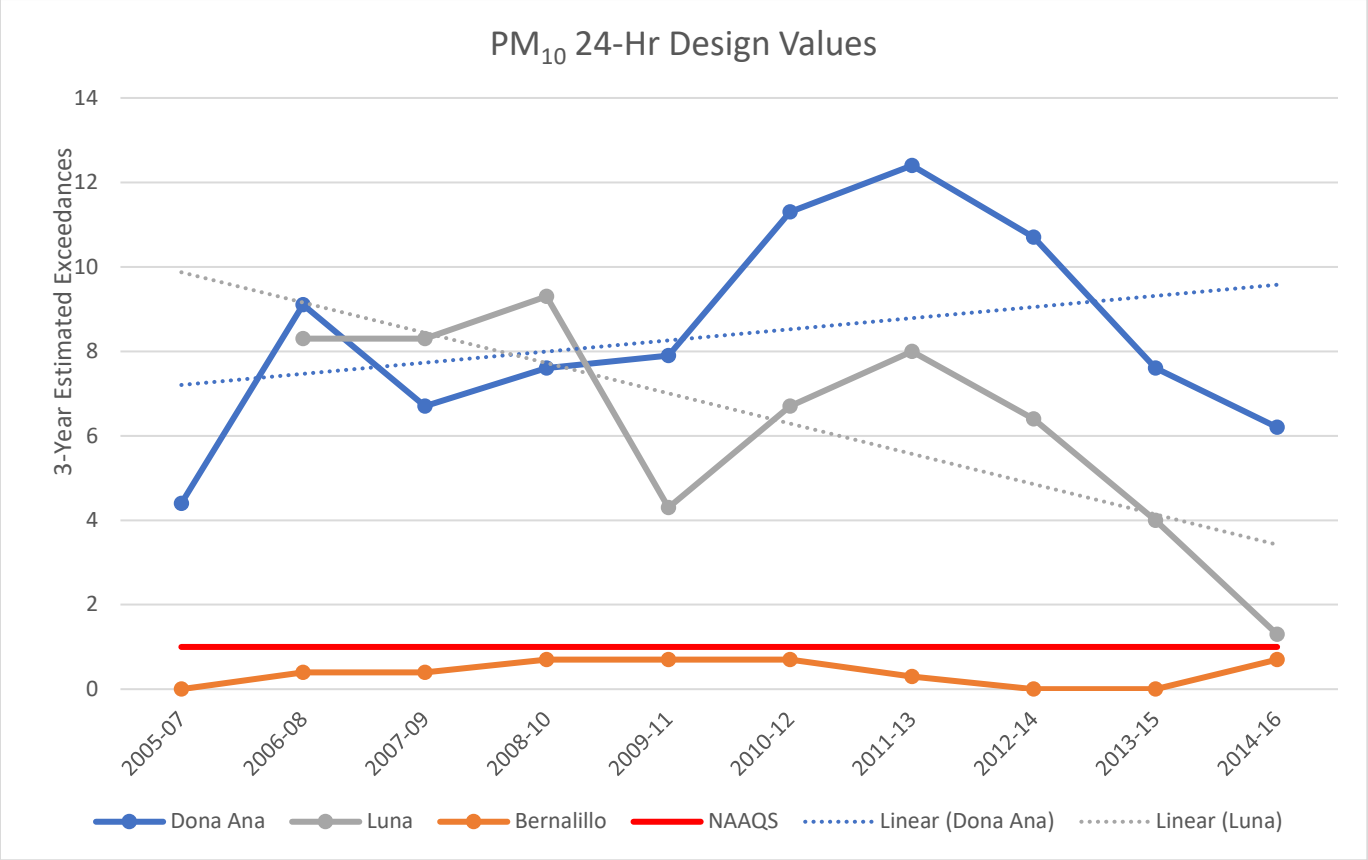

PM2.5 24-Hr Design Values
Design Value
40
35
30
25
20
15
10
5
0
2005-2007
2006-2008
2007-2009
2008-2010
2009-2011
2010-2012
2011-2013
2012-2014
2013-2015
2014-2016
Axis Title
Santa Fe
San Juan
Lea
Dona Ana
Bernalillo
NAAQS
Linear (Santa Fe)
Linear (San Juan)
Linear (Lea)
Linear (Dona Ana)

Figure 3


PM10 24-Hr Design Values
3-Year Estimated Exceedances
14
12
10
8
6
4
2
0
2005-07
2006-08
2007-09
2008-10
2009-11
2010-12
2011-13
2012-14
2013-15
2014-16
Dona Ana
Luna
Bernalillo
NAAQS
Linear (Dona Ana)
Linear (Luna)