



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007-2935
(602) 771-2300 • www.azdeq.gov



Stephen A. Owens
Director

AQD: PS: CTS: 125256

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

October 4, 2006

Michael Staggs, Plant Manager
Chemical Lime Company, Nelson Lime Plant
P.O. Box 370
Peach Springs, AZ 86434

FILE

Dear Mr. Staggs:

Subject: Minor Permit Revision No. 36425 to Operating Permit No.1000045;
Place ID 1390

The Arizona Department of Environmental Quality (ADEQ), Air Quality Division (AQD), has completed its review of your application for minor permit revision to Permit No. 1000045 and has determined that the referenced changes meet the criteria for coverage under minor permit revision.

Enclosed is a copy of the Permit revision Chemical Lime Company – Nelson Lime Plant, located in Yavapai County, Arizona. In accordance with Arizona Revised Statute §49-430, this revision to the permit shall be readily available at all times on the premises.

You are advised that this Permit revision is a legally enforceable document. If your facility fails to comply with the provisions contained in this Permit revision, you may be subject to enforcement action and could incur civil fines under the Arizona Revised Statutes.

Should you have any questions regarding this matter, please contact Trevor Baggione, at (602) 771-2321, or me at (602) 771-2308. Thank you.

Sincerely,

Nancy C. Wrona, Director
Air Quality Division

NCW: MBH

Enclosures: Minor Permit Revision No: 36425

Northern Regional Office
1515 East Cedar Avenue • Suite F • Flagstaff, AZ 86004
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

10

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 W. Washington St. Phoenix, AZ 85007-2935 Phone: (602) 771-2317
MINOR PERMIT REVISION TO AIR QUALITY CONTROL PERMIT
(As required by Title 49, Chapter 3, Article 2, Section 49-426, Arizona Revised Statutes)

This air quality control permit does not relieve applicant of responsibility for meeting all air pollution regulations

1. PERMIT TO BE ISSUED TO (Business license name of organization that is to receive permit) _____

Chemical Lime Company, Nelson Lime Plant

2. NAME (OR NAMES) OF OWNER OR PRINCIPALS DOING BUSINESS AS THE ABOVE ORGANIZATION _____

Mike Staggs, Plant Manager

3. MAILING ADDRESS *P.O. Box 370*

Peach Springs, AZ 86434

4. ORIGINAL EQUIPMENT LOCATION/ADDRESS *2 miles south of US Route 66, mile marker 112*

Nelson, Yavapai County, Arizona 86434

5. FACILITIES OR EQUIPMENT DESCRIPTION *Replace the existing gravel bed filter on Kiln #1 with a baghouse.*

6. THIS PERMIT ISSUED SUBJECT TO THE FOLLOWING *Conditions contained in Attachments "B", "C", and "E"*

7. ADEQ MINOR REVISION NUMBER *36425* PERMIT CLASS *I*

PERMIT ISSUED THIS *4th* DAY OF *October*, 2006



SIGNATURE

Nancy C. Wrona, Director, Air Quality Division

TITLE

MINOR PERMIT REVISION DESCRIPTION

The Permittee, Chemical Lime Company Nelson, operates a limestone processing and lime manufacturing plant located approximately six miles east of Peach Springs in Nelson, Yavapai County, Arizona. This Minor Revision allows Chemical Lime Company Nelson to replace the existing gravel bed filter on Kiln #1 with a baghouse.

**MINOR PERMIT REVISION NO.36425
TO AIR QUALITY PERMIT NO. 1000045
for
Chemical Lime Company – Nelson Plant**

In addition to the terms and conditions set forth in this Minor Revision, the Permittee shall comply with the terms and conditions of Permit #1000045.

I. GENERAL REQUIREMENTS

- I. For purposes of this Attachment, the following documents are referenced:
 2. "Emissions Control Procedure" refers to the *Emission Control Procedures* submitted to the Director by the Permittee, dated October 28, 1998, and revision dated May 19, 2005, as required by the Consent Order and any subsequent amendments approved by the Director.

III. LIMESTONE CRUSHING AND SCREENING PLANT

B. Emissions Limits/Standards

1. Opacity
 - a. The opacity of any plume or effluent from any process source affected under this Section, except Belt Conveyor 226, shall not be greater than 20 percent.
[A.A.C. R 18-2-702.B.3]
 - b. At all times during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from any transfer point on the Belt Conveyor 226 any fugitive emissions which exhibit greater than 10 percent opacity and any stack emissions which exhibit greater than 7 percent opacity. Compliance with the opacity standard shall be determined by conducting observations in accordance with EPA Reference Method 9 in 40 CFR 60, Appendix A. [40 CFR 60.672(a)(2) and -672(b), 60.11(b), and 60.11(c)]

IV. LIMESTONE KILN FEED SYSTEM

B. Emissions Limits/Standards

1. Opacity
 - a. The opacity of any plume or effluent from any process source affected under this Section, except Vibrating Screen 328, shall not be greater than 20 percent

while operating in PM₁₀ attainment or unclassified areas.

[A.A.C. R18-2-702.B.3]

- c. At all times during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from the Vibrating Screen 328 any fugitive emissions which exhibit greater than 10 percent opacity and any stack emissions which exhibit greater than 7 percent opacity. Compliance with the opacity standard shall be determined by conducting observations in accordance with EPA Reference Method 9 in 40 CFR 60, Appendix A.

[40 CFR 60.672(a)(2) and -672(b), 60.11(b), and 60.11(c)]

V. SOLID FUEL HANDLING SYSTEM

B. Emissions Limits/Standards

1. Opacity

- a. The opacity of any plume or effluent from any process source affected under this Section, except Belt Conveyor 516, Solid Fuel Bin 508, Weigh Feeder 601-1, Ball Mill 602-1, and Classifier 1-604, shall not be greater than 20 percent.

[A.A.C. R 18-2-702.B.3]

- b. At all times during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from Belt Conveyor 516, Solid Fuel Bin 517-2, Weigh Feeder 601-2, Ball Mill 602-2, or Classifier 2-604 gases which 20 percent or greater. Compliance with the opacity standard shall be determined by conducting observations in accordance with EPA Reference Method 9 in 40 CFR 60, Appendix A.

[40 CFR 60.252(c), 60.11(b), and 60.11(c)]

VI. KILN 1 SYSTEM/KILN 2 SYSTEM

A. Applicability

The conditions of this Section VI are applicable to the following process sources listed under Attachment "C" of the Permit, which configure Kiln 1 System/Kiln 2 System:

1. Kiln 1 System: Preheater 305, Rotary Kiln 1, Contact Cooler 1-310, Kiln 1 Dust Bin 1-318, Screw Conveyor 1-316, Screw Conveyor 1-316-A, Screw Conveyor 1-316-B, Screw Conveyor 1-316-C, and Bin Elevator 1-317.

B. Rotary Kiln 1 and 2

1. Emission Limits/Standards

a. Opacity

The opacity of any plume or effluent from Kiln 1 and 2 stacks shall not be greater than 20 percent.

[A.A.C. R 18-2-702.B.3]

c. Stack Limitation

The Permittee shall construct the stack of Kiln 1 to a nominal height of 140 feet.
[A.A.C. R18-2-306.A.2]

d. Combined Feed Rate Limit

The Permittee may operate Kilns 1 and 2 at a combined feed rate of up to, but no greater than, ten (10) percent above the combined rate at which the most recent performance test required under Sub-paragraph VI(B)(4)(b) was conducted and the test results show compliance with Sub-paragraph VI(B)(1)(b) above, as notified by the Director. [Consent Order Condition III.14, state enforceable]

e. Fuel Limitation

The Permittee shall use only the following materials as fuel for the rotary kilns under this Section: (i) fuel oil, (ii) coal, (iii) petroleum coke, or (iv) any combination of (i) through (iii). [A.A.C. R18-2-306.A.2]

2. Air Pollution Control Requirements

b. At all times that Kiln 1 is in operation, the Permittee shall operate both the Kiln 1 negative pressure baghouse and the Multicyclone 319.

(1) The Kiln 1 Baghouse shall be operated and maintained in a manner consistent with good practice for minimizing particulate emissions and maximizing particulate control efficiency. [A.A.C. R18-2-306.A.2]

(2) The differential pressure across the baghouse shall be monitored. If the differential pressure is outside the target range as guided in Part C(1) of the *Emissions Control Procedure*, the system shall be evaluated and appropriate corrective action be taken, if necessary. [A.A.C. R18-2-306.A.2]

d. The Permittee shall inspect and maintain, on daily, weekly, monthly, and semi-annual basis, both Kiln 1 and 2 baghouses in accordance with the maintenance and inspection methods and procedures stipulated in Part C(2) of the Emission Control Procedure to ensure the equipment is operated properly and to prevent equipment failure. All the periodic maintenance and inspection shall be performed following the appropriate procedural forms listed in the Emission Control Procedure attachments. These forms shall be signed and retained for at least five (5) years at the plant. [Consent Order Condition III.2 and 4, state enforceable]

3. Monitoring, Reporting, and Recordkeeping

b. Particulate Matter

(1) The Permittee shall evaluate, on a 3-hr rolling average, opacity measurements from the Kiln 1 and Kiln 2 continuous opacity monitoring system prescribed under Provision VI(B)(3)(a)(1). If the 3-hour rolling average opacity exceeds 10 percent at Kiln 1 or at Kiln 2, then the Permittee shall initiate investigation of the control equipment

of the relevant kiln within 24 hours of the first discovery of the high opacity incident for possible corrective action, using the appropriate Trouble Shooting guide provided by the manufacturer as given in Attachment F and G of the *Emissions Control Procedures* referenced in Paragraph I(D)(2) of this Attachment. If corrective action is required, the Permittee shall proceed to implement such corrective action as soon as practicable in order to minimize possible exceedances of the particulate standard established in Sub Paragraph VI(B)(1)(b) of this Attachment. If the 3-hr rolling average opacity remains above 10 percent at either Kiln 1 or at Kiln 2 for 72 consecutive hours from the first discovery of the high opacity incident, the Permittee shall submit a compliance schedule to the Director in accordance with Part XII(D) of Attachment "A". [A.A.C. R18-2-306(A)(3)(c) and Consent Order Condition III.4]

- (2) The Permittee shall log in ink or in electronic format and maintain a record of 3-hr opacity measurements performed in accordance with Provision VI(B)(3)(b)((1)) above and any corrective actions taken. A record of corrective action taken shall include the date and time that the 3-hr rolling average opacity exceeds 10 percent at both Kiln 1 and Kiln 2 and the date and time corrective action, if any, was completed. [A.A.C. R18-2-306(A)(3)(c) and Consent Order Condition III.4]

C. Dust Bin 1-318/DC 1-321 and Dust Bin 2-318/DC 2-321

1. Emission Limits/Standards

- a. Opacity

The opacity of any plume or effluent from the stacks of Dust Bin 1-318/DC 1-321 and Dust Bin 2-318/DC 2-321 shall not be greater than 20 percent.

[A.A.C. R 18-2-702.B.3]

D. Other Identifiable Emission Points at the Kiln 1 and 2 Systems

1. Emission Limits/Standards

- a. The opacity of any other identifiable emission point or plume from the affected process sources as defined in Part VI(A), which could not pass through a stack, chimney, vent or other functionally equivalent opening, shall not be greater than 20 percent while operating in PM₁₀ attainment or unclassified areas. In applying this standard, any plumes from material transfer points shall be considered identifiable. [A.A.C. R 18-2-702.B.3]

VII. FRONT LIME HANDLING SYSTEM AND BACK LIME HANDLING SYSTEM

B. FLHS/DC 430, DC 437A-F, DC 419-5, DC 452, DC 762-1 and BLHS/DC 414

1. Emission Limits/Standards

- a. Opacity

The opacity of any plume or effluent from the stacks at FLHS/DC 430, DC437A-F, DC-419-5, DC 452, DC 762-1 and BLHS/DC 414 shall not be greater than 20 percent. [A.A.C. R 18-2-702.B.3]

C. Other Identifiable Emissions Points at FLHS and BLHS

1. Emission Limits/Standards

- a. The opacity of any other identifiable emission point or plume from the process sources affected under this Section VII, that could not pass through a stack, chimney, vent or other functionally equivalent opening, shall not be greater than 20 percent. In applying this standard, any plumes from material transfer points shall be considered identifiable. [A.A.C. R 18-2-702.B.3]

VIII. HYDRATOR

B. DF 711, DC 714, and DC 721

1. Emission Limits/Standards

a. Opacity

The opacity of any plume or effluent from DF 711, DC 714, and DC 721 shall not be greater than 20 percent. [A.A.C. R 18-2-702.B.3]

C. Other Identifiable Emission Points at the Hydrator

1. Emission Limits/Standards

- a. The opacity of any other identifiable emission point or plume from the process sources affected under this Section VIII, that could not pass through a stack, chimney, vent or other functionally equivalent opening, shall not be greater than 20 percent while operating in PM₁₀ attainment or unclassified areas. In applying this standard, any plumes from material transfer points shall be considered identifiable. [A.A.C. R 18-2-702.B.3]

IX. MISCELLANEOUS DROP POINTS FROM DUST BINS AND CONVEYORS

B. Emission Limits/Standards

1. The opacity of any plume or effluent from any drop point shall not be greater than 20 percent while operating in PM₁₀ attainment or unclassified areas. [A.A.C. R 18-2-702.B.3]

**ADDENDA (MINOR REVISION) NO. 36425
TO AIR QUALITY PERMIT NO. 1000045**

for

Chemical Lime Company – Nelson Plant

The following equipment list shall supersede the previous equipment list in Attachment "C": Equipment List

ATTACHMENT "C": EQUIPMENT LIST

NAME/IDENTIFICATION	MAKE	MODEL	SERIAL NO.	DATE OF INSTALLATION	CAPACITY (TONS/HOUR)	AFFECTED BY
LIMESTONE CRUSHING SCREENING OPERATIONS: REQUIREMENTS IN ATTACHMENT B, SECTION III (SEE FIGURE E-1 OF ATTACHMENT E)						
Dump Hopper	ua	ua	ua	ua	ua	720
Apron Feeder 102	ua	ua	ua	ua	ua	720
Cleanup Belt Conveyor 102B	ua	ua	ua	Pre-1983	ua	720
Grizzly 102A	ua	ua	ua	ua	ua	720
Jaw Crusher 103	KVS	48" X 60" Jaw	554-P-73	1973	Maximum: 1260	720
Belt Conveyor 104	Hi-Line	42"	ua	Pre-1983	Rated : 600	720
Primary Screen 108	Symons	GP2820	GP-8153	1999 with screen made in 1980	Rated: 1100 Maximum: 1400	720
Surge Bin 107	66078	60 Ton	Unit 107	1973	600 rated and 1400 maximum	720
Belt Conveyor 235	ua	ua	ua	Pre-1983	ua	720
Belt Conveyor 215	ua	ua	ua	Pre-1983	ua	720
Vibrating Feeders 216-1, 2, 3	FMC	42" x 72"	ua	Pre-1983	ua	720
Vibrating Feeder 201	FMC	36" x 60"	ua	Pre-1983	Rated: 550	720
Belt Conveyor 217	Hi-Line	42"	ua	Pre-1983	ua	720
Vibrating Screen 218	Tyler	F-1406-X, 6'x16'	Unit 218	1977	850 rated and 1050 maximum	720
Gyratory Crusher 219	KVS	1752	892-P-76	1977	500 rated and 910 maximum	720

Belt Conveyor 224	Hi-Line	30"	ua	Pre-1983	ua	720
Belt Conveyor 202	Hi-Line	42"	ua	Pre-1983	ua	720
Belt Conveyor 222	Hi-Line	24"	ua	Pre-1983	ua	720
Belt Conveyor 220	Hi-Line	24"	ua	Pre-1983	ua	720
Vibrating Screen 203	Tyler	F-900, 6'x16'	Unit 203	1973	600 rated and 1260 maximum	720
Gyratory Crushers 206 (2)	KVS	1752	557-P-73	1973	650 rated and 1050 maximum (each crusher)	720
Belt Conveyor 204	Hi-Line	30"	ua	Pre-1983	ua	720
Belt Conveyor 207	Hi-Line	30"	ua	Pre-1983	ua	720
Vibrating Screen 205	Tyler	F-900, 6'x16'	Unit 205	1973	650 rated and 1050 maximum	720
Belt Conveyor 208	Hi-Line	24"	ua	Pre-1983	ua	720
Belt Conveyor 209	Hi-Line	24"	ua	Pre-1983	ua	720
Chat Silo 210	KVS	500 Ton	Unit 210	1973	700 maximum	720
Belt Conveyor 225	Hi-Line	24"	ua	Pre-1983	ua	720
Belt Conveyor 226	ua	ua	ua	1999	ua	Subpart OOO
Supersacks Fill Operation	ua	ua	ua	ua	ua	720
Dust Collector 240A	Pneumafil	2-PKE-12BV	ua	ua	99% rated efficiency and 5000 cfm flow rate	n/a
Dust Collector 240B	Pneumafil	2-PKE-12BV	ua	ua	99% rated efficiency and 5000 cfm flow rate	n/a
Dust Collector 234	Pneumafil	PCFH 284	ua	ua	99% rated efficiency and 6000 cfm flow rate	n/a
Dust Collector 213	Mikro-Pulsaire	64-S-8-20B	ua	ua	99% rated efficiency and 1080 cfm flow rate	n/a
SOLID FUEL HANDLING SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION V (SEE FIGURE E-4 OF ATTACHMENT E)						
Track Hopper	ua	ua	ua	1973	ua	716

Solid Fuel Hopper	ua	ua	ua	ua	1973	ua	716
Track Hopper Fuel Bin 503	KVS	Double-type steel	#503	1973	ua	716	
Feeders 504A, B	ua	ua	ua	1973	ua	716	
Crusher 505	McLanahan	36"x18"	1400-73	1973	Maximum: tph	220	716
Belt Conveyor 506	Hi-Line	24"	ua	1973	ua	716	
Weigh Belt 504C	ua	ua	ua	2001	ua	716, uses coke only	
Bucket Elevator 521	ua	ua	ua	1973	ua	716	
Roll Crusher 522	KVS	36"x36" KVS	891-P-76	1973	Rated: 150 tph	716	
Belt Conveyor 516	ua	ua	ua	1977	ua	Subpart Y	
Belt Conveyor 514	KVS	24"	ua	1973	ua	716	
Solid Fuel Bin 508	KVS	500 Ton Bin	#508	1973	ua	716	
Weigh Feeder 601-1	Ramsey	10-301	ua	1973	within ± 1/2% accuracy	716	
Screw Conveyor 613-1A	Fl. Worth Steel	9"	ua	1973	ua	716	
Screw Conveyor 613-1B	Fl. Worth Steel	9"	ua	1973	ua	716	
Ball Mill 602-1	KVS	9' x 12'6"	ua	1973	Maximum: tph	34.5	716
Classifier 604	KVS	ua	ua	1973	ua	716	
Solid Fuel Bin 517-2	KVS	650 Ton Bin	#517	1976	ua	Subpart Y	
Weigh Feeder 601-2	Ramsey	10-301	ua	1977	within ± 1/2% accuracy	Subpart Y	
Ball Mill 602-2	KVS	10' x 10'6"	ua	1976	Maximum: tph	51.6	Subpart Y
Classifier 2-604	KVS	ua	ua	1976	ua	Subpart Y	
Dust Collector 527	Mikro-Pulsair	100S-10-0	ua	ua	99%+ rated and operating efficiency and 6,050 cfm flow rate	n/a	

LIMESTONE KILN FEED SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION IV (SEE FIGURES E-2 AND E-3 OF ATTACHMENT E)

Vibrating Feeders 301 (6)	FMC	32" x 48"	ua	1976	ua	722
Belt Conveyor 302	na	na	na	1973 extended 1977	ua	722
Vibrating Screen 328	Tyler	R-1005-CS-G	ua	1997	Rated: 100 tph Maximum: 393 tph	Subpart OOO
Weigh Belt Conveyor 329	Hi-Line	24"	ua	1973 extended 1977	ua	722
Stone Bin 304-1	KVS	800 Ton Bin	#304-1	1973	n/a	722
Weigh Belt Conveyor 303A	Hi-Line	24"	ua	1977	ua	722
Stone Bin 304-2	KVS	700 Ton Bin	#304-2	1976	n/a	722
Supersack Load-in Hopper	ua	ua	ua	ua	ua	722
Tube Conveyor	ua	ua	ua	ua	ua	722
KILN I SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VI (SEE FIGURE E-2 OF ATTACHMENT E)						
Preheater 305	KVS	ua	001	1973	ua	730
Lime Kiln 1 (quicklime production)	KVS	15' dia. x 155'	ua	1973	Rated: 33.3 tph Maximum: 39.4 tph	720
Contact Cooler 1-310	Ferenco	Knives	#310-1	1995	Rated: 33.3 tph Maximum: 39.4 tph	730
Kiln 1 Dust Bin 1-318	KVS	50 Ton Bin	#318-1	1973	ua	730
Screw Conveyor 1-316A	Ft. Worth Steel	12"	ua	1973	ua	730
Screw Conveyor 1-316	Ft. Worth Steel	12"	ua	1973	ua	730
Screw Conveyor 1-316-B	ua	12"	ua	Projected 2005	ua	730
Screw Conveyor 1-316-C	ua	12"	ua	Projected 2005	ua	730
Bin Elevator 1-317	ua	ua	ua	1973	ua	730
Kiln 1 Multicyclone 1-319	Rescareh-Cottrell	CY-119	ua	ua	50-75%+ rated and operating efficiency and 220,000 cfm flow rate	n/a

Kiln 1 Negative Pressure Baghouse 1-313	Boldtco Pulse Jet Baghouse	Model FBCL 14-2-18-16-10	ua	Projected 2005	99.87% rated efficiency, 99.5% operating efficiency and 227,000 cfm flow rate	n/a
Dust Bin 1-318 Dust Collector 1-321	Mikro-Pulsaire	365-8-30B	ua	ua	99%+ rated and operating efficiency and 1,740 cfm flow rate	n/a
KILN 2 SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VI (SEE FIGURE E-3 OF ATTACHMENT E)						
Kiln 2 Preheater	KVS	ua	ua	1976	ua	730
Lime Kiln 2 (quicklime production)	KVS	17' dia. x 178.5'	ua	1976	Rated: 41.7 tph Maximum: 59.0 tph	720
Contact Cooler 310-2	KVS	20' dia.	#310-2	1976	Rated: 41.7 tph Maximum: 59.0 tph	730
Kiln 2 Dust Bin 318-2	KVS	150 Ton Bin	#318-2	1976	ua	730
Screw Conveyor 2-316	Pt. Worth Steel	9"	ua	1976	ua	730
Screw Conveyor 2-316A	Pt. Worth Steel	9"	ua	1976	ua	730
Screw Conveyor 2-316B	Pt. Worth Steel	12"	ua	1976	ua	730
Screw Conveyor 2-316C	Pt. Worth Steel	16"	ua	1976	ua	730
Screw Conveyor 2-316D	ua	ua	ua	1998	ua	730
Screw Conveyor 2-316E	ua	ua	ua	1998	ua	730
Screw Conveyor 2-316F	ua	ua	ua	1998	ua	730
Screw Conveyor 2-316G	ua	ua	ua	1998	ua	730
Bin Elevator 2-317	Rexnord	1100 Series	ua	1973	ua	730
Kiln 2 Multicyclone 2-319	Cyclo-Trell	5x8 C-24	ua	1976	50-75%+ rated and operating efficiency and 280,000 cfm flow rate	n/a
Kiln 2 Negative Pressure Baghouse	Amerex	Rex-Pulse	10RP-14-324D6	1998	99.87% rated efficiency, 99.5% operating efficiency and 227,000 cfm flow rate	n/a

Kiln 2 Dust Collector 2-321	Mikro-Pulsaire	64S-8-20B	ua	1976	99%+ rated and operating efficiency and 3,100 cfm flow rate	n/a
FRONT (NORTH) LIME HANDLING SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VII (SEE FIGURE E-5 OF ATTACHMENT E)						
Vibrating Feeders 340A, B, C, D (4 Feeders)	ua	ua	ua	1995	ua	730
Vibrating Feeder 2-311	ua	ua	ua	1977	ua	730
Conveyor 411	ua	ua	ua	2000	ua	730
Apron Conveyor 420	Rexnord	24"	ua	1977	ua	730
Apron Conveyor 421	Rexnord	42"	ua	1977	ua	730
Screw Conveyor 413	Ft. Worth Steel	16"	ua	1977	ua	730
Roll Crusher 422	McLanahan	24"x48"	953045	1977	Maximum: 250 tph	730
Bucket Elevator 423	Rexnord	1100 Series	ua	1977	ua	730
Screen 432	Tyler	5"x14" 3S R-1405-X	50-2685	1976	Maximum: 195 tph	730
Undersize Lime Hopper	ua	ua	ua	1999	Maximum: 195 tph	730
Hammermill 422	ua	ua	ua	1999	Rated: 195 tph Maximum: 195 tph	730
Screw Conveyor 428	Purvis Bearing	20"	ua	1999	Rated: 150 tph	730
Bucket Elevator 424-1	Rexnord	1100 Series	ua	1977	ua	730
Bucket Elevator 424-2	Rexnord	1100 Series	ua	1977	ua	730
Bucket Elevator 424-C	Rexnord	1100 Series	ua	1977	ua	730
Screw 425	Ft. Worth Steel	24"	ua	1977	ua	730
Screw 426	Ft. Worth Steel	24"	ua	1977	ua	730
Screw 427	Ft. Worth Steel	24"	ua	1977	ua	730
Screw Conveyor 471	Purvis Bearing	9"	ua	1999	Rated: 10 tph	730

Screw Conveyor 470	Purvis Bearing	9"	ua	1999	Rated: 10 tph	730
Product Silo 1A (428-1)	KVS	3300 Ton Silo	428-1	1976	ua	730
Product Silo 2A (428-2)	KVS	3300 Ton Silo	428-1	1976	ua	730
Product Silo 3A (428-3)	KVS	3300 Ton Silo	428-1	1976	ua	730
Vibrating Feeder 443-1	FMC	Syntron MF-200-B 48" x 84"	ua	1977	Rated: 600 tph	730
Vibrating Feeder 433-1 with Screen Cloth	FMC	Syntron RF-80 30" x 54"	ua	1977	Rated: 200 tph	730
Vibrating Feeder 443-2	FMC	Syntron MF-200-B 48" x 84"	ua	1977	Rated: 600 tph	730
Vibrating Feeder 433-2	FMC	Syntron RF-80 30" x 54"	ua	1977	Rated: 200 tph	730
Vibrating Feeder 443-3	FMC	Syntron MF-200-B 48" x 84"	ua	1977	Rated: 600 tph	730
Vibrating Feeder 433-3	FMC	Syntron RF-80 30" x 54"	ua	1977	Rated: 200 tph	730
Screw Conveyor 441	ua	ua	ua	ua	ua	730
Screw Conveyor 461	Mesco Conveying Corp	UT 40-40-08	ua	1994	ua	730
Dust Recovery Bin	Siotek	16 Ton Bin	ua	1994	ua	730
Screw Conveyor 466	ua	9"	ua	1994	ua	730
Screw Conveyor 465	ua	9"	ua	1994	ua	730
Belt Conveyor 435	Hi-Line	42"	ua	1977	Rated: 600 tph	730
Belt Conveyor 434	Hi-Line	30"	ua	1977	Rated: 200 tph	730
Screw Conveyor 444	ua	ua	ua	ua	ua	730
Dust Collector 430	Mikro-Pulsaire	180S-8-20	ua	1977	99%+ rated and operating efficiency and 8,700 cfm flow rate	n/a
Dust Collector 437A	Mikro-Pulsaire	25S-8-30	ua	1977	99%+ rated and operating efficiency and 1,210 cfm flow rate	n/a
Dust Collector 437B	Mikro-Pulsaire	25S-8-30	ua	1977	99%+ rated and operating efficiency and 1,210 cfm flow rate	n/a

Dust Collector 437C	Mikro-Pulsaire	36S-10-30	ua	1977	99%+ rated and operating efficiency and 2,178 cfm flow rate	n/a
Dust Collector 437D	Mikro-Pulsaire	49S-8-20	ua	ua	99%+ rated and operating efficiency and 2,370 cfm flow rate	n/a
Dust Collector 437E	Mikro-Pulsaire	49S-8-20	ua	ua	99%+ rated and operating efficiency and 2,370 cfm flow rate	n/a
Dust Collector 437F	Mikro-Pulsaire	49S-8-20	ua	ua	99%+ rated and operating efficiency and 2,370 cfm flow rate	n/a
Dust Collector 419-5	Mikro-Pulsaire	16S-8-30	ua	ua	99%+ rated and operating efficiency and 1,210 cfm flow rate	n/a
Dust Collector 452	Pneumafil	PCFH-8BV	ua	1994	99%+ rated and operating efficiency and 1,500 cfm flow rate	n/a
Dust Collector 762-1	Pneumafil	PKE-24	ua	ua	99%+ rated and operating efficiency and 5,000 cfm flow rate	n/a
BACK (SOUTH) LIME HANDLING SYSTEM: REQUIREMENTS IN ATTACHMENT B, SECTION VII (SEE FIGURE E-6 OF ATTACHMENT E)						
Rail Car Off-Load Hopper	ua	ua	ua	1973	ua	730
Screw Conveyor 412	ua	ua	ua	1973	ua	730
Belt Conveyor 401	Hi-Line	24"	ua	1973	ua	730
Bucket Elevator 403	Rexnord	1612-02	ua	1973	Rated: 74 tph	730
Screw Conveyor 443	Conveyor Inc.	24"	ua	1991	Rated: 115 tph	730
Roll Crusher 444	McLanahan	24"x36"	903060	1991	Maximum: 250 tph	730
Screw Conveyor 445	Conveyor Inc.	24"	ua	1991	Rated: 115 tph	730
Bucket Elevator 446	ua	ua	ua	1991	Rated: 150 tph	730
Screen 404	Tyler	F-600, 4'x12'	20423	1973	Maximum: 250 tph	730
Hammermill 405	Williams	340R	15562	1998	Maximum: 98.3	730
Screw Conveyor 447	Conveyor Inc.	16"	ua	1991	Rated: 50 tph	730

Screw Conveyor 411	ua	ua	ua	ua	2001	ua	730
Bucket Elevator 406 E, W (2 elevators)	Reknord	1612-01	ua	ua	1973	Rated: 40 tph	730
Screw Conveyor 408	ua	20"	ua	ua	1994	ua	730
Screw Conveyor 408A	Thomas Conveyor	20"	ua	ua	1994	ua	730
Screw Conveyor 408B	Thomas Conveyor	20"	ua	ua	1994	ua	730
Screw Conveyor 408C	Thomas Conveyor	20"	ua	ua	1994	ua	730
Hammernill 402-2	Williams	C-32 Slugger	14399	1992	Maximum: 98.3 tph	730	730
Product Silo 1	KVS	950 Ton Bin	#409-1	1973	ua	730	730
Product Silo 2	KVS	950 Ton Bin	#409-2	1973	ua	730	730
Product Silo 3	KVS	950 Ton Bin	#409-3	1973	ua	730	730
Product Silo 4	KVS	950 Ton Bin	#409-4	1973	ua	730	730
Product Silo 5	KVS	950 Ton Bin	#409-5	1973	ua	730	730
Screw Conveyor 414-2	ua	ua	ua	1973	ua	730	730
Belt Conveyor 402	ua	ua	ua	ua	ua	730	730
Dust Collector 414	Mikro-Pulsaire	IF-2-48	ua	1973	99%+ rated and operating efficiency and 10,800 cfm flow rate	n/a	
HYDRATOR: REQUIREMENTS IN ATTACHMENT B, SECTION VIII (SEE FIGURE E-7 OF ATTACHMENT E)							
Screw Conveyor 701	ua	ua	ua	1988	ua	730	730
Screw Conveyor 702	ua	ua	ua	1988	ua	730	730
Quicklime Feed Surge Bin 703	ua	3 tons	ua	1988	ua	730	730
Quicklime Belt Conveyor 704	Ramsey	Belt Scale System	Scale: 10-101R-1 Integrator: 2001	2001	Rated: 15.0 tph	730	730
4W Pulverizer 706	Mikro Pulverizer	4W	ua	1988	Rated: 20 tph Maximum: 22 tph	730	730
Screw Conveyor 707	ua	ua	ua	1988	ua	730	730

Pug Mill 708	Ehrsam	Twin Paddle	ua	1988		Rated: 20 tph Maximum: 22 tph	730
Seasoning Chamber 710	ua	18'x8' diameter	ua	1988		Rated: 12 tph Maximum: 22 tph	730
Screw Conveyor 712	ua	ua	ua	1999		ua	730
Bucket Elevator 719	ua	ua	ua	1999		ua	730
Air Separator 715	Sturtevant	Whirlwind 12'	3086	1999		Maximum: 25 tph	730
Hammermill 717	Williams Crusher Co.	Meteor Mill, Size 18	ua	1999		Maximum: 12.5 tph	730
Screw Conveyor 718	ua	ua	ua	1999		ua	730
Bucket Elevator 713	ua	ua	ua	1988		ua	730
Hydrated Lime Silo 6	KVS	950 Ton Bin	#409-6	1973		Rated: 500 tons hydrated	730
Pilot System Storage Bin 1	Silotec	ua	ua	1998		ua	730
Pilot System Screw Conveyor 1	ua	ua	ua	1998		ua	730
Vibrating Mill/Seasoning Chamber (Pilot System)	ua	MD36X10	DP1449-1-1	1998		Rated: 13 tph Maximum: 13 tph	730
Pilot System Screw Conveyor 2	ua	ua	ua	1998		ua	730
Pilot System Storage Bin 2	Silotec	ua	ua	1998		ua	730
Ducon Scrubber 706	Ducon Wet Scrubber	UW-4(48)	ua	1988		95%+ rated and operating efficiency and 6,000 cfm flow rate	n/a
Dust Collector 714	Mikro-Pulsaire	36S-8-30	ua	ua		99%+ rated and operating efficiency and 1,740 cfm flow rate	n/a
Dust Collector 721	American Air Filter	Millennium	ua	1999		99%+ rated and operating efficiency and 10,000 cfm flow rate	n/a
DIESEL GENERATORS: REQUIREMENT IN ATTACHMENT B, SECTION X							
North Electric Generator	Diversified Technical Services	1150 EkW Generator	3516 DITA	1990		Rated: 1135 kW Maximum: 1135 kW	719
South Electric Generator	Diversified Technical Services	1150 EkW Generator	3516 DITA	1990		Rated: 1135 kW Maximum: 1135 kW	719

Portable Electric Generator	Rental	125 kW maximum capacity	Rental	1999	Rated: 125 kW Maximum: 125 kW	719
-----------------------------	--------	-------------------------	--------	------	----------------------------------	-----

na: Unavailable
n/a: Not Applicable

Table C-2. Stack Information

Stack ID	Description	Exit Temperature (°F)	Exit Velocity (fps)	Stack Height (ft)	Inside Diameter (ft)
1	North Generator Stack	855	245	13	1
100	Kiln 1 Stack	459	37.9	140	10
1-321	DC 1-321	100	58	45	0.8
2	South Generator Stack	855	245	13	1
200	Kiln 2 South Stack	420	48.2	141	10
213	DC 213	68	13.6	75	1.3
2-321	DC 2-321	100	54	66	1.1
234	DC 234	68	57	40	1.5
414	DC 414	90	34	125	2
762-1	DC 762-1	150	47	12	1.5
419-5	DC 419-5	100	32	8	0.9
430	DC 430	100	51	33	1.9
437A	DC 437A	80	27	40	0.9
437B	DC 437B	100	32	120	0.9
437C	DC 437C	80	27	40	0.9
437D	DC 437D	80	62	26	0.9
437E	DC 437E	80	62	26	0.9

437F	DC 437F	80	62	26	0.9
452	DC 452	100	26	10	1.1
527	DC 527	80	40	90	1.8
714	DC 714	80	22	92	1.3
240B	DC 240B	68	47	40	1.5
240A	DC 240A	68	47	40	1.5
800	Ducon Scrubber	190	44	92	1.7
721	New Hydrator DC 721	115	55	42	1.8

Table C-3. Continuous Emission Monitoring Systems Information

Type	Manufacturer	Model	Serial No.	Range	Location
Kiln 1 stack opacity monitor	KVB	LM3086EPA3	730184	0-100%	Kiln 1 Stack
Kiln 2 stack opacity monitor	KVB	LM3086EPA3	730185	0-100%	Kiln 2 Stack

**ADDENDA (MINOR REVISION) NO. 36425
TO AIR QUALITY PERMIT NO. 100045
for
Chemical Lime Company – Nelson Plant**

ATTACHMENT “E”: PLANT SCHEMATICS

This attachment includes the following process flow diagram:

Figure E-2. Process Flow Diagram of the Kiln 1 System

APPENDIX D-A
SAMPLE RECORDKEEPING FORMS



ID Fans, American Standard.

Check water flow to ID Fan Bearings:

	#1 Kiln		#2 Kiln
N	_____	N	_____
S	_____	S	_____

Check Water temp at Bearings:

	#1 Kiln		#2 Kiln
N	_____	N	_____
S	_____	S	_____

Check Oil Level at Bearings:

	#1 Kiln		#2 Kiln
N	_____	N	_____
S	_____	S	_____

Check Oil Level on ID Fan Motor:

#1 Kiln _____ #2 Kiln _____

Check cooling oil temps at American Standard (#1 Kiln):

Intake _____ Exit _____

Check Oil Pressure at American Standard:

#1 Kiln _____

Check oil level and oil cooling fans on American Standard:

#1 Kiln _____

Vent Fan

Check Oil Level on Vent Fan Bearings

#1 Kiln _____

Check Water Flow:

#1 Kiln _____

Vent Fan Water Temp:

#1 Kiln _____

Dust System, Back Flush Fans (#1 Kiln)

Needs Cleaned Yes___ No___

Check primary dust collector, insure its empty: _____

Check primary dust collector air lock for operation: _____

Check all dust screws for operation and flow: _____

Check dust elevator for operation: _____

Check back flush fans drive belts: _____

Check hydraulic tank fluid level: _____

Check all plumbing for leaks: _____

Check rake drives for operation: _____

Check all tipping gates for operation: _____



ID Fans, American Standard

Check water flow to ID Fan Bearings:

#1 Kiln		#2 Kiln	
N	_____	N	_____
S	_____	S	_____

Check Water temp at Bearings:

#1 Kiln		#2 Kiln	
N	_____	N	_____
S	_____	S	_____

Check Oil Level at Bearings:

#1 Kiln		#2 Kiln	
N	_____	N	_____
S	_____	S	_____

Check Oil Level on ID Fan Motor:

#1 Kiln	#2 Kiln
_____	_____



Dust System, Baghouse (#1 Kiln)

Needs Cleaned Yes ___ No ___

Check all dust screws for operation and flow: _____

Check all rotary air locks: _____

Check all poppet gate cylinders: _____

Record all Magnahelic readings: _____

First Half

Second Half

#1	_____	#6	_____	#1	_____	#6	_____
#2	_____	#7	_____	#2	_____	#7	_____
#3	_____	#8	_____	#3	_____	#8	_____
#4	_____	#9	_____	#4	_____	#9	_____
#5	_____	#10	_____	#5	_____	#10	_____

Dust System, Baghouse (#2 Kiln)

Needs Cleaned Yes ___ No ___

Check all dust screws for operation and flow: _____

Check all rotary air locks: _____

Check all poppet gate cylinders: _____

Record all Magnahelic readings: _____

First Half

Second Half

#1	_____	#6	_____	#1	_____	#6	_____
#2	_____	#7	_____	#2	_____	#7	_____
#3	_____	#8	_____	#3	_____	#8	_____
#4	_____	#9	_____	#4	_____	#9	_____
#5	_____	#10	_____	#5	_____	#10	_____

Lime Handling Systems (Back)

Back System Needs Cleaned Yes ___ No ___

Check 762-1 dust collector and airlock for operation: _____

Ensure gate is set in correct direction, and hopper is empty: _____

Check 401 Belt for alignment, bindicator, and zero speeds: _____

Check 403 Elevator for operation: _____

Check 404 Screen for operation: _____

Check 402 Belt and zero speed for operation: _____

Check 405 Hammer mill bearings & belts for operation: _____

Check 444 Crushers, shim packs, and bolts for operation: _____

Check 406 Elevators for operation: _____

Check 408, 408 A, B, & C Screw and zero speed for operation: _____

Check 443, 445, 447 screws and zero speeds for operation: _____

Check 446 Elevator for operation: _____

Check 414-1 Dust collector and ensure that it is empty: _____

Check 414-2 Dust screw and zero speed for operation: _____

Check 414-4 Dust airlocks for operation: _____