©TATE OF TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF AIR POLLUTION CONTROL



9th Floor, L & C Annex 401 Church Street Nashville, TN 37243-1531 Telephone: (615) 532-0554

NOT TO BE USED FOR TITLE V APPLICATIONS

## PERMIT APPLICATION

|  | •  |                                       |  |                         | 10 2 0 4                           | APC 20         |
|--|--|---------------------------------------|--|-------------------------|------------------------------------|----------------|
| PL<br>FC   | EASE TYPE OR PRINT A                                 | AND SUBMIT IN DUPLICA                 | TE FOR EACH EMISS  | SION SOURCE, ATTACH     | APPROPRIATE SOURCE [               | DESCRIPTION    |
| 1. ORGANIZATION'S LEGAL NAME  Central Lime & Cement, LLC |  |                                       |  |                         | PC COMPANY — POINT NO.             | <u> </u>       |
| 2.   | MAILING ADDRESS (ST/RI                               | · · · · · · · · · · · · · · · · · · · |  | FOR /// A               | PC LOG/PERMIT NO.                  | <u> </u>       |
|  | P.O. Box 1589  | ·                                     |  | APC                     | 45429                              |                |
|  | Columbia   | mtest                                 |  | 102   PH                | HONE WITH AREA CODE<br>15–388–4179 |                |
| 3.   | PRINCIPAL TECHNICAL CO<br>J.L. Smith                 | ONTACT                                | 111 23 1996  |                         | ONE WITH AREA CODE<br>15–381–0687  | #. <del></del> |
| 4.   | SITE ADDRESS (ST/RD/HV 343 Theta Pike                | VY)                                   | .101   | CF.                     | DUNTY NAME<br>Maury                | <del></del>    |
|  | CITY OR DISTANCE TO NE Columbia. Tenn.               | EAREST TOWN                           | OLUMBIA FIEUD OFFI<br>OLUMBIA FIEUD OFFI<br>OLUMBIA FIEUD OFFI | PH PH                   | ONE WITH AREA CODE                 |                |
| 5.   | EMISSION SOURCE NO. (N<br>THIS SOURCE)<br>60-0165-01 | NOWBER MHICH ONIGHERY                 | DENTIFIES   PERM<br>YES  | TRENEWAL                |                                    |                |
| 6.   | BRIEF DESCRIPTION OF E                               | MISSION SOURCE                        |  | ····                    |                                    |                |
|  | Ready Mixed Co<br>Fugitives)                         | ncrete Batching                       | Plant (Scales  | and Hopper Bag          | ghouse,Storage Sil                 | .o Baghouse,   |
|  | ,  |                                       | ····   |                         |                                    |                |
| 7.   | TYPE OF PERMIT REQUES                                |                                       |  |                         |                                    |                |
|  | CONSTRUCTION   | STARTING DATE                         | COMPLETION DATE  | LAST PERMIT NUMBER      | EMISSION SOURCE REFERE             | INCE NUMBER    |
|  | ( )  | '                                     |  | •                       | l                                  |                |
|  | OPERATING  | DATE CONSTRUCTION<br>STARTED          | DATE COMPLETED   | LAST PERMIT NUMBER      | EMISSION SOURCE REFERE             | NCE NUMBER     |
|  | ( <b>X</b> )   | 4-8-96                                | 6-10-96  | 943842P                 | 60-0165-01                         |                |
|  | LOCATION TRANSFER                                    | TRANSFER DATE                         |  | LAST PERMIT NUMBER      | EMISSION SOURCE REFERE             | NCE NUMBER     |
|  | ( )  |                                       |  | <u> </u>                | <u>.</u>                           |                |
|  | ADDRESS OF LAST                                      | T LOCATION                            |  |                         |                                    |                |
| 8.   | DESCRIBE CHANGES THAT<br>APPLICATION.                | T HAVE BEEN MADE TO THI               | S EQUIPMENT OR OPER  | RATION SINCE THE LAST ( | CONSTRUCTION OR OPERATIN           | IG PERMIT      |
|  | •  |                                       |  |                         |                                    |                |
|  |  |                                       |  |                         |                                    |                |
|  |  | •                                     |  |                         |                                    | ·              |
| 9. (   | SIGNATURE (APPLICATION                               | N MUST BE SIGNED BEFORE               | E IT WILL BE PROCESS   | ED)                     | DATE                               |                |
|  | 1 y. k   | ill-                                  |  |                         | 7–10–96                            |                |
| 9  | SIGNER'S NAME (TYPE OR                               | PRINT;                                | TITLE  |                         | PHONE WITH AREA CODE               |                |
|  | J.L. Smith   |                                       | Owner  |                         | 615–388–4179                       | <u> </u>       |
|  |  |                                       |  |                         | <del></del>                        |                |

## ABLE OF POLLUTION REDUCTION DEVICE OR METHOL JDES (ALPHABETICAL LISTING)

NOTE, FOR CYCLONES, SETTLING CHAMBERS, WET SCRUBBERS, AND ELECTROSTATIC PRECIPITATORS, THE EFFICIENCY RANGES CORRESPONDED TO THE FOLLOWING PERCENTAGES.

HIGH, 95 - 99+%, MEDIUM, 80 - 95%, AND LOW, LESS THAN 80%

IF THE SYSTEM HAS SEVERAL PIECES OF CONNECTED CONTROL EQUIPMENT, INDICATE THE SEQUENCE FOR EXAMPLE 008/010, 97%

IF NONE OF THE BELOW CODES FIT. USE 999 AS A CODE FOR CITHER AND SPECIFY IN THE COMMENTS

| NO EQUIPMENT  |             | LIMESTONE INJECTION — DRY                                |      |
|---|-------------|--|------|
| ACTIVATED CARBON ADSORPTION   | 048         | LIMESTONE INJECTION — WET                                |      |
| AFTERBURNER DIRECT FLAME  | 021         | LIQUID FILTRATION SYSTEM                                 |      |
| AFTERBURNER — DIRECT FLAME WITH HEAT EXCHANGER  | 022         | MIST ELIMINATOR HIGH VELOCITY                            |      |
| AFTERBURNER — CATALYTIC   | 019         | MIST ELIMINATOR — LOW VELOCITY                           |      |
| AFTERBURNER — CATALYTIC WITH HEAT EXCHANGER   | 020         | PROCESS CHANGE   | U1   |
| ALKALIZED ALUMINA   | 040         | PROCESS ENCLOSED   | 04   |
| CATALYTIC OXIDATION — FLUE GAS DESULFURIZATION  | 039         | PROCESS GAS RECOVERY                                     |      |
| CYCLONE — HIGH EFFICIENCY   | 007         | SETTLING CHAMBER — HIGH EFFICIENCY                       | DE:  |
| CYCLONE MEDIUM EFFICIENCY   |             | SETTLING CHAMBER — MEDIUM EFFICIENCY                     | 054  |
| CYCLONE LOW EFFICIENCY  | 009         | SETTLING CHAMBER — LOW EFFICIENCY                        | 005  |
| DUST SUPPRESSION BY CHEMICAL STABILIZERS OR   |             | SPRAY TOWER (GASEOUS CONTROL ONLY)                       | 006  |
| WETTING AGENTS  | 062         | SULFURIC ACID PLANT — CONTACT PROCESS                    | 052  |
| ELECTROSTATIC PRECIPITATOR HIGH EFFICIENCY  | 010         | SULFURIC ACID PLANT - DOUBLE CONTACT PROCESS             | 043  |
| ELECTROSTATIC PRECIPITATOR — MEDIUM EFFICIENCY  | 011         | SULFURIC ACID PLANT — DOUBLE CONTACT PROCESS             | 044  |
| ELECTROSTATIC PRECIPITATOR — LOW EFFICIENCY   | 012         | SULFUR PLANTVAPOR RECOVERY SYSTEM (INCLUDING CONDENSERS. | 045  |
| FABRIC FILTER — HIGH TEMPERATURE  | 016         |  |      |
| FABRIC FILTER — MEDIUM TEMPERATURE  | 017         | HOODING AND OTHER ENCLOSURES)                            | 04~  |
| FABRIC FILTER — LOW TEMPERATURE   | 018         | VENTURI SCRUBBER (GASEOUS CONTROL ONLY)                  |      |
| FABRIC FILTER - METAL SCREEN COTTON GINS  | 059         | WET SCRUBBER HIGH EFFICIENCY                             | 00.  |
| FLARING   | 023         | WET SCRUBBER MEDIUM EFFICIENCY                           | 002  |
| GAS ADSORPTION COLUMN — PACKED  | 050         | WET SCRUBBER - LOW EFFICIENCY                            | 003  |
| GAS ADSORPTION COLUMN — TRAY TYPE   | 0E+         | WET SUPPRESSION BY WATER SPRAYS                          | DE 1 |
| GAS SCRUBBER (GENERAL: NOT CLASSIFIED   | n:3         |  |      |
|   |             |  |      |
| TABLE OF EMISS  | HON ESTIMA  | TION METHOD CODES  |      |
| NOT APPLICABLE EMISSIONS ARE KNOWN TO BE ZERO   |             |  |      |
| MISSIONS BASED ON SOURCE TESTING  |             |  |      |
| MISSIONS BASED ON MATERIAL BALANCE USING ENGINEERING E                                | EVDEDTICE . | AND MICHAEL TO A TO        | 1    |
| MISSIONS CALCULATED USING EMISSION FACTORS FROM EPA P                                 | ENTERTIBE A | AND KNOWLEDGE OF PROCESS                                 | 2    |
| AIR POLLUTANT EMISSION FACTORS  | UDLIGHTION  | NU. AP-42 COMPILATION OF                                 |      |
| AIR POLLUTANT EMISSION FACTORS  | ·····       |  | 3    |
| UDGEMENT  |             |  | 4    |
| MISSIONS CALCULATED USING A SPECIAL EMISSION FACTOR DIF<br>THER (SPECIFY IN COMMENTS, | FERING FRO  | DM THAT IN AP-42   | 5    |
|   |             |  |      |



9th Floor, L & C Annex 401 Church Street Nashville, TN 37243-1531 Telephone: (615) 532-0554

## CONCRETE BATCH PLANT SOURCE DESCRIPTION

**APC 122** 

Please type or print, submit in duplicate and attach to the permit application. Attach a plant diagram according to the instructions given below.

| 1.  | ORGANIZATION NAME Central Lime & Cement, LLC |   |  |                                      | F<br>O<br>R        | APC COMPANY – F  | POINT NO.                    |
|-----|--|---|--|--------------------------------------|--------------------|------------------|------------------------------|
| 2.  | EMISSION SOURCE NO. (FI 60-0165-01           | OURCE NO. (FROM APPLICATION)<br>-01       |  |                                      | A<br>P<br>C        | APC LOG/PERMIT I | NO.                          |
| 3.  | SOURCE LOCATION:                             | 35 38 30"                                 | LONGITUDE 87• 1' 45"                       | UTM VERTICAL N/A                     | UTM HORIZONTAL N/A |                  |                              |
| 4.  | NORMAL OPERATION:<br>SCHEDULE:               | HOURS/DAY                                 | DAYS/WEEK  6                               | WEEKS/YEAR 52                        |                    | YEAR<br>812      |                              |
| 5.  | PERCENT ANNUAL<br>THROUGHPUT:                | DECFEB.<br>15                             | MARCH-MAY<br>30                            | JUNE-AUG.<br>30                      |                    | -NOV.<br>25      | ·                            |
| 6.  | ANNUAL PRODUCTION:<br>(YARDS)                | TRANSIT MIX 75,000(Est.)                  | CENTRAL MIX                                | DRY MIX                              |                    | CONSTRUCTED      |                              |
| 7.  | ROAD DUST CONTROL:                           | NONE                                      | PAVED                                      | OILED                                | WATE               | RED FREQUENTLY   |                              |
|     | PLANT YARD:                                  |   |  |                                      |                    | As needed)       | **                           |
|     | ACCESS ROADS:                                |   |  |                                      | х (                | as needed)       |                              |
| 8.  | STOCKPILES:                                  | ESTIMATED<br>ANNUAL TONNAGE               | NUMBER OF<br>SIDES ENCLOSED                | TURNOVER RATE<br>(TONS/MONTH)        | RECE<br>DAMF       |                  | WETTED AS<br>RECEIVED        |
|     | GRAVEL:                                      | 69,000                                    | 0(Est.)                                    | 5800                                 |                    | X                | No                           |
|     | SAND:  | 51,000                                    | 0(Est.) /                                  | 4300                                 |                    | X                | No                           |
| 9.  | CEMENT RECEIVING EQUIP.                      | CONVEYOR<br>ENCLOSED                      | ELEVATOR<br>ENCLOSED                       | COMPRESSED AIR<br>FLOW (FT³/MIN.)    | AVE. I<br>SIZE (   | _OAD<br>TONS)    | NORM. LOADING<br>TIME (MIN.) |
|     | (CIRCLE OR COMPLETE<br>AS APPROPRIATE)       | (YES) or NO<br>(Est.)                     | YES or NO                                  | 1800 (max.)<br>600 (Avq.)            |                    | 25               | 45 min.(approx.              |
| 10. | CEMENT STORAGE SILOS:                        | NUMBER OF SILOS                           | TOTAL CAPACITY                             | SILO VENT CONTROLS                   |                    |                  | +                            |
|     |  | 2 (Est.)                                  | (UNITS: BARRELS<br>OR TONS) 250            |                                      |                    |                  |                              |
| 11. | WEIGH-BATCHER:                               | CAPACITY (YARDS) 12 (Est.)                | BATCHING RATE<br>(YARDS/HOUR)<br><b>90</b> | BATCH DUMPING RATE (YARDS/MINUTE) 10 |                    |                  |                              |
|     | SILO-TO-WEIGH-BATCHER<br>VENT CONTROLS       | HOOD FABRIC FILTER DISCHARES TO SILO NONE |  |                                      |                    |                  |                              |
| 12. | WEIGH-BATCHER:                               | DISCHARGES TO: (IN YARDS/YEAR)            |  |                                      |                    |                  |                              |
|     | (COMPLETE OR CIRCLE                          | 75,000                                    | TILT                                       | PRODUCTS MIXER  Transit Mix          |                    |                  |                              |
|     | AS APPROPRIATE)                              | WEIGH-BATCHER DISCHARGE CHUTE CONTROLS:   |  |                                      |                    |                  |                              |
|     |  | ADJUSTABLE GATHE                          | RING HOPPER H                              | OOD FABRIC FILTE                     | R DI               | SCHARGES TO SILO | NONE                         |
|     |  |   |  |                                      |                    |                  |                              |

CONCRETE BATCH PLANT DIAGRAM INSTRUCTIONS: SHOW GENERAL PLANT LAYOUT AND AIR POLLUTION CONTROL DEVICES. INDICATE THE FOLLOWING: STORAGE PILE AREAS, CONVEYOR SYSTEMS, METHOD OF RECEIVING CEMENT, ELEVATORS, SILOS, SILO VENTS, SILO-TO-WEIGH-BATCHER VENT, WEIGH-BATCHER DISCHARGE CHUTE AND PRODUCT RECEIVING EQUIPMENT, SUCH AS TRUCKS AND TILT OR PRODUCT MIXERS. INDICATE AIR POLLUTION CONTROL DEVICES, SUCH AS FABRIC FILTERS, WET SUPPRESSIONS, HOODS, CANVAS COVERINGS; ENCLOSURES, ETC.

| 13. EMISSION POINT DATA FOR:                         | SILO VENT                       | SILO-TO-WEIGH-<br>BATCHER VENT | WEIGH-BATCHER<br>DISCHARGE CHUTE |                       |
|--|---------------------------------|--------------------------------|----------------------------------|-----------------------|
| A. HEIGHT ABOVE GRADE (FT)                           | Approx. 62'                     | Approx. 25'                    | Approx. 13'                      | _                     |
| B. DIAMETER (FT)                                     | 10 1/8"                         | 8"X 6"                         | Approx. 8"                       | _                     |
| C. EMISSION EXIT DIRECTION (UP, DOWN, or HORIZONTAL) | Uр                              | Down                           | Up                               | _                     |
| D. AIR FLOW RATE<br>(FT³/MINUTE)                     | 1800 CFM (Max<br>600 CFM (Avg.) | ) 200 CFM (max<br>70 CFM (Avg  | .)<br>) 70 CFM (Est              | -<br>.)               |
| 14. PARTICULATE AIR<br>CONTAMINANTS                  | SILO VENT                       | SILO-TO-WEIGH-<br>BATCHER VENT | WEIGH-BATCHER<br>DISCHARGE CHUTE | TOTALS (FOR APC ONLY) |
| A. AVERAGE EMISSIONS<br>(POUNDS/HOUR)                | 1.29                            |                                |                                  |                       |
| B. MAXIMUM EMISSIONS (POUNDS/HOUR)                   | 3.86*                           |                                |                                  |                       |
| C. AVERAGE EMISSIONS<br>(TONS/YEAR)                  | 11.3                            |                                |                                  |                       |
| D. EMISSIONS ESTIMATION<br>METHOD*                   | #3 (AP-42)                      | #3 (AP-42)                     | #3(AP-42)                        |                       |
| E. CONTROL DEVICES*                                  | 018<br>Fabric Filter            | 018<br>Fabric Filter           | Hood                             |                       |
| F. CONTROL EFFICIENCY %                              | 99.95%                          | 99.995%                        | +99% (Est.)                      |                       |
| 15. COMMENTS   |                                 |                                |                                  |                       |

\*This application requests the following emissions from this plant site:

1800 CFM X 0.25 GR/DRY CF X  $\frac{1\#}{7000 \text{ Grain}}$  X  $\frac{60 \text{ min}}{\text{Hr}}$  = 3.86 #/HR (Each Silo)

Total(for 2 Silos)would be: 2 X 3.86 X 8760 HR/YR  $\stackrel{\frac{1}{2}}{-}$  2000 #/TN = 33.8 TN/YR

| 16. SIGNATU | IRE      |                    | DATE    |
|-------------|----------|--------------------|---------|
| 4           | L. Smith | J.L. Smith, Owner  | 7–10–96 |
| #           |          | U.H. BillettyOwner | 7-10-36 |

REFER TO THE BACK OF THE PERMIT APPLICATION FORM FOR ESTIMATION METHOD AND CONTROL CODES, IF THE CODE IS "OTHER", SPECIFY IN COMMENTS.



## Central Lime & Cement, LLC



P.O. BOX 1589 COLUMBIA, TENNESSEE 38402 (615) 388-4179

July 10,1996

Mr. John W. Walton, P.E.

Director Division of Air Pollution Control

Tennessee Department of Environment and Conservation Priority Overnight

9th Floor, L & C Annex

401 Church Street

Nashville, Tennessee 37243-1531

Attn: Richard Beckwith

RE: Air Permit #943842P

Central Lime & Cement, LLC

343 Theta Pike

Maury County (Columbia), Tennessee

FEDERAL EXPRESS #7336652735

JUL 12 1996

COLUMBIA FIELD OFFICE DIV. OF AIR POLLUTION CONTROL

Dear Mr. Walton:

Central Lime & Cement, LLC has completed construction of our new ready mixed concrete plant on 343 Theta Pike Columbia, Tennessee.

Therefore, we are requesting the issuance of a permanent air permit. Please find enclosed copies of the application and concrete batch plant source description (APC 122). If you have any questions or need any further information, please do not hesitate to contact me.

CENTRAL LIME & CEMENT, LLC

J.L. SMITH, OWNER

**Enclosures** 

JLS/ska

Hard Williams