June 8, 2010

Project 111910000.00003

Mr. Scott Lutz
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

Subject: **Air Quality Modeling Protocol**
Lehigh Southwest Cement Company – Permit No. A0017
Cupertino, California

Dear Mr. Lutz:

On behalf of Lehigh Southwest Cement Company (Permit No. A0017), AMEC Geomatrix, Inc. (AMEC) has prepared this Air Quality Modeling Protocol. Air quality modeling is being conducted in of support an AB 2588 Health Risk Assessment (HRA) that your office has requested for the facility in Cupertino, California. Upon your approval of this protocol, AMEC will conduct the air dispersion modeling and document the results in the AB 2588 HRA report.

As we discussed with you last week, a survey will be conducted at the Lehigh facility to obtain specific information that has not been available to date. This pending information is noted in the source summary tables. Revised tables will be provided to you as soon as possible after receipt of data from the surveyor. We believe the key assumptions in the protocol can be reviewed in the absence of this survey data and hope to hear from you in this regard as soon as possible.

We look forward to receiving your response, which we anticipate within a week or so based on our previous discussions. Please don't hesitate to contact us in the interim with any questions.

Sincerely yours,
AMEC Geomatrix, Inc.

Ann Holbrow Verwiel

Ann Holbrow-Verwiel
Senior Toxicologist

Stephen Ochs
Chemical / Air Quality Engineer

SO
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Air Quality Modeling Protocol Lehigh Southwest Cement Company – Permit No. A0017, Cupertino, California
cc: Scott A Renfrew, Lehigh Southwest Cement Company
Heinrich Wesseling, Lehigh Southwest Cement Company
Robert Hull, Bay Area Air Quality Management District

AMEC Geomatrix

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Air Quality Modeling Protocol
Lehigh Southwest Cement Company – Permit No. A0017
Cupertino, California

Prepared for:

Lehigh Southwest Cement Company
Cupertino, California

Prepared by:

AMEC Geomatrix, Inc.
Newport Beach, California

AMEC Job No. 0111910000.00003
June 8, 2010

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1.0 INTRODUCTION

On behalf of Lehigh Southwest Cement Company (Lehigh), AMEC Geomatrix, Inc. (AMEC) is submitting this air quality modeling protocol to the Bay Area Air Quality Management District (BAAQMD) for approval. AMEC has prepared this air quality modeling protocol to support an AB2588 Human Health Risk Assessment for the Lehigh facility in Cupertino, California.

Company and Facility Name:	Lehigh Southwest Cement Company Permanente Plant 24001 Stevens Creek Blvd. Cupertino, CA 95014
Permit Number and Type:	A0017, Class I, Major Source

Project Information and Description:

The Lehigh Cupertino facility operates a cement plant and lime quarry.

The regulations and guidelines that pertain to this study are those published to support California's Air Toxics Hot Spots Act (AB 2588). Guidance for the AB 2588 specifically and air dispersion modeling in general has been published by the California Air Resources Board (CARB, 2010), the Office of Environmental Health Hazard Assessment (OEHHA, 2003), and the Bay Area Air Quality Management District (BAAQMD, 2007). This health risk assessment was required based on a request from the BAAQMD following submittal of the Comprehensive Emission Inventory Report (CEIR) for emission year 2008 (AMEC, 2009) and a subsequent addendum (CEIR Addendum; Lehigh, 2009). BAAQMD requires that modeling protocols are submitted in advance of completing air dispersion modeling for a health risk assessment.

This report documents the protocol to be followed for the air dispersion modeling analysis in support of the health risk assessment (HRA). Section 2.0 of this report provides a discussion of the site location. Section 3.0 presents the protocol to be followed for the dispersion analysis. Model inputs and outputs prepared for the purpose of this report are provided on an enclosed CDROM.

2.0 SITE LOCATION AND OPERATIONS

The Lehigh facility is located in the foothills west of the city of Cupertino west of Interstate 280 and several miles north of Highway 9. The location of the facility is presented in Figure 1.

Elevations at the project site range from 225 to 500 meters above mean sea level (AMSL). Higher terrain is located to the west of the facility and lower terrain is located to the east of the facility. Figure 1 includes the area topography.

Residential areas are located to the north, east, and south of the facility. Figure 2 showing the proposed receptor network indicates where residential areas are located in the vicinity of the facility.

The facility consists of a mine (west), rock plant (south), and cement production facilities (north and east). Major emission sources include, a kiln, dust collectors, fugitive sources related to operations, mining operations and rock crushing, paved and unpaved roads, stockpiles, two fuel stations, emergency diesel generators, and internal combustion engines for welding equipment.

Map Document: (X:\Projects\0111910000\MXD\Site Map.mxd) 6/2/2010 -- 1:51:32 PM

JOB NO.:	0111910000
DATE:	6/02/2010
SCALE:	1" = 10 kms
PROJ:	UTM Zone 10
DATUM:	NAD 83

The map shown here has been created with all due and reasonable care and is strictly for use with AMEC Project Number: 0111910000. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. AMEC assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Lehigh Southwest Cement Company
Cupertino Facility

Facility Location

FIGURE 1

AMEC Geomatrix

3.0 EMISSIONS

Emissions from the facility are based on a Comprehensive Emission Inventory Report (CEIR) prepared for emission year 2008 (AMEC, 2009) and the CEIR Addendum (Lehigh, 2009). The emissions in the CEIR were based on throughput in 2005, which was a high production year for the facility.

The following revisions to the emission inventory reported in the CEIR and CEIR Addendum have been made and will be incorporated in the HRA as follows:

1. Grain loading emission rates for two finish mill baghouses have been updated to reflect maximum permit conditions of 0.006 grains per dry standard cubic feet per minute (gr/dscfm) (permit conditions #4997 and #4998 from the 1992 permit-to-operate for A-218 and A-220, respectively). Permit conditions for these sources were not included in the current facility permit so a default value of 0.01 gr/dscfm had been used in the CEIR.

2. Grain loading emission rates for one kiln mill dust collector (4-DC-5) have been updated to reflect new equipment added in 2010 with maximum permit conditions of 0.0013 gr/dscfm and a flow rate of 3500 standard cubic feet per minute (SCFM) (March 9, 2010 permit-to-operate for A-414). A default emission factor of 0.01 gr/dscfm had been used in the CEIR.

3. The permitted source S-19 (clinker storage area) has been changed to inactive and the associated dust collectors A-10 have been changed to inactive (clinker storage hall). The associated building has not been used as an active storage facility since 2007, but was kept in the CEIR to account for all permitted sources. Lehigh has no plans to start using the building and is considering closing out the permit.

Table 1 provides a summary of annual average and maximum hourly emissions for chemicals emitted from the facility for all sources based on the CEIR, the CEIR addendum, and the revisions listed above. Calculations for the emission revisions that are noted above are presented in Appendix A. These emissions calculations may be revised prior to completing the air dispersion modeling if source tests to be conducted in June 2010 indicate that the emission estimates in the CEIR were conservatively based on permit conditions that were much higher than operating conditions. Also, based on lower facility-wide throughput since 2007, alternative emission rates may be evaluated in addition to the emission rates reported herein. The CEIR Addendum provided coordinates for a subset of surveyed dust collector locations (Lehigh, 2009). It should be noted that the coordinate system was not georeferenced to a recognized coordinate system and the appropriate coordinates for dust collectors are provided herein in Universal Trans Mercator (UTM) meters referenced to the NAD83 datum (Table 2).

4.0 PROPOSED AIR DISPERSION MODELING APPROACH

This section presents the proposed dispersion modeling approach. Discussion includes the model selected, building downwash analysis, land use

4.1 Model Selection

The Lakes MPI version of AERMOD (version 09292, dated 10/19/2009) was selected to predict ambient concentrations resulting from the facility's emissions sources. AERMOD is the recommended sequential model in USEPA's Guideline on Air Quality Models (40 CFR 51, Appendix W) and Lakes has recompiled the program utilizing the MCIP multithreading libraries to enable AERMOD to take advantage of modern multicore processors. Reductions in model run times by a factor of six may be achieved using this version of AERMOD on dual quad core machines. The following regulatory default options will be used in AERMOD:

- use the elevated terrain algorithms requiring input of terrain height data for receptors and emission sources,
- turn on stack tip downwash (building downwash automatically overrides),
- use the calms processing routines,
- include buoyancy-induced dispersion, and
- use the routines for missing meteorological data processing.

4.2 BPIP Analysis

If a stack is sufficiently close to a large building, the plume can be entrained in the building's wake. The winds in the wake of the building cause the plume's rise to be diminished, which results in increased ground level ambient concentrations near the building. Lehigh is conducting an investigation to determine the building heights near any stacks. There are also several large structures such as the cement silos that will also be evaluated for downwash. The collected data will be input to USEPA's Building Profile Input Program for PRIME (BPIPPRM, version 04274; USEPA, 2004), which will be used to compute formula GEP stack heights and to generate wind direction specific building profiles for sequential modeling.

4.3 Urban Land Use Assessment

Dispersion coefficients for air quality modeling were selected based on the land use classification technique suggested by Auer (Auer, 1978), which is the preferred method of the USEPA. The classification determination involves assessing land use by Auer's categories within a 3-kilometer radius of the proposed site. Urban dispersion coefficients should be selected if greater than 50 percent of the area consists of urban land use types; otherwise, rural coefficients apply.

USEPA's AERSURFACE tool (version 08009; USEPA, 2008) was used to summarize the land use within a 3-kilometer radius of the facility. AERSURFACE was developed by USEPA to identify surface roughness length within a defined radius from a specified point. In this case, the latitude and longitude coordinates of the on-site meteorological state were input to AERSURFACE along with a 3 kilometer radius. USGS National Land Cover Data (NLCD) were acquired for the northern portion of the state of California and used as input to AERSURFACE. The area within 3-kilometers of the facility is predominately rural with residential and commercial land use comprising 31% of the total area within a 3 km radius of the onsite meteorological station. Therefore, rural dispersion coefficients were selected for the air quality modeling.

4.4 Receptors

AMEC proposes using the fine receptor grid generated by BAAQMD for their modeling. Receptors from the worker exposure analysis and sensitive receptor exposure analysis will be added so all receptors of interest are captured in a single model run. Because we are using meteorological data that is the same as BAAQMD, the maximum impact areas should not shift spatially in a significant way. Additionally, the BAAQMD receptor grid area captured the maximum residential impact areas from the previous HRA modeling analysis performed in 1994 (Radian, 1994). Figure 2 presents the receptor network with residential, worker, and sensitive receptors that will be used for the modeling analysis.

Receptor elevations were assigned by using USEPA's AERMAP (version 09040; USEPA, 2009a) software tool, which is designed to extract elevations from USGS Digital Elevation Model (DEM) files, USGS National Elevation Dataset (NED) files, and Shuttle Radar Topography Mapping (SRTM) files. AERMAP is the terrain preprocessor for AERMOD and uses the following procedure to assign elevations to a receptor:

- For each receptor, the program searches through the terrain input files to determine the two profiles (longitudes or eastings) that straddle this receptor.
- For each of these two profiles, the program then searches through the nodes in the terrain input files to determine which two rows (latitudes or northings) straddle the receptor.
- The program then calculates the coordinates of these four points and reads the elevations for these four points.
- A 2-dimensional distance-weighted interpolation is used to determine the elevation at the receptor location based on the elevations at the four nodes determined above.

NED data with a resolution of 1/3 arc-second (roughly 10 meters) were used as inputs to AERMAP. The NED data were obtained from the USGS Seamless Data Server and covers the modeling domain area. This domain is sufficient to properly account for terrain that would factor into the critical hill height calculations. AERMAP input and output files are provided on CDROM per the nomenclature described in Appendix B.

4.5 Meteorological Data

USEPA's AERMET tool (version 09040; USEPA, 2009) will be used to process meteorological data for use with AERMOD. AERMET merges National Weather Service (NWS) surface observations and onsite meteorological data with NWS upper air observations and performs calculations of meteorological parameters required by AERMOD. In addition to the meteorological observations, AERMET further requires the inclusion of land use surface characteristics that are calculated by USEPA's AERSURFACE tool.

The meteorological data used in the sequential modeling consists of on-site hourly surface observations collected by Lehigh from a 10-meter tower located near the southwestern property boundary. As discussed with BAAQMD, the meteorological data used in the modeling cover 2006, with the raw on-site data provided by Lehigh.

The meteorological instruments were installed at an elevation of 10 meters above ground level (AGL). The tower was equipped with the following instrumentation:

- Wind speed, wind direction, standard deviation of horizontal wind, and ambient temperature at 10 meters. Relative humidity was also measured by the tower, however, AERMET is not able to use the onsite relative humidity data.

Concurrent surface observations collected by NOAA at the San Jose Airport were used to substitute for missing on-site wind and temperature values and to provide relative humidity, station pressure, and cloud cover data. BAAQMD provided the data in AERMET-ready format.

Concurrent upper air radiosonde data were provided by BAAQMD for the Oakland NWS site (WBAN 23230). The data obtained were in FSL format. The Oakland site is located at latitude 37.75 and longitude -122.22 with an elevation of 6 meters (19.68 feet) according to the RAOB NOAA website and the FSL file header.

Both the surface station and upper air station locations are shown in Figure 1.

USEPA's AERSURFACE tool was used to calculate the surface roughness length, albedo, and Bowen ratio inputs required by AERMET. AERSURFACE was developed by USEPA to identify these parameters within a defined radius from a specified point. In this case, the latitude and longitude of the on-site meteorological tower were input to AERSURFACE along with a 1 kilometer radius per USEPA guidance. USGS National Land Cover Data (NLCD) were acquired for the northern section of California and used as input to AERSURFACE. The parameters were calculated for six compass sectors broken down as follows:

- Sector 1: 50° to 130°
- Sector 2: 130° to 230°
- Sector 3: 230° to 273°
- Sector 4: 273° to 312°

- Sector 5: 312° to 347°
- Sector 6: 347° to 50°

The sectors are the same as those provide by BAAQMD, with one added sector in the southern portion to better define the surface characteristics near the residential areas toward the south of the facility. The surface characteristics were also broken down by month. Seasonal categories were assigned as follows per BAAQMD guidance:

- Late autumn after frost and harvest, or winter with no snow: January, November and December;
- Winter with continuous snow on the ground: No months;
- Transitional spring (partial green coverage, short annuals): February and March;
- Midsummer with lush vegetation: April, May, June and July; and
- Autumn with unharvested cropland: August, September and October.

Average surface moisture was assumed. AERSURFACE input and output files are provided on CDROM per the nomenclature described in Appendix B.

The Lehigh on-site data, San Jose surface data, Oakland upper air data, and AERSURFACE land use data were processed with the AERMET meteorological processor. AERMET input and output files are provided on CDROM per the nomenclature described in Appendix B.

Based on the above approach, the data completeness is 100% with no missing hours. The data meets the USEPA completeness criteria of 90%.

A wind rose for the data are provided in Figure 3. The annual wind rose demonstrates that wind direction frequency is generally aligned with the orientation of the nearby mountain ridges and valleys.

4.6 Source Parameters

Source input parameters are provided in Tables 2 and 3 for point and volume sources, respectively. Lehigh is currently surveying the stacks to ensure the correct parameters are modeled and final source input parameters will be provided at a later time. Parameters being gathered include stack height, stack diameter, and stack orientation (horizontal or vertical).

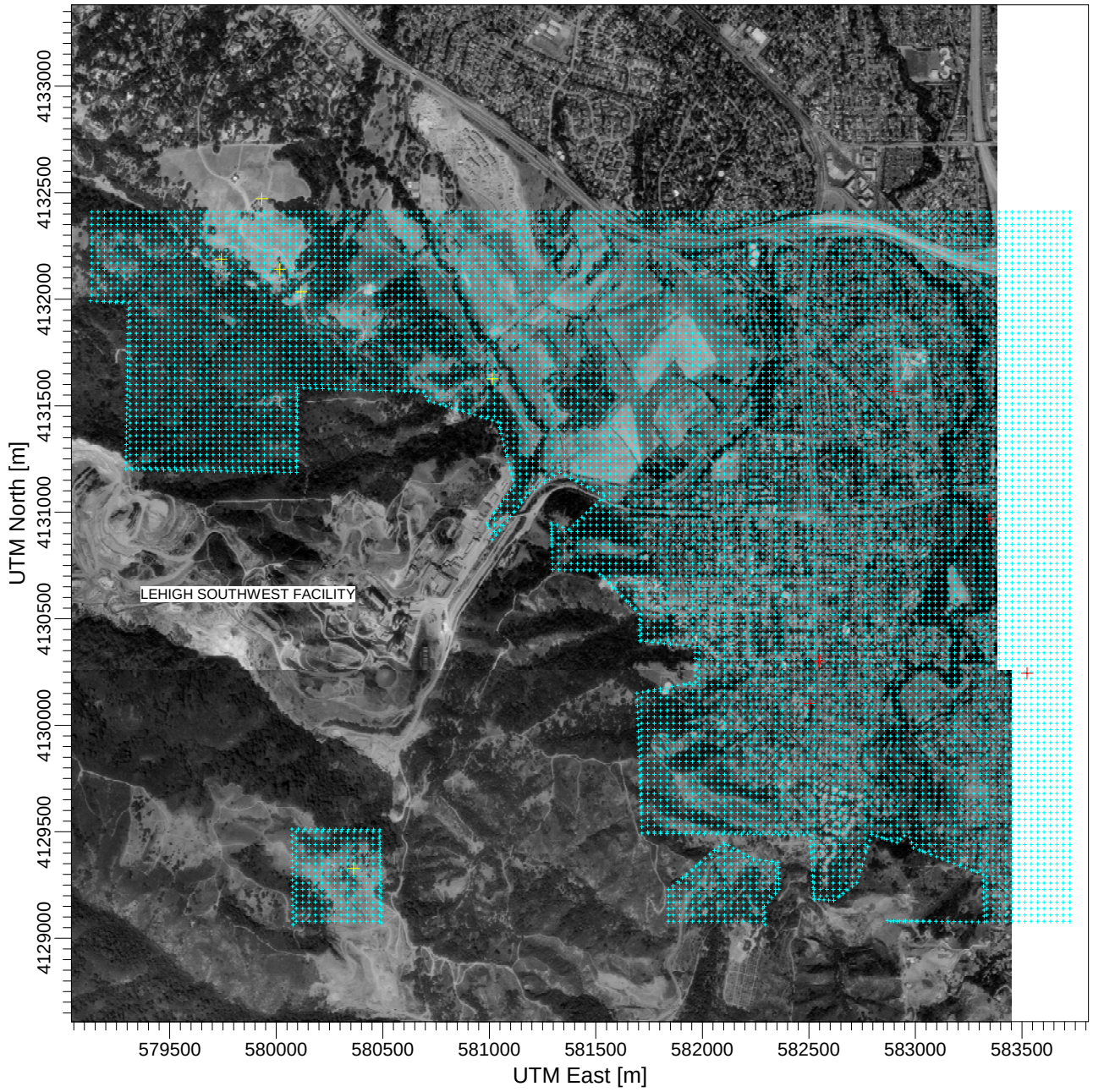
To simplify the modeling effort without materially changing the results, AMEC is proposing to model only the significant permitted sources, which are defined as sources contributing more than 0.5 percent of the total emissions of particulate matter less than 10 microns in size (PM10). This evaluation was performed for all permitted PM10 sources (e.g. dust collectors) and results are presented in Table 4. Twenty-five of a total 68 dust collector sources will be included as significant sources in the air dispersion modeling, which represents 93 percent of total PM10 emissions.

A number of point sources at the facility have a horizontal stack orientation. These point sources will be set up in AERMOD in accordance with USEPA guidance (Model Clearinghouse Memo 93-II-09). AERMODview has incorporated the USEPA guidance into their model as a nonregulatory option. Capped or horizontal stacks not subject to building downwash will have their exit velocity set to 0.001 meters per second to account for suppression of vertical momentum for the plume and will use an effective stack diameter that maintains the actual flow rate of the plume.

Fugitive emissions were calculated and are being aggregated into several volume sources throughout the facility. This approach simplifies the modeling by reducing the number of sources to model. However, if more refined analysis is required once initial modeling is conducted, AMEC will further define individual fugitive sources such as storage piles. A summary of the fugitive emissions and modeled sources are provided in Table 3 and the proposed fugitive volume source layout is in Figure 4.

PROJECT TITLE:

Lehigh Southwest Cement Company - Cupertino Facility



LEGEND:

RECEPTOR TYPES:

Blue = Residential
Yellow = Worker
Red = Sensitive

RECEPTORS: **10967**	MODELER: **SO**	AMEC Geomatrix
	SCALE: 1:30,000 — 0 — 1 km	
	DATE: **6/4/2010**	PROJECT NO.: **0111910000.00003.2**

AERMOD View - Lakes Environmental Software

E:\Modeling\LehighRisk\Kiln\CRscrn.isc

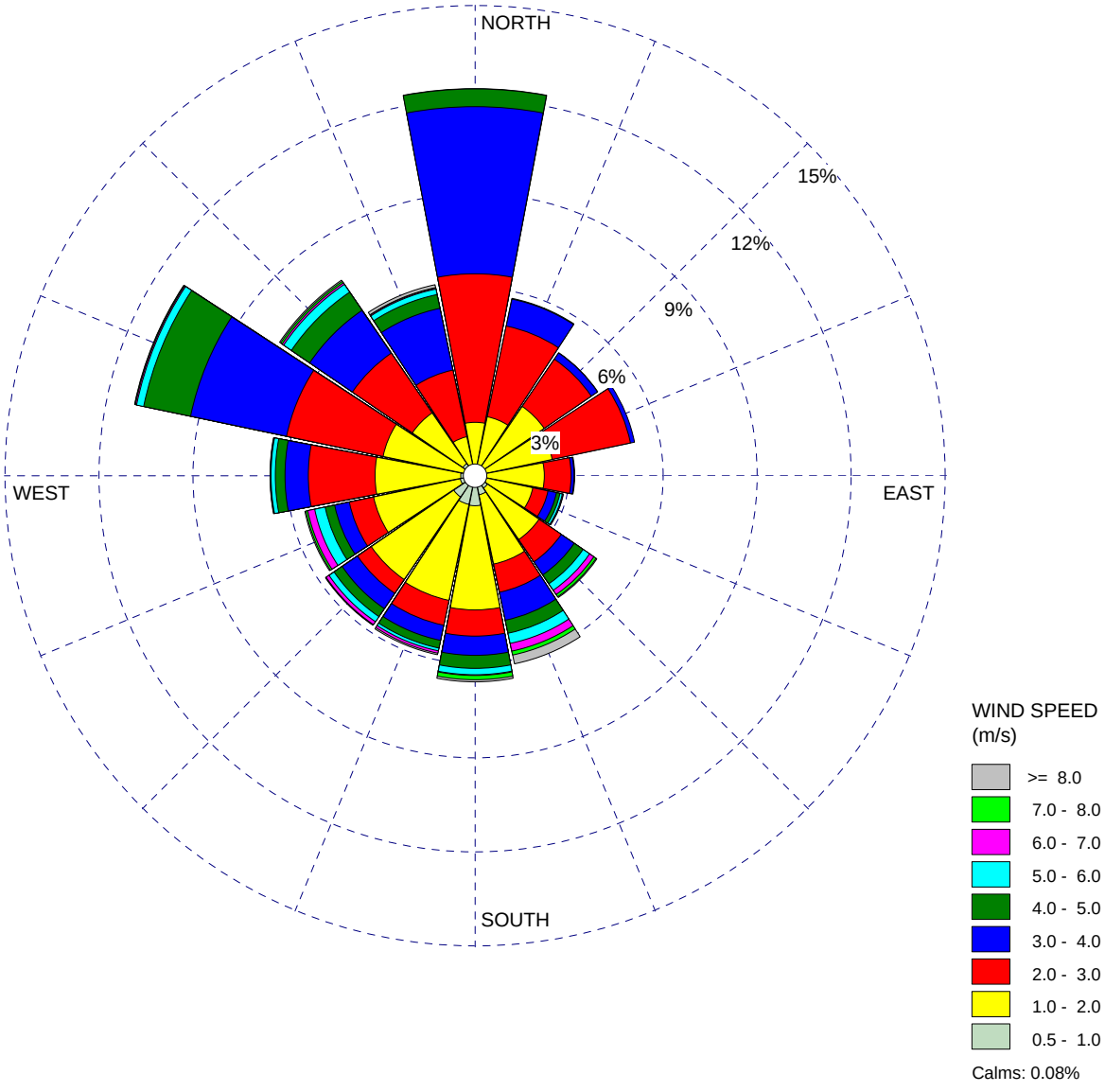
Figure 2: Proposed Receptor Network

WIND ROSE PLOT:

Lehigh Southwest Cement Company- Cupertino Facility

DISPLAY:

Wind Speed
Direction (blowing from)



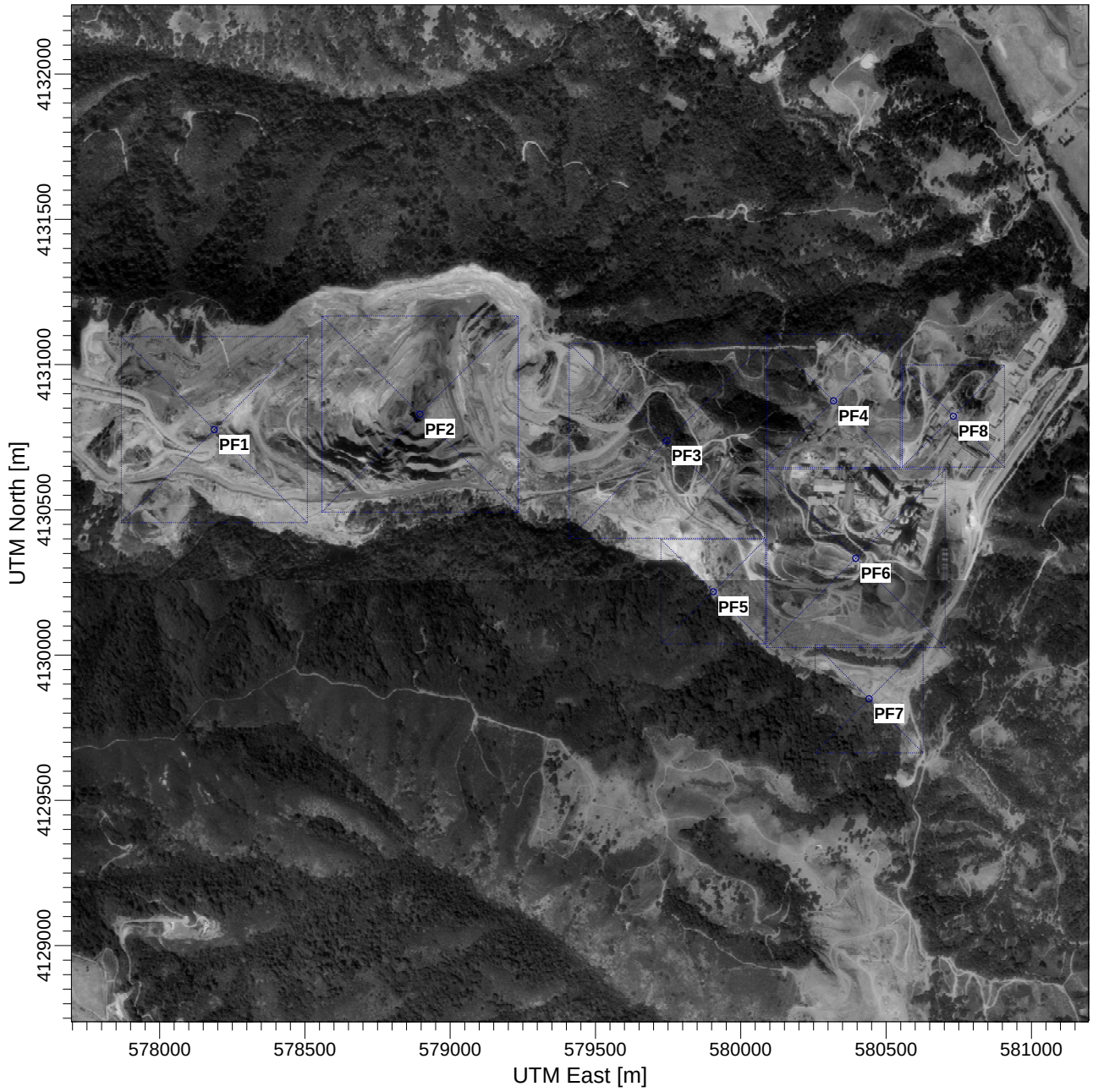
COMMENTS:	DATA PERIOD: **2006 Jan 1 - Dec 31 00:00 - 23:00**	COMPANY NAME: **AMEC Geomatrix**	
		MODELER: **SO**	AMEC Geomatrix
	CALM WINDS: **0.08%**	TOTAL COUNT: **8760 hrs.**	
	AVG. WIND SPEED: **2.40 m/s**	DATE: **6/4/2010**	PROJECT NO.: **0111910000.00002**

WRPLOT View - Lakes Environmental Software

Figure 3: Wind Rose

PROJECT TITLE:

Lehigh Southwest Cement Company - Cupertino Facility



LEGEND:

RECEPTORS: **10967**	MODELER: **SO**	AMEC Geomatrix
	SCALE: 1:22,000 0 0.5 km	
	DATE: **6/4/2010**	PROJECT NO.: **0111910000.00003.2**

AERMOD View - Lakes Environmental Software

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Figure 4: Fugitive Volume Sources

5.0 CONCLUSION

Air dispersion modeling to support an AB 2588 health risk assessment is being conducted for the Lehigh Southwest Cement Plant. Emission rates have been calculated, source parameters have been or will be obtained, and wind-direction specific building dimensions will be calculated with USEPA's BPIPPRM computer program. This modeling protocol describes the selected dispersion model, land use, receptor grids and meteorological data to be used.

The proposed modeling analysis was completed using BAAQMD, OEHHA, CARB, and USEPA guidance as specified herein. Dispersion modeling will be performed for complex terrain to evaluate facility emissions reported in the 2008 CEIR (as revised) and possibly other alternative emission scenarios. The predicted concentrations will be used in the Hotspots Analysis Reporting Program (HARP) model to predict potential residential, sensitive receptor, and worker health risks related to emission sources at the facility.

6.0 REFERENCES

40 CFR 51, Appendix W. Guideline on Air Quality Models.

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TABLE 1
REVISED FACILITY MAXIMUM HOURLY AND ANNUAL EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant	Chemical Group	Total Maximum Hourly (lb/hr)[1]	Total Annual (tons or lbs/yr) [2]
CO	Criteria Pollutant	3.54E+02	1.16E+03
NOx	Criteria Pollutant	6.14E+02	1.94E+03
PM10	Criteria Pollutant	1.85E+02	3.96E+02
SOx	Criteria Pollutant	6.84E+01	2.36E+02
VOC	Criteria Pollutant	8.53E+01	2.88E+02
Diesel PM	Other TAC	9.73E-01	2.47E+01
Gasoline PM	PM	9.30E-03	9.30E-01
Antimony	Metals	5.76E-04	2.87E+00
Arsenic	Metals	7.53E-04	3.91E+00
Barium	Metals	1.92E-01	8.92E+02
Beryllium	Metals	1.90E-04	9.90E-01
Cadmium	Metals	3.21E-04	1.62E+00
Total Chromium	Metals	7.28E-03	3.68E+01
Cobalt	Metals	1.46E-03	7.20E+00
Copper	Metals	5.28E-03	2.60E+01
Lead	Metals	5.04E-04	2.67E+00
Manganese	Metals	5.79E-04	3.99E+00
Mercury	Metals	8.44E-02	5.82E+02
Molybdenum	Metals	2.81E-03	1.76E+01
Nickel	Metals	1.41E-02	7.42E+01
Phosphorous	Metals	1.07E-02	7.37E+01
Selenium	Metals	1.04E-03	6.18E+00
Silver	Metals	3.31E-04	1.73E+00
Thallium	Metals	2.22E-03	1.43E+01
Vanadium	Metals	4.38E-02	2.36E+02
Zinc	Metals	1.97E-02	1.10E+02
Chromium (VI)	Metals	5.86E-04	3.37E+00
Total Crystalline Silica	Other TAC	3.81E-01	1.28E+03
Naphthalene	PAHs	2.01E-02	1.39E+02
2-Methyl naphthalene	PAHs	1.64E-02	1.13E+02
Acenaphthylene	PAHs	1.67E-04	1.15E+00
Acenaphthene	PAHs	2.57E-05	1.77E-01
Fluorene	PAHs	2.39E-03	1.65E+01
Phenanthrene	PAHs	1.33E-02	9.17E+01
Anthracene	PAHs	8.94E-05	6.17E-01
Fluoranthene	PAHs	2.28E-04	1.57E+00
Pyrene	PAHs	1.70E-04	1.17E+00
Benz[a]anthracene	PAHs	1.90E-06	1.31E-02
Chrysene	PAHs	5.60E-06	3.86E-02
Benzo[b]fluoranthene	PAHs	2.71E-07	1.87E-03
Benzo[k]fluoranthene	PAHs	4.27E-08	2.95E-04
Benzo[e]pyrene	PAHs	1.99E-07	1.37E-03
Benzo[a]pyrene	PAHs	4.27E-08	2.95E-04
Perylene	PAHs	4.27E-08	2.95E-04
Indeno[1,2,3-c,d]pyrene	PAHs	3.17E-08	2.19E-04
Dibenz[a,h]anthracene	PAHs	4.27E-08	2.95E-04
Benzo[g,h,i]perylene	PAHs	4.27E-08	2.95E-04
1,2,3,4,6,7,8-HpCDD	PCDD/PCDF	1.40E-09	9.63E-06
1,2,3,4,6,7,8-HpCDF	PCDD/PCDF	6.77E-10	4.67E-06
1,2,3,4,7,8,9-HpCDF	PCDD/PCDF	1.75E-10	1.20E-06

TABLE 1
REVISED FACILITY MAXIMUM HOURLY AND ANNUAL EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant	Chemical Group	Total Maximum Hourly (lb/hr)[1]	Total Annual (tons or lbs/yr) [2]
1,2,3,4,7,8-HxCDD	PCDD/PCDF	3.90E-10	2.69E-06
1,2,3,4,7,8-HxCDF	PCDD/PCDF	5.90E-10	4.07E-06
1,2,3,6,7,8-HxCDD	PCDD/PCDF	3.85E-10	2.65E-06
1,2,3,6,7,8-HxCDF	PCDD/PCDF	5.52E-10	3.81E-06
1,2,3,7,8,9-HxCDD	PCDD/PCDF	3.98E-10	2.75E-06
1,2,3,7,8,9-HxCDF	PCDD/PCDF	1.86E-10	1.28E-06
1,2,3,7,8-PeCDD	PCDD/PCDF	3.44E-10	2.37E-06
1,2,3,7,8-PeCDF	PCDD/PCDF	2.66E-09	1.83E-05
2,3,4,6,7,8-HxCDF	PCDD/PCDF	3.40E-10	2.34E-06
2,3,4,7,8-PeCDF	PCDD/PCDF	3.98E-09	2.74E-05
2,3,7,8-TCDD	PCDD/PCDF	3.38E-10	2.33E-06
2,3,7,8-TCDF	PCDD/PCDF	1.67E-08	1.15E-04
OCDD	PCDD/PCDF	2.92E-09	2.02E-05
OCDF	PCDD/PCDF	6.69E-10	4.61E-06
1,1,1-trichloroethane	TAC	4.65E-03	3.21E+01
1,1,2,2-tetrachloroethane	TAC	5.85E-03	4.03E+01
1,1,2-trichloroethane	TAC	7.75E-03	5.34E+01
1,1-dichloroethane	TAC	2.87E-03	1.98E+01
1,1-dichloroethylene	TAC	5.64E-03	3.89E+01
1,2,4-trichlorobenzene	TAC	1.58E-02	1.09E+02
1,2,4-trimethylbenzene	TAC	2.00E-01	1.38E+03
1,2-dibromoethane	TAC	8.73E-03	6.02E+01
1,2-dichloroethane	TAC	3.45E-03	2.38E+01
1,2-dichloropropane	TAC	3.94E-03	2.71E+01
1,3,5-trimethylbenzene	TAC	1.64E-01	1.13E+03
1,3-butadiene	TAC	1.33E-02	9.18E+01
4-ethyl-toluene	TAC	6.23E-02	4.30E+02
Acrolein	TAC	6.51E-03	4.49E+01
Benzene	TAC	1.40E+00	9.65E+03
Benzyl chloride	TAC	1.47E-02	1.01E+02
c-1,2-dichloroethene	TAC	5.64E-03	3.89E+01
c-1,3-dichloropropene	TAC	9.67E-03	6.67E+01
Carbon Tetrachloride	TAC	8.94E-03	6.16E+01
Chlorobenzene	TAC	8.04E-02	5.54E+02
Chloroform	TAC	4.16E-03	2.87E+01
Dichloromethane	TAC	1.87E-02	1.29E+02
Ethyl Chloride	TAC	5.62E-03	3.87E+01
Ethylbenzene	TAC	1.39E-01	9.59E+02
Freon 11	TAC	4.79E-03	3.30E+01
Freon 113	TAC	6.53E-03	4.50E+01
Freon 114	TAC	5.95E-03	4.11E+01
Freon 12	TAC	3.51E-03	2.42E+01
Hexachlorobutadiene	TAC	1.52E-02	1.05E+02
m+p-xylenes	TAC	1.01E+00	6.94E+03
m-dichlorobenzene	TAC	6.83E-03	4.71E+01
Methyl Bromide	TAC	9.07E-02	6.25E+02
Methyl Chloride	TAC	1.60E-01	1.10E+03
o-dichlorobenzene	TAC	6.83E-03	4.71E+01
o-xylene	TAC	1.97E-01	1.36E+03
p-dichlorobenzene	TAC	8.54E-03	5.89E+01

TABLE 1
REVISED FACILITY MAXIMUM HOURLY AND ANNUAL EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant	Chemical Group	Total Maximum Hourly (lb/hr)[1]	Total Annual (tons or lbs/yr) [2]
Perchloroethylene	TAC	7.70E-03	5.31E+01
Styrene	TAC	3.52E-02	2.43E+02
t-1,3-dichloropropene	TAC	6.44E-03	4.44E+01
Toluene	TAC	1.25E+00	8.65E+03
Trichloroethene	TAC	6.10E-03	4.21E+01
Vinyl Chloride	TAC	2.06E-02	1.42E+02
Hydrogen Chloride	Other	1.55E+01	1.07E+05
Acetaldehyde	Volatile Organics	1.68E-01	1.16E+03
Formaldehyde	Volatile Organics	9.15E-03	6.31E+01

Notes:
1. All polllutants reported in lbs/hr
2. Criteria pollutants reported in tons/yr. All others reported in lb/yr.

Abbreviations:
TAC = Toxic Air Contaminant
PAHs = Polcyclic Aromatic Hydrocarbons

TABLE 2

POINT SOURCE INPUT PARAMETERS[1]

Lehigh Southwest Cement Company

Cupertino Facility

Baghouse BAAQMD Permit #	DC ID	Source[2]	Material	Operating Schedule[3]			UTM NAD83 Coordinates[4]		Stack ID	Stack Height[3] (ft)	Stack Orientation[5] (V/H)	Stack Shape (Round / Rect)	Stack Dimensions		Stack Diameter[6]		Temp[3] (°F)	Stack Flow[3] (acfm)
				weeks/ year	days/ week	hours/ day	X (meters)	Y (meters)					(in)	(in)	(ft)	(m)	Typical	Typical
A-10	6-DC-45&46 6-DC-47&48	Clinker Storage Area	Clinker	Inactive														
A-13	6-DC-1	Roll Press Clinker Surge Bin and Feeder	Clinker	52	7	24	pending		P14	10	H	Rect	13	14.5	1.3	0.39	80	5,000
A-58	7-DC-8	Type II Mechanical Transfer System	Cement	52	5	12 - 13	580491.06	4130553.29	P58	97	V	Rect	25	18	2.0	0.61	150	5,000
A-111	1-DC-1	Rail Unloading System Area 1	Additive	52	7	16	580687.82	4130378.57	P111	60	V	Rect	12	6	0.80	0.24	75	2,000
A-112	1-DC-2	Additive Hopper Transfer System Area 1	Additive	52	7	16	580720.94	4130211.26	P112	60	V	Rect	12	6	0.80	0.24	75	2,000
A-113	1-DC-3	Additive Bin Transfer Facilities Area 1	Additive	52	7	24	pending		P113	60	H	Rect	16	8	1.1	0.32	75	4,000
A-114	1-DC-4	Additive Bin Transfer Facilities Area 1	Additive	52	7	24	580519.84	4130331.21	P114	75	H	Rect	16	18	1.6	0.49	75	8,000
A-115	1-DC-5	Additive Storage Tripper	Additive	52	7	16	580686.42	4130230.77	P115	60	V	Rect	12	6	0.80	0.24	75	2,000
A-121	2-DC-1	Tertiary Scalping Screen/ Tertiary Crusher	56% High Grade 44% Mid Grade	52	7	16	580089.32	4130343.77	P121	98	H	Rect	25	22	2.2	0.67	75	16,500
A-122	2-DC-2	Tertiary Crusher/ Rock Conveying System Area 2	56% High Grade 44% Mid Grade	52	7	16	580057.26	4130286.22	P122	60	V	Rect	12	6	0.80	0.24	75	2,000
A-123	2-DC-3	Rock Conveying System Area 2	56% High Grade 44% Mid Grade	52	7	16	580280.31	4130239.12	P123	60	V	Rect	12	6	0.80	0.24	75	2,000
A-131	3-DC-1	Rock Sampling System Area 3	56% High Grade 44% Mid Grade	52	7	16	580464.42	4130272.57	P131	75	H	Rect	16.5	14	1.4	0.44	75	6,000
A-132	3-DC-2	Preblend	5% Additive 53% High Grade 42% Mid Grade	52	7	24	pending		P132	60	H	Rect	11	13	1.1	0.34	75	4,000
A-133	3-DC-3	Preblend	5% Additive 53% High Grade 42% Mid Grade	52	7	24	pending		P133	60	H	Rect	pending		pending		75	4,000
A-134	3-DC-4	Preblend Storage Bin	5% Additive 95% All Grade Limestone	52	7	24	580526.71	4130320.81	P134	98	H	Rect	16	18	1.6	0.49	75	8,000
A-135	3-DC-5	High-grade Storage Bins	High Grade Limestone	52	7	24	580527.83	4130324.71	P135	98	H	Rect	16	18	1.6	0.49	75	8,000
A-141	4-DC-7/22	Raw Mill/Kiln	5% Additive 53% High Grade 42% Mid Grade	52	7	24	580547.1	4130296.17	P141	60	V	Rect	25	22	2.2	0.67	320	180,000
A-142	4-DC-23/38	Raw Mill/Kiln	5% Additive 53% High Grade 42% Mid Grade	52	7	24			P142	60	V	Rect	25	22	2.2	0.67	320	180,000
A-143	4-DC-3	Raw Mill 1 Separator System	5% Additive 53% High Grade 42% Mid Grade	52	7	24	pending		P143	80	H	Rect	25	22	2.2	0.67	210	10,000
A-144	4-DC-4	Raw Mill 2 Separator System	5% Additive 53% High Grade 42% Mid Grade	52	7	24	pending		P144	80	H	Rect	25	22	2.2	0.67	210	10,000
A-151	5-DC-1	Homogenizer	5% Additive 53% High Grade 42% Mid Grade	52	7	24	Poor PDOP 2 Satellites		P151	135	H	Rect	22	20	2.0	0.60	180	20,000
A-152	5-DC-2	Homogenizer	5% Additive 53% High Grade 42% Mid Grade	52	7	24	pending		P152	135	H	Rect	28	25	2.5	0.76	180	20,000
A-153	5-DC-3	Kiln Feed System	5% Additive 53% High Grade 42% Mid Grade	52	7	24	pending		P153	195	H	Rect	28	25	2.5	0.76	180	18,000

TABLE 2
POINT SOURCE INPUT PARAMETERS[1]
Lehigh Southwest Cement Company
Cupertino Facility

Baghouse BAAQMD Permit #	DC ID	Source[2]	Material	Operating Schedule[3]			UTM NAD83 Coordinates[4]		Stack ID	Stack Height[3] (ft)	Stack Orientation[5] (V/H)	Stack Shape (Round / Rect)	Stack Dimensions		Stack Diameter[6]		Temp[3] (°F)	Stack Flow[3] (acfm)
				weeks/ year	days/ week	hours/ day	X (meters)	Y (meters)					(in)	(in)	(ft)	(m)	Typical	Typical
A-161	5-DC-11/20	Clinker Cooler	Clinker	52	7	24	580621.32	4130459.67	P161	75	H	Rect	25	22	2.2	0.67	425	135,000
A-162	5-DC-24	Clinker Silo A	Clinker	52	7	24	580567.93	4130477.34	P162	150	H	Rect	11	13	1.1	0.34	120	8,000
A-163	5-DC-25	Clinker Silo B	Clinker	52	7	24	580551.41	4130447.63	P163	150	H	Rect	11	13	1.1	0.34	120	4,000
A-164	5-DC-23	Clinker Silo B	Clinker	52	7	24	580578.70	4130502.97	P164	80	H	Rect	20	23	2.0	0.61	120	10,000
A-165	5-DC-27	Clinker Transfer System	Clinker	52	7	24	580517.06	4130446.89	P165	80	H	Rect	11	13	1.1	0.34	120	4,000
	5-DC-28						580352.70	4130473.70			H	Round	--	--	1.1	0.33		
A-166		Belt Feeder, Belt Conveyor & Feed Chute	--	Inactive														
A-171	5-DC-5	Kiln/Kiln Coal System	Coke	52	7	24	pending		P171	60	H	Round	--	--	2.5	0.76	140	24,000
A-172	5-DC-6	Kiln/Precalciner Coal Mill	Coke	52	7	24	pending		P172	60	H	Round	--	--	2.5	0.76	140	24,000
A-174	5-DC-29	Pre-Calciner Coke System	--	Inactive														
A-175	5-DC-26	Kiln Coke System	--	Inactive														
A-190	5-DC-90	Clinker Cooler	Clinker	52	7	24	580606.74	4130490.15		N/A	H	Rect	28	25	2.5	0.76	120	24,000
A-203	8-DC-3	Screen (7SC2)	--	Inactive														
A-210	6-DC-17	Finish Mill 6-GM-1	Cement	52	7	21	580224.30	4130563.28	P210	17	H	Round	--	--	2.5	0.76	230	20,000
A-211	6-DC-12/18	Separator 6-SE-2	Cement	52	7	21	pending		P211	8	H (45 deg)	Rect	39	39	3.7	1.12	168	80,000
A-214	8-DC-2	Crusher	--	Inactive														
A-215	8-DC-1	Screen (7SC1)	--	Inactive														
A-216	6-DC-13	6-GM-1 Cake Conveyor	Clinker	51	7	21	pending			N/A	H	Rect	10	10	0.94	0.29	150	875
A-217	6-DC-15	6-GM-1 Cake Conveyor	Clinker	52	7	21	pending			N/A	H	Rect	12	6	0.80	0.24	150	875
A-218	6-DC-19	6-GM-1 Air Separator	Cement	52	7	21	580284.60	4130615.98	P218	15	H	Rect	65	73	6.5	1.97	200	150,000
A-220	6-DC-8	6-GM-2 Mill and Peripherals	Cement	52	7	21	pending			N/A	H	Rect	28.5	24	2.5	0.75	220	17,000
A-221	6-DC-6	6-GM-2 Cake Feeder	Clinker	52	7	21	pending			N/A	H	Rect	10	10	0.94	0.29	150	1,325
A-222	6-DC-4	6-GM-2 Gypsum Feeder	Natural Gypsum	52	7	21	580234.06	4130591.26	P222	28	V	Rect	12	6	0.80	0.24	68	1,200
A-230	6-DC-2	Roller Press and Peripherals	Cement	52	7	21	pending		P230	34	H	Rect	21	25	2.2	0.66	150	15,000
A-231	6-DC-3	Concrete Storage Silo, Pressed Cake Bin	Clinker	52	7	21	580223.65	4130567.40	P231	68	V	Rect	12	6	0.80	0.24	150	1,250
A-240	6-DC-21	Concrete Storage Additive Conveyor/Bins	5% Slag 6% Pozzolan 36% All Grade Limestone 53% Natural Gypsum	52	7	3	580213.67	4130584.11	P240	15	H	Rect	10.5	6	0.75	0.23	70	1,000
A-242	6-DC-11	6-GM-1 Cake Feeder	Cement	52	7	21	pending			N/A	H	Rect	10	10	0.94	0.29	150	1,500
A-243	6-DC-5	Gypsum Feeder	--	Inactive														
A-244	6-DC-7	6-GM-1 Pozzolan Feeder	Pozzolan	52	7	21	580210.85	4130579.98	P244	28	H	Rect	12	6	0.80	0.24	68	1,550
A-245	6-DC-9	6-GM-1 Clay Feeder Gypsum	Natural Gypsum	52	7	21	pending		P245	28	V	Rect	12	8	0.92	0.28	68	1,550
A-301	7-DC-9	Rail Loadout System	Cement	52	5	8	580481.59	4130579.84	P301	32	H	Round	--	--	0.7	0.20	150	3,000
A-340	8-DC-50	Coarse Rock Withdrawal System	Low Grade Limestone	52	5	16	pending		P340	22	V	Round	--	--	1.8	0.56	--	11,000
A-341	8-DC-51	Pre-Crushing Screens Rock Plant 3/Crushed Rock Returns Conveyor	Low Grade Limestone	52	5	16	pending		P341	24	V	Round	--	--	2.5	0.76	--	13,000
A-342	8-DC-52	Coarse Rock Crushing System 2 ea. Symons 5.5 Ft	Low Grade Limestone	52	5	16	pending		P342	25	V	Round	--	--	2.2	0.66	--	15,000
A-384	8-DC-31	Rock Plant 2 Conveyors/Rock Plant 2 Screens - 16 & 17	Low Grade Limestone	50	5	8	pending		P184	25	V	Round	--	--	2.5	0.76	--	17,000
A-390	8-DC-30	Conveyor Belt 15-M	Low Grade Limestone	52	5	16	pending		P290	15	V	Round	--	--	0.7	0.20	--	2,800
A-400		Vibration Coke Mill	--	Inactive														
A-414	6-DC-25	Kiln Dust Additive Bin	Synthetic Gypsum	52	7	21	580256.83	4130612.08	P414	62	H	Rect	12	8	0.9	0.28	200	3500
A-415		Finish Mill Building Conveyor	--	Inactive														

TABLE 2

POINT SOURCE INPUT PARAMETERS[1]

Lehigh Southwest Cement Company

Cupertino Facility

Baghouse BAAQMD Permit #	DC ID	Source[2]	Material	Operating Schedule[3]			UTM NAD83 Coordinates[4]		Stack ID	Stack Height[3] (ft)	Stack Orientation[5] (V/H)	Stack Shape (Round / Rect)	Stack Dimensions		Stack Diameter[6]		Temp[3] (^{o}F)	Stack Flow[3] (acfm)
				weeks/ year	days/ week	hours/ day	X (meters)	Y (meters)					(in)	(in)	(ft)	(m)	Typical	Typical
A-420	7-DC-16	Bulk Cement Loadout Tank #1 and #2	Cement	52	6	24	pending		P420	53	H	Round	--	--	1.1	0.33	100	2,000
A-421	7-DC-17	Bulk Cement Loadout Tank #1 and #2	Cement	52	6	24	pending		P421	53	H	Round	--	--	1.1	0.33	100	2,000
A-422	7-DC-18	Bulk Cement Loadout Tank #1 and #2	Cement	52	6	24	pending		P422	20	H	Round	--	--	1.1	0.33	100	2,400
A-423	7-DC-12	Bulk Cement Loadout Tank #28	Cement	52	6	24	pending		P423	53	H	Round	--	--	1.1	0.33	100	2,000
A-424	7-DC-14	Bulk Cement Loadout Tank #28	Cement	52	6	24	pending		P424	20	V	Round	--	--	0.7	0.21	100	2,400
A-425	7-DC-13	Bulk Cement Loadout Tank #29	Cement	52	6	24	pending		P425	53	H	Round	--	--	1.1	0.33	100	200
A-426	7-DC-15	Bulk Cement Loadout Tank #29	Cement	52	6	24	pending		P426	20	V	Round	--	--	0.7	0.21	100	2,400
A-427	7-DC-19	Bulk Cement Loadout Tank #28/#29	Cement	52	6	24	580509.82	4130541.40	P427	90	H	Rect	16	19	1.6	0.50	100	8,300
A-428	7-DC-11	Bulk Cement Loadout Tank #1 and #2	Cement	52	6	24	580521.14	4130527.29	P428	79	H	Rect	16	18	1.6	0.49	100	6,100
A-429	7-DC-10	Bulk Cement Loadout Tank #28/#29	Cement	52	6	8	580504.80	4130550.32	P429	90	V	Rect	18	17	1.6	0.50	100	8,300
A-430	7-PDC-1	Cement Packer #1	Cement	52	5	8	pending		P430	73	H	Round	--	--	1.5	0.46	100	800
A-431	7-PDC-2	Cement Packer #2	Cement	52	5	8	pending		P431	73	H	Round	--	--	1.5	0.46	100	8,000
A-432	7-PDC-3	Cement Packer #3	--	Inactive														
A-433	7-DC-5	West Silo Top Cement Distribution Tower	Cement	52	7	24	pending		P433	96	H	Rect	12	12	1.1	0.34	100	4,000
A-434	7-DC-6	Middle West Silo Top Cement Distribution Tower	Cement	52	7	24	pending		P434	96	H	Rect	12	12	1.1	0.34	100	4,000
A-435	7-PDC-7	East Silo Top Cement Distribution Tower	Cement	52	7	24	pending		P435	96	H	Rect	25	22	2.2	0.67	100	10,000
A-436	6-DC-49	Clinker Transfer Area	Clinker	52	7	24	580350.53	4130583.67	P436	49	H	Rect	11.5	12.5	1.1	0.34	100	4,000
A-441	8-DC-4		--	Inactive														
A-442	8-DC-5		--															
A-447	6-DC-51		--															
A-448	6-DC52		--															
A-449	6-DC-53		--															
A-450	6-DC-54		--															
A-451	7-PDC-4		--															
S501	--	Emergency Diesel Generator	Diesel fuel	10.5 hours/yr			pending											
S502	--	Emergency Diesel Generator	Diesel fuel	10.5 hours/yr			pending											

Notes:

1. Input parameters were provided by the facility; AMEC has not measured any source parameters. Information may be revised upon further review by Lehigh/AMEC.
2. Shaded dust collectors are evaluated quantitatively; unshaded dust collector sources are considered to have an insignificant contribution to particulate (dust) emissions (Table 4).
3. Information obtained from Hanson Permanente Cement Inspection Report #562, March 10, 2005. Document received after CEIR prepared.
4. A survey is being scheduled to obtain missing stack parameters.
5. Vertical (V) or horizontal (H) orientation of the stack.
6. Provided by facility personnel; if stack is rectangular, equivalent diameter is calculated from stack dimensions as follows: Diameter (ft) = 2 x (Stack dimensions (in x in) / 144 in/ft / π)$^{1/2}$

Abbreviations:

DC = Dust collector
UTM NAD 83 = Universal Transverse Mercator; North American Datum 1983
NA = not available
-- = not applicable
Rect = Rectangular
ft = feet
in = inches

TABLE 3
FUGITIVE VOLUME SOURCE INPUT PARAMETERS
Lehigh Southwest Cement Company
Cupertino Facility

Modeled Volume Source Group[1]	Source[2]	CEIR Table	Material	Operating Schedule			UTM NAD83 Coordinates[3]		Dimensions (meters)		
				weeks/ year	days/ week	hours/ day	X (meters)	Y (meters)	side length	initial lateral dimension	release height
1 / 2	Material Handling	12A	Primary crushed limestone (medium grade)	52	7	10	578187.53 578895.69	4130775.88 4130829.41	640.48 674.83	148.95 156.94	7
1 / 2	Blasting	12A		52	7	10					
1 / 2	Bulldozing	12A		52	7	10					
1 / 2	Grading	12A		52	7	10					
1 / 2	Dust Entrainment - Unpaved Roads	12A	Unpaved road dust in mine (sample 015)	52	7	10					
1 / 2	Wind Erosion - Unpaved Roads	12A	Unpaved road dust in mine (sample 015)	52	7	24					
1 / 2	Wind Erosion - Mine Area	12A	Primary crushed limestone (medium grade)	52	7	24					
3	Crushing and screening process fugitives	7B	27% High Grade 25% All Grade 48% Low Grade	52	7	24	579745.28	4130737.49	670.78	156	7
4	Cement facility process fugitives	7A	Various	52	7	24	580319.09	4130874.87	458.64	106.66	7
4	Natural Gypsum Stockpile (located in a covered bldg)	11	Natural Gypsum	52	7	24					
4	Pozzolan Stockpile (located in a covered bldg)	11	Pozzolan	52	7	24					
5	Rock plant process fugitives	7C	Low grade	52	7	24	579904.89	4130218.23	359.64	83.64	7
5	Primary Crushed Limestone Stockpile (High Grade)	11	Primary crushed limestone (high grade)	52	7	24					
5	Primary Crushed Limestone Stockpile (Medium Grade)	11	Primary crushed limestone (medium grade)	52	7	24					
6	Dust entrainment from unpaved roads	10	Unpaved road dust	52	7	10	580395.86	4130333.39	614.21	142.84	7
6	Dust entrainment from paved roads	10	Paved road dust	52	7	10					
6	Wind erosion from unpaved roads	10	Unpaved road dust	52	7	24					
6	Bauxite Stockpile	11	Bauxite	52	7	24					
6	Iron Ore Stockpile	11	Iron Ore	52	7	24					
6	Coal Stockpile	11	Coal	52	7	24					
6	Coke Stockpile	11	Coke	52	7	24					
6	Clinker Stockpile	11	Clinker	52	7	24					
6	Gasoline dispensing	8	--	2,500 hours/year							
6 / 7	Diesel dispensing	8	--	2,500 hours/year			multiple				7

TABLE 3
FUGITIVE VOLUME SOURCE INPUT PARAMETERS
Lehigh Southwest Cement Company
Cupertino Facility

Modeled Volume Source Group[1]	Source[2]	CEIR Table	Material	Operating Schedule			UTM NAD83 Coordinates[3]		Dimensions (meters)		
				weeks/ year	days/ week	hours/ day	X (meters)	Y (meters)	side length	initial lateral dimension	release height
5 / 6 / 7	Gasoline welding stationary IC engines	9B	--	100 hours/year			multiple				7
5 / 6 / 7	Diesel welding stationary IC engines	9B	--	202 hours/year			multiple				7
5 / 7 / 8	Quarry Overburden Stockpile	11	Quarry overburden (low grade)	52	7	24	multiple				7
8	Slag Stockpile	11	Slag	52	7	24	580731.26	4130822.35	351.56	81.76	7
8	Low Grade Limestone Stockpile (Non-Process)	11	Primary crushed limestone (medium grade)	52	7	24					

Notes:
1. Emissions for sources which overlap multiple areas are shared equally between volume sources with the exception of the welders (Group 5: 25%; Group 6: 60%; Group 7: 15%).
2. Stockpile emissions include that from wind erosion and material handling.
3. The coordinates provided correspond to the center of the volume source.

Source Group Descriptions:

1	Mine Operations
2	Mine Operations
3	Rock Crushing Operations
4	Cement Processing
5	Rock Plant
6	Plant Operations
7	Quarry Operations
8	Non-Process Storage

Abbreviations:
UTM NAD 83 = Universal Transverse Mercator; North American Datum 1983
-- = not applicable

TABLE 4

SELECTION OF SIGNIFICANT DUST COLLECTOR EMISSIONS FOR CEMENT AND ROCK PLANT BAGHOUSES

Lehigh Southwest Cement Company

Cupertino Facility

BAAQMD Permit #	Plant ID	Description	Material [1]	Stack Flow (dscfm)	Grain Loading (gr/dscfm)	Hourly Emissions (lb/hr)	Annual Operating Hours [2,3] (hrs/yr)	Annual Emissions (tons/yr)	Percent Contribution[4]
A-10	6-DC-45-48	Dust Collector - KCC design 32,000 cfm (inactive per SR)	Clinker	32,000	0.01	0.00	0	0.00E+00	0.0%
A-13	6-DC-1	Dust Collector - Reese 4 unit x 49 Bags	Clinker	15,000	0.01	1.29	5459	3.51E+00	**1.3%**
A-58	7-DC-8	Dust Collector - MAC Model 144LST64, 5000 ACFM	Cement	5,000	0.01	0.43	6119	1.31E+00	0.5%
A-111	1-DC-1	Dust Collector - DCA Volks - 2,000 cfm	Additive	2,000	0.01	0.17	4772	4.09E-01	0.2%
A-112	1-DC-2	Dust Collector - DCA Volks - 2,000 cfm	Additive	2,000	0.01	0.17	2882	2.47E-01	0.1%
A-113	1-DC-3	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	Additive	4,000	0.01	0.34	2487	4.26E-01	0.2%
A-114 [5]	1-DC-4	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	Additive	8,000	0.01	0.69	6589	2.26E+00	**0.8%**
A-115	1-DC-5	Dust Collector - DCA Volks - 2,000 cfm	Additive	2,000	0.01	0.17	4772	4.09E-01	0.2%
A-121	2-DC-1	Dust Collector - Mikro-Pulsaire Model 1F5 16,000 cfm	56% High Grade 44% Mid Grade	16,000	0.01	1.37	6236	4.28E+00	**1.6%**
A-122	2-DC-2	Dust Collector - DCA Volks - 2,000 cfm	56% High Grade 44% Mid Grade	2,000	0.01	0.17	6935	5.94E-01	0.2%
A-123	2-DC-3	Dust Collector - DCA Volks - 2,000 cfm	56% High Grade 44% Mid Grade	2,000	0.01	0.17	7031	6.03E-01	0.2%
A-131	3-DC-1	Dust Collector - Mikro-Pulsaire Model 1F2 6,000 cfm	56% High Grade 44% Mid Grade	6,000	0.01	0.51	7672	1.97E+00	**0.7%**
A-132	3-DC-2	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	5% Additive 53% High Grade 42% Mid Grade	4,000	0.01	0.34	6464	1.11E+00	0.4%
A-133	3-DC-3	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	5% Additive 53% High Grade 42% Mid Grade	4,000	0.01	0.34	4115	7.05E-01	0.3%
A-134	3-DC-4	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	5% Additive 95% All Grade Limestone	8,000	0.01	0.69	5310	1.82E+00	**0.7%**
A-135	3-DC-5	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	High Grade Limestone	8,000	0.01	0.69	5383	1.85E+00	**0.7%**
A-141	4-DC-7/22	Dust Collector - Kaiser Design 180,000 cfm	5% Additive 53% High Grade 42% Mid Grade	180,000	0.012	18.00	6897	6.21E+01	**23.2%**
A-142	4-DC-23/38	Dust Collector - Kaiser Design 180,000 cfm	5% Additive 53% High Grade 42% Mid Grade	180,000	0.012	18.00	6897	6.21E+01	**23.2%**
A-143	4-DC-3	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	5309	2.28E+00	**0.8%**
A-144	4-DC-4	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	5417	2.32E+00	**0.9%**
A-151	5-DC-1	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	6897	2.96E+00	**1.1%**
A-152	5-DC-2	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	6897	2.96E+00	**1.1%**

TABLE 4

SELECTION OF SIGNIFICANT DUST COLLECTOR EMISSIONS FOR CEMENT AND ROCK PLANT BAGHOUSES

Lehigh Southwest Cement Company

Cupertino Facility

BAAQMD Permit #	Plant ID	Description	Material [1]	Stack Flow (dscfm)	Grain Loading (gr/dscfm)	Hourly Emissions (lb/hr)	Annual Operating Hours [2,3] (hrs/yr)	Annual Emissions (tons/yr)	Percent Contribution[4]
A-153	5-DC-3	Dust Collector - Mikro-Pulsaire Model 2G3 18,000 cfm	5% Additive 53% High Grade 42% Mid Grade	18,000	0.01	1.54	6897	5.32E+00	**2.0%**
A-161 [6]	5-DC-11/20	Dust Collector - Kaiser Design glass bag 135,000 cfm	Clinker	135,000	0.004	4.93	6897	1.70E+01	**6.4%**
A-162	5-DC-24	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	Clinker	4,000	0.01	0.34	4724	8.10E-01	0.3%
A-163	5-DC-25	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	Clinker	8,000	0.01	0.69	2041	7.00E-01	0.3%
A-164	5-DC-23	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	Clinker	10,000	0.01	0.86	6897	2.96E+00	**1.1%**
A-165	5-DC-27/28	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	Clinker	8,000	0.01	0.69	4530	1.55E+00	**0.6%**
A-166		Dust Collector DC144-10 Pulse Jet (Inactive)	--	--	--	--	--	--	--
A-171	5-DC-5	Baghouse, Pulse Jet Dust Collector - Mikro-Pulsaire Model 2D5 24,000	Coke	24,000	0.016	3.30	6837	1.13E+01	**4.2%**
A-172	5-DC-6	Baghouse, Pulse Jet Dust Collector - Mikro-Pulsaire Model 2D5 24,000	Coke	24,000	0.016	3.30	6753	1.11E+01	**4.2%**
A-174	5-DC-29	Pre-Calciner Coke System (Inactive)	--	--	--	--	--	--	--
A-175	5-DC-26	Dust Collector - DCE Vokes Model DLM - V45/15F 2,200 cfm (Inactive)	--	--	--	--	--	--	--
A-190 [6]	5-DC-90	Clinker Cooler Dust Collectors - Kaiser Design 7,000 cfm	Clinker	7,000	0.005	0.27	6897	9.31E-01	0.3%
A-203	8-DC-3	Dust Collector - DLM Model V10/10 w/5HP Blower (Inactive)	--	--	--	--	--	--	--
A-210	6-DC-17	Dust Collector (6-D-1) - Carter Day Model 376RF10 Clamshell 20,000	Cement	20,000	0.006	1.03	6772	3.48E+00	**1.3%**
A-211	6-DC-12/18	Dust Collector (6-D-1) - Carter Day -4- Model 376RF10 80,000 cfm	Cement	80,000	0.006	4.11	5248	1.08E+01	**4.0%**
A-214	8-DC-2	Dust Collector - DCE Vokes Model DLM - V10/10 1,000 cfm (Inactive)	--	--	--	--	--	--	--
A-215	8-DC-1	Dust Collector - DLM Model V10/10 w/5HP Blower (Inactive)	--	--	--	--	--	--	--
A-216	6-DC-13	Dust Collector - DCE Vokes DLM - v9/15 Type F, 875 CFM-(F1)	Clinker	875	0.0013	0.01	6772	3.30E-02	0.0%
A-217	6-DC-15	Dust Collector - DCE Vokes DLM - v9/15 Type F, 875 CFM-(F1)	Clinker	875	0.0013	0.01	6772	3.30E-02	0.0%
A-218	6-DC-19	Dust Collector - Mikro-Pulsaire Model 2-1200T-12 150,000 ACFM	Cement	150,000	0.006	7.71	6772	2.61E+01	**9.8%**
A-220	6-DC-8	Dust Collector - Mikro-Pulsaire Model 289S/10, 17000 ACFM	Cement	17,000	0.006	0.87	5248	2.29E+00	**0.9%**
A-221	6-DC-6	Dust Collector - DCE Vokes Model DLM-V14/7 Type F, 1325 ACFM-(F2)	Clinker	1,325	0.0013	0.01	5249	3.87E-02	0.0%
A-222	6-DC-4	Dust Collector - DCE sintamatic 1200 acfm-(f2)	Natural Gypsum	1,200	0.0013	0.01	5249	3.51E-02	0.0%
A-230	6-DC-2	Dust Collector - Mikro-Pulsaire Model 289S/10, 15000 ACFM	Cement	15,000	0.01	1.29	5459	3.51E+00	**1.3%**
A-231	6-DC-3	Dust Collector - DCE Vokes DLM - v14/7 Type F, 1200 CFM-(F2)	Clinker	1,200	0.0013	0.01	5459	3.65E-02	0.0%
A-240	6-DC-21	Dust Collector - DCE sintamatic 1000 acfm-(f3)	5% Slag 6 % Pozzolan 36% All Grade Limestone 53% Natural Gypsum	1,000	0.0013	0.01	367	2.04E-03	0.0%
A-242	6-DC-11	Dust Collector - DCE Vokes Model DLM-V18/15, Type f, 1500 acfm-(f3)	Cement	1,500	0.0013	0.02	6772	5.66E-02	0.0%
A-243	6-DC-5	Dust Collector - DCE sintamatic 1675 acfm-(f3) (Inactive)	--	--	--	--	--	--	--
A-244	6-DC-7	Dust Collector - DCE sintamatic 1550 acfm-(f3)	Pozzolan	1,550	0.0013	0.02	356	3.07E-03	0.0%
A-245	6-DC-9	Dust Collector - DCE sintamatic 1550 acfm-(f3)	Natural Gypsum	1,550	0.0013	0.02	6772	5.85E-02	0.0%
A-301	7-DC-9	Rail Loadout Dust Collector	Cement	1,500	0.01	0.13	578	3.72E-02	0.0%
A-340	8-DC-50	DC-3 Baghouse - Mikropul Model 196S Pulse Jet DC 11,000 cfm	Low Grade Limestone	11,000	0.0013	0.12	3319	2.03E-01	0.1%
A-341	8-DC-51	DC-4 Baghouse - Mikropul Model 221S Pulse Jet DC 17,000 cfm	Low Grade Limestone	17,000	0.0013	0.19	3812	3.61E-01	0.1%
A-342	8-DC-52	DC-5 Baghouse - Mikropul Model 289S Pulse Jet DC 15,000 cfm	Low Grade Limestone	15,000	0.0013	0.17	3812	3.19E-01	0.1%
A-384	8-DC-31	DC-2 Baghouse - Mikropul Model 289S Pulse Jet DC 17,000 cfm	Low Grade Limestone	17,000	0.01	1.46	3319	2.42E+00	**0.9%**
A-390	8-DC-30	DC-2 Baghouse - Mikropul Model 49S Pulse Jet DC 2,800 cfm	Low Grade Limestone	2,800	0.0013	0.03	3319	5.18E-02	0.0%
A-400		Dust Collector - DC49 - DCE Vokes DLM v15/15F - 3 hp (Inactive)	--	--	--	--	--	--	--
A-414	6-DC-25	Dust Collector - Pactecon PC-2 528 ACFM	Synthetic Gypsum	528	0.01	0.05	4580	1.04E-01	0.0%
A-415		Dust Collector (Inactive)	--	--	--	--	--	--	--
A-420	7-DC-16	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01	0.1%

TABLE 4

SELECTION OF SIGNIFICANT DUST COLLECTOR EMISSIONS FOR CEMENT AND ROCK PLANT BAGHOUSES

Lehigh Southwest Cement Company

Cupertino Facility

BAAQMD Permit #	Plant ID	Description	Material [1]	Stack Flow (dscfm)	Grain Loading (gr/dscfm)	Hourly Emissions (lb/hr)	Annual Operating Hours [2,3] (hrs/yr)	Annual Emissions (tons/yr)	Percent Contribution[4]
A-421	7-DC-17	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01	0.1%
A-422	7-DC-18	Dust Collector - DCL, CFM330, 2,400 ACFM	Cement	2,400	0.006	0.12	6119	3.78E-01	0.1%
A-423	7-DC-12	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01	0.1%
A-424	7-DC-14	Dust Collector - DCL, CFM330, 2,400 ACFM	Cement	2,400	0.006	0.12	6119	3.78E-01	0.1%
A-425	7-DC-13	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01	0.1%
A-426	7-DC-15	Dust Collector - DCL, CFM330, 2,400 ACFM	Cement	2,400	0.006	0.12	6119	3.78E-01	0.1%
A-427	7-DC-19	Dust Collector - US Air Filtration 2110-CKPT-96-5, 8,300 ACFM	Cement	8,300	0.006	0.43	6119	1.31E+00	0.5%
A-428	7-DC-11	Dust Collector - Fuller/Dracco Type A, 6,100 ACFM	Cement	6,100	0.006	0.31	6119	9.60E-01	0.4%
A-429	7-DC-10	Dust Collector - Fuller/Dracco Type A, 8,300 ACFM	Cement	8,300	0.006	0.43	6119	1.31E+00	0.5%
A-430	7-PDC-1	Dust Collector - BHA Pulse Jet Baghouse Conversion 8,000 ACFM	Cement	8,000	0.006	0.41	982	2.02E-01	0.1%
A-431	7-PDC-2	Dust Collector - BHA Pulse Jet Baghouse Conversion 8,000 ACFM	Cement	8,000	0.006	0.41	523	1.08E-01	0.0%
A-432	7-PDC-3	Dust Collector - BHA Pulse Jet Baghouse Conversion (Inactive)	--	--	--	--	--	--	--
A-433	7-DC-5	Dust Collector - US Air Filtration 1010-PT-96-5, 4000 ACFM	Cement	4,000	0.006	0.21	6772	6.97E-01	0.3%
A-434	7-DC-6	Dust Collector - US Air Filtration 1010-PT-96-5, 4000 ACFM	Cement	4,000	0.006	0.21	6772	6.97E-01	0.3%
A-435	7-DC-7	Dust Collector - US Air Filtration 2110-CKPT-96-5, 10,000 ACFM	Cement	10,000	0.006	0.51	6772	1.74E+00	**0.7%**
A-436	6-DC-49	Dust Collector - DCE Vokes DLM-V15/lff 4000acfm	Clinker	4,000	0.006	0.21	4712	4.85E-01	0.2%
A-441	8-DC-4	Dust Collector (Inactive)	--	--	--	--	--	--	--
A-442	8-DC-5	Dust Collector (Inactive)	--	--	--	--	--	--	--
A-447	6-DC-51	Dust Collector (Inactive)	--	--	--	--	--	--	--
A-448	6-DC52	Dust Collector (Inactive)	--	--	--	--	--	--	--
A-449	6-DC-53	Dust Collector (Inactive)	--	--	--	--	--	--	--
A-450	6-DC-54	Dust Collector (Inactive)	--	--	--	--	--	--	--
A-451	7-PDC-4	Dust Collector (Inactive)	--	--	--	--	--	--	--
					Total Significant Emissions:				93%
					Total Emissions:	8.41E+01		2.68E+02	100.0%

Notes:

Shading indicates equipment with emissions updated in this revised CEIR Addendum.

1. For sources handling a combination of process materials, percentages were calculated based on 2005 production reports
2. Operating hours based on 2005 NESHAP report. Operating hours for A-13 provided by Scott Renfrew.
3. Operating hours for A-111 through 133 not in NESHAP report. Hours provided from 2008 and then calculated 2005 hours by taking the ratio of clinker production from 2005 and 2008.
4. Sources contributing to greater than 0.5 percent of the PM10 emissions are indicated in **bold** and are included in the HRA.
5. Dust collector A-114 used operating hours from 2008
6. Dust collectors for the clinker cooler (A-161, 190) used PM10 emissions (lb/hr) from source testing, 2007 Emissions Test Report, Revision II, Table 6-1

Key:

0.01	Default Grain Loading (gr/dscfm)
777130	metric tons of clinker in 2008 (from Scott Renfrew)
1399692	tons of clinker in 2005
1.779	2005/2008 production ratio
2000	pounds (lb) per ton

APPENDIX A

CEIR Calculation Tables

APPENDIX A
REVISED TABLE 6A

DUST COLLECTOR EMISSIONS FOR CEMENT BAGHOUSES
Lehigh Southwest Cement Company
Cupertino Facility

BAAQMD Permit #	Plant ID	Description	Material [5]	Stack Flow (dscfm)	Grain Loading (gr/dscfm)	Hourly Emissions (lb/hr)	Yearly Operating Hours (hrs/yr) [1, 2]	Yearly Emissions (tons/yr)
A-10	6-DC-45-48	Dust Collector - KCC design 32,000 cfm (inactive per SR)	Clinker	32,000	0.01	0.00	0	0.00E+00
A-13	6-DC-1	Dust Collector - Reese 4 unit x 49 Bags	Clinker	15,000	0.01	1.29	5459	3.51E+00
A-58	7-DC-8	Dust Collector - MAC Model 144LST64, 5000 ACFM	Cement	5,000	0.01	0.43	6119	1.31E+00
A-111	1-DC-1	Dust Collector - DCA Volks - 2,000 cfm	Additive	2,000	0.01	0.17	4772	4.09E-01
A-112	1-DC-2	Dust Collector - DCA Volks - 2,000 cfm	Additive	2,000	0.01	0.17	2882	2.47E-01
A-113	1-DC-3	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	Additive	4,000	0.01	0.34	2487	4.26E-01
A-114 [4]	1-DC-4	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	Additive	8,000	0.01	0.69	6589	2.26E+00
A-115	1-DC-5	Dust Collector - DCA Volks - 2,000 cfm	Additive	2,000	0.01	0.17	4772	4.09E-01
A-121	2-DC-1	Dust Collector - Mikro-Pulsaire Model 1F5 16,000 cfm	56% High Grade 44% Mid Grade	16,000	0.01	1.37	6236	4.28E+00
A-122	2-DC-2	Dust Collector - DCA Volks - 2,000 cfm	56% High Grade 44% Mid Grade	2,000	0.01	0.17	6935	5.94E-01
A-123	2-DC-3	Dust Collector - DCA Volks - 2,000 cfm	56% High Grade 44% Mid Grade	2,000	0.01	0.17	7031	6.03E-01
A-131	3-DC-1	Dust Collector - Mikro-Pulsaire Model 1F2 6,000 cfm	56% High Grade 44% Mid Grade	6,000	0.01	0.51	7672	1.97E+00
A-132	3-DC-2	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	5% Additive 53% High Grade 42% Mid Grade	4,000	0.01	0.34	6464	1.11E+00
A-133	3-DC-3	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	5% Additive 53% High Grade 42% Mid Grade	4,000	0.01	0.34	4115	7.05E-01
A-134	3-DC-4	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	5% Additive 95% All Grade Limestone	8,000	0.01	0.69	5310	1.82E+00
A-135	3-DC-5	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	High Grade Limestone	8,000	0.01	0.69	5383	1.85E+00
A-141	4-DC-7/22	Dust Collector - Kaiser Design 180,000 cfm	5% Additive 53% High Grade 42% Mid Grade	180,000	0.012	18.00	6897	6.21E+01
A-142	4-DC-23/38	Dust Collector - Kaiser Design 180,000 cfm	5% Additive 53% High Grade 42% Mid Grade	180,000	0.012	18.00	6897	6.21E+01
A-143	4-DC-3	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	5309	2.28E+00
A-144	4-DC-4	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	5417	2.32E+00
A-151	5-DC-1	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	6897	2.96E+00

APPENDIX A
REVISED TABLE 6A

DUST COLLECTOR EMISSIONS FOR CEMENT BAGHOUSES
Lehigh Southwest Cement Company
Cupertino Facility

BAAQMD Permit #	Plant ID	Description	Material [5]	Stack Flow (dscfm)	Grain Loading (gr/dscfm)	Hourly Emissions (lb/hr)	Yearly Operating Hours (hrs/yr) [1, 2]	Yearly Emissions (tons/yr)
A-152	5-DC-2	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	5% Additive 53% High Grade 42% Mid Grade	10,000	0.01	0.86	6897	2.96E+00
A-153	5-DC-3	Dust Collector - Mikro-Pulsaire Model 2G3 18,000 cfm	5% Additive 53% High Grade 42% Mid Grade	18,000	0.01	1.54	6897	5.32E+00
A-161 [3]	5-DC-11/20	Dust Collector - Kaiser Design glass bag 135,000 cfm	Clinker	135,000	0.004	4.93	6897	1.70E+01
A-162	5-DC-24	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	Clinker	4,000	0.01	0.34	4724	8.10E-01
A-163	5-DC-25	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	Clinker	8,000	0.01	0.69	2041	7.00E-01
A-164	5-DC-23	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	Clinker	10,000	0.01	0.86	6897	2.96E+00
A-165	5-DC-27/28	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	Clinker	8,000	0.01	0.69	4530	1.55E+00
A-166		Dust Collector DC144-10 Pulse Jet (Inactive)	--	--	--	--	--	--
A-171	5-DC-5	Baghouse, Pulse Jet Dust Collector - Mikro-Pulsaire Model 2D5 24,000 cfm	Coke	24,000	0.016	3.30	6837	1.13E+01
A-172	5-DC-6	Baghouse, Pulse Jet Dust Collector - Mikro-Pulsaire Model 2D5 24,000 cfm	Coke	24,000	0.016	3.30	6753	1.11E+01
A-174	5-DC-29	Pre-Calciner Coke System (Inactive)	--	--	--	--	--	--
A-175	5-DC-26	Dust Collector - DCE Vokes Model DLM - V45/15F 2,200 cfm (Inactive)	--	--	--	--	--	--
A-190 [3]	5-DC-90	Clinker Cooler Dust Collectors - Kaiser Design 7,000 cfm	Clinker	7,000	0.005	0.27	6897	9.31E-01
A-203	8-DC-3	Dust Collector - DLM Model V10/10 w/5HP Blower (Inactive)	--	--	--	--	--	--
A-210	6-DC-17	Dust Collector (6-D-1) - Carter Day Model 376RF10 Clamshell 20,000 cfm	Cement	20,000	0.006	1.03	6772	3.48E+00
A-211	6-DC-12/18	Dust Collector (6-D-1) - Carter Day -4- Model 376RF10 80,000 cfm	Cement	80,000	0.006	4.11	5248	1.08E+01
A-214	8-DC-2	Dust Collector - DCE Vokes Model DLM - V10/10 1,000 cfm (Inactive)	--	--	--	--	--	--
A-215	8-DC-1	Dust Collector - DLM Model V10/10 w/5HP Blower (Inactive)	--	--	--	--	--	--
A-216	6-DC-13	Dust Collector - DCE Vokes DLM - v9/15 Type F, 875 CFM-(F1)	Clinker	875	0.0013	0.01	6772	3.30E-02
A-217	6-DC-15	Dust Collector - DCE Vokes DLM - v9/15 Type F, 875 CFM-(F1)	Clinker	875	0.0013	0.01	6772	3.30E-02
A-218	6-DC-19	Dust Collector - Mikro-Pulsaire Model 2-1200T-12 150,000 ACFM	Cement	150,000	0.006	7.71	6772	2.61E+01
A-220	6-DC-8	Dust Collector - Mikro-Pulsaire Model 289S/10, 17000 ACFM	Cement	17,000	0.006	0.87	5248	2.29E+00
A-221	6-DC-6	Dust Collector - DCE Vokes Model DLM-V14/7 Type F, 1325 ACFM-(F2)	Clinker	1,325	0.0013	0.01	5249	3.87E-02
A-222	6-DC-4	Dust Collector - DCE sintamatic 1200 acfm-(f2)	Natural Gypsum	1,200	0.0013	0.01	5249	3.51E-02
A-230	6-DC-2	Dust Collector - Mikro-Pulsaire Model 289S/10, 15000 ACFM	Cement	15,000	0.01	1.29	5459	3.51E+00
A-231	6-DC-3	Dust Collector - DCE Vokes DLM - v14/7 Type F, 1200 CFM-(F2)	Clinker	1,200	0.0013	0.01	5459	3.65E-02
A-240	6-DC-21	Dust Collector - DCE sintamatic 1000 acfm-(f3)	5% Slag 6 % Pozzolan 36% All Grade Limestone 53% Natural Gypsum	1,000	0.0013	0.01	367	2.04E-03
A-242	6-DC-11	Dust Collector - DCE Vokes Model DLM-V18/15, Type f, 1500 acfm-(f3)	Cement	1,500	0.0013	0.02	6772	5.66E-02
A-243	6-DC-5	Dust Collector - DCE sintamatic 1675 acfm-(f3) (Inactive)	--	--	--	--	--	--
A-244	6-DC-7	Dust Collector - DCE sintamatic 1550 acfm-(f3)	Pozzolan	1,550	0.0013	0.02	356	3.07E-03
A-245	6-DC-9	Dust Collector - DCE sintamatic 1550 acfm-(f3)	Natural Gypsum	1,550	0.0013	0.02	6772	5.85E-02
A-301	7-DC-9	Rail Loadout Dust Collector	Cement	1,500	0.01	0.13	578	3.72E-02
A-400		Dust Collector - DC49 - DCE Vokes DLM v15/15F - 3 hp (Inactive)	--	--	--	--	--	--
A-414	6-DC-25	Dust Collector - Kiln Dust Additive Bin	Synthetic Gypsum	3,500	0.0013	0.04	4580	8.93E-02
A-415		Dust Collector (Inactive)	--	--	--	--	--	--
A-420	7-DC-16	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01
A-421	7-DC-17	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01

APPENDIX A
REVISED TABLE 6A

DUST COLLECTOR EMISSIONS FOR CEMENT BAGHOUSES
Lehigh Southwest Cement Company
Cupertino Facility

BAAQMD Permit #	Plant ID	Description	Material [5]	Stack Flow (dscfm)	Grain Loading (gr/dscfm)	Hourly Emissions (lb/hr)	Yearly Operating Hours (hrs/yr) [1, 2]	Yearly Emissions (tons/yr)
A-422	7-DC-18	Dust Collector - DCL, CFM330, 2,400 ACFM	Cement	2,400	0.006	0.12	6119	3.78E-01
A-423	7-DC-12	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01
A-424	7-DC-14	Dust Collector - DCL, CFM330, 2,400 ACFM	Cement	2,400	0.006	0.12	6119	3.78E-01
A-425	7-DC-13	Dust Collector - DCL, CD049-84, 2,000 ACFM	Cement	2,000	0.006	0.10	6119	3.15E-01
A-426	7-DC-15	Dust Collector - DCL, CFM330, 2,400 ACFM	Cement	2,400	0.006	0.12	6119	3.78E-01
A-427	7-DC-19	Dust Collector - US Air Filtration 2110-CKPT-96-5, 8,300 ACFM	Cement	8,300	0.006	0.43	6119	1.31E+00
A-428	7-DC-11	Dust Collector - Fuller/Dracco Type A, 6,100 ACFM	Cement	6,100	0.006	0.31	6119	9.60E-01
A-429	7-DC-10	Dust Collector - Fuller/Dracco Type A, 8,300 ACFM	Cement	8,300	0.006	0.43	6119	1.31E+00
A-430	7-PDC-1	Dust Collector - BHA Pulse Jet Baghouse Conversion 8,000 ACFM	Cement	8,000	0.006	0.41	982	2.02E-01
A-431	7-PDC-2	Dust Collector - BHA Pulse Jet Baghouse Conversion 8,000 ACFM	Cement	8,000	0.006	0.41	523	1.08E-01
A-432	7-PDC-3	Dust Collector - BHA Pulse Jet Baghouse Conversion (Inactive)	--	--	--	--	--	--
A-433	7-DC-5	Dust Collector - US Air Filtration 1010-PT-96-5, 4000 ACFM	Cement	4,000	0.006	0.21	6772	6.97E-01
A-434	7-DC-6	Dust Collector - US Air Filtration 1010-PT-96-5, 4000 ACFM	Cement	4,000	0.006	0.21	6772	6.97E-01
A-435	7-DC-7	Dust Collector - US Air Filtration 2110-CKPT-96-5, 10,000 ACFM	Cement	10,000	0.006	0.51	6772	1.74E+00
A-436	6-DC-49	Dust Collector - DCE Vokes DLM-V15/lff 4000acfm	Clinker	4,000	0.006	0.21	4712	4.85E-01
A-441	8-DC-4	Dust Collector (Inactive)	--	--	--	--	--	--
A-442	8-DC-5	Dust Collector (Inactive)	--	--	--	--	--	--
A-447	6-DC-51	Dust Collector (Inactive)	--	--	--	--	--	--
A-448	6-DC52	Dust Collector (Inactive)	--	--	--	--	--	--
A-449	6-DC-53	Dust Collector (Inactive)	--	--	--	--	--	--
A-450	6-DC-54	Dust Collector (Inactive)	--	--	--	--	--	--
A-451	7-PDC-4	Dust Collector (Inactive)	--	--	--	--	--	--
					Total:	8.21E+01		2.64E+02

Default Grain Loading:

0.01	gr/dscfm
777130	metric tons of clinker in 2008 (from Scott Renfrew)
1399692	tons of clinker in 2005
1.77921966	2005/2008 production ratio
2000	lb=ton

Notes:
1. Operating hours based on 2005 NESHAP report. Operating hours for A-13 provided by Scott Renfrew.
2. Operating hours for A-111 through 133 not in NESHAP report. Hours provided from 2008 and then calculated 2005 hours by taking the ratio of clinker production from 2005 and 2008.
3. Dust collectors for the clinker cooler (A-161, 190) used PM10 emissions (lb/hr) from source testing, 2007 Emissions Test Report, Revision II, Table 6-1
4. Dust collector A-114 used operating hours from 2008
5. For sources handling a combination of process materials, percentages were calculated based on 2005 production reports

APPENDIX A
REVISED TABLE 7A

PROCESS FUGITIVE EMISSIONS FOR CEMENT PLANT
Lehigh Southwest Cement Company
Cupertino Facility

BAAQMD Source #	Abatement Device #	Description	Material [3,4]	Controlled Transfer Points	Screens	Crushers	Emission Factor (lb/ton)	Throughput [1, 2] (tons/yr)	Annual Emissions (tons/yr)	Maximum Hourly Throughput (tons/hr) [1]	Maxiumum Hourly Emissions (lbs/hr)
S-17	A-436	Clinker Transfer Area	Clinker	2	0	0	9.20E-05	1,399,692	6.44E-02	350	3.22E-02
S-19	A-10 A-447 A-448 A-449 A-450	Clinker Storage Area (inactive per SR)	Clinker	0	0	0	0.00E+00	0	0.00E+00	0	0.00E+00
S-21	A-13	Roll Press Clinker Surge Bin and Feeder	Clinker	9	0	0	4.14E-04	1,399,692	2.90E-01	265	1.10E-01
S-45	A-433	West Silo Top Cement Distribution Tower	Cement	6	0	0	2.76E-04	479,012	6.61E-02	100	2.76E-02
S-46	A-434	Middle West Silo Top Cement Distribution Tower	Cement	2	0	0	9.20E-05	394,687	1.82E-02	100	9.20E-03
S-47	A-435	East Silo Top Cement Distribution Tower	Cement	2	0	0	9.20E-05	533,754	2.46E-02	100	9.20E-03
S-48	A-420 A-421 A-422 A-428	Bulk Cement Loadout Tank #1 and #2	Cement	15	0	0	6.90E-04	148,728	5.13E-02	216	1.49E-01
S-49	A-423 A-424 A-427 A-429	Bulk Cement Loadout Tank #28	Cement	12	0	0	5.52E-04	634,414	1.75E-01	108	5.96E-02
S-50	A-425 A-426 A-427 A-429	Bulk Cement Loadout Tank #29	Cement	13	0	0	5.98E-04	634,414	1.90E-01	108	6.46E-02
S-54	A-430	Cement Packer #1	Cement	5	0	0	2.30E-04	19,300	2.22E-03	45	1.04E-02
S-55	A-431	Cement Packer #2	Cement	4	0	0	1.84E-04	16,100	1.48E-03	45	8.28E-03
S-56	A-432	Cement Packer #3 (inactive)	--	--	--	--	--	--	--	--	--
S-57	A-451	Cement Packer #4 (inactive)	--	--	--	--	--	--	--	--	--
S-74	A-58	Type II Mechanical Transfer System	Cement	18	0	0	8.28E-04	1,268,828	5.25E-01	400	3.31E-01
S-111	A-111	Rail Unloading System Area 1	Additive	4	0	0	1.84E-04	151,534	1.39E-02	500	9.20E-02
S-112	A-112	Additive Hopper Transfer System Area 1	Additive	4	0	0	1.84E-04	254,806	2.34E-02	400	7.36E-02
S-113	A-113 A-114	Additive Bin Transfer Facilities Area 1	Additive	4	0	0	1.84E-04	254,806	2.34E-02	400	7.36E-02
S-115	A-115	Additive Storage Tripper	Additive	2	0	0	9.20E-05	251,097	1.16E-02	500	4.60E-02
S-121	A-121	Tertiary Scalping Screen	56% High Grade 44% Mid Grade	7	2	0	4.72E-03	2,044,812	4.83E+00	1400	6.61E+00
S-122	A-121 A-122	Tertiary Crusher	56% High Grade 44% Mid Grade	7	0	1	1.52E-03	2,044,812	1.56E+00	600	9.13E-01
S-123	A-122 A-123	Rock Conveying System Area 2	56% High Grade 44% Mid Grade	4	0	0	1.84E-04	2,050,000	1.89E-01	600	1.10E-01
S-131	A-131	Rock Sampling System Area 3	56% High Grade 44% Mid Grade	9	0	1	1.61E-03	2,050,000	1.65E+00	800	1.29E+00
S-132	A-132 A-133	Preblend	5% Additive 53% High Grade 42% Mid Grade	8	0	0	3.68E-04	1,940,000	3.57E-01	800	2.94E-01
S-134	A-134	Preblend Storage Bin	5% Additive 95% All Grade Limestone	4	0	0	1.84E-04	1,940,000	1.78E-01	600	1.10E-01
S-135	A-135	High-grade Storage Bins	High Grade Limestone	2	0	0	9.20E-05	104,171	4.79E-03	800	7.36E-02
S-141	A-141	Raw Mill	5% Additive 53% High Grade 42% Mid Grade	51	0	0	2.35E-03	1,068,691	1.25E+00	250	5.87E-01

APPENDIX A
REVISED TABLE 7A

PROCESS FUGITIVE EMISSIONS FOR CEMENT PLANT
Lehigh Southwest Cement Company
Cupertino Facility

BAAQMD Source #	Abatement Device #	Description	Material [3,4]	Controlled Transfer Points	Screens	Crushers	Emission Factor (lb/ton)	Throughput [1, 2] (tons/yr)	Annual Emissions (tons/yr)	Maximum Hourly Throughput (tons/hr) [1]	Maxiumum Hourly Emissions (lbs/hr)
S-142	A-142	Raw Mill	5% Additive 53% High Grade 42% Mid Grade	43	0	0	1.98E-03	1,125,347	1.11E+00	250	4.95E-01
S-143	A-143	Raw Mill 1 Separator System	5% Additive 53% High Grade 42% Mid Grade	11	0	0	5.06E-04	320,607	8.11E-02	792	4.01E-01
S-144	A-144	Raw Mill 2 Separator System	5% Additive 53% High Grade 42% Mid Grade	11	0	0	5.06E-04	337,604	8.54E-02	792	4.01E-01
S-151	A-151 A-152	Homogenizer	5% Additive 53% High Grade 42% Mid Grade	23	0	0	1.06E-03	2,194,038	1.16E+00	1000	1.06E+00
S-153	A-153	Kiln Feed System	5% Additive 53% High Grade 42% Mid Grade	14	0	0	6.44E-04	2,070,000	6.67E-01	700	4.51E-01
S-154	A-141 A-142 A-171 A-172	Cement Calcining Kiln	Clinker	45	0	0	2.07E-03	1,400,000	1.45E+00	208	4.31E-01
S-161	A-161 A-190	Clinker Cooler	Clinker	41	0	1	3.09E-03	1,398,337	2.16E+00	320	9.88E-01
S-162	A-162	Clinker Silo A	Clinker	3	0	0	1.38E-04	699,169	4.82E-02	320	4.42E-02
S-163	A-163 A-164	Clinker Silo B	Clinker	4	0	0	1.84E-04	699,169	6.43E-02	320	5.89E-02
S-164	A-164	Free lime Storage Bin (inactive)	--	--	--	--	--	--	--	--	--
S-165	A-165	Clinker Transfer System	Clinker	3	0	0	1.38E-04	1,350,000	9.32E-02	350	4.83E-02
S-166		Bulk Clinker Rail Car Loadout System (inactive)	--	--	--	--	--	--	--	--	--
S-171	A-171	Kiln Coal System	Coke	9	0	0	4.14E-04	62,097	1.29E-02	25	1.04E-02
S-172	A-172	Precalciner Coal Mill	Coke	11	0	0	5.06E-04	93,146	2.36E-02	10	5.06E-03
S-173	A-175	Kiln Coke System (inactive)	--	--	--	--	--	--	--	--	--
S-174	A-174	Pre-Calciner Coke System (inactive)	--	--	--	--	--	--	--	--	--
S-203		Screen (inactive)	--	--	--	--	--	--	--	--	--
S-204		Tunnel Conveyor (8-BC-1) with 2 Belt Conveyors (8-BC-2&8-BC-8) (inactive)	--	--	--	--	--	--	--	--	--
S-205		Conveying System with 10 Belt Conveyors (inactive)	--	--	--	--	--	--	--	--	--
S-210	A-210	Finish Mill 6-GM-1	Cement	8	0	0	3.68E-04	1,100,000	2.02E-01	250	9.20E-02
S-211	A-211	Separator 6-SE-2	Cement	7	0	0	3.22E-04	296,979	4.78E-02	300	9.66E-02
S-214	A-214	Rock Crusher 8CRI (inactive)	--	--	--	--	--	--	--	--	--
S-215		Vibrating Screen (inactive)	--	--	--	--	--	--	--	--	--
S-216	A-216	6-GM-1 Cake Conveyor	Clinker	2	0	0	9.20E-05	1,123,180	5.17E-02	250	2.30E-02
S-217	A-217	6GM1Cake Conveyor	Clinker	2	0	0	9.20E-05	1,123,180	5.17E-02	250	2.30E-02
S-218	A-218	6-GM-1 Air Separator	Cement	8	0	0	3.68E-04	1,169,980	2.15E-01	700	2.58E-01
S-220	A-220	6-GM-2 Mill and Peripherals	Cement	11	0	0	5.06E-04	291,816	7.38E-02	75	3.80E-02
S-221	A-221	6-GM-2 Cake Feeder	Clinker	3	0	0	1.38E-04	280,143	1.93E-02	75	1.04E-02
S-222	A-222	6-GM-2 Gypsum Feeder	Natural Gypsum	4	0	0	1.84E-04	11,498	1.06E-03	10	1.84E-03
S-230	A-230	Roller Press and Peripherals	Cement	7	0	0	3.22E-04	1,399,692	2.25E-01	300	9.66E-02
S-231	A-231	Concrete Storage Silo, Pressed Cake Bin	Clinker	2	0	0	9.20E-05	1,399,692	6.44E-02	240	2.21E-02

APPENDIX A
REVISED TABLE 7A

PROCESS FUGITIVE EMISSIONS FOR CEMENT PLANT
Lehigh Southwest Cement Company
Cupertino Facility

BAAQMD Source #	Abatement Device #	Description	Material [3,4]	Controlled Transfer Points	Screens	Crushers	Emission Factor (lb/ton)	Throughput [1, 2] (tons/yr)	Annual Emissions (tons/yr)	Maximum Hourly Throughput (tons/hr) [1]	Maxiumum Hourly Emissions (lbs/hr)
S-240	A-240	Concrete Storage Additive Conveyor/Bins	5% Slag 6 % Pozzolan 36% All Grade Limestone 53% Natural Gypsum	4	0	0	1.84E-04	62,107	5.71E-03	85	1.56E-02
S-242	A-242	6-GM-1 Cake Feeder	Cement	3	0	0	1.38E-04	1,123,180	7.75E-02	250	3.45E-02
S-243	A-243	6-GM-1 Gypsum Feeder Reclaimed Cement	Synthetic Gypsum	4	0	0	1.84E-04	0	0.00E+00	0	0.00E+00
S-244	A-244	6GM1 Pozzolan Feeder	Pozzolan	3	0	0	1.38E-04	4,616	3.19E-04	35	4.83E-03
S-245	A-245	6-GM-1 Clay Feeder Gypsum	Natural Gypsum	4	0	0	1.84E-04	1,513	1.39E-04	15	2.76E-03
S-301	A-301	Rail Loadout System	Cement	6	0	0	2.76E-04	151,534	2.09E-02	200	5.52E-02
S-400		Vibratory Coke Mill (inactive)	--	--	--	--	--	--	--	--	--
S-401		Vibratory Coke Mill (inactive)	--	--	--	--	--	--	--	--	--
S-412	A-218	Finish Mill	Cement	6	0	0	2.76E-04	45,807	6.32E-03	100	2.76E-02
S-414	A-414	Kiln Dust Additive Bin	Synthetic Gypsum	3	0	0	1.38E-04	3,472	2.40E-04	40	5.52E-03
S-415		Finish Mill Building Conveyor (inactive)	--	--	--	--	--	--	--	--	--
S-440	A-441	Surge Bin Feeder (inactive)	--	--	--	--	--	--	--	--	--
S-441	A-441	Texas VSI Impact Crusher (inactive)	--	--	--	--	--	--	--	--	--
S-442	A-442	Triple Deck Vibrating Screen (inactive)	--	--	--	--	--	--	--	--	--
S-443	A-442	Conveyor (inactive)	--	--	--	--	--	--	--	--	--
S-444		Emergency Clinker Conveyor + Water Spray	Clinker	2	0	0	9.20E-05	69,917	3.22E-03	350	3.22E-02
								Total:	1.95E+01		1.63E+01

Calculation Factors (AP-42, Section 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing, Table 11.19.2-2)

4.60E-05 lb/ton; PM10 controlled emission factor for conveyor transfer points
0.0012 lb/ton; PM10 controlled emission factor for controlled fines crushing
0.0022 lb/ton; PM10 controlled emission factor for fines screening

Notes:
1. Maxiumum hourly and yearly throughput information provided by Scott Renfrew
2. S-245 throughput value from 1999. S-243 throughput provided by Scott Renfrew by email (2/17/09)
3. S-240 material provided by Scott Renfrew by email (2/17/09)
4. For sources handling a combination of process materials, percentages were calculated based on 2005 production reports

APPENDIX A
TABLE S-1

FACILITY PM10 EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Table	HARP Device ID	BAAQMD #	Category	Description	Lehigh PM10 (tons/yr)
6a	30010	A-10	DC	Dust Collector - KCC design 32,000 cfm	0.00E+00
6a	30013	A-13	DC	Dust Collector - Reese 4 unit x 49 Bags	3.51E+00
6a	30058	A-58	DC	Dust Collector - MAC Model 144LST64, 5000 ACFM	1.31E+00
6a	30111	A-111	DC	Dust Collector - DCA Volks - 2,000 cfm	4.09E-01
6a	30112	A-112	DC	Dust Collector - DCA Volks - 2,000 cfm	2.47E-01
6a	30113	A-113	DC	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	4.26E-01
6a	30114	A-114	DC	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	2.26E+00
6a	30115	A-115	DC	Dust Collector - DCA Volks - 2,000 cfm	4.09E-01
6a	30121	A-121	DC	Dust Collector - Mikro-Pulsaire Model 1F5 16,000 cfm	4.28E+00
6a	30122	A-122	DC	Dust Collector - DCA Volks - 2,000 cfm	5.94E-01
6a	30123	A-123	DC	Dust Collector - DCA Volks - 2,000 cfm	6.03E-01
6a	30131	A-131	DC	Dust Collector - Mikro-Pulsaire Model 1F2 6,000 cfm	1.97E+00
6a	30132	A-132	DC	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	1.11E+00
6a	30133	A-133	DC	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	7.05E-01
6a	30134	A-134	DC	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	1.82E+00
6a	30135	A-135	DC	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	1.85E+00
6a	30141	A-141	DC	Dust Collector - Kaiser Design 180,000 cfm	6.21E+01
6a	30142	A-142	DC	Dust Collector - Kaiser Design 180,000 cfm	6.21E+01
6a	30143	A-143	DC	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	2.28E+00
6a	30144	A-144	DC	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	2.32E+00
6a	30151	A-151	DC	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	2.96E+00
6a	30152	A-152	DC	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	2.96E+00
6a	30153	A-153	DC	Dust Collector - Mikro-Pulsaire Model 2G3 18,000 cfm	5.32E+00
6a	30161	A-161	DC	Dust Collector - Kaiser Design glass bag 135,000 cfm	1.70E+01
6a	30162	A-162	DC	Dust Collector - Mikro-Pulsaire Model 100S-8-20 4,000 cfm	8.10E-01
6a	30163	A-163	DC	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	7.00E-01
6a	30164	A-164	DC	Dust Collector - Mikro-Pulsaire Model 1F3 10,000 cfm	2.96E+00
6a	30165	A-165	DC	Dust Collector - Mikro-Pulsaire Model 1F3 8,000 cfm	1.55E+00
6a	--	A-166	DC	Dust Collector DC144-10 Pulse Jet (Inactive)	--
6a	30171	A-171	DC	Baghouse, Pulse Jet Dust Collector - Mikro-Pulsaire Model 2D5 24,000 cfm	1.13E+01
6a	30172	A-172	DC	Baghouse, Pulse Jet Dust Collector - Mikro-Pulsaire Model 2D5 24,000 cfm	1.11E+01
6a	--	A-174	DC	Pre-Calciner Coke System (Inactive)	--
6a	--	A-175	DC	Dust Collector - DCE Vokes Model DLM - V45/15F 2,200 cfm (Inactive)	--
6a	30190	A-190	DC	Clinker Cooler Dust Collectors - Kaiser Design 7,000 cfm	9.31E-01
6a	--	A-203	DC	Dust Collector - DLM Model V10/10 w/5HP Blower (Inactive)	--
6a	30210	A-210	DC	Dust Collector (6-D-1) - Carter Day Model 376RF10 Clamshell 20,000 cfm	3.48E+00
6a	30211	A-211	DC	Dust Collector (6-D-1) - Carter Day -4- Model 376RF10 80,000 cfm	1.08E+01
6a	--	A-214	DC	Dust Collector - DCE Vokes Model DLM - V10/10 1,000 cfm (Inactive)	--
6a	--	A-215	DC	Dust Collector - DLM Model V10/10 w/5HP Blower (Inactive)	--
6a	30216	A-216	DC	Dust Collector - DCE Vokes DLM - v9/15 Type F, 875 CFM-(F1)	3.30E-02
6a	30217	A-217	DC	Dust Collector - DCE Vokes DLM - v9/15 Type F, 875 CFM-(F1)	3.30E-02
6a	30218	A-218	DC	Dust Collector - Mikro-Pulsaire Model 2-1200T-12 150,000 ACFM	2.61E+01
6a	30220	A-220	DC	Dust Collector - Mikro-Pulsaire Model 289S/10, 17000 ACFM	2.29E+00
6a	30221	A-221	DC	Dust Collector - DCE Vokes Model DLM-V14/7 Type F, 1325 ACFM-(F2)	3.87E-02

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FACILITY PM10 EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Table	HARP Device ID	BAAQMD #	Category	Description	Lehigh PM10 (tons/yr)
6a	30222	A-222	DC	Dust Collector - DCE sintamatic 1200 acfm-(f2)	3.51E-02
6a	30230	A-230	DC	Dust Collector - Mikro-Pulsaire Model 289S/10, 15000 ACFM	3.51E+00
6a	30231	A-231	DC	Dust Collector - DCE Vokes DLM - v14/7 Type F, 1200 CFM-(F2)	3.65E-02
6a	30240	A-240	DC	Dust Collector - DCE sintamatic 1000 acfm-(f3)	2.04E-03
6a	30242	A-242	DC	Dust Collector - DCE Vokes Model DLM-V18/15, Type f, 1500 acfm-(f3)	5.66E-02
6a	--	A-243	DC	Dust Collector - DCE sintamatic 1675 acfm-(f3) (Inactive)	--
6a	30244	A-244	DC	Dust Collector - DCE sintamatic 1550 acfm-(f3)	3.07E-03
6a	30245	A-245	DC	Dust Collector - DCE sintamatic 1550 acfm-(f3)	5.85E-02
6a	30301	A-301	DC	Rail Loadout Dust Collector	3.72E-02
6b	30340	A-340	DC-Rock	DC-3 Baghouse - Mikropul Model 196S Pulse Jet DC 11,000 cfm	2.03E-01
6b	30341	A-341	DC-Rock	DC-4 Baghouse - Mikropul Model 221S Pulse Jet DC 17,000 cfm	3.61E-01
6b	30342	A-342	DC-Rock	DC-5 Baghouse - Mikropul Model 289S Pulse Jet DC 15,000 cfm	3.19E-01
6b	30384	A-384	DC-Rock	DC-2 Baghouse - Mikropul Model 289S Pulse Jet DC 17,000 cfm	2.42E+00
6b	30390	A-390	DC-Rock	DC-2 Baghouse - Mikropul Model 49S Pulse Jet DC 2,800 cfm	5.18E-02
6a	--	A-400	DC	Dust Collector - DC49 - DCE Vokes DLM v15/15F - 3 hp (Inactive)	--
6a	30414	A-414	DC	Dust Collector - Kiln Dust Additive Bin	8.93E-02
6a	--	A-415	DC	Dust Collector (Inactive)	--
6a	30420	A-420	DC	Dust Collector - DCL, CD049-84, 2,000 ACFM	3.15E-01
6a	30421	A-421	DC	Dust Collector - DCL, CD049-84, 2,000 ACFM	3.15E-01
6a	30422	A-422	DC	Dust Collector - DCL, CFM330, 2,400 ACFM	3.78E-01
6a	30423	A-423	DC	Dust Collector - DCL, CD049-84, 2,000 ACFM	3.15E-01
6a	30424	A-424	DC	Dust Collector - DCL, CFM330, 2,400 ACFM	3.78E-01
6a	30425	A-425	DC	Dust Collector - DCL, CD049-84, 2,000 ACFM	3.15E-01
6a	30426	A-426	DC	Dust Collector - DCL, CFM330, 2,400 ACFM	3.78E-01
6a	30427	A-427	DC	Dust Collector - US Air Filtration 2110-CKPT-96-5, 8,300 ACFM	1.31E+00
6a	30428	A-428	DC	Dust Collector - Fuller/Dracco Type A, 6,100 ACFM	9.60E-01
6a	30429	A-429	DC	Dust Collector - Fuller/Dracco Type A, 8,300 ACFM	1.31E+00
6a	30430	A-430	DC	Dust Collector - BHA Pulse Jet Baghouse Conversion 8,000 ACFM	2.02E-01
6a	30431	A-431	DC	Dust Collector - BHA Pulse Jet Baghouse Conversion 8,000 ACFM	1.08E-01
6a	--	A-432	DC	Dust Collector - BHA Pulse Jet Baghouse Conversion (Inactive)	--
6a	30433	A-433	DC	Dust Collector - US Air Filtration 1010-PT-96-5, 4000 ACFM	6.97E-01
6a	30434	A-434	DC	Dust Collector - US Air Filtration 1010-PT-96-5, 4000 ACFM	6.97E-01
6a	30435	A-435	DC	Dust Collector - US Air Filtration 2110-CKPT-96-5, 10,000 ACFM	1.74E+00
6a	30436	A-436	DC	Dust Collector - DCE Vokes DLM-V15/lff 4000acfm	4.85E-01
6a	--	A-441	DC	Dust Collector (Inactive)	--
6a	--	A-442	DC	Dust Collector (Inactive)	--
6a	--	A-447	DC	Dust Collector (Inactive)	--
6a	--	A-448	DC	Dust Collector (Inactive)	--
6a	--	A-449	DC	Dust Collector (Inactive)	--
6a	--	A-450	DC	Dust Collector (Inactive)	--
6a	--	A-451	DC	Dust Collector (Inactive)	--
				Subtotal:	**2.68E+02**

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FACILITY PM10 EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Table	HARP Device ID	BAAQMD #	Category	Description	Lehigh PM10 (tons/yr)
7a	20017	S-17	PF - Cement	Clinker Transfer Area	6.44E-02
7a	20019	S-19	PF - Cement	Clinker Storage Area	0.00E+00
7a	20021	S-21	PF - Cement	Roll Press Clinker Surge Bin and Feeder	2.90E-01
7a	20045	S-45	PF - Cement	West Silo Top Cement Distribution Tower	6.61E-02
7a	20046	S-46	PF - Cement	Middle West Silo Top Cement Distribution Tower	1.82E-02
7a	20047	S-47	PF - Cement	East Silo Top Cement Distribution Tower	2.46E-02
7a	20048	S-48	PF - Cement	Bulk Cement Loadout Tank #1 and #2	5.13E-02
7a	20049	S-49	PF - Cement	Bulk Cement Loadout Tank #28	1.75E-01
7a	20050	S-50	PF - Cement	Bulk Cement Loadout Tank #29	1.90E-01
7a	20054	S-54	PF - Cement	Cement Packer #1	2.22E-03
7a	20055	S-55	PF - Cement	Cement Packer #2	1.48E-03
7a	--	S-56	PF - Cement	Cement Packer #3 (inactive)	--
7a	--	S-57	PF - Cement	Cement Packer #4 (inactive)	--
7a	20074	S-74	PF - Cement	Type II Mechanical Transfer System	5.25E-01
7a	20111	S-111	PF - Cement	Rail Unloading System Area 1	1.39E-02
7a	20112	S-112	PF - Cement	Additive Hopper Transfer System Area 1	2.34E-02
7a	20113	S-113	PF - Cement	Additive Bin Transfer Facilities Area 1	2.34E-02
7a	20115	S-115	PF - Cement	Additive Storage Tripper	1.16E-02
7a	20121	S-121	PF - Cement	Tertiary Scalping Screen	4.83E+00
7a	20122	S-122	PF - Cement	Tertiary Crusher	1.56E+00
7a	20123	S-123	PF - Cement	Rock Conveying System Area 2	1.89E-01
7a	20131	S-131	PF - Cement	Rock Sampling System Area 3	1.65E+00
7a	20132	S-132	PF - Cement	Preblend	3.57E-01
7a	20134	S-134	PF - Cement	Preblend Storage Bin	1.78E-01
7a	20135	S-135	PF - Cement	High-grade Storage Bins	4.79E-03
7a	20141	S-141	PF - Cement	Raw Mill	1.25E+00
7a	20142	S-142	PF - Cement	Raw Mill	1.11E+00
7a	20143	S-143	PF - Cement	Raw Mill 1 Separator System	8.11E-02
7a	20144	S-144	PF - Cement	Raw Mill 2 Separator System	8.54E-02
7a	20151	S-151	PF - Cement	Homogenizer	1.16E+00
7a	20153	S-153	PF - Cement	Kiln Feed System	6.67E-01
7a	20154	S-154	PF - Cement	Cement Calcining Kiln	1.45E+00
7a	20161	S-161	PF - Cement	Clinker Cooler	2.16E+00
7a	20162	S-162	PF - Cement	Clinker Silo A	4.82E-02
7a	20163	S-163	PF - Cement	Clinker Silo B	6.43E-02
7a	--	S-164	PF - Cement	Free lime Storage Bin (inactive)	--
7a	20165	S-165	PF - Cement	Clinker Transfer System	9.32E-02
7a	--	S-166	PF - Cement	Bulk Clinker Rail Car Loadout System (inactive)	--
7a	20171	S-171	PF - Cement	Kiln Coal System	1.29E-02
7a	20172	S-172	PF - Cement	Precalciner Coal Mill	2.36E-02
7a	--	S-173	PF - Cement	Kiln Coke System (inactive)	--
7a	--	S-174	PF - Cement	Pre-Calciner Coke System (inactive)	--
7a	--	S-203	PF - Cement	Screen (inactive)	--
7a	--	S-204	PF - Cement	Tunnel Conveyor (8-BC-1) with □2 Belt Conveyors (8-BC-2&8-BC-8) (inactive)	--
7a	--	S-205	PF - Cement	Conveying System with 10 Belt Conveyors (inactive)	--

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FACILITY PM10 EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Table	HARP Device ID	BAAQMD #	Category	Description	Lehigh PM10 (tons/yr)
7a	20210	S-210	PF - Cement	Finish Mill 6-GM-1	2.02E-01
7a	20211	S-211	PF - Cement	Separator 6-SE-2	4.78E-02
7a	--	S-214	PF - Cement	Rock Crusher 8CRI (inactive)	--
7a	--	S-215	PF - Cement	Vibrating Screen (inactive)	--
7a	20216	S-216	PF - Cement	6-GM-1 Cake Conveyor	5.17E-02
7a	20217	S-217	PF - Cement	6GM1Cake Conveyor	5.17E-02
7a	20218	S-218	PF - Cement	6-GM-1 Air Separator	2.15E-01
7a	20220	S-220	PF - Cement	6-GM-2 Mill and Peripherals	7.38E-02
7a	20221	S-221	PF - Cement	6-GM-2 Cake Feeder	1.93E-02
7a	20222	S-222	PF - Cement	6-GM-2 Gypsum Feeder	1.06E-03
7a	20230	S-230	PF - Cement	Roller Press and Peripherals	2.25E-01
7a	20231	S-231	PF - Cement	Concrete Storage Silo, Pressed Cake Bin	6.44E-02
7a	20240	S-240	PF - Cement	Concrete Storage Additive Conveyor/Bins	5.71E-03
7a	20242	S-242	PF - Cement	6-GM-1 Cake Feeder	7.75E-02
7a	20243	S-243	PF - Cement	6-GM-1 Gypsum Feeder Reclaimed Cement	0.00E+00
7a	20244	S-244	PF - Cement	6GM1 Pozzolan Feeder	3.19E-04
7a	20245	S-245	PF - Cement	6-GM-1 Clay Feeder Gypsum	1.39E-04
7a	20301	S-301	PF - Cement	Rail Loadout System	2.09E-02
7a	--	S-400	PF - Cement	Vibratory Coke Mill (inactive)	--
7a	--	S-401	PF - Cement	Vibratory Coke Mill (inactive)	--
7a	20412	S-412	PF - Cement	Finish Mill	6.32E-03
7a	20414	S-414	PF - Cement	Kiln Dust Additive Bin	2.40E-04
7a	--	S-415	PF - Cement	Finish Mill Building Conveyor (inactive)	--
7a	--	S-440	PF - Cement	Surge Bin Feeder (inactive)	--
7a	--	S-441	PF - Cement	Texas VSI Impact Crusher (inactive)	--
7a	--	S-442	PF - Cement	Triple Deck Vibrating Screen (inactive)	--
7a	--	S-443	PF - Cement	Conveyor (inactive)	--
7a	20444	S-444	PF - Cement	Emergency Clinker Conveyor + Water Spray	3.22E-03
7c	--	S-187	PF-Rock	Sand Hopper and Storage Bin (inactive)	--
7c	25340	S-340	PF-Rock	Coarse Rock Withdrawal System	1.65E-01
7c	25341	S-341	PF-Rock	Pre-Crushing Screens Rock Plant 3	1.17E+00
7c	25342	S-342	PF-Rock	Coarse Rock Crushing System 2 ea. Symons 5.5 Ft	6.60E-01
7c	25343	S-343	PF-Rock	Crushed Rock Returns Conveyor	2.35E-02
7c	25344	S-344	PF-Rock	Wet Screening Feed Conveyor	1.34E+00
7c	25350	S-350	PF-Rock	Wet Screening and Conveying	3.00E+00
7c	25360	S-360	PF-Rock	Wet Aggregate Loadout System	7.36E-02
7c	25370	S-370	PF-Rock	Class 2 Aggregate Additive Transfer System	2.50E-03
7c	25380	S-380	PF-Rock	Sand Transfer Class 2 Hopper	3.24E-01
7c	25381	S-381	PF-Rock	Sand Storage Pile Conveyor	5.22E-03
7c	25382	S-382	PF-Rock	Water Clarifier Fines Shipment	3.02E-02
7c	25383	S-383	PF-Rock	Rock Plant 2 Conveyors	7.66E-02
7c	25384	S-384	PF-Rock	Rock Plant 2 Screens - 16 & 17	2.75E+00

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FACILITY PM10 EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Table	HARP Device ID	BAAQMD #	Category	Description	Lehigh PM10 (tons/yr)
7c	--	S-387	PF-Rock	Rock Plant 2 Sand Hopper and Storage Bin (100 ton capacity) (inactive)	--
7c	25390	S-390	PF-Rock	Conveyor Belt 15-M	2.28E-01
7b	20201	S-201	PF-Crushers	Primary Crusher	4.82E+00
7b	20202	S-202	PF-Crushers	Secondary Crusher	1.31E+01
				Subtotal:	**2.78E+01**
10	40007	--	RDE	Dust entrainment from unpaved roads	1.71E+00
10	40008	--	RDE	Dust entrainment from paved roads	1.20E+01
10	40009	--	RWE	Wind erosion from unpaved roads	1.30E+01
				Subtotal:	**2.67E+01**
9a	40003	501	IC	Emergency Diesel Generator	1.57E-03
9a	40004	502	IC	Emergency Diesel Generator	3.14E-03
				Subtotal:	**4.71E-03**
9b & 9c	40005	--	IC	Welding Stationary Diesel IC Engines	7.66E-03
9b & 9c	40006	--	IC	Welding Stationary Gasoline IC Engines	4.65E-04
				Subtotal:	**8.13E-03**
8	40001/40002	--	FD	Fuel Dispensing	**--**
11	40010	--	SWE	Quarry Overburden	2.99E+00
11	40011	--	SWE	Primary Crushed Limestone (High Grade)	1.56E-01
11	40012	--	SWE	Primary Crushed Limestone (Medium Grade)	1.56E-01
11	40013	--	SWE	Bauxite	7.43E-02
11	40014	--	SWE	Iron Ore	6.11E-02
11	40015	--	SWE	Coal	7.43E-02
11	40016	--	SWE	Coke	7.51E-02
11	--	--	SWE	Clinker	NA
11	--	--	SWE	Natural Gypsum	NA
11	--	--	SWE	Pozzolan	NA
11	40019	--	SWE	Slag	4.63E-01
11	40020	--	SWE	Low Grade Limestone (Non-Process)	3.31E-02
				Subtotal:	**4.08E+00**
11	40021	--	SMH	Quarry Overburden	3.64E-01
11	40022	--	SMH	Primary Crushed Limestone (High Grade)	1.09E-01
11	40023	--	SMH	Primary Crushed Limestone (Medium Grade)	8.30E-02
11	40024	--	SMH	Bauxite	5.12E-03
11	40025	--	SMH	Iron Ore	4.24E-03
11	40026	--	SMH	Coal	1.42E-02
11	40027	--	SMH	Coke	7.19E-04
11	40028	--	SMH	Clinker	1.65E-03
11	40029	--	SMH	Natural Gypsum	5.40E-03
11	40030	--	SMH	Pozzolan	4.34E-04
11	--	--	SMH	Slag	0.00E+00
11	40031	--	SMH	Low Grade Limestone (Non-Process)	2.61E-03
				Subtotal:	**5.91E-01**

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FACILITY PM10 EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Table	HARP Device ID	BAAQMD #	Category	Description	Lehigh PM10 (tons/yr)
4	20154	--	Source Testing	Kiln	9.79E+00
12a	50001	--	MF10	Material Handling	3.87E+00
12a	50002	--	MF10	Blasting	1.14E-01
12a	50003	--	MF10	Bulldozing	1.10E+00
12a	50004	--	MF10	Grading	3.37E+00
12b	50005	--	MF10	Dust Entrainment - Unpaved Roads	2.34E+01
12b	50006	--	MF24	Wind Erosion - Unpaved Roads	3.99E+00
12c	50007	--	MF24	Wind Erosion - Mine Area	4.39E+00

K	Kiln	9.79E+00
DC-Cement	Dust Collectors - Cement Plant	2.64E+02
DC-Rock	Dust Collectors - Rock Plant	3.35E+00
PF-Cement	Process Fugitives - Cement Plant	1.95E+01
PF-Rock	Process Fugitives - Rock Plant	9.85E+00
PF-Cement	Process Fugitives - Primary/Secondary Crushers	1.79E+01
FD	Fuel Dispensing	--
IC	Stationary IC Engines	1.28E-02
RWE	Plant Roads - Wind Erosion	1.30E+01
RDE	Plant Roads - Dust Entrainment	1.37E+01
SWE	Plant Stockpiles - Wind Erosion	4.08E+00
SMH	Plant Stockpiles - Material Handling	5.91E-01
MF24	Mine Fugitives 24 hours	8.38E+00
MF10	Mine Fugitives 10 hours	3.18E+01
	PM Total:	3.96E+02
	PM Diesel Total:	1.24E-02
	PM Gasoline Total:	4.65E-04

APPENDIX A
TABLE S-2
REVISED FACILITY ANNUAL EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant[1]	Chemical Group	Kiln	DC-Cement	DC-Rock	PF-Cement	PF-Crushing and Screening	PF-Rock Plant	Dispensing Facilities	Emergency Diesel Generators	Welding Stationary IC Engines	Unpaved Roads Wind Erosion	Paved/Unpaved Roads Dust Entrainment	Stockpile Wind Erosion	Stockpile Material Handling	Mine MF10[2]	Mine MF24[3]	Total (tons or lbs/yr)
CO	Criteria Pollutant	1155.25							0.07	0.31							1.16E+03
NOx	Criteria Pollutant	1941.51							0.26	0.12							1.94E+03
PM10	Criteria Pollutant	9.79	264.36	3.35	19.52	17.94	9.85				13.02	13.71	4.08	0.59	31.83	8.38	3.96E+02
SOx	Criteria Pollutant	235.53							0.00	0.01							2.36E+02
VOC	Criteria Pollutant	287.88							0.01	0.02							2.88E+02
Diesel PM	Other TAC								9.42	15.32							2.47E+01
Gasoline PM	PM									0.9301							9.30E-01
Antimony	Metals	6.78E-01	1.58E+00	1.68E-02	1.04E-01	8.97E-02	5.04E-02				6.51E-02	6.86E-02	2.13E-02	3.02E-03	1.59E-01	4.19E-02	2.87E+00
Arsenic	Metals	7.60E-01	2.53E+00	8.38E-03	1.86E-01	1.07E-01	2.52E-02				3.25E-02	8.11E-02	1.33E-02	2.05E-03	1.19E-01	4.16E-02	3.91E+00
Barium	Metals	9.81E+00	6.28E+02	5.23E+00	4.92E+01	4.11E+01	1.57E+01				2.60E+01	2.98E+01	5.24E+00	7.08E-01	6.61E+01	1.48E+01	8.92E+02
Beryllium	Metals	3.80E-01	4.24E-01	5.03E-03	2.70E-02	2.69E-02	1.51E-02				1.95E-02	2.06E-02	9.99E-03	9.14E-04	4.77E-02	1.26E-02	9.90E-01
Cadmium	Metals	3.80E-01	9.04E-01	8.38E-03	6.58E-02	5.79E-02	2.52E-02				3.25E-02	3.43E-02	1.10E-02	1.93E-03	7.96E-02	2.09E-02	1.62E+00
Total Chromium	Metals	5.55E+00	2.34E+01	1.61E-01	1.66E+00	1.07E+00	4.84E-01				1.07E+00	1.14E+00	1.91E-01	2.58E-02	1.63E+00	4.08E-01	3.68E+01
Cobalt	Metals	1.75E+00	3.70E+00	4.29E-02	2.25E-01	2.02E-01	1.29E-01				2.55E-01	2.30E-01	4.90E-02	6.62E-03	4.93E-01	1.14E-01	7.20E+00
Copper	Metals	4.24E+00	1.58E+01	9.39E-02	1.25E+00	8.84E-01	2.82E-01				6.42E-01	7.80E-01	1.10E-01	2.08E-02	1.45E+00	3.95E-01	2.60E+01
Lead	Metals	8.86E-01	1.31E+00	8.72E-03	9.47E-02	5.69E-02	2.62E-02				5.99E-02	1.13E-01	1.24E-02	1.74E-03	7.96E-02	2.09E-02	2.67E+00
Manganese	Metals	3.99E+00	--	--	--	--	--				--	--	--	--	--	--	3.99E+00
Mercury	Metals	5.81E+02	2.83E-01	1.34E-03	6.38E-02	9.63E-03	4.03E-03				3.65E-03	4.56E-03	2.39E-03	2.58E-04	1.83E-02	1.91E-06	5.82E+02
Molybdenum	Metals	1.29E+01	3.82E+00	1.68E-02	2.41E-01	1.59E-01	5.04E-02				6.51E-02	1.33E-01	2.32E-02	3.06E-03	1.59E-01	1.68E-05	1.76E+01
Nickel	Metals	6.53E+00	5.68E+01	1.54E-01	2.44E+00	1.21E+00	4.63E-01				1.40E+00	2.37E+00	2.56E-01	3.18E-02	2.56E+00	2.46E-04	7.42E+01
Phosphorous	Metals	7.37E+01	--	--	--	--	--				--	--	--	--	--	--	7.37E+01
Selenium	Metals	4.25E+00	1.41E+00	1.68E-02	9.87E-02	8.97E-02	5.04E-02				6.51E-02	1.45E-02	2.07E-02	2.97E-03	1.59E-01	1.68E-05	6.18E+00
Silver	Metals	7.39E-01	7.07E-01	8.72E-03	4.94E-02	4.57E-02	2.62E-02				3.25E-02	3.43E-02	1.07E-02	1.53E-03	7.96E-02	8.38E-06	1.73E+00
Thallium	Metals	4.25E+00	7.08E+00	8.72E-03	2.63E+00	1.15E-01	2.62E-02				3.25E-02	3.43E-02	1.13E-02	1.65E-03	7.96E-02	8.38E-06	1.43E+01
Vanadium	Metals	3.80E+00	2.05E+02	1.27E-01	1.04E+01	4.07E+00	3.83E-01				2.17E+00	7.01E+00	5.31E-01	9.08E-02	2.81E+00	3.43E-04	2.36E+02
Zinc	Metals	5.14E+01	4.64E+01	1.68E-01	3.73E+00	2.58E+00	5.04E-01				8.85E-01	1.68E+00	2.34E-01	4.64E-02	2.32E+00	3.18E-04	1.10E+02
Chromium (VI)	Metals	3.36E-01	2.79E+00	6.71E-04	1.32E-01	1.06E-02	2.01E-03				4.95E-02	4.49E-02	9.24E-04	1.45E-04	6.37E-03	6.70E-07	3.37E+00
Total Crystalline Silica	Other TAC	--	3.86E+02	2.49E+01	3.17E+01	8.69E+01	7.48E+01				1.85E+02	8.01E+01	2.47E+01	4.11E+00	3.79E+02	3.23E-02	1.28E+03
Naphthalene	PAH's	1.39E+02															1.39E+02
2-Methyl naphthalene	PAH's	1.13E+02															1.13E+02
Acenaphthylene	PAH's	1.15E+00															1.15E+00
Acenaphthene	PAH's	1.77E-01															1.77E-01
Fluorene	PAH's	1.65E+01															1.65E+01
Phenanthrene	PAH's	9.17E+01															9.17E+01
Anthracene	PAH's	6.17E-01															6.17E-01
Fluoranthene	PAH's	1.57E+00															1.57E+00
Pyrene	PAH's	1.17E+00															1.17E+00
Benz[a]anthracene	PAH's	1.31E-02															1.31E-02
Chrysene	PAH's	3.86E-02															3.86E-02
Benzo[b]fluoranthene	PAH's	1.87E-03															1.87E-03
Benzo[k]fluoranthene	PAH's	2.95E-04															2.95E-04
Benzo[e]pyrene	PAH's	1.37E-03															1.37E-03
Benzo[a]pyrene	PAH's	2.95E-04															2.95E-04
Perylene	PAH's	2.95E-04															2.95E-04
Indeno[1,2,3-c,d]pyrene	PAH's	2.19E-04															2.19E-04
Dibenz[a,h]anthracene	PAH's	2.95E-04															2.95E-04
Benzo[g,h,i]perylene	PAH's	2.95E-04															2.95E-04
1,2,3,4,6,7,8-HpCDD	PCDD/PCDF	9.63E-06															9.63E-06
1,2,3,4,6,7,8-HpCDF	PCDD/PCDF	4.67E-06															4.67E-06
1,2,3,4,7,8,9-HpCDF	PCDD/PCDF	1.20E-06															1.20E-06
1,2,3,4,7,8-HxCDD	PCDD/PCDF	2.69E-06															2.69E-06
1,2,3,4,7,8-HxCDF	PCDD/PCDF																0.00E+00
1,2,3,6,7,8-HxCDD	PCDD/PCDF	2.65E-06															2.65E-06
1,2,3,6,7,8-HxCDF	PCDD/PCDF	3.81E-06															3.81E-06
1,2,3,7,8,9-HxCDD	PCDD/PCDF	2.75E-06															2.75E-06
1,2,3,7,8,9-HxCDF	PCDD/PCDF	1.28E-06															1.28E-06
1,2,3,7,8-PeCDD	PCDD/PCDF	2.37E-06															2.37E-06
1,2,3,7,8-PeCDF	PCDD/PCDF	1.83E-05															1.83E-05
2,3,4,6,7,8-HxCDF	PCDD/PCDF	2.34E-06															2.34E-06
2,3,4,7,8-PeCDF	PCDD/PCDF	2.74E-05															2.74E-05

APPENDIX A
TABLE S-2
REVISED FACILITY ANNUAL EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant[1]	Chemical Group	Kiln	DC-Cement	DC-Rock	PF-Cement	PF-Crushing and Screening	PF-Rock Plant	Dispensing Facilities	Emergency Diesel Generators	Welding Stationary IC Engines	Unpaved Roads Wind Erosion	Paved/Unpaved Roads Dust Entrainment	Stockpile Wind Erosion	Stockpile Material Handling	Mine MF10[2]	Mine MF24[3]	Total (tons or lbs/yr)
2,3,7,8-TCDD	PCDD/PCDF	2.33E-06															2.33E-06
2,3,7,8-TCDF	PCDD/PCDF	1.15E-04															1.15E-04
HpCDD (Total)	PCDD/PCDF	1.51E-05															1.51E-05
HpCDF (Total)	PCDD/PCDF	4.75E-06															4.75E-06
HxCDD (Total)	PCDD/PCDF	6.71E-05															6.71E-05
HxCDF (Total)	PCDD/PCDF	2.34E-05															2.34E-05
OCDD	PCDD/PCDF	2.02E-05															2.02E-05
OCDF	PCDD/PCDF	4.61E-06															4.61E-06
PeCDD (Total)	PCDD/PCDF	7.18E-05															7.18E-05
PeCDF (Total)	PCDD/PCDF	7.01E-04															7.01E-04
TCDD (Total)	PCDD/PCDF	1.91E-04															1.91E-04
TCDF (Total)	PCDD/PCDF	1.31E-02															1.31E-02
1,1,1-trichloroethane	TAC	3.21E+01															3.21E+01
1,1,2,2-tetrachloroethane	TAC	4.03E+01															4.03E+01
1,1,2-trichloroethane	TAC	5.34E+01															5.34E+01
1,1-dichloroethane	TAC	1.98E+01															1.98E+01
1,1-dichloroethylene	TAC	3.89E+01															3.89E+01
1,2,4-trichlorobenzene	TAC	1.09E+02															1.09E+02
1,2,4-trimethylbenzene	TAC	1.38E+03															1.38E+03
1,2-dibromoethane	TAC	6.02E+01															6.02E+01
1,2-dichloroethane	TAC	2.38E+01															2.38E+01
1,2-dichloropropane	TAC	2.71E+01															2.71E+01
1,3,5-trimethylbenzene	TAC	1.13E+03															1.13E+03
1,3-butadiene	TAC	9.18E+01															9.18E+01
4-ethyl-toluene	TAC	4.30E+02															4.30E+02
Acrolein	TAC	4.49E+01															4.49E+01
Benzene	TAC	9.65E+03						9.24E-03									9.65E+03
Benzyl chloride	TAC	1.01E+02															1.01E+02
c-1,2-dichloroethene	TAC	3.89E+01															3.89E+01
c-1,3-dichloropropene	TAC	6.67E+01															6.67E+01
Carbon Tetrachloride	TAC	6.16E+01															6.16E+01
Chlorobenzene	TAC	5.54E+02															5.54E+02
Chloroform	TAC	2.87E+01															2.87E+01
Dichloromethane	TAC	1.29E+02															1.29E+02
Ethyl Chloride	TAC	3.87E+01															3.87E+01
Ethylbenzene	TAC	9.59E+02															9.59E+02
Freon 11	TAC	3.30E+01															3.30E+01
Freon 113	TAC	4.50E+01															4.50E+01
Freon 114	TAC	4.11E+01															4.11E+01
Freon 12	TAC	2.42E+01															2.42E+01
Hexachlorobutadiene	TAC	1.05E+02															1.05E+02
m+p-xylenes	TAC	6.94E+03						4.06E-05									6.94E+03
m-dichlorobenzene	TAC	4.71E+01															4.71E+01
Methyl Bromide	TAC	6.25E+02															6.25E+02
Methyl Chloride	TAC	1.10E+03															1.10E+03
o-dichlorobenzene	TAC	4.71E+01															4.71E+01
o-xylene	TAC	1.36E+03															1.36E+03
p-dichlorobenzene	TAC	5.89E+01															5.89E+01
Perchloroethylene	TAC	5.31E+01															5.31E+01
Styrene	TAC	2.43E+02															2.43E+02
t-1,3-dichloropropene	TAC	4.44E+01															4.44E+01
Toluene	TAC	8.65E+03						4.13E-02									8.65E+03
Trichloroethene	TAC	4.21E+01															4.21E+01
Vinyl Chloride	TAC	1.42E+02															1.42E+02
Hydrogen Chloride	Other	1.07E+05															1.07E+05
Acetaldehyde	Volatile Organics	1.16E+03															1.16E+03
Formaldehyde	Volatile Organics	6.31E+01															6.31E+01

Notes
1. Criteria Pollutant reported in tons/yr. All other pollutants reported in lbs/yr.
2. MF10 are mine fugitives emissions occurring over 10 hours per day (operating horus)
3. MF24 are mine fugitive emissions occuring 24 hours per day

APPENDIX A
TABLE S-3
REVISED FACILITY HOURLY EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant	Chemical Group	Kiln	DC-Cement	DC-Rock	PF-Cement	PF-Crushing and Screening	PF-Rock Plant	Dispensing Facilities	Emergency Diesel Generators	Welding Stationary IC Engines	Unpaved Roads Wind Erosion	Paved/Unpaved Roads Dust Entrainment	Stockpile Wind Erosion	Stockpile Material Handling	Mines MF10[2]	Mines MF24[3]	Total (lb/hr)[1]
CO	Criteria Pollutant	335.00							13.31	5.89							3.54E+02
NOx	Criteria Pollutant	563.00							50.11	1.21							6.14E+02
PM10	Criteria Pollutant	2.84	82.10	1.97	16.32	11.66	13.03				10.42	10.97	3.27	0.47	25.47	6.70	1.85E+02
SOx	Criteria Pollutant	68.30							0.02	0.08							6.84E+01
VOC	Criteria Pollutant	83.48							1.41	0.37							8.53E+01
Diesel PM	Other TAC								0.90	0.08							9.73E-01
Gasoline PM	PM									0.0093							9.30E-03
Antimony	Metals	9.83E-05	2.47E-04	4.92E-06	6.37E-05	8.09E-06	3.35E-05				2.73E-06	2.74E-05	8.53E-06	1.21E-06	6.37E-05	1.68E-05	5.76E-04
Arsenic	Metals	1.10E-04	3.97E-04	2.46E-06	1.13E-04	9.69E-06	1.67E-05				1.36E-06	3.24E-05	5.32E-06	8.21E-07	4.77E-05	1.66E-05	7.53E-04
Barium	Metals	1.42E-03	9.66E-02	1.53E-03	3.10E-02	3.70E-03	1.05E-02				1.09E-03	1.19E-02	2.10E-03	2.83E-04	2.64E-02	5.90E-03	1.92E-01
Beryllium	Metals	5.52E-05	6.60E-05	1.48E-06	1.75E-05	2.43E-06	1.00E-05				8.19E-07	8.23E-06	3.99E-06	3.65E-07	1.91E-05	5.03E-06	1.90E-04
Cadmium	Metals	5.52E-05	1.39E-04	2.46E-06	4.15E-05	5.22E-06	1.67E-05				1.36E-06	1.37E-05	4.40E-06	7.74E-07	3.18E-05	8.38E-06	3.21E-04
Total Chromium	Metals	8.04E-04	3.71E-03	4.72E-05	8.89E-04	9.69E-05	3.22E-04				4.48E-05	4.56E-04	7.66E-05	1.03E-05	6.54E-04	1.63E-04	7.28E-03
Cobalt	Metals	2.54E-04	5.90E-04	1.26E-05	1.34E-04	1.82E-05	8.58E-05				1.07E-05	9.21E-05	1.96E-05	2.65E-06	1.97E-04	4.57E-05	1.46E-03
Copper	Metals	6.15E-04	2.44E-03	2.75E-05	7.95E-04	7.98E-05	1.88E-04				2.69E-05	3.12E-04	4.42E-05	8.30E-06	5.81E-04	1.58E-04	5.28E-03
Lead	Metals	1.28E-04	2.08E-04	2.56E-06	4.89E-05	5.13E-06	1.74E-05				2.51E-06	4.54E-05	4.97E-06	6.97E-07	3.18E-05	8.38E-06	5.04E-04
Manganese	Metals	5.79E-04	--	--	--	--	--				--	--	--	--	--	--	5.79E-04
Mercury	Metals	8.43E-02	4.24E-05	3.93E-07	1.45E-05	8.69E-07	2.68E-06				1.53E-07	1.82E-06	9.56E-07	1.03E-07	7.32E-06	1.91E-06	8.44E-02
Molybdenum	Metals	1.88E-03	5.88E-04	4.92E-06	1.44E-04	1.44E-05	3.35E-05				2.73E-06	5.34E-05	9.27E-06	1.22E-06	6.37E-05	1.68E-05	2.81E-03
Nickel	Metals	9.46E-04	8.95E-03	4.53E-05	1.35E-03	1.09E-04	3.08E-04				5.86E-05	9.47E-04	1.02E-04	1.27E-05	1.03E-03	2.46E-04	1.41E-02
Phosphorous	Metals	1.07E-02	--	--	--	--	--				--	--	--	--	--	--	1.07E-02
Selenium	Metals	6.17E-04	2.20E-04	4.92E-06	6.01E-05	8.09E-06	3.35E-05				2.73E-06	5.81E-06	8.29E-06	1.19E-06	6.37E-05	1.68E-05	1.04E-03
Silver	Metals	1.07E-04	1.10E-04	2.56E-06	3.01E-05	4.12E-06	1.74E-05				1.36E-06	1.37E-05	4.27E-06	6.14E-07	3.18E-05	8.38E-06	3.31E-04
Thallium	Metals	6.17E-04	1.05E-03	2.56E-06	4.63E-04	1.04E-05	1.74E-05				1.36E-06	1.37E-05	4.52E-06	6.61E-07	3.18E-05	8.38E-06	2.22E-03
Vanadium	Metals	5.52E-04	3.22E-02	3.74E-05	5.84E-03	3.67E-04	2.55E-04				9.10E-05	2.80E-03	2.13E-04	3.63E-05	1.12E-03	3.43E-04	4.38E-02
Zinc	Metals	7.46E-03	7.07E-03	4.92E-05	2.52E-03	2.33E-04	3.35E-04				3.71E-05	6.71E-04	9.36E-05	1.86E-05	9.27E-04	3.18E-04	1.97E-02
Chromium (VI)	Metals	4.87E-05	4.66E-04	1.97E-07	4.48E-05	9.60E-07	1.34E-06				2.07E-06	1.80E-05	3.69E-07	5.80E-08	2.55E-06	6.70E-07	5.86E-04
Total Crystalline Silica	Other TAC	--	5.76E-02	7.30E-03	2.39E-02	7.84E-03	4.97E-02				7.75E-03	3.20E-02	9.89E-03	1.64E-03	1.51E-01	3.23E-02	3.81E-01
Naphthalene	PAH's	2.01E-02															2.01E-02
2-Methyl naphthalene	PAH's	1.64E-02															1.64E-02
Acenaphthylene	PAH's	1.67E-04															1.67E-04
Acenaphthene	PAH's	2.57E-05															2.57E-05
Fluorene	PAH's	2.39E-03															2.39E-03
Phenanthrene	PAH's	1.33E-02															1.33E-02
Anthracene	PAH's	8.94E-05															8.94E-05
Fluoranthene	PAH's	2.28E-04															2.28E-04
Pyrene	PAH's	1.70E-04															1.70E-04
Benz[a]anthracene	PAH's	1.90E-06															1.90E-06
Chrysene	PAH's	5.60E-06															5.60E-06
Benzo[b]fluoranthene	PAH's	2.71E-07															2.71E-07
Benzo[k]fluoranthene	PAH's	4.27E-08															4.27E-08
Benzo[e]pyrene	PAH's	1.99E-07															1.99E-07
Benzo[a]pyrene	PAH's	4.27E-08															4.27E-08
Perylene	PAH's	4.27E-08															4.27E-08
Indeno[1,2,3-c,d]pyrene	PAH's	3.17E-08															3.17E-08
Dibenz[a,h]anthracene	PAH's	4.27E-08															4.27E-08
Benzo[g,h,i]perylene	PAH's	4.27E-08															4.27E-08
1,2,3,4,6,7,8-HpCDD	PCDD/PCDF	1.40E-09															1.40E-09
1,2,3,4,6,7,8-HpCDF	PCDD/PCDF	6.77E-10															6.77E-10
1,2,3,4,7,8,9-HpCDF	PCDD/PCDF	1.75E-10															1.75E-10
1,2,3,4,7,8-HxCDD	PCDD/PCDF	3.90E-10															3.90E-10
1,2,3,4,7,8-HxCDF	PCDD/PCDF	5.90E-10															5.90E-10
1,2,3,6,7,8-HxCDD	PCDD/PCDF	3.85E-10															3.85E-10
1,2,3,6,7,8-HxCDF	PCDD/PCDF	5.52E-10															5.52E-10

APPENDIX A
TABLE S-3
REVISED FACILITY HOURLY EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant	Chemical Group	Kiln	DC-Cement	DC-Rock	PF-Cement	PF-Crushing and Screening	PF-Rock Plant	Dispensing Facilities	Emergency Diesel Generators	Welding Stationary IC Engines	Unpaved Roads Wind Erosion	Paved/Unpaved Roads Dust Entrainment	Stockpile Wind Erosion	Stockpile Material Handling	Mines MF10[2]	Mines MF24[3]	Total (lb/hr)[1]
1,2,3,7,8,9-HxCDD	PCDD/PCDF	3.98E-10															3.98E-10
1,2,3,7,8,9-HxCDF	PCDD/PCDF	1.86E-10															1.86E-10
1,2,3,7,8-PeCDD	PCDD/PCDF	3.44E-10															3.44E-10
1,2,3,7,8-PeCDF	PCDD/PCDF	2.66E-09															2.66E-09
2,3,4,6,7,8-HxCDF	PCDD/PCDF	3.40E-10															3.40E-10
2,3,4,7,8-PeCDF	PCDD/PCDF	3.98E-09															3.98E-09
2,3,7,8-TCDD	PCDD/PCDF	3.38E-10															3.38E-10
2,3,7,8-TCDF	PCDD/PCDF	1.67E-08															1.67E-08
HpCDD (Total)	PCDD/PCDF	2.19E-09															2.19E-09
HpCDF (Total)	PCDD/PCDF	6.89E-10															6.89E-10
HxCDD (Total)	PCDD/PCDF	9.73E-09															9.73E-09
HxCDF (Total)	PCDD/PCDF	3.39E-09															3.39E-09
OCDD	PCDD/PCDF	2.92E-09															2.92E-09
OCDF	PCDD/PCDF	6.69E-10															6.69E-10
PeCDD (Total)	PCDD/PCDF	1.04E-08															1.04E-08
PeCDF (Total)	PCDD/PCDF	1.02E-07															1.02E-07
TCDD (Total)	PCDD/PCDF	2.76E-08															2.76E-08
TCDF (Total)	PCDD/PCDF	1.90E-06															1.90E-06
1,1,1-trichloroethane	TAC	4.65E-03															4.65E-03
1,1,2,2-tetrachloroethane	TAC	5.85E-03															5.85E-03
1,1,2-trichloroethane	TAC	7.75E-03															7.75E-03
1,1-dichloroethane	TAC	2.87E-03															2.87E-03
1,1-dichloroethylene	TAC	5.64E-03															5.64E-03
1,2,4-trichlorobenzene	TAC	1.58E-02															1.58E-02
1,2,4-trimethylbenzene	TAC	2.00E-01															2.00E-01
1,2-dibromoethane	TAC	8.73E-03															8.73E-03
1,2-dichloroethane	TAC	3.45E-03															3.45E-03
1,2-dichloropropane	TAC	3.94E-03															3.94E-03
1,3,5-trimethylbenzene	TAC	1.64E-01															1.64E-01
1,3-butadiene	TAC	1.33E-02															1.33E-02
4-ethyl-toluene	TAC	6.23E-02															6.23E-02
Acrolein	TAC	6.51E-03															6.51E-03
Benzene	TAC	1.40E+00						3.70E-06									1.40E+00
Benzyl chloride	TAC	1.47E-02															1.47E-02
c-1,2-dichloroethene	TAC	5.64E-03															5.64E-03
c-1,3-dichloropropene	TAC	9.67E-03															9.67E-03
Carbon Tetrachloride	TAC	8.94E-03															8.94E-03
Chlorobenzene	TAC	8.04E-02															8.04E-02
Chloroform	TAC	4.16E-03															4.16E-03
Dichloromethane	TAC	1.87E-02															1.87E-02
Ethyl Chloride	TAC	5.62E-03															5.62E-03
Ethylbenzene	TAC	1.39E-01															1.39E-01
Freon 11	TAC	4.79E-03															4.79E-03
Freon 113	TAC	6.53E-03															6.53E-03
Freon 114	TAC	5.95E-03															5.95E-03
Freon 12	TAC	3.51E-03															3.51E-03
Hexachlorobutadiene	TAC	1.52E-02															1.52E-02
m+p-xylenes	TAC	1.01E+00						4.06E-05									1.01E+00
m-dichlorobenzene	TAC	6.83E-03															6.83E-03
Methyl Bromide	TAC	9.07E-02															9.07E-02
Methyl Chloride	TAC	1.60E-01															1.60E-01
o-dichlorobenzene	TAC	6.83E-03															6.83E-03
o-xylene	TAC	1.97E-01															1.97E-01
p-dichlorobenzene	TAC	8.54E-03															8.54E-03
Perchloroethylene	TAC	7.70E-03															7.70E-03

APPENDIX A
TABLE S-3
REVISED FACILITY HOURLY EMISSIONS SUMMARY
Lehigh Southwest Cement Company
Cupertino Facility

Pollutant	Chemical Group	Kiln	DC-Cement	DC-Rock	PF-Cement	PF-Crushing and Screening	PF-Rock Plant	Dispensing Facilities	Emergency Diesel Generators	Welding Stationary IC Engines	Unpaved Roads Wind Erosion	Paved/Unpaved Roads Dust Entrainment	Stockpile Wind Erosion	Stockpile Material Handling	Mines MF10[2]	Mines MF24[3]	Total (lb/hr)[1]
Styrene	TAC	3.52E-02															3.52E-02
t-1,3-dichloropropene	TAC	6.44E-03															6.44E-03
Toluene	TAC	1.25E+00						1.65E-05									1.25E+00
Trichloroethene	TAC	6.10E-03															6.10E-03
Vinyl Chloride	TAC	2.06E-02															2.06E-02
Hydrogen Chloride	Other	1.55E+01															1.55E+01
Acetaldehyde	Volatile Organics	1.68E-01															1.68E-01
Formaldehyde	Volatile Organics	9.15E-03															9.15E-03

Notes
1. All polllutants reported in lbs/hr
2. MF10 are mine fugitives emissions occurring over 10 hours per day (operating horus)
3. MF24 are mine fugitive emissions occuring 24 hours per day

APPENDIX A
TABLE S-4
REVISED PRIORITIZATION SCORE CALCULATIONS FOR FACILITY EMISSIONS [1]
Lehigh Southwest Cement Company
Cupertino Facility

CAS	Compound	Emission Rates - 2008 CEIR			Cancer Unit Risk	Reference Exposure Level (REL)		Cancer Priority[3]	Chronic Noncancer Priority[4]	Acute Noncancer Priority[5]
		Annual	Chronic[2]	Hourly		Chronic	Acute			
		(lbs/yr)	(lbs/hr)	(lbs/hr)	$(\mu g/m^3)^{-1}$	($\mu g/m^3$)	($\mu g/m^3$)			
83329	Acenaphthene	1.77E-01	2.02E-05	2.57E-05	0	0	0	NA	NA	NA
208968	Acenaphthylene	1.15E+00	1.31E-04	1.67E-04	0	0	0	NA	NA	NA
75070	Acetaldehyde	1.16E+03	1.32E-01	1.68E-01	0.0000027	140	470	1.59E-02	4.25E-04	1.61E-03
107028	Acrolein	4.49E+01	5.13E-03	6.51E-03	0	0.35	2.5	NA	6.59E-03	1.17E-02
120127	Anthracene	6.17E-01	7.04E-05	8.94E-05	0	0	0	NA	NA	NA
7440360	Antimony	2.87E+00	3.28E-04	5.76E-04	0	0	0	NA	NA	NA
7440382	Arsenic	3.91E+00	4.47E-04	7.53E-04	0.0033	0.015	0.2	6.58E-02	1.34E-02	1.69E-02
7440393	Barium	8.92E+02	1.02E-01	1.92E-01	0	0	0	NA	NA	NA
100527	Benzaldehyde	NL	NL	NL	NL	NL	NL	NA	NA	NA
71432	Benzene	9.65E+03	1.10E+00	1.40E+00	0.000029	60	1300	1.43E+00	8.26E-03	4.84E-03
56553	Benzo(a)anthracene	1.31E-02	1.50E-06	1.90E-06	0.00011	0	0	7.35E-06	NA	NA
50328	Benzo(a)pyrene	2.95E-04	3.36E-08	4.27E-08	0.0011	0	0	1.65E-06	NA	NA
205992	Benzo(b)fluoranthene	1.87E-03	2.13E-07	2.71E-07	0.00011	0	0	1.05E-06	NA	NA
192972	Benzo(e)pyrene	1.37E-03	1.57E-07	1.99E-07	0	0	0	NA	NA	NA
191242	Benzo(g,h,i)perylene	2.95E-04	3.36E-08	4.27E-08	0	0	0	NA	NA	NA
207089	Benzo(k)fluoranthene	2.95E-04	3.36E-08	4.27E-08	0.00011	0	0	1.65E-07	NA	NA
100447	Benzyl chloride	1.01E+02	1.16E-02	1.47E-02	0.000049	0	240	2.53E-02	NA	2.75E-04
7440417	Beryllium	9.90E-01	1.13E-04	1.90E-04	0.0024	0.007	0	1.21E-02	7.26E-03	NA
106990	1,3-Butadiene	9.18E+01	1.05E-02	1.33E-02	0.00017	20	0	7.96E-02	2.36E-04	NA
106978	Butane	NL	NL	NL	NL	NL	NL	NA	NA	NA
7440439	Cadmium	1.62E+00	1.85E-04	3.21E-04	0.0042	0.02	0	3.47E-02	4.17E-03	NA
56235	Carbon Tetrachloride	6.16E+01	7.03E-03	8.94E-03	0.000042	40	1900	1.32E-02	7.91E-05	2.12E-05
108907	Chlorobenzene	5.54E+02	6.33E-02	8.04E-02	0	1000	0	NA	2.85E-05	NA
67663	Chloroform	2.87E+01	3.27E-03	4.16E-03	0.0000053	300	150	7.75E-04	4.91E-06	1.25E-04
18540299	Chromium, hexavalent	3.37E+00	3.85E-04	5.86E-04	0.15	0.2	0	2.58E+00	8.65E-04	NA
7440473	Chromium, total	3.68E+01	4.20E-03	7.28E-03	0	0	0	NA	NA	NA
218019	Chrysene	3.86E-02	4.41E-06	5.60E-06	0.000011	0	0	2.17E-06	NA	NA
7440484	Cobalt	7.20E+00	8.22E-04	1.46E-03	0	0	0	NA	NA	NA
7440508	Copper	2.60E+01	2.96E-03	5.28E-03	0	0	100	NA	NA	2.37E-04
1175	Crystalline silica	1.28E+03	1.46E-01	3.81E-01	0	3	0	NA	2.19E-02	NA
2051243	Decachlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
53703	Dibenzo(a,h)anthracene	2.95E-04	3.36E-08	4.27E-08	0.0012	0	0	1.80E-06	NA	NA
106934	1,2-Dibromoethane (EDB)	6.02E+01	6.87E-03	8.73E-03	0.000071	0.8	0	2.18E-02	3.87E-03	NA
95501	1,2-Dichlorobenzene	4.71E+01	5.38E-03	6.83E-03	0	0	0	NA	NA	NA
541731	1,3-Dichlorobenzene	4.71E+01	5.38E-03	6.83E-03	0	0	0	NA	NA	NA
106467	1,4-Dichlorobenzene (p-)	5.89E+01	6.72E-03	8.54E-03	0.000011	800	0	3.30E-03	3.78E-06	NA
25321226	Dichlorobenzene (mixed isomers)	NL	NL	NL	0	0	0	NA	NA	NA
2050682	Dichlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
75343	1,1-Dichloroethane	1.98E+01	2.26E-03	2.87E-03	0.0000016	0	0	1.62E-04	NA	NA

APPENDIX A
TABLE S-4
REVISED PRIORITIZATION SCORE CALCULATIONS FOR FACILITY EMISSIONS [1]
Lehigh Southwest Cement Company
Cupertino Facility

CAS	Compound	Emission Rates - 2008 CEIR			Cancer Unit Risk	Reference Exposure Level (REL)		Cancer Priority[3]	Chronic Noncancer Priority[4]	Acute Noncancer Priority[5]
		Annual	Chronic[2]	Hourly		Chronic	Acute			
		(lbs/yr)	(lbs/hr)	(lbs/hr)	$(\mu g/m^3)^{-1}$	($\mu g/m^3$)	($\mu g/m^3$)			
107062	1,2-Dichloroethane	2.38E+01	2.71E-03	3.45E-03	0.000021	400	0	2.55E-03	3.05E-06	NA
540590	c-1,2-Dichloroethene	3.89E+01	4.44E-03	5.64E-03	0	0	0	NA	NA	NA
75354	1,1-Dichloroethylene	3.89E+01	4.44E-03	5.64E-03	0	70	0	NA	2.85E-05	NA
540590	1,2-Dichloroethylene	3.89E+01	4.44E-03	5.64E-03	0	0	0	NA	NA	NA
75718	Dichlorodifluoromethane (Freon 12)	2.42E+01	2.77E-03	3.51E-03	0	0	0	NA	NA	NA
75092	Dichloromethane	1.29E+02	1.47E-02	1.87E-02	0.000001	400	14000	6.58E-04	1.66E-05	6.01E-06
78875	1,2-Dichloropropane	2.71E+01	3.10E-03	3.94E-03	0.000018	0	0	2.49E-03	NA	NA
542756	1,3-Dichloropropene	6.67E+01	7.62E-03	9.67E-03	0.000016	0	0	5.44E-03	NA	NA
542756	c-1,3-Dichloropropene	6.67E+01	7.62E-03	9.67E-03	0.000016	0	0	5.44E-03	NA	NA
542756	t-1,3-Dichloropropene	6.67E+01	7.62E-03	9.67E-03	0.000016	0	0	5.44E-03	NA	NA
76142	Dichlorotetrafluoroethane (Freon 114)	4.11E+01	4.69E-03	5.95E-03	NL	NL	NL	NA	NA	NA
9901	Diesel PM	2.47E+01	2.82E-03	9.73E-01	0.0003	5	0	3.79E-02	2.54E-04	NA
57976	7,12-Dimethylbenz[a]anthracene	NL	NL	NL	0.071	0	0	NA	NA	NA
3268879	1,2,3,4,6,7,8,9-OCDD	2.02E-05	2.30E-09	2.92E-09	0.0038	0.4	0	3.91E-07	2.59E-09	NA
39001020	1,2,3,4,6,7,8,9-OCDF	4.61E-06	5.26E-10	6.69E-10	0.0038	0.4	0	8.94E-08	5.92E-10	NA
35822469	1,2,3,4,6,7,8-HpCDD	9.63E-06	1.10E-09	1.40E-09	0.38	0.004	0	1.87E-05	1.24E-07	NA
67562394	1,2,3,4,6,7,8-HpCDF	4.67E-06	5.33E-10	6.77E-10	0.38	0.004	0	9.05E-06	6.00E-08	NA
55673897	1,2,3,4,7,8,9-HpCDF	1.20E-06	1.37E-10	1.75E-10	0.38	0.004	0	2.33E-06	1.55E-08	NA
39227286	1,2,3,4,7,8-HxCDD	2.69E-06	3.07E-10	3.90E-10	3.8	0.0004	0	5.21E-05	3.45E-07	NA
70648269	1,2,3,4,7,8-HxCDF	0.00E+00	0.00E+00	5.90E-10	3.8	0.0004	0	0.00E+00	0.00E+00	NA
57653857	1,2,3,6,7,8-HxCDD	2.65E-06	3.03E-10	3.85E-10	3.8	0.0004	0	5.14E-05	3.41E-07	NA
57117449	1,2,3,6,7,8-HxCDF	3.81E-06	4.35E-10	5.52E-10	3.8	0.0004	0	7.38E-05	4.89E-07	NA
19408743	1,2,3,7,8,9-HxCDD	2.75E-06	3.14E-10	3.98E-10	3.8	0.0004	0	5.32E-05	3.53E-07	NA
72918219	1,2,3,7,8,9-HxCDF	1.28E-06	1.46E-10	1.86E-10	3.8	0.0004	0	2.48E-05	1.65E-07	NA
40321764	1,2,3,7,8-PeCDD	2.37E-06	2.71E-10	3.44E-10	38	0.00004	0	4.60E-04	3.05E-06	NA
57117416	1,2,3,7,8-PeCDF	1.83E-05	2.09E-09	2.66E-09	1.9	0.0008	0	1.78E-04	1.18E-06	NA
60851345	2,3,4,6,7,8-HxCDF	2.34E-06	2.68E-10	3.40E-10	3.8	0.0004	0	4.54E-05	3.01E-07	NA
57117314	2,3,4,7,8-PeCDF	2.74E-05	3.13E-09	3.98E-09	19	0.00008	0	2.66E-03	1.76E-05	NA
1746016	2,3,7,8-TCDD	2.33E-06	2.66E-10	3.38E-10	38	0.00004	0	4.51E-04	2.99E-06	NA
51207319	2,3,7,8-TCDF	1.15E-04	1.32E-08	1.67E-08	3.8	0.0004	0	2.23E-03	1.48E-05	NA
37871004	HpCDD (Total)	1.51E-05	1.73E-09	2.19E-09	0	0	0	NA	NA	NA
38998753	HpCDF (Total)	4.75E-06	5.43E-10	6.89E-10	0	0	0	NA	NA	NA
34465468	HxCDD (Total)	6.71E-05	7.66E-09	9.73E-09	0	0	0	NA	NA	NA
55684941	HxCDF (Total)	2.34E-05	2.67E-09	3.39E-09	0	0	0	NA	NA	NA
36088229	PeCDD (Total)	7.18E-05	8.19E-09	1.04E-08	0	0	0	NA	NA	NA
30402154	PeCDF (Total)	7.01E-04	8.00E-08	1.02E-07	0	0	0	NA	NA	NA
41903575	TCDD (Total)	1.91E-04	2.18E-08	2.76E-08	0	0	0	NA	NA	NA
55722275	TCDF (Total)	1.31E-02	1.49E-06	1.90E-06	0	0	0	NA	NA	NA

APPENDIX A
TABLE S-4
REVISED PRIORITIZATION SCORE CALCULATIONS FOR FACILITY EMISSIONS [1]
Lehigh Southwest Cement Company
Cupertino Facility

CAS	Compound	Emission Rates - 2008 CEIR			Cancer Unit Risk	Reference Exposure Level (REL)		Cancer Priority[3]	Chronic Noncancer Priority[4]	Acute Noncancer Priority[5]
		Annual	Chronic[2]	Hourly		Chronic	Acute			
		(lbs/yr)	(lbs/hr)	(lbs/hr)	$(\mu g/m^3)^{-1}$	$(\mu g/m^3)$	$(\mu g/m^3)$			
74840	Ethane	NL	NL	NL	NL	NL	NL	NA	NA	NA
100414	Ethylbenzene	9.59E+02	1.10E-01	1.39E-01	0.0000025	2000	0	1.22E-02	2.46E-05	NA
75003	Ethyl chloride	3.87E+01	4.42E-03	5.62E-03	0	30000	0	NA	6.63E-08	NA
622968	4-Ethyltoluene	4.30E+02	4.91E-02	6.23E-02	NL	NL	NL	NA	NA	NA
206440	Fluoranthene	1.57E+00	1.80E-04	2.28E-04	0	0	0	NA	NA	NA
86737	Fluorene	1.65E+01	1.88E-03	2.39E-03	0	0	0	NA	NA	NA
50000	Formaldehyde	6.31E+01	7.20E-03	9.15E-03	0.000006	9	55	1.93E-03	3.60E-04	7.48E-04
9910	Gasoline PM	9.30E-01	1.06E-04	9.30E-03	0	0	0	NA	NA	NA
28655712	Heptachlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
26601649	Hexachlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
87683	Hexachlorobutadiene	1.05E+02	1.19E-02	1.52E-02	0	0	0	NA	NA	NA
110543	Hexane	NL	NL	NL	0	7000	0	NA	NA	NA
7647010	Hydrogen chloride	1.07E+05	1.22E+01	1.55E+01	0	9	2100	NA	6.12E-01	3.33E-02
193395	Indeno(1,2,3-c,d)pyrene	2.19E-04	2.50E-08	3.17E-08	0.00011	0	0	1.23E-07	NA	NA
7439921	Lead	2.67E+00	3.05E-04	5.04E-04	0.000012	0	0	1.63E-04	NA	NA
7439965	Manganese	3.99E+00	4.56E-04	5.79E-04	0	0.09	0	NA	2.28E-03	NA
7439976	Mercury	5.82E+02	6.64E-02	8.44E-02	0	0.03	0.6	NA	9.96E-01	6.33E-01
74839	Methyl Bromide	6.25E+02	7.14E-02	9.07E-02	0	5	3900	NA	6.42E-03	1.05E-04
74873	Methyl Chloride	1.10E+03	1.26E-01	1.60E-01	0	0	0	NA	NA	NA
56495	3-Methylchloroanthrene	NL	NL	NL	0.0063	0	0	NA	NA	NA
91576	2-Methylnaphthalene	1.13E+02	1.29E-02	1.64E-02	0	0	0	NA	NA	NA
1634044	MTBE	NL	NL	NL	0.00000026	8000	0	NA	NA	NA
7439987	Molybdenum	1.76E+01	2.01E-03	2.81E-03	NL	NL	NL	NA	NA	NA
27323188	Monochlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
91203	Naphthalene	1.39E+02	1.58E-02	2.01E-02	0.000034	9	0	2.40E-02	7.91E-04	NA
7440020	Nickel	7.43E+01	8.48E-03	1.41E-02	0.00026	0.05	6	9.85E-02	7.63E-02	1.06E-02
53742077	Nonachlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
55722264	Octachlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
25429292	Pentachlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
109660	Pentane	NL	NL	NL	NL	NL	NL	NA	NA	NA
127184	Perchloroethylene	5.31E+01	6.07E-03	7.70E-03	0.0000059	35	20000	1.60E-03	7.80E-05	1.73E-06
198550	Perylene	2.95E-04	3.36E-08	4.27E-08	0	0	0	NA	NA	NA
85018	Phenanthrene	9.17E+01	1.05E-02	1.33E-02	0	0	0	NA	NA	NA
7723140	Phosphorus	7.37E+01	8.41E-03	1.07E-02	0	0	0	NA	NA	NA
1336363	Polychlorinated biphenyls	NL	NL	NL	0.00057	0	0	NA	NA	NA
74986	Propane	NL	NL	NL	NL	NL	NL	NA	NA	NA
129000	Pyrene	1.17E+00	1.34E-04	1.70E-04	0	0	0	NA	NA	NA
7782492	Selenium	6.18E+00	7.06E-04	1.04E-03	0	20	0	NA	1.59E-05	NA
7440224	Silver	1.73E+00	1.98E-04	3.31E-04	0	0	0	NA	NA	NA

APPENDIX A
TABLE S-4
REVISED PRIORITIZATION SCORE CALCULATIONS FOR FACILITY EMISSIONS [1]
Lehigh Southwest Cement Company
Cupertino Facility

CAS	Compound	Emission Rates - 2008 CEIR			Cancer Unit Risk	Reference Exposure Level (REL)		Cancer Priority[3]	Chronic Noncancer Priority[4]	Acute Noncancer Priority[5]
		Annual	Chronic[2]	Hourly		Chronic	Acute			
		(lbs/yr)	(lbs/hr)	(lbs/hr)	$(\mu g/m^3)^{-1}$	$(\mu g/m^3)$	$(\mu g/m^3)$			
100425	Styrene	2.43E+02	2.77E-02	3.52E-02	0	900	21000	NA	1.39E-05	7.54E-06
26914330	Tetrachlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
79345	1,1,2,2-Tetrachloroethane	4.03E+01	4.60E-03	5.85E-03	0.000058	0	0	1.19E-02	NA	NA
7440280	Thallium	1.43E+01	1.63E-03	2.22E-03	0	0	0	NA	NA	NA
108883	Toluene	8.65E+03	9.87E-01	1.25E+00	0	300	37000	NA	1.48E-03	1.52E-04
87616	1,2,3-Trichlorobenzene	NL	NL	NL	NL	NL	NL	NA	NA	NA
120821	1,2,4-Trichlorobenzene	1.09E+02	1.24E-02	1.58E-02	0	0	0	NA	NA	NA
25323686	Trichlorobiphenyl	NL	NL	NL	NL	NL	NL	NA	NA	NA
71556	1,1,1-Trichloroethane	3.21E+01	3.66E-03	4.65E-03	0	1000	68000	NA	1.65E-06	3.08E-07
79005	1,1,2-Trichloroethane	5.34E+01	6.10E-03	7.75E-03	0.000016	0	0	4.36E-03	NA	NA
79016	Trichloroethene	4.21E+01	4.81E-03	6.10E-03	0.000002	600	0	4.29E-04	3.60E-06	NA
76131	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.50E+01	5.14E-03	6.53E-03	0	0	0	NA	NA	NA
75694	Trichlorofluoromethane (Freon 11)	3.30E+01	3.77E-03	4.79E-03	0	0	0	NA	NA	NA
95636	1,2,4-Trimethylbenzene	1.38E+03	1.57E-01	2.00E-01	0	0	0	NA	NA	NA
25551137	1,3,5-Trimethylbenzene	1.13E+03	1.29E-01	NL	0	0	0	NA	NA	NA
7440622	Vanadium	2.36E+02	2.70E-02	4.39E-02	0	0	30	NA	NA	6.58E-03
75014	Vinyl Chloride	1.42E+02	1.62E-02	2.06E-02	0.000078	0	180000	5.64E-02	NA	5.14E-07
108383	m-Xylene	NL	NL	NL	0	700	22000	NA	NA	NA
95476	o-Xylene	1.36E+03	1.55E-01	1.97E-01	0	700	22000	NA	9.99E-05	4.04E-05
1330207	Xylene	6.94E+03	7.93E-01	1.01E+00	0	700	22000	NA	5.10E-04	2.06E-04
7440666	Zinc	1.10E+02	1.26E-02	1.97E-02	0	0	0	NA	NA	NA
TOTAL PRIORITIZATION SCORE								**4.55**	**1.764**	**0.720**

Parameter	Symbol	Value	Description
Receptor Proximity Adjustment Factor	RP	0.003	receptor ~ 1200 m
Cancer normalization factor	NFca	1,700	constant
Chronic normalization factor	NFcnc	150	constant
Acute normalization factor	NFanc	1,500	constant

Notes:
[1] Facility scored according to CAPCOA Facility Prioritization Guidelines, July 1990, AB2588 Risk Assessment Committee of the California Air Pollution Control Officers Association (CAPCOA); Emissions and Potency Procedure.
[2] Annual emission rates (lbs/yr) converted to lbs/hr by dividing by 8760 hrs/yr (365 days/yr x 24 hr/day).
[3] Cancer Priority = Annual Emission Rate (lbs/yr) x Cancer Unit Risk $(ug/m^3)^{-1}$ x RP x NFca
[4] Chronic Non-cancer Priority = Chronic Emission Rate (lbs/hr) / Chronic REL (ug/m^3) x RP x NFcnc
[5] Acute Non-cancer Priority = Hourly Emission Rate (lbs/hr) / Acute REL (ug/m^3) x RP x NFanc
NA = not applicable
NL = Not listed as an air toxic requiring quantification of emissions
"0" = Toxicity criteria is not available

Revisions to CEIR Addendum
June 8, 2010

APPENDIX B

Dispersion Modeling Files

AERMAP Files

AERSURFACE Files

AERMET Files

AERMAP, AERSURFACE, and AERMET modeling inputs and results have been provided on CD-ROM formatted for IBM-compatible personal computers. The directory structure on the CD-ROM is self-explanatory, with inputs and outputs organized by the program used. An index of the files provided follows.

AERMAP (09040)

The AERMAP files are provided in the AERMAP folder. The filenames use extensions that are common to all files. These are as follows:

filename	Contents
DOMDETAIL.OUT	Detailed output file – Full Receptor Grid
MAPDETAIL.OUT	
MAPPARAMS.OUT	
RECEPTORS.ROU	Summary output file – Full Receptor Grid
AERMAP.INP	AERMAP Input File
90271298.tif	NED 1/3 arc Terrain Files
91467771.tif	

AERSURFACE (08009)

The AERSURFACE files are provided in the AERSURFACE folder. The filenames use extensions that are common to all files. These are as follows:

filename	Contents
Lehigh_aersurface.inp	Input file – Met Tower Site
Lehigh_aersurface .OUT	Output File – Met Tower Site
Lehigh_aersurface.LOG	Output Log File – Met Tower Site
Lehigh_aersurface.DAT	Output data file
Lehigh_albedo_bowen_domain.txt	Albedo, bowen ratio, and domain output file
Ca_north_NLCD_04800_flat.bin	Northern California land use file

AERMET (06341)

The AERMET files are provided in the AERMET folder. Files for the individual years of meteorological data are located in their respective folders. The filenames use extensions that are common to all files. These are as follows:

filename	Contents
Kai06.aer	Lehigh on-site surface data supplied by BAAQMD
Ksjc06f.ish	San Jose airport surface data supplied by BAAQMD
Oak_raob_2006.txt	Oakland upper air data supplied by BAAQMD
Lehigh.IN1	AERMET Stage 1 input file
Lehigh.RP1	AERMET Stage 1 report file
Lehigh.MG1	AERMET Stage 1 message file
Lehigh.IN2	AERMET Stage 2 input file
Lehigh.RP2	AERMET Stage 2 report file
Lehigh.MG2	AERMET Stage 2 message file
Lehigh.IN3	AERMET Stage 3 input file
Lehigh.RP3	AERMET Stage 3 report file
Lehigh.MG3	AERMET Stage 3 message file
Lehigh.SFC	AERMET Surface File
Lehigh.PFL	AERMET Profile File