Bay Area Air Quality Management District October 9, 2017
Board of Directors
375 Beale Street, Suite 600
San Francisco, CA 94105

Via Email: vdouglas@baaqmd.gov; Victor Douglas

Reference: Comments on DEIR for Regulation 11, Rule 18

Dear Mr. Douglas:

Thank you for the opportunity to comment on this important Regulation.

As a citizen living in the vicinity of Lehigh Cement Plant, I strongly encourage rapid adaptation and a comprehensive enforcement of this Regulation as provided by Assembly Bill 617. Implementation of this Regulation will provide better health to the community in the vicinity of the Lehigh Cement Plant. There is obvious dust, odors, and pollutants that are released from the plant into the surrounding community. A full implementation of the Regulation will provide the necessary legal mechanisms to improve and prevent any further degradation to community health.

While the Regulation 11-18 stipulates more stringent requirements on assessing health risk than the previous rule, this improvement in public health will be meaningless without scientifically accurate and comprehensive enforcement.

Because of the technical difficulty in calculating air pollution emission and dispersal, the District should substantially increase monitoring around the plant. Fortunately there are now a variety of options in establishing community-level air quality with smaller and dramatically less expensive monitors.

The District has had difficulty in providing an accurate HRA for Leigh in the past. In reviewing the 2014 HRA for the Lehigh Cement Plant consultant, who were hired by citizen groups and local municipalities, found several deficiencies in the District's products. I have tried to make this experience into a series of recommendation to improve future HRAs.

When the citizens in the region of the Lehigh Cement Plant hired consultants (Dr. Jim Staudt on emission control technology and a San Jose State University Professor on Heath Risk Assessment) to evaluate the 2014 HRA and the regulations resulting from it, the consultants found several errors and unsubstantiated assumptions in the December 2014 HRA. While the District willingly corrected the errors, the District maintained its position on several assumptions that the citizen's found unreasonable.

I recommend the following items, which should result in a more scientifically sound and credible HRA for regulations of major point sources:

1. <u>All Emission Control Equipment should be operated 24 hours by 7 days.</u> Dr. Jim Staudt, from Andover Technologies, made this recommendation in evaluating the 2014 HRA. The District concurred and the equipment has been operated continuously. As a consequence the emission levels of mercury were found to be substantially below the regulation and the emissions of NOx was somewhat below the regulation. **I attribute these low emissions and their positive health consequences to the full-time operation of the emission control equipment.**
2. <u>Fugitive Dust Calculations must be combined with extensive On-Site and Community Measurements</u>. Calculations of fugitive dust emissions are complex and inherently subject to errors. The actual dust blown off land surfaces depends on many parameters that cannot be accurately known, and even if known their implications are difficult to calculate. The dust blown off surfaces can vary depending on gustiness of the wind, vegetation, exact

composition of the material, moisture content of the surfaces, and numerous other parameters. Consequently, it is critical to monitor regularly for particularly harmful pollutants such as Chromium VI. Winegar Associates, under contract with MidPenn, conducted Air Quality measurements near the boarder with Lehigh. The consultant, Dr. Eric Winegar of Winegar Air Sciences detected a level of 0.40 ng/m^3, which is a factor of ten or more over other measurements in the general metropolitan area. Below is a sample table of the extensive measurements conducted by the South Coast Air Quality Management District in Riverside County (SCAQMD). SCAQMD conducted hundreds of measurements over a five-month period in evaluating the chromium 6 emissions from all sources. I believe Bay Area citizens should have comparable measurements made in the vicinity of major facilities. SCAQMD did substantial investigations on the source of the chromium VI. SCAQMD actually did microscopic examination of the dust collected to determine the source.

The following table is from the SCAQMD website. BAAQMD has never conducted a similar survey and analysis of the particulates from the Lehigh Cement Plant. SCQAMD website: http://www.aqmd.gov/home/library/air-quality-data-studies/special-monitoring/hexavalent-chromium

HEXAVALENT CHROMIUM (Cr^{6+}) SAMPLING RESULTS

	24-hour Cr^{6+} concentrations in n						
Sample Date	**Site-1**	**Site-2**	**Site-3**	**Site-4**	**Site-5**	**Site-6**	**Site-7**
02/12/08	NS	NS	0.71	0.85	0.27		
02/13/08	3.31	0.92	0.25	0.30	0.54		
02/14/08	0.35	0.23	0.71	0.44	0.07		
02/15/08	2.73	0.84	0.25	0.30	0.10		
02/16/08	3.83	1.58	0.29	0.37	0.31		
02/17/08	2.53	0.46	0.92	0.27	0.28		
02/18/08	1.69	0.91	0.15	0.20	0.18		
02/19/08	1.33	NS	0.16	0.25	0.05		
02/20/08	1.40	NS	0.13	0.18	0.06		
02/21/08	1.79	0.31	0.19	0.26	0.15		
02/24/08	4.79	0.28	0.14	0.23	NS		
02/27/08	5.97	2.01	0.58	0.45	0.54		
03/01/08	5.50	0.06	0.23	0.15	0.06		
03/04/08	6.78	4.87	NS	0.58	0.68		
03/07/08	0.24	1.43	0.71	0.44	0.45		
03/10/08	1.72	0.21	0.76	0.27	0.33		
03/13/08	2.71	0.96	0.26	0.14	0.24		
03/16/08	1.80	0.21	0.21	0.06	0.33		
03/19/08	1.73	NS	0.20	0.23	0.31	0.79	
03/22/08	2.00	2.62	0.37	0.55	0.87	0.35	
03/25/08	2.29	2.39	0.31	0.60	0.62	NS	
03/28/08	1.90	0.68	0.21	0.31	0.09	0.82	
03/31/08	2.03	0.14	0.13	0.23	0.13	0.7	
04/03/08	0.72	0.01	0.05	0.18	0.06	0.92	
04/06/08	0.83	NS	0.02	0.03	0.03	0.37	
04/09/08	0.90	0.18	0.06	0.11	NS	0.53	
04/12/08	0.65	NS	0.16	0.45	0.34	0.09	
04/15/08	0.86	NS	NS	0.15	0.05	NS	
04/17/08	NS	NS	Moved	NS	NS	NS	0.41
04/18/08	2.37	NS	to Site 7	NS	NS	NS	0.36
04/20/08	1.07	NS		NS	NS	NS	0.23
04/21/08	1.07	0.10		0.07	0.05	0.27	0.18
04/24/08	2.32	0.16		0.15	0.04	0.44	0.22
04/27/08	0.15	0.20		NS	0.08	0.06	0.12
04/30/08	0.17	0.12		0.18	0.03	0.16	0.10
05/03/08	0.14	0.31		0.09	0.13	0.09	0.08
05/06/08	0.65	0.05		NS	0.04	0.09	0.10
05/09/08	0.56	0.07		NS	0.04	0.16	0.24
05/10/08	0.63						
05/11/08	1.35						
05/12/08	0.43	0.09		NS	0.04	0.27	0.04
05/13/08	0.71						
05/14/08	0.81						
05/15/08	0.79	0.54		NS	0.16	0.10	0.40
05/16/08	0.54						
05/17/08	0.51						
05/18/08	0.82	0.45		0.32	0.22	0.09	0.33
05/19/08	0.74						
05/20/08	0.80						
05/21/08	1.58	0.27		0.12	0.03	0.27	0.14
05/22/08	0.50						

3. The presence and concentration of hazardous chemicals in the rock piles must be performed frequently and hazardous materials, which are not explicitly detected in the rock piles, should be assigned a level of the Minimal

Detection Limit. One of the disputes between the citizen's consultants and the District regarding the 2014 HRA for Lehigh was that the District insisted on using "zero" concentration for the presence of Chromium 6 in the raw materials. However, the process to detect Chromium 6 had its limitations – it could only detect its presence at some minimal detection level (MDL). Thus, Chromium 6 in concentrations less than MDL would not be accounted for in the HRA. The assumption of zero concentration is clearly erroneous since as reference previously, Winegar Air Sciences did detect Chromium 6 in the atmosphere near the facility.

4. Emission Measurements of TACs should be performed regularly. In order to estimate the emissions of TACs, the District uses the standard procedure of continuous measurement of HAPS and then applies a ratio of a few TAC to HAPs direct measurement. A more accurate determination would be by direct measurement of one or two TACs such as benzene. I understand that continuous monitors are not available at this time. However, monthly On-Site Measurements are feasible.
5. Accurate and comprehensive Measurement of Meteorological Conditions must be performed. In the initial 2014 HRA the calculations involved the use of an amateur's meteorological station. This station was found to be deficient on several aspects. It was not elevated over uniform ground as specified by the EPA, but it was simply placed at the edge of fence overlooking a valley. While this was corrected after discussion with the District, the incident reveals the importance of good meteorological measurements that conform to all the EPA specifications.
6. The Social Economic Impact Analyses must include the costs of health effects. The social economic benefit study performed for Lehigh regulation failed to account for the cost of health effects. The District has the ability to monitor the health impact associated with a particular facility in a fashion similar to what was done for the 2010 Clean Air Plan Volume 1, Adopted September 15, 2010 by ABAG, MTC, and BCDC. While this plan examined all the pollutants

from the entire region, the same methodology should be applied to a specific point source or a group of point sources such as the collection of Refineries.

7. All averages of individual measurements must be consistently and statistically accurately calculated. Usually the On-site measurements incorporate many individual measurements and then report a combined value for further use in HRAs, violation consideration, etc. One the disputes between the citizens and the District was due to the removal of several of the on-site benzene measurements in determining the "average" benzene emissions. This directly changed the health risk at several locations. Often the "averaging" individual measurements exclude without explanation several individual measurements. Below is an example of measurements of a Relative Accuracy Test (RAT), which was performed at Lehigh. Without explanation three of the highest differences were eliminated in performing the "average." The District must no longer allow such arbitrary elimination of measurements.

TABLE 6-2
RELATIVE ACCURACY TEST AUDIT
CO_2 (% VOLUME DRY)
LEHIGH - PERMANENTE PLANT
CEMS #1 (KMDC1)

Run Number	Date	Time	Avogadro CEMS	Plant CEMS	Difference
Run 1	6/27/13	0905-0926	14.39	14.11	0.280
Run 2	6/27/13	0948-1009	14.23	14.09	0.140
~~Run 3~~	~~6/27/13~~	~~1033-1054~~	~~14.88~~	~~14.59~~	~~0.290~~
Run 4	6/27/13	1122-1143	14.82	14.62	0.200
Run 5	6/27/13	1205-1226	14.50	14.34	0.160
Run 6	6/27/13	1249-1310	14.67	14.62	0.050
Run 7	6/27/13	1328-1349	12.77	12.55	0.220
Run 8	6/27/13	1411-1432	12.23	11.98	0.250
Run 9	6/27/13	1456-1517	12.96	12.76	0.200
Run 10	6/27/13	1547-1608	13.44	13.18	0.260
~~Run 11~~	~~6/27/13~~	~~1628-1649~~	~~12.96~~	~~12.63~~	~~0.330~~
~~Run 12~~	~~6/27/13~~	~~1721-1742~~	~~12.95~~	~~12.65~~	~~0.300~~
AVERAGES:			13.78	13.58	0.196
STANDARD DEVIATION:					0.071
CONFIDENCE COEFFICIENT:					0.055
RELATIVE ACCURACY, %:					**0.20**

Note: Relative accuracy is based on the absolute difference of 1 %.

Thank you again for the opportunity to comment on the development of new regulations designed to improve the health of residents of the San Francisco Bay Area.

Sincerely,

Gary Latshaw, Ph.D.