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Industrial Hygiene Project Report, Lead Air Monitoring, WSSC Temple Hills Blasting, 8/22/17

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1.0 Background and Executive Summary

Industrial Hygiene Air Sampling was conducted at the WSSC Temple Hills water tank blasting project on August 22, 2017. Four area air samples were collected during various activities associated with this project. This project report port summarizes assessment methodologies and analytical results from the sampling.

Activities conducted on the day of the exposure assessment included erecting the bonnet tarp around the tank, shot blasting, and debris cleanup using a HEPA vacuum cleaner. Winds during the shot blasting work were six to 12 miles per hour out of the southeast, with wind gusts of eight to 16 miles per hour.

2.0 Methodologies

Samples were collected at the four perimeter corners of the property to verify that lead particulates generated by blasting activities are not migrating to adjacent properties.

The samples were collected using low flow air sampling points at a flow rate of 2.5 liters per minute (lpm) for 455 – 460 minutes, for a total air volume of between 1,050 – 1,104 liters. The sampling pumps were pre and post calibrated using a rotameter calibrated against a primary standard. The samples were hand delivered under chain-of-custody to AMA Analytical Services of Lanham, Maryland for analysis via NIOSH Method 7082 (Flame AA). AMA Analytical Services is an American Industrial Hygiene Association (AIHA) accredited analytical laboratory.

3.0 Regulatory/Project Benchmarks

Exposure to lead in construction is regulated by the Occupational Safety and Health Administration via 29 CFR 1926.62 The standard establishes an Action Level and Permissible Exposure Limit (PEL) of 30 and 50 micrograms per cubic meter of air ($\mu g/m^3$). Both the Action Level and Permissible Exposure Limit (PEL) are based on an

eight-hour time-weighted average and apply to worker exposure (as opposed to area samples).

Section 02091, Paragraph 1.6.H of the WSSC project specifications establishes an ambient project action level of 30 µg/m^3. Sample results above this limit require modification of abatement methods to bring concentrations to below 30 µg/m^3.

4.0 Analytical Results

The analytical results of the four area samples collected on August 22, 2017 are summarized in Table 1. The results are presented by sample number, sample location and duration, and the analytical result.

As indicated by the data in Table 1, the results of the four area samples were below the analytical limit of detection (indicated by a less than symbol in the result).

Table 1 –Air Sampling Results

Sample Number	Sample/Type	Location and Duration	Analytical Result/ 8 Hour TWA
TH82217-1	Area/Ambient	NE Perimeter Fence 315 Minutes	<2.7 µg/m^3
TH82217-2	Area/Ambient	SE Perimeter Fence 316 Minutes	<2.7 µg/m^3
TH82217-3	Area/Ambient	SW Perimeter Fence 317 Minutes	<2.7 µg/m^3
TH82217-4	Area/Ambient	NW Perimeter Fence 320 Minutes	<2.7 µg/m^3

5.0 Conclusions

The analytical results of the four perimeter area air samples were below the project action level of 30 µg/m^3 established in Section 02091, Paragraph 1.6.H of the WSSC project specifications.

If there are any additional questions, or if I can be of additional assistance, please do not hesitate to contact me at 240-328-4698.

Sincerely,

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