



September 16, 2012

## Industry Wide Objective Data Study

### Lead Air Monitoring Results During Lead Containing Stripe in Both White and Yellow Traffic Stripe Removal.

The work methods for this stripe removal are as follows: Traffic Stripe is removed from the road surface using a micro planer attachment on "Bobcat" or "Road-Pro" equipment. The device has a water mister to maintain a moist atmosphere inside the planer head. There is an attached HEPA Vacuum system that collects the fine dust created during the operation. The operation leaves large dimension chips, (approximately 0.2 to 3 millimeter chips) that are collected with a regenerating road sweeper. The work area is pre-cleaned with a Road Sweeper and post-cleaned with the same sweeper. Air monitoring has been conducted at all work stations, the operators of both the micro planer and the sweeper operator. Air monitoring has been conducted at the job limits. In this study the air monitoring data collected at various locations throughout California was reviewed and compiled on the table below. All tests were conducted while operating the Micro unit, assisted by a regenerative sweeper. Air Monitoring was conducted in compliance with OSHA and NIOSH Standards. All data was collected during operations using the micro planer and street sweeper equipment. This data includes locations throughout the State of California the dates are indicated on the table, as well as the general location. In all cases the levels were below the detection limit for the NIOSH Method is NIOSH Method 7082 Issue 2. That method was utilized unless otherwise so stated. Please refer to NIOSH Standards when analyzing left censored data. These data are reported as the highest level for each day, usually there were four or more data points collected. A copy of records for this work are maintained at DNA Industrial Hygiene, those records are confidential and are not part of this public document. Those original records are and remain the sole property of the individuals or companies that conducted air monitoring.

Date	Location	Lead level $\mu\text{g}/\text{m}^3$
20 May 2005	State Route 34 at Rice Road, Oxnard	Below Detection $<2\mu\text{g}/\text{m}^3$
8 April 2008	State Route 52 at Mast Boulevard, San Diego	Below Detection $<3.2\mu\text{g}/\text{m}^3$
16 June 2008	State Route 243 Near Banning	Below Detection $<2.5\mu\text{g}/\text{m}^3$

11 August 2008	State Route 160 at Isleton & Walnut	<2.4 µg/m <sup>3</sup>
12 August 2008	State Route 160 near Sacramento	Below Detection <1.7µg/m <sup>3</sup>
20 October 2008	Interstate Route I 805 at H and Telegraph Canyon Road, San Diego	Below Detection <2µg/m <sup>3</sup>
21 November 2008	Intersection of Lomita and Western Avenue, Lomita	2.7 µg/m <sup>3</sup>
17 April 2009	Bridge Deck Interstate Route 15 Near San Bernardino. Significant Visible Dust clouds were generated during this work. Visibility was less than three feet inside the work area.	9.6 µg/m <sup>3</sup>
24 March 2009	State Route 118 near Simi Valley	Below Detection <2µg/m <sup>3</sup>
26 June 2009	Interstate Route I 405 at Vermont, Torrance	0.16 µg/m <sup>3</sup> Niosh 7105
28 January 2010	State Route 18 in Lucerne Valley	Below Detection <6.8µg/m <sup>3</sup>
5 April 2010	Interstate Route 405 at Golden West Boulevard OC, Anaheim	Below Detection <3.2µg/m <sup>3</sup>
17 April 2011	Interstate Route I 405 at Interstate Route 710, significant visible dust was present during the work.	5.8 µg/m <sup>3</sup>
20 July 2011	State Route 1 at Mission Street, Santa Cruz	Below Detection <2.4µg/m <sup>3</sup>
10 August 2011	Interstate Route I 5 at San Ysidro Overpass, San Ysidro	Below Detection <2.4µg/m <sup>3</sup>
26 August 2011	Interstate Route I 8 at East Mile Marker 7.6 San Diego	Below Detection <2.3µg/m <sup>3</sup>
6 December 2011	State Route 60 at Euclid Avenue	Below Detection <9.2µg/m <sup>3</sup>
9 August 2012	Interstate Route I 15 from 94 <sup>th</sup> Street the southern end of I 15	Below Detection <2.5µg/m <sup>3</sup>

All levels measured were conducted by a Certified Industrial Hygienist (CIH), the data clearly demonstrates that the system can not and does not create an exposure above the 30  $\mu\text{g}/\text{m}^3$  action level, even during conditions that should trigger a stop work condition. The proper use of this equipment does not create measurable levels using NIOSH Method 7082 Issue 2. The detection level is (2  $\mu\text{g}$  Pb). Improper use does create a low level of exposure, but it is readily discernable since it is accompanied by a dense dust cloud. That level is however substantially less than the action level.

The recorded detection levels that are indicated above 2  $\mu\text{g}/\text{m}^3$  are the result of calculations when the work period is significantly less than eight hours. In many cases the available work time is less than eight hours or the task is simply completed in less than eight hours. In all cases where the test indicated below detection levels the reader must understand the laboratory detection level of less than 2  $\mu\text{g}$  was always met. The method requires that the smaller volume of collected air must be considered when developing the detection level. For example the study conducted on December 6, 2011 was completed in less than two hours. Therefore the detection level was simply higher, but in that case the analytical level of detection found that lead was not detected.

Respectfully Submitted;



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