AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

Air Resources Board

California Environmental Protection Agency

Hexavalent Chromium Monitoring in Barrio Logan
Update #3

Sampling Results and Analysis
For the Sampling Period of April 6 - May 12, 2002

The San Diego Air Pollution Control District (SDAPCD) and California Air Resources Board (ARB) are near completion of an intensive monitoring study for hexavalent chromium at selected sites in Barrio Logan near Master Plating and Carlson & Beauloye Machine Shop. The information contained in this fact sheet summarizes the results obtained during the period of April 6 - May 12, 2002 for the ambient (outside) monitoring, including the results of monitoring downwind of Carlson & Beauloye, and indoor monitoring of the air at Master Plating. Monitoring for this special study is scheduled to end on May 24, 2002. The SDAPCD will continue surveillance of facilities in the Barrio Logan area to ensure that they remain in full compliance with all legal requirements and to work with local officials and residents.

SAMPLING RESULTS AND ANALYSIS

During this sampling period, the ARB and SDAPCD conducted 24-hour outdoor monitoring at the residence between the facilities (Location 1) and in the alley behind the plating facilities (Location 5). The table below summarizes the 24-hour concentrations from April 6 – May 12. A total of 73 (24-hour) samples were analyzed for the latest sampling period. Of those, 50 samples (68%) had values below the level of detection (LOD) and 23 samples (32%) had readings at or above the LOD. Since May 2, all outdoor measured concentrations have been at or below the LOD.

Summary of Ambient Air Monitoring Results
(24-Hour Samplers)

Sampling Location	April 6 – May 12, 2002		
	No. of samples	Hexavalent Chromium (ng/m^3) [1] Average[2]	Highest
Location 1 (between plating facilities)	36	0.77	21.0
Location 5 (alley)	37	0.14	0.5

[1] Nanograms per cubic meter

[2] In calculating the average concentrations, it is standard practice to assume that any sample detected below the level of detection (LOD) is half that value. Therefore, in this case, all samples below LOD are assumed to be 0.1 ng/m^3.

On April 6, there was an unexpectedly high concentration of hexavalent chromium recorded at Location 1. On this same day, a high indoor concentration was measured inside of Master Plating (see below). Although chrome plating was not being conducted, there were inside construction activities taking place at Master Plating. The ARB and SDAPCD notified local public officials of this elevated concentration.

Shown below are the average of all of the 24-hour sampling data for all sites collected since December 3, 2001 through May 12, 2002 at the six sites near the chrome plating facilities.

Summary of All 24-Hour Sampling Data by Site
Since December 3, 2001 Through May 12, 2002

Sampling Location	December 3, 2001 – May 12, 2002			
	No. of samples	Average Cancer Risk	Hexavalent Chromium (ng/m^3) [1] Average[2]	Highest
Location 1 (between plating facilities)	107	114	0.76	21.0
Location 2 (vacant lot)	45	33	0.22	3.6
Location 2c (duplicate at vacant lot)	43	31	0.21	3.2
Location 3 (across street)	44	50	0.33	7.9
Location 4 (across street)	43	43	0.28	4.8
Location 5 (alley)	107	69	0.46	22.0
Location 6 (Mercado Apt parking lot)	42	23	0.15	0.5
Average of all samples[2]	0.42			
Average cancer risk[3] for all locations	63			

[1] Nanograms per cubic meter

[2] In calculating the average concentrations, it is standard practice to assume that any sample detected below the LOD is half that value. Therefore, in this case, all samples below LOD are assumed to be 0.1 ng/m^3.

[3] Estimated cancer risk represents the chances of developing cancer assuming a person is continuously exposed to the average concentrations for a 70-year lifetime.

The potential cancer risk estimates presented here are based on a few months of data and may not represent the annual average concentration that is normally used to estimate cancer risk. The estimated chances of developing cancer are based on the assumption that a person is continuously exposed to the monitored levels of hexavalent chromium for a lifetime (24 hours a day for 70 years).

Supplemental Monitoring Downwind of Carlson & Beauloye

Supplementary 12-hour monitoring is being conducted at four locations downwind of Carlson & Beauloye Machine Shop to determine if hexavalent chromium emissions from this facility are impacting the community at locations other than the original six sites. These sites were selected based on modeling analyses that predicted the location of the maximum potential impact of emissions from Carlson & Beauloye. The sites are operated during the 12-hour period that meteorological conditions would carry emission to those locations. These sites began monitoring during a phased-in period from March 29 through May 3 and will continue through May 24. A total of 105 samples have been

analyzed through May 12. Of those, 92 samples (88%) had values below the level of detection (LOD) and 13 samples (12%) had readings at or above the LOD. The average of all samples was below the LOD. A summary of the 12-hour samples at these locations is shown below.

Summary of 12-Hour Monitoring to Evaluate Carlson & Beauloye Emissions Impact

Sampling Location	March 29 - May 12 (Samplers started March 29 - May 3)		
	No. of samples	Hexavalent Chromium (ng/m^3) [1] Average[2]	Highest
2168 Newton	45	0.29	1.2
2196 Newton	30	0.22	0.5
2141 Main	10	0.20	0.2
2141 Main (co-located)	10	0.22	0.4
2191 Main	10	0.20	0.2
Average for all sites	105	0.25	

[1] Nanograms per cubic meter

[2] In calculating the average concentrations, it is standard practice to assume that any sample detected below the level of detection (LOD) is half that value. Therefore, in this case, all samples below LOD are assumed to be 0.2 ng/m^3 for 12-hour samples.

Indoor Air Sampling Results at Master Plating

During the time of April 6 – May 12, 2002 there was continued indoor air monitoring at Master Plating. On April 6, the highest indoor concentration of this study, 2315 ng/m^3, was measured. Field notes by SDAPCD inspectors indicated that construction work was being done inside of Master Plating during this time. A summary of the indoor testing results is shown below.

Summary of Indoor Sampling Results at Master Plating

April 6 - May 12	12-Hour Samples	24-Hour Samples
Number of Samples	23	25
Lowest Concentration (ng/m^3)[1]	0.2	0.1
Highest Concentration (ng/m^3)[2]	2315	330
Average Concentration (ng/m^3)[3]	152.1	21.6

[1] Nanograms per cubic meter

[2] The highest 12-hour concentration and 24-hour concentration were not measured on the same day.

[3] In calculating the average concentrations, it is standard practice to assume that any sample detected below the level of detection (LOD) is half that value. Therefore, in this case, all samples below LOD are assumed to be 0.1 ng/m^3 for 24-hour samples and 0.2 ng/m^3 for 12-hour samples.

NEXT STEPS

The air sampling study ends May 24, 2002. SDAPCD will distribute the results of the additional monitoring not included in this fact sheet to local officials and residents as

soon as possible. The SDAPCD will continue to evaluate chrome plating operations and other facilities in the Barrio Logan neighborhood.

The Superior Court is expected to rule on the County of San Diego's and SDAPCD's request for a preliminary injunction ordering Master Plating to cease chrome plating operations on May 24, 2002. A final ruling on that request has not yet been scheduled.

ARB is proceeding to collect additional information on emissions from chrome plating operations in the State. ARB will use that new information and the information gathered in this study to evaluate the current statewide Air Toxic Control Measure to determine if revisions are needed. Any new requirements that may be proposed would apply to all chrome platers in California.

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