

THE  
COHEN  
GROUP



September 6, 2019  
Project No. 18178

Mr. Tony Constantouros  
General Manager  
Kensington Police Protection and Community Services District  
217 Arlington Avenue  
Kensington, California 94707

Re: Community Center Park – 59 Arlington Avenue, Kensington

Dear Mr. Constantouros:

On September 11, 2018, at the request of Kensington Police Protection and Community Services District (KPPCSD) The Cohen Group conducted an air monitoring survey for asbestos during simulated activities at the Community Center Park to disturb the ground surface was being disturbed and generating airborne dust. The survey was conducted by Tim Bormann, CIH and Nancy Gonzalez, MS of The Cohen Group. Eileen Nottoli, KPPCSD Board Member was on site at the time of the survey. In addition to air sampling bulk samples were collected to determine the presence of naturally occurring asbestos in the soil of the park. This brief report provides a summary of activities, findings and conclusions. Briefly, 2 of the 3 air samples collected found detectable though low concentrations of airborne asbestos fibers during simulated activities to disturb the ground and generate dust.

## **LIMITATIONS**

The Cohen Group has prepared this report for the exclusive use of Kensington Police Protection and Community Services District (KPPCSD). The work was performed within the limitations set forth in the Agreement as to the degree of care, amount of time and expense, and any other limitations contained in the Agreement. No other representation, warranty or guarantee, expressed or implied, is included or intended in this report.

The findings in this report are based on our observations of conditions and simulated activities at the park on the day of the survey and on information provided by representatives of KPPCSD. The findings presented in this report are limited by the numbers of samples collected, precision of the sampling equipment and collection and analytical methods that were used and the conditions established during the simulation. However, to the best of our knowledge, the findings constitute a reasonable and accurate assessment of airborne concentrations of airborne asbestos fibers on the survey date, under the conditions established and observed during the monitoring.

### **SITE CONDITIONS AND ACTIVITIES**

An approximate 35 foot by 32 foot portion of the Community Center park is located on a hillside on the east side of the park. On the east side of this small parcel is a large rock, which KPPCSD suspected to be serpentine and thus potentially asbestos containing. The rock is approximately 3 feet wide and 3 feet high. The slope of the hill is estimated to be less than a 20% grade. This parcel has some straggly plants and weeds, with bare soil and small rocks and pebbles. In general, the top side of the hill below the rock has looser soil than at the bottom of the hill closer to the side walk.

According to a former director of the Kensington After School Enrichment Program (KASEP) and Summer Camp Program, in Summer Camp children typically would sit and talk on/around the rock for 15-20 minutes while other kids were in directed play in other areas in the vicinity of the rock. During KASEP, there were no directed playing activities on the rock and kids might play in the area for about 15 minutes. The former director indicated only passive activities were seen around the rock with no active disturbance of the ground around the rock.

In order to simulate activities by park visitors to this area, The Cohen Group performed various activities to create airborne dust. Activities included stomping in dirt, scuffling rocks and soil with shoes. In addition, garden rakes were used to scuff up the rocks and soils throughout the parcel. These actions were continued for approximately 2 ½ hours. The activities of The Cohen Group most likely represented worst case conditions for both time and the amount of dust generated. There is no information to suggest that visitors would spend up to 2 ½ climbing and jumping from the rock.

During the simulation, two area samples and one personal air sampling were collected. The area samples were approximately 20 feet apart on the north and south side of the parcel, approximately 25 feet from the top of the parcel. The personal sample was connected to a Cohen Group investigator's waist to approximate the height of a child playing in the area. The investigators were actively disturbing the ground while the air sample was being collected. The area samples were approximately 4 feet above ground.

## **SAMPLE METHODOLOGY**

Air samples provide a means of estimating average airborne contaminant concentrations during the monitored period. There are two basic approaches to air monitoring: area and personal sampling. Personal samples allow estimation of individual exposure during the sampled interval, while area samples allow estimation of the average concentration in a given location during the sampled interval. Both personal and area samples were collected during the investigation.

Air samples were collected using assemblies that consisted of sampling media (glass tubes containing charcoal sorbent) connected with Tygon tubing to portable, battery-operated air sampling pumps. Sampling air flow rates were set before and checked after monitoring to ensure consistent operation. Air samples were collected using sampling assemblies that consisted of air sampling pumps connected with Tygon tubing to contaminant-specific sampling media; 25-milimeter, 0.45 micron, mixed cellulose ester filters that were analyzed for asbestos fibers. Sample air volumes were calculated from the average measured flow rate and the duration of the sampling period.

Bulk samples were collected from the designated site to determine the presence of naturally occurring asbestos in the park parcel. The samples were placed in plastic baggies for analysis. The samples were analyzed for asbestos content in accordance with California Air Resources Board (CARB) method 435.

Following sampling, the air samples were sealed, labeled and delivered with a completed chain of custody to an independent, NVLAP-accredited laboratory for analysis. Personal and area samples collected during were analyzed by Phase Contrast Microscopy in accordance with NIOSH method 7400 and Transmission Electron Microscopy in accordance with NIOSH Method 7402 by transmission electron microscopy (TEM). The PCM method (NIOSH 7400) counts all fibers of a certain size (5 microns or greater in length, with a minimum 3:1 length-to-width ratio), including asbestos and non-asbestos fibers. NIOSH method 7402 counts all asbestos particles with diameter greater than 0.25 microns that meet the definition of a fiber (aspect ratio  $\geq 3:1$ , longer than 5 microns).

## **FINDINGS**

Airborne fiber concentrations for the personal and two area samples collected during approximately 2 ½ hour sampling period during simulated activities to disturb the ground at the park indicated low levels of airborne asbestos. Asbestos fiber concentrations ranged from none-detect to 0.012 asbestos fiber/cc. The personal sample had the highest concentration (0.012 f/cc) from 7402.

The bulk samples indicated that the presence of low levels of naturally-occurring asbestos at the park parcel. Two of five samples indicated that less than 0.25% chrysotile asbestos was found in the soil matrix samples. 0.25% is the limit of detection, therefore less than 0.25 is the limit of quantification. Three samples were none-detect for asbestos.

As an exposure reference analytical results may be compared to applicable Cal/OSHA worker exposure limits. In addition the U.S EPA in Title 40 CFR Part 763 established clearance limit of 0.01 fiber/cc in schools following asbestos abatement. Concentrations below this limit are acceptable for re-occupancy.

### CONCLUSIONS

Based on our simulation, though measurable levels of asbestos were found, this most likely does not create a significant health hazards to park visitors who may climb the rock, or run up and down the hill alongside the rock. The Cohen Group performed aggressive means of testing in an attempt to generate airborne dust by performing activities that would purposely disturb the soil including trampling and scuffing the soil as well as aggressive raking through the area for a period of 2 ½ which represents worst case conditions. Typical activities observed in the area such as jumping on rock and running/walking up and down the hill for as much as one hour would produce airborne levels of asbestos much lower than what was measured, if measureable at all.

### RECOMMENDATIONS

Although we conclude that this area does not produce a significant health hazard to further reduce potential exposure to asbestos, KPPCSD could explore adding top soil and drought resistant vegetation to the hillside below the rock.

Please let us know if you have any questions.



Nancy Gonzalez, MS  
The Cohen Group



Tim Bormann, CIH, CAC, FAIHA  
The Cohen Group



**Table 1**  
**Air Monitoring for Asbestos**  
**59 Arlington Park Parcel**  
**Kensington Community Center Park**  
**Kensington, CA**  
**Samples Collected: September 11, 2018**

<b>Sample Number</b>	<b>Location</b>	<b>Volume (liter)</b>	<b>PCM Fibers/cc</b>	<b>Asbestos Fibers Counted</b>	<b>TEM Fibers/cc</b>
K1	Area – Northside of parcel	436	0.016	2	0.005
K2	Area – Southside of parcel	413	<0.007	<3	<0.007
K3	Personal – during simulation activities to generate dust	450	0.021	5	0.012

PCM – Phase contrast microscopy – NIOSH 7400 method

TEM – Transmission Electron Microscopy – NIOSH 7402 Method

Note: Sampling time was approximately 11:00 am to 1:30 pm

**Table 2**  
**Summary of Asbestos Analysis of Bulk Samples**  
**59 Arlington Park Parcel**  
**Kensington Community Center Park**  
**Kensington, CA**  
**Samples Collected: September 11, 2018**

<b>Sample Number</b>	<b>Location</b>	<b>Appearance</b>	<b>Asbestos</b>
9-11-1	West face of rock	Brown stone/soil	None Detected
9-11-2	Southside of rock	Brown stone/soil	None Detected
9-11-3	North backside of parcel	Brown stone/soil	None Detected
9-11-4	South ground middle of parcel	Grey-Green stones	Chrysotile <0.25% in matrix`
9-11-5	Center area of parcel	Grey-Green stones	Chrysotile <0.25% in matrix

Analyzed in accordance with Air Resources Board Method 435

< refers to limit quantification. 0.25% is the limit of detection and that asbestos was detected.