



Mold, Asbestos  
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Radon, IAQ  
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Expert Witness

## Post Construction Air Quality Summary Report

<b>REPORT DATE:</b>	October 3, 2019
<b>CLIENT:</b>	Dr. James Tarwater
<b>JOB SITE ADDRESS:</b>	Sierra House Elementary School 1709 Remington Trail South Lake Tahoe, CA 96150



**Prepared by:**

**Premier Environmental Consulting (PEC)**

Nate Seward, PE, CIH  
EPA & IICRC Instructor (WRT & AMRT)  
Professional Mechanical Engineer (M31978)  
Certified Industrial Hygienist (9582 CP)  
Certified Radon Tester #108180RT  
Licensed Asbestos Abatement Consultant (I-1923)  
Fire & Smoke Restoration Technician (IICRC)



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**Dr. Tarwater**  
**Lake Tahoe Unified School District**  
1021 Al Tahoe Blvd.  
South Lake Tahoe, CA 96150  
Phone: (530) 541-2850 ext. 1039

**Subject: Post Construction Air Quality Results**  
Sierra House Elementary School  
1709 Remington Trail  
South Lake Tahoe, CA 96150

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Dear Dr. Tarwater,

At your request, Mr. Nate Seward, Certified Industrial Hygienist and staff of **Premier Environmental Consulting** (PEC) performed various air quality testing at the subject site to determine the site conditions after the remediation activities and major reconstruction of the subject site. Various samples were collected including asbestos, Carbon Monoxide, Ozone, soot/ash/char or combustion products, mold, lead and VOCs. Samples were collected using various methodologies and analytical methods that were submitted to LA Testing/EMSL labs, Natural Link Mold Lab, nationally certified laboratories.

Combustion By-Products (i.e. soot, ash, char) – Air samples were collected in various portions of the school including the upper pod, lower pod, MRP/hallway and admin areas of the school. In our opinion, the results indicated ash/soot and char particulates were within a background or normal concentrations. These results were taken in mid August 2019 during major construction activities.

Carbon monoxide & Ozone – These air quality constituents were also checked in September 2019 as potential, yet unlikely byproducts from the fire. The subject site was still in the process of reconstructing activities (i.e. flooring, painting, insulation, etc.) in many areas that had been demolished/renovated as a result from the fire in late 2018 including the upper pod classrooms, MPR/hallway and administrative areas. A handheld ozone and carbon monoxide meter were used and sampling was performed within all of these construction areas and additionally in the lower pod classrooms and in all Portables 1-7. The readings from the Carbon monoxide meter were 0ppm with no indication of carbon monoxide present within the areas tested. The ozone concentrations throughout the school ranged between 0 – 0.01ppm. These results are not surprising as these constituents are generally found immediately after a fire and the school has had major construction activities ongoing for at least 8 months not to mention aggressive air flushing performed has been performed. No concerns were related to these findings.

Asbestos – Air and surface asbestos samples were collected before and after the asbestos abatement process had occurred. The abatement was performed in various locations with clearance sampling performed using Transmission Electron Microscopy (TEM) in accordance with AHERA regulations. No concerns were noted regarding the asbestos abatement activities.



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Mold Sampling - As a precautionary measure, PEC collected non-viable mold samples within the property to determine the mold concentrations. The samples were forwarded to a certified Laboratory for non-viable analysis. The following is a table revealing the results from the sampling. Please refer to Attachment 1 for a copy of the laboratory results.

**Non-Viable Air Sample Results**

Sample ID	Sample Location	Total Spores (sp/m <sup>3</sup> )	Dominant or Spores of concern
0	Outside (used for comparison purposes)	1789	<i>Basidiospores</i> 870 <i>Cladosporium</i> 400 <i>Ascospores</i> 270 <i>Penicillium/Aspergillus</i> 130 <i>Smuts/Myxomycetes</i> 93 <i>Chaetomium</i> 13 <i>Oidium</i> 13
1	Portable Classroom 1	27	<i>Cladosporium</i> 27
2	Portable Classroom 2	370	<i>Basidiospores</i> 200 <i>Cladosporium</i> 130 <i>Smuts/Myxomycetes</i> 40
3	Portable Classroom 3	27	<i>Basidiospores</i> 27
4	Portable Classroom 4	343	<i>Basidiospores</i> 200 <i>Cladosporium</i> 130 <i>Oidium</i> 13
5	Portable Classroom 5	27	<i>Cladosporium</i> 27
6	Portable Classroom 6	197	<i>Basidiospores</i> 130 <i>Cladosporium</i> 67
7	Portable Classroom 7	570	<i>Basidiospores</i> 400 <i>Ascospores</i> 130 <i>Smuts/Myxomycetes</i> 40

sp/m<sup>3</sup> = spores per cubic meter

The outside baseline sample (which is used to compare to the inside samples) was within a normal fungal mycology for outdoor environments. All other air samples looked to be within background. Based on the findings from our assessment, it is our opinion that mold concentrations were within background and do not suggest remediation is warranted.

**Overall Conclusions** – Thorough and detailed remediation and abatement activities have been performed by Belfor throughout this project as it relates to the damage caused by the original fire. Precautionary measures (containment, decontamination chambers, HEPA air scrubbers, critical barriers, etc.) were also taken throughout the reconstruction of the project to eliminate cross contamination of environmental and/or construction debris to other parts of the school. Environmental monitoring and clearance sampling was performed throughout the project to ensure the remediation efforts were completed in accordance with industry standards and procedures. Environmental samples were collected at the conclusion of each phase and at the conclusion of the project with the results revealing that all concerned environmental hazards were non detect and/or below regulatory standards.



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If you have any questions or concerns regarding the information provided, please do not hesitate to call us at 775.298.2679 or my cell phone at 805.432.4888.

Respectfully submitted,

**Premier Environmental Consulting (PEC)**

A handwritten signature in blue ink, appearing to read "Nate", is positioned above a horizontal line.

**Nate Seward, PE, CIH**

Professional Mechanical Engineer  
Certified Industrial Hygienist (9582 CP)  
Certified Radon Tester (#108180RT)  
NV Asbestos Abatement Consultant (I-1923)

A handwritten signature in blue ink, appearing to read "Kevin", is positioned above a horizontal line.

**Kevin Hanson, CAC, B.A.**

DOSH Certified Asbestos Consultant (No. 14-5171)  
Lead Inspector/Assessor (I-23829)  
Senior Staff Hygienist