

DEALING WITH ASBESTOS IN ORANGE COUNTY PUBLIC SCHOOLS



GRAND JURY 2015-2016

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<https://en.wikipedia.org/wiki/Asbestos>, Web 13 June 2016.

Figure 2. Asbestos Fibers (Scanning Electron Microscope)

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EXECUTIVE SUMMARY

Over two-thirds of Orange County's nearly 600 K-12 public schools have encapsulated asbestos present in one or more of the buildings on their school campuses. Orange County's school districts are of widely varying sizes and have facilities of varying ages. However, the presence of encapsulated asbestos is not limited to a few larger and older school districts; all but one of the twenty-eight Orange County school districts have asbestos present in at least one of their schools or administrative buildings.

The 1986 Asbestos Hazard Emergency Response Act (AHERA) established Federal regulations related to asbestos hazards applicable to all schools specifically including public, public charter, private non-profit, and religious schools. The Act was designed to assure that school districts maintain awareness of where asbestos is located in their schools and that if asbestos is present that it does not present an immediate hazard to students and staff. The Grand Jury found in its investigation of how Orange County school districts deal with asbestos that all districts are diligent in meeting the key AHERA requirements, but that many fall short of full compliance with all relevant AHERA regulations.

Asbestos is a hazardous material that poses significant health risks when its microscopic fibers are not safely encapsulated or when normally safe asbestos-containing materials are disturbed. There is no established safe exposure level to breathing microscopic asbestos fibers. Asbestos fibers embedded in cement, asphalt, and vinyl materials are said to be "encapsulated" when they are firmly bound into materials in good condition. Such fibers typically will be released into the air only if the material is damaged mechanically, for example through drilling, cutting, grinding, or sanding, or through wear and tear of unprotected and exposed surfaces. Asbestos in roofing shingles and siding exposed to weathering may slowly deteriorate and has the potential to release fibers. An impermeable barrier that isolates any asbestos-containing material from an environment that people might occupy is an acceptable form of encapsulation.

The Grand Jury strongly cautions that current EPA standards provide the mere presence of encapsulated asbestos at a school site does not present any immediate danger to schoolchildren or staff at the site.

However, the presence of encapsulated asbestos does call for *continued awareness* of where the asbestos is located, for *extreme care to not disturb encapsulated asbestos* during modifications or repairs of a facility, and for *continued monitoring* for wear and tear of asbestos-containing materials. Districts must know how to inspect for, contract for, schedule, and manage removal (abatement) of asbestos and other hazardous materials prior to and during construction work.

Twenty-one Orange County school districts are embarking on modernization and repair construction efforts affecting existing facilities, the time of greatest risk of asbestos exposure from encapsulated asbestos present in those facilities. The scope of planned construction efforts in just three districts of these twenty-one districts is quite impressive. Measure H was approved in 2014 for a \$249 million bond for Anaheim Union High School District, Measure E was approved in 2016 for a \$319 million bond for Irvine Unified School District, and proposals are being prepared for up to \$889 million in bonds for Capistrano Unified School District. Most of the planned efforts funded by these bonds will be for modernization and repair of existing facilities, not new construction.

The Grand Jury in this report makes detailed recommendations to Orange County school districts to establish documented and transparent processes to comply fully with AHERA requirements, to establish disciplined contracting processes for safely removing asbestos and other hazardous materials, and to commit to plans to remove asbestos from all Orange County schools.

BACKGROUND

Scope of This Report

Safety of children is a concern of everyone in Orange County. Children spend the greatest amount of time away from their home and family in the schools they attend. The 2015-2016 Orange County Grand Jury conducted an investigation of Orange County public school safety issues related to the hazardous material asbestos. Public schools within the scope of this investigation were grades K-12, including public charter schools. Note that some school districts include preschool and pre-K classes, and these classroom facilities are also in the scope of this report. Private schools are not within the scope of this report, nor are private residences used for “home-schooling” or “on-line-learning”. The investigation examined implementation at the local school district levels of legal requirements for dealing with asbestos. The Grand Jury also looked at best practices for school districts for dealing with asbestos during facility modification, modernization, or repair, and for communicating with their parents, staff, and other community stakeholders on asbestos related activities.

Prior Orange County Grand Jury Reports on School Safety

Orange County Grand Juries have examined issues related to aspects of safety in public schools but none (going back to 1999) investigated potential hazardous materials in these schools. The three reports that did investigate safety in OC schools looked at the following topics:

- Bullying (“ANTI-BULLYING PROGRAMS IN ORANGE COUNTY SCHOOLS”)

- Emergency Preparedness (“Orange County Public Schools: Are they Prepared for Emergencies”)
- Disaster Planning (“ORANGE COUNTY SCHOOLS DISASTER PLANS”)

Reason for this Report’s Focus on Asbestos as a School Safety Issue

Student safety in schools involves an enormous range of potential topics for investigation such as bullying, the physical security of campus sites, earthquake and fire threats, and health related issues. The issue of how well Orange County schools are prepared to deal with asbestos-containing materials if present on their campuses came to the Grand Jury’s attention when problems with asbestos had a major impact on the Ocean View School District, as was extensively reported in local news stories in 2014-2015. The topic of hazardous materials covers much more than asbestos, as the Ocean View district learned when its asbestos remediation efforts had to be expanded to deal with the presence of lead and mold in the buildings where asbestos was being removed. Other hazardous materials that potentially might be found on school campuses include pesticides and other toxic chemicals.

Additional reasons the Grand Jury chose to narrow the focus of this school safety investigation to only asbestos include:

- The regulatory environment for asbestos is well established.
- The organizational allocation of authority and responsibility for dealing with asbestos in school districts will apply to other hazardous materials.
- The processes and best practices that should be in place to deal with asbestos will in general apply to school district processes for other hazardous materials.
- Remediation efforts for dealing with removal of any hazardous material all involve similar methodologies of inspection, record keeping, isolation of hazardous materials if they are found, movement of students and staff away from areas where hazardous materials are being removed, and protection for the workers doing the removal.
- Remediation of asbestos will almost always involve simultaneous remediation of other potential hazards such as lead, mold, and chemical contamination of soils and buildings.

Organizational Structure of Orange County School Districts

The size and complexity of public education in Orange County presents a challenge for Grand Jury investigations. Public education for grades K-12 in Orange County is an enormous enterprise serving over 500,000 students spread over a 782 square mile area. In addition to the Orange County Department of Education, there are 27 independently managed and financed school districts in the county. Total annual expenditures for these students exceed \$5.4 billion.

Over 23,000 teachers are responsible for these students’ education, supported by over 20,000 management/administrative/support staff (Orange County Schools at a Glance). Figures in this section and Appendix E of the report use data from the Orange County Department of Education (OCDE) and provide statistics on the number and types of Orange County schools (Directory 2015-2016) and on racial and ethnic diversity of students (Racial & Ethnic Survey 2012-2013).

The 27 independent school districts in Orange County are structured along three different models: elementary districts generally serving grades K-8 students, high school districts generally serving grades 9-12 students, and unified districts serving grades K-12 students. Table 1 shows how the 27 school districts are organized in these categories.

Table 1. Independent School District Organizational Structures

| | |
|------------------------------------|-----------|
| Elementary School Districts | 12 |
| Unified School Districts | 12 |
| High School Districts | 3 |
| Total | 27 |

As shown in Table 2, these 27 districts plus the schools managed by the Department of Education comprise almost 600 schools. Each of these school campuses may have several buildings for education, with each building having multiple classrooms. In addition to classroom buildings, most campuses will have administrative/office buildings, laboratories, cafeterias and other food preparation and service areas, gyms, and maintenance buildings. All of these facilities fall within the purview of this report.

Table 2. Several Different School Types Comprise Each District

| | |
|---|------------|
| Elementary Schools | 392 |
| Junior High/Intermediate/Middle Schools | 83 |
| Senior High Schools | 68 |
| Continuation/Alternative/Special Education Schools | 36 |
| Charter Schools | 19 |
| Total | 598 |

Table 3 shows the instructional grade distribution of the half-million Orange County K-12 student population.

Table 3. Student Population Distribution by Grades

| | |
|--------------|----------------|
| K-8 | 336,502 |
| 9-12 | 163,985 |
| Total | 500,487 |

Orange County public schools serve a very diverse population of students in terms of racial and ethnic backgrounds. Twenty of the twenty-eight Orange County school districts are attended by more than 20% Hispanic students, and nearly half (13 of 28) are attended by more than 50 % Hispanic students. Nearly one-third (10 of 28 districts) of Orange County districts have greater than or equal to 20% Asian students. This diversity in the communities served can present difficulties in communication when dealing with potentially contentious topics related to hazardous materials. See Appendix E for more detailed information on the racial and ethnic diversity of the Orange County school population and for a more detailed breakout of that diversity by individual school district, which varies greatly from district to district.

What is Asbestos and Why is It a Hazard to Health?

Asbestos, its Mineralogy and Uses

Asbestos is a naturally occurring mineral, which is often in turn embedded in other minerals. Figure 1 shows one such asbestos-containing mineral, serpentine. (The ruler shown in the figure is one centimeter.) Ironically, as one person the Grand Jury interviewed pointed out, serpentine is the official state rock of California.

Asbestos has been used in thousands of products, largely because it is plentiful, readily available, cheap, strong, does not burn, conducts heat and electricity poorly, and is resistant to chemical corrosion. Some of the most common uses of asbestos containing materials include: fireproofing, insulation, and acoustical or soundproofing. Asbestos has also been added to asphalt, vinyl, cement and other materials to make products like roofing felts, exterior siding and roofing shingles, wallboard, pipes for water supply, combustion vents, and flues for waste gases and heat. Fibers in asbestos cement, asphalt, and vinyl materials are usually firmly bound into materials in good condition and typically will be released only if the material is damaged mechanically - for example through drilling, cutting, grinding, or sanding. In addition, asbestos in roofing shingles and siding exposed to weathering may slowly deteriorate and has the potential to release fibers. Appendix C provides an extensive overview of asbestos, its mineralogy, and its uses.



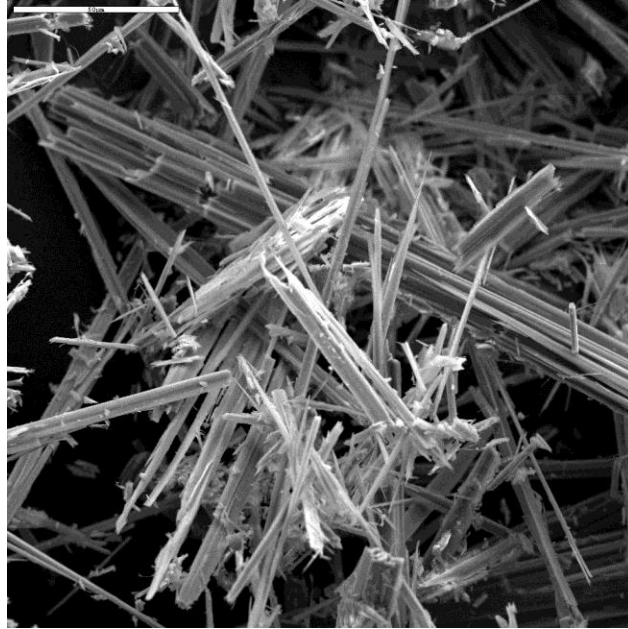
Source: Wikipedia

Figure 1. Serpentine (Crocidolite), a Mineral Source of Asbestos.

What are the Risks of Asbestos Exposure?

Unfortunately, despite its positive characteristics as a widely used material, asbestos is now well recognized as a health hazard, and its use is highly regulated by both the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA). Asbestos fibers associated with these health risks are roughly one tenth the width of a human hair and too small to be seen with the naked eye. Figure 2 below shows the microscopic needle-like asbestos fibers.

Multiple studies show that breathing in asbestos fibers leads to increased risk of developing several diseases. Asbestos-related diseases include asbestosis, lung cancer, mesothelioma, and other cancers. It is important to recognize that the majority of people who have developed diseases because of asbestos exposures are former asbestos workers exposed for long periods to breathing these fibers. The National Institute for Occupational Safety and Health (NIOSH) has determined, however, that there is no established safe level of exposure. Appendix D provides a more extensive discussion of the health risks associated with asbestos.



Source: Wikipedia

Figure 2. Asbestos Fibers (Scanning Electron Microscope)

The Regulatory Environment for Asbestos

The Federal Asbestos Hazard Emergency Response Act (AHERA) imposes regulations related to asbestos hazards on all public schools. Effective implementation of AHERA is the key to dealing with the potential hazards of asbestos in Orange County public schools. This is accomplished via written policies and procedures established by the County Department of Education and by the 27 independent school district boards and their District Superintendents' offices, training of personnel, and monitoring for compliance with these policies and procedures. The federal government does not delegate authority for dealing with AHERA compliance to individual states.

Enabling Federal Legislation

The Toxic Substances Control Act (TSCA) was enacted by the 94th United States Congress effective on October 11, 1976. TSCA is administered by the United States Environmental Protection Agency (EPA) to regulate the introduction of new or already existing chemicals. Title I of the original program establishes the core program, directs the EPA to control risks from polychlorinated biphenyls (PCBs), and bans certain activities with respect to elemental mercury. Title II of the TSCA, "Asbestos Hazard Emergency Response" was enacted by the US Congress in 1986. It authorizes the EPA to impose requirements for asbestos abatement in schools and requires accreditation of those who inspect for asbestos-containing materials.

Laws and Regulations

The EPA provides a web page with an excellent overview of the laws and regulations pertaining to asbestos implemented by the EPA and certain other federal agencies (Asbestos Laws and Regulations). Below is an extract from that overview, focusing on these laws and regulations as they apply to schools:

EPA Asbestos-Related Laws

The Asbestos Hazard Emergency Response Act (AHERA) (Toxic Substances Control Act (TSCA) Title II) required EPA to promulgate regulations (e.g., the Asbestos-Containing Materials in Schools Rule) requiring local educational agencies to inspect their school buildings for asbestos-containing building material, prepare asbestos management plans and perform asbestos response actions to prevent or reduce asbestos hazards. See Appendix F for a sample asbestos management plan (referred to as an AHERA report in this Grand Jury document) from one school in Orange County. AHERA also tasked EPA with developing a model plan for states for accrediting persons conducting asbestos inspection and corrective-action activities at schools.

The Asbestos School Hazard Abatement Reauthorization Act (ASHARA) extended funding for the asbestos abatement loan and grant program for schools. ASHARA also directed EPA to increase the number of training hours required for the training disciplines under the Asbestos Model Accreditation Plan (MAP) and to expand the accreditation requirements to cover asbestos abatement projects in all public and commercial buildings in addition to schools.

EPA Asbestos-Related Regulations

Asbestos-Containing Materials in Schools Rule (40 CFR Part 763, Subpart E): Pursuant to the Asbestos Hazard Emergency Response Act (AHERA), the Asbestos-Containing Materials in Schools rule requires local education agencies to inspect their school buildings for asbestos-containing building material, prepare asbestos management plans and perform asbestos response actions to prevent or reduce asbestos hazards. Public school districts and non-profit private schools, including charter schools and schools affiliated with religious institutions (collectively called local education agencies) are subject to the rule's requirements.

Occupational Safety and Health Administration (OSHA) Regulations

OSHA oversees the working conditions for U.S. workers by implementing and managing occupational safety and health standards. The following regulations pertain to handling asbestos in the workplace.

Asbestos General Standard—Specification of permissible exposure limits, engineering controls, worker training, labeling, respiratory protection, and disposal of asbestos waste.

Asbestos Construction Standard—Covers construction work involving asbestos, including work practices during demolition and renovation, worker training, disposal of asbestos waste, and specification of permissible exposure limits.

AHERA Requirements

On October 22, 1986, Congress promulgated the Asbestos Hazard Emergency Response Act (AHERA), Public Law 99-519. AHERA mandated that EPA develop regulations to respond to asbestos in schools. On October 30, 1987, EPA promulgated the Asbestos-Containing Materials in Schools Rule (referred to as the AHERA Rule), 40 CFR Part 763, Subpart E. This rule requires that all of the nation's nonprofit elementary and secondary schools, both public and private, inspect their school buildings for asbestos-containing-building-materials (ACBM), develop a plan to manage the asbestos for each school building, notify parents and staff regarding management plan availability, and provide asbestos awareness training to school maintenance and custodial workers.

The governing authority responsible for AHERA compliance is the Local Education Agency (LEA). "Local Education Agency" means either any local educational agency as defined in Section 198 of the Elementary and Secondary Education Act of 1965 (often called school district), the owner of any private, non-profit elementary or secondary school building, or the governing authority of any school operated under the Defense Department's education system.

Responsibilities of the AHERA Designated Person

A guide titled, "How to Manage Asbestos in School Buildings: The AHERA Designated Person's Self Study Guide" published January 1996 by the US EPA, Office of Prevention, Pesticides and Toxic Substances, contains a wealth of information on asbestos and the responsibilities of schools in dealing with it in its 93 pages (How to Manage Asbestos in Schools). One key responsibility called out is that the EPA requires schools to appoint an asbestos management coordinator, called the AHERA "Designated Person" to be responsible for a number of asbestos-related activities, including the implementation of the plan for managing asbestos-containing building materials (ACBM) in the school buildings and compliance with the federal asbestos regulations.

A more detailed list of the responsibilities of the AHERA Designated Person (DP) includes:

- Ensure that all activities of anyone who conducts the following are carried out in accordance with the AHERA requirements: conduct inspections, re-inspections, periodic

surveillance; develops, implements and updates management plans; and plans and implements asbestos-related activities (such as maintenance or removal);

- Ensure that all custodial and maintenance employees are properly trained;
- Ensure that all workers, building occupants, students, and their parents are notified annually about management plan availability and recent and upcoming asbestos-related activities;
- Ensure that short-term workers who may come into contact with asbestos are provided information regarding the location of this asbestos;
- Ensure that all warning labels are posted; and
- Ensure that any conflicts of interest that may arise when selecting accredited personnel to conduct asbestos-related activities are considered.

Designated Person Training

AHERA requires that the DP be adequately trained to carry out his or her responsibilities. Due to the differing needs of school districts based on the size of the district and the amount and condition of the ACBM, AHERA does not list a specific training course or specific number of hours of training for the DP. Further, AHERA does not require the DP to be accredited.

However, the regulations require that the training specifically include the following topics:

- Health effects of asbestos;
- Detection, identification and assessment of asbestos-containing building materials (ACBM);
- Options for controlling asbestos-containing building materials;
- Asbestos management programs; and
- Relevant Federal and State regulations concerning asbestos, including AHERA and its implementing regulations and the regulations of the Occupational Safety and Health Administration, the U.S. Department of Transportation, and the U.S. Environmental Protection Agency.

METHODOLOGY

The Orange County Grand Jury began its investigation by interviewing school board members, parents, and management staff from the Superintendent's office of the Ocean View School District.

Using the lessons learned from these interviews, the Grand Jury then interviewed senior staff of the Orange County Department of Education and a selected set of other OC school districts chosen to provide a cross section of district size, location in the county, and type of district (elementary, high school, unified). Those interviews examined AHERA implementation by those

districts and identified best practices developed by some of the districts for dealing with the asbestos toxic hazard.

Given the large number of school districts in Orange County, the Grand Jury was not able to formally interview representatives of every district. In order to have complete statistical data from all districts, the Grand Jury developed a set of survey questions based on what it learned in its preliminary interviews and from its analysis of applicable EPA AHERA regulations. The Grand Jury sent the survey to all 28 Orange County school districts and was pleased to receive completed surveys from all the districts.

The Grand Jury investigation used several additional sources of information including:

- News media research
- Review of professional and government publications on hazardous materials
- Review of existing asbestos/lead/mold monitoring and control regulations at the federal, state, and local levels
- Review of prior grand jury reports related to school safety, school board responses to those reports, and review of the current implementation of school board safety policies and procedures
- Interview with a representative of a parent teacher association on concerns with hazardous materials at their schools
- Review of hazardous materials inspection reports for timeliness and completeness and for problems found and evidence of remediation
- Review of Asbestos Hazard Emergency Response Act

INVESTIGATION AND ANALYSIS

The Grand Jury looked at many aspects of hazardous materials in public schools starting with gaining an understanding of which materials represent risks to students and school employees. The Grand Jury also reviewed the legal restrictions on the use of potentially hazardous materials and regulations for the proper means to inspect for their presence and for remediation if hazardous materials are found. The Grand Jury conducted interviews with the stakeholders in one school district which had highly publicized issues with asbestos and identified lessons learned and ideas for avoiding a repetition of the problems in other Orange County school districts.

Asbestos-related News Articles Involving Orange County Schools

The asbestos problems that the Ocean View School District dealt with over the last two years were widely reported and led to the original Grand Jury interest in this topic. However, the Grand Jury discovered in its research for this report that other Orange County schools have had asbestos related issues that were also the subjects of local press coverage, just

not reported on as extensively. Asbestos-related issues in Orange County schools periodically come into public awareness and are apparently then forgotten. The experiences of two Orange County school districts with asbestos issues are briefly described below:

- Fullerton Joint Union High School District - Staff and parents at Troy and La Habra high schools were greatly concerned that health and safety may have been compromised by construction contractors during the school modernization process in 1997, 1999 and 2005. Significant, unanticipated asbestos abatement work was necessary at Sonora, Fullerton Union, Troy and La Habra high schools (Firms Sought).
- Brea Olinda Unified School District - Damage from a March 2014 earthquake allowed previously safely encapsulated asbestos at Fanning Elementary School to drift down from ceilings into classrooms and other school areas. Second through sixth grade students were relocated temporarily to Laurel Elementary School while extensive asbestos abatement work was performed (Fanning Elementary).

The Ocean View School District Experience with Asbestos

Extensive press coverage beginning in 2014 on the impact of asbestos related issues on the Ocean View School District led to the initial Grand Jury interest in this topic. The Ocean View School District serves the Orange County communities of Fountain Valley, Huntington Beach, Midway City, Westminster, and Seal Beach. This section of the report provides the timeline of events that occurred in the Ocean View district as that district responded to the discovery of asbestos in three of its schools during its eleven-campus modernization project. The consequences of that discovery had a huge impact on the operations of the district with the closures of three elementary schools, the unplanned costs of relocation and transportation of students from those schools, the use of temporary portable units for classrooms, and the financial impact of unanticipated costs for removing the asbestos. In addition to the immediate costs in dealing with the asbestos issues, the loss of students who transferred from Ocean View to other districts had a direct impact on the financial health of the district, and according to press reports at that time nearly took the district into bankruptcy.

The Grand Jury developed the timeline below based on interviews with Ocean View district staff, school board members, and parents and based on the extensive press reporting of the story as it developed (see selected news articles used in developing the timeline in the Works Consulted section of this report).

- July 2014 - Work begins on \$40 million eleven campus modernization project (financed by \$23 million from the state, a loan of \$10.5 million, and \$6.5 million of internal funding)
- August and September 2014 - Unanticipated asbestos discovered by construction contractor at some school locations, contractor begins to remove the asbestos and then informs school board that it was doing so.
- September 16, 2014 - Parents and school board react strongly at a rescheduled regular board meeting to the discovery of asbestos removal work apparently occurring while students and staff were present at schools.
- October 6, 2014 - District decides to test for asbestos at all eleven campuses.
- October 8, 2014 - District closes three elementary schools (Hope View, Lake View, and Oak View), relocates 1300 students to other schools in the Ocean View School District and to nearby school districts.
- October 21, 2014 - Eight remaining schools are found to be safe for students and district determines to keep those schools open.
- January, 2015 - Oak View Elementary reopens but must use portable classrooms for housing many of the returned students.
- February, 2015 - Unanticipated costs for busing 1300 students, for portable classrooms, and for hazardous materials (asbestos, lead, and mold) remediation estimated to be between \$7.6 to \$11 million.
- February 16, 2015 - Ocean View School District attendance drops by 152 students in first half of school year, which could mean a loss of \$1.3 million in state funding.
- April, 2015 - Hope View Elementary reopens but must use portable classrooms for housing many of the returned students.
- September, 2015 - Hope View fully reopens for all students.
- February, 2016 - Oak View fully reopens.
- September 2016 - Lake View to reopen.

Lessons Learned from the Ocean View Experience

In order to gain an understanding of what contributed to the disruption to the Ocean View School District when it was forced to deal with the discovery of asbestos during modernization efforts at three of its elementary schools, the Orange County Grand Jury met with several stakeholders of the Ocean View School District. The Grand Jury conducted interviews with one or more school board members, parents, and management and facilities staff from the Ocean View Superintendent's office. The objective of both the Grand Jury and of those interviewed was not to assign blame but to gain insights into:

- Root causes of the problems experienced

- Impacts to the school district stakeholders, both the obvious and also those not so readily apparent
- Proactive steps that would have avoided the problems, or at least mitigated the problems, when they occurred
- Dealing with the aftermath of the discovery of asbestos issues
- Communication issues with their community
- Whether other school districts were at risk of repeating the Ocean View experience

Based on these Ocean View interviews the Grand Jury made the following observations:

- School districts are naturally focused on their success in educating their students and do not necessarily have in-depth knowledge of finance, contracting, contract management, and most notably of hazardous materials.
- Authority to issue school bonds is difficult to obtain, and there is a push, including legal requirements, to expend the money quickly while it is available to deal with what are typically long-standing needs. Trying to manage multiple major contracts at the same time presented too big a challenge for Ocean View.
- Small school districts are thinly resourced in personnel. At the time the Ocean View modernization effort started, management of the construction efforts was a part time assignment to one person, who had much more experience as an educator than as a construction manager.
- The District understood the desirability of doing construction work when students and staff were not present, but did not have good mechanisms in place for monitoring progress. This meant there was no schedule slack to deal with unanticipated problems, such as the discovery of asbestos, and no real knowledge of whether work would have been completed on time even if the asbestos problems had not occurred.
- Construction contracts lacked key schedule performance requirements and schedule progress reporting mechanisms.
- The District had lost awareness of the presence of encapsulated asbestos at the schools being modernized.
- The District was not out in front in dealing with the asbestos issue, but was generally in a reactive mode. The initial discovery of unanticipated asbestos removal allegedly occurring while students and staff were present at schools came from the community and this caused great consternation.

Orange County Department of Education Involvement with Hazardous Materials

As part of this investigation, the Grand Jury interviewed senior managers and administrative and facilities managers from the Orange County Department of Education (OCDE). The OCDE provided the Grand Jury with top-level insight into how Orange County schools deal with

hazardous materials and especially the key role that AHERA regulations play in avoiding asbestos issues. The Grand Jury learned somewhat to its surprise in these discussions that although the OCDE provides extensive high-level support services to public schools in Orange County, it has little direct control of the activities, policies, and administrative procedures of the twenty-seven independent school districts providing public education for the County. Each district has its own elected Board of Trustees that manages their district, appoints their own Superintendents, and are quite committed to local control of their schools.

The Orange County Department of Education provides more than support services to Orange County school districts; it operates its own school facilities serving approximately 8,000 students daily and 17,000 students annually. These facilities provide the OCDE's Alternative Community and Correctional Schools and Services (ACCESS) program. Hence, the OCDE has more than an academic interest in hazardous materials in public schools in Orange County. The OCDE must be AHERA compliant for its own facilities.

When the Grand Jury asked if the OCDE was interested in providing such things as hazardous materials training and standard contract language for use in contracting for construction, the OCDE demurred, citing again the local control issues. However, during these discussions the OCDE proposed an excellent idea to the Grand Jury. The OCDE holds monthly "all districts" meetings to foster interchange of information on topics of current interest to OC school districts. The proposed idea was to devote one or more of its all districts meetings to discussions of hazardous materials. The OCDE would take the lead in developing topics for discussion and accumulating relevant materials. Each district would be expected to engage actively in roundtable discussions and share their own lessons learned and the best practices they have adopted for consideration by other districts.

Interviews with Selected School Districts

As part of this investigation, the Grand Jury interviewed senior administrative and facilities managers from a selected set of the independent school districts. The Grand Jury tried to select randomly school districts of different sizes, at varied locations in the County, and which reflected some of the ethnic and racial diversity of the County student population. Below are common discussion points and themes raised in these interviews:

- All districts were acutely aware of the HB Ocean View asbestos experience.
- The general tenor of most discussions was that the district felt they had their asbestos risks well under control, but were reluctant to deal with public concerns that too much transparency and discussion of the topic would entail. The Ocean View experience graphically showed how emotional a topic the risk of exposure to asbestos was to parents and school staff.

- Interestingly, none of the districts brought up the occurrence of asbestos-related problems at other districts in the county besides Ocean View, although the Grand Jury later became aware of several examples in other districts.
- Although each district described what appeared to the Grand Jury to be reasonable “best practices” for dealing with hazardous materials and the contracting process, many relied on the general knowledge and experience of key staff and not on written policies, procedures, and/or guidelines.
- The districts all gave high priority to training on hazardous materials for their facilities staff as well as administrative and teaching staff, and viewed this as the best way of avoiding problems. An interesting resource more than one district pointed out is training provided by their insurance carriers, who have both excellent presentations and trainers on hazardous materials, and who share a common interest in avoiding risks and lawsuits.
- One idea broached by the Grand jury, to post the district’s AHERA reports on line, was largely unpopular and almost immediately rejected. The districts generally appeared to be very concerned about the public’s understanding of the risks of asbestos and about the possibility of creating a public relations problem that would take a lot of time and energy to mitigate.
- The vast majority of Districts were reluctant to get into detail as to how many, if any, of their schools had encapsulated asbestos present. The survey conducted by the GJ (discussed later in this report) subsequently made it clear to the GJ why this reluctance existed. All but one of the twenty-eight Orange County school districts had encapsulated asbestos present in at least one of the schools in their district. However, one initially reluctant district did accept the idea of posting AHERA reports during subsequent discussions on another topic, now seeing a value in transparency and safe preservation of key data.
- More than one district urged the Grand Jury to talk with charter schools about how those schools dealt with hazardous materials. These districts were uncomfortable with how little access they had to knowledge of the day-to-day operations of charter schools while still feeling ultimately responsible for the safety of all students in their district, including the students in the charter schools. Some of these managers expressed concerns that although the charter schools were funded by the public school system, the district had little control or visibility into what the charter schools were doing.
- Generally, the districts felt they were compliant with AHERA regulations. However, the Grand Jury notes that its surveys showed that few districts were actually fully compliant.

Interviews with Selected Charter Schools

Charter schools are authorized by local, county, or state level Boards of Education and funded with local school district monies. However, charter schools are managed by their own Boards of Trustees, and, based on the Grand Jury’s interactions with several charter schools, value their

independence highly. The school districts' areas of concern in their relationships with charter schools expressed to the Grand Jury explicitly included how well these schools dealt with hazardous materials.

The Grand Jury interviewed senior managers from a variety of Orange County charter schools. The charter schools all expressed pride in the special programs they offered. The Grand Jury sought to learn how the schools dealt with potential problems with hazardous materials, with the discussion focused on asbestos. The results of these interviews varied significantly. Some of the larger charter schools had senior managers with decades of prior experience working in large public schools. These managers were deeply knowledgeable about issues related to hazardous materials and of AHERA requirements. These schools also had the good fortune to be well funded and occupied newly constructed and/or completely refurbished facilities that they made sure were free of hazardous materials.

The Grand Jury also interviewed senior staff from several of the smaller charter schools and often found the awareness of hazardous materials issues at these schools far less robust. These schools tended to be small (500 to 1000 students), and often had less experienced senior managers, some of whom were relatively new to their school. Some charter schools occupied commercial or church properties; some charter schools occupied buildings that belonged to their school district. Some of these managers were at best vaguely aware of the hazards of asbestos and several had no clue as to AHERA requirements. These managers tended to rely on and/or assume that the people (school district, church, or commercial property lessors) providing their classroom and administrative facilities would be aware of and fix any issues with hazardous materials if they occurred.

An interview with a senior manager of one charter school provided a key example of the problems that unawareness of the presence of encapsulated asbestos can cause. The charter school decided to replace badly worn carpeting in their teachers' lounge. They hired a DIR-certified contractor to do this relatively minor work. After the contractor started work, he discovered that removing the carpet would expose encapsulated asbestos in the tiles and adhesive under the carpet and immediately stopped work. The charter school informed their school district of the problem encountered, and the district remediated the asbestos so that the carpet replacement could resume. The charter school manager was not aware of, nor could he find for the Grand Jury, any AHERA records for the teachers' lounge that would have warned their contractor of what he might encounter. However, the school district assured the Grand Jury that they would have provided such reports when they chartered the school.

It was clear to the Grand Jury that school districts' concerns with how well their charter schools are prepared to deal with hazardous materials are warranted in some cases. The respective roles and responsibilities of the district and their charter schools for dealing with hazardous materials,

staff training, and AHERA compliance must be clearly laid out by the districts as part of any charter approval process.

Interviews with Environmental Protection Agency

The Grand Jury interviewed senior managers from the Environmental Protection Agency located in the Washington, DC, and Sacramento, California, areas to understand that agency's role in administration and enforcement of regulations for the safe handling of asbestos. The EPA is administered out of Washington, DC, and is further broken into regional offices. Orange County, California, falls within EPA's Region 9, which consists of the states of California, Arizona, Nevada, Hawaii, plus 3 Pacific islands and 140 [Native American] tribes.

The EPA is broadly charged with enforcement of federal environmental regulations dealing with clean water, clean air, hazardous waste, pesticides, and toxic site cleanup. The EPA administers and regulates asbestos through the AHERA and National Emissions Standards for Hazardous Air Pollutants (NESHAP) Act. Although administration of some EPA regulations can be and has been delegated to states, regulations related to asbestos, by federal law, are not delegable to the state level.

Discussions with the EPA made it very clear that *all* schools are required to comply with AHERA regulations, including public schools, public charter schools, private schools, and religious schools. Although not discussed in these meetings with the EPA, the Grand Jury is troubled that some of the charter schools that it interviewed were clearly unaware, and apparently had not been informed by their district, of this fact.

The EPA performs inspections related to AHERA compliance as well as several other areas such as lead paint. However, EPA Region 9 has 60 personnel who inspect for compliance with regulations for all the hazardous materials within its purview including but scarcely limited to compliance with AHERA regulations. The Grand Jury was told that in reality the EPA conducts very few inspections under AHERA, only inspects individual schools within a district, and principally relies on the regulated community to do such inspections. The Grand Jury notes that a discussion of EPA inspections for AHERA compliance never came up voluntarily in its interviews with Orange County school districts. The Grand Jury was unable to locate any facilities personnel who could recall when the last inspection in their district had occurred. Given that Orange County has over 600 public schools and that EPA Region 9 has 60 inspectors for all hazardous materials enforcement, the rarity of AHERA-related inspections and the limitation of inspections to individual schools within a district became readily understandable to the Grand Jury. The EPA was reluctant to discuss how it selects which schools to inspect in order to preserve the element of surprise in its inspections.

Although inspections for AHERA compliance are rare, the EPA does conduct inspections and does have several escalating avenues it uses to enforce compliance:

- An informal “Out of Compliance” letter informs a school of the compliance issue found, asks that the issue be resolved, and warns that an enforcement action could be initiated if non-compliance continues.
- A more formal “Administrative Action” letter requires a school to talk with the EPA, states that a negotiated settlement is expected, and warns that the settlement could include penalties
- The settlement of non-compliance issues could result in an “Enforceable Consent Agreement”.

The conclusion reached by the Grand Jury is that given the limited EPA inspection resources, the only way citizens of Orange County can be assured of compliance with AHERA regulations by its school districts is through constant public awareness and through requiring school districts to develop, document, and enforce their own AHERA compliance programs.

Survey of Orange County Public School Districts Results and Analysis

In its investigation of how Orange County school districts implement the requirements of the Federal 1986 Asbestos Hazard Emergency Response Act (AHERA), the Grand Jury met with stakeholders of the Ocean View School District including one or more School Board members, parents, and management staff from the Superintendent’s office. Using the lessons learned from these interviews, the Grand Jury then interviewed representatives from a selected set of other Orange County school districts chosen to provide a cross section of district size, location in the County, and type of district (elementary, high school, unified). However, given the large number of school districts in Orange County, the Grand Jury was not able to formally interview representatives of every district.

In order to have comprehensive statistical data from all districts, the Grand Jury developed a set of survey questions based on what it learned in its preliminary interviews and from its analysis of applicable EPA regulations. The Grand Jury assured responders that survey results would be reported in the aggregate without attribution of specific responses to the individual districts that comprise the summarized data. Appendix G provides the survey questions.

The Grand Jury sent the survey to the Orange County DOE plus the 27 independent Orange County school districts and received completed surveys from all the districts. Key results and findings from the survey are discussed below.

Number of Schools with Asbestos Present

Early in its investigation the Grand Jury discussed whether the presence of asbestos in the Ocean View School District might have been an extremely rare occurrence. Unfortunately, this turned out not to be the case. Interviews with senior managers of a selected number of school districts quickly indicated to the Grand Jury that asbestos was a problem for more than just the Ocean View School District, although no one district was aware of the extent of the problem across Orange County. The results of the survey of all 28 school districts ended any Grand Jury optimism that problems with asbestos were isolated to only a few schools.

All but one of the 28 school districts in Orange County have asbestos present in one or more of their schools/buildings, and the presence of asbestos is not limited to a small number of schools in each district. As shown in Figure 3, well over two-thirds of the nearly 600 Orange County schools have encapsulated asbestos present in one or more of their buildings.

The Grand Jury again cautions that current EPA standards provide that the mere presence of encapsulated asbestos at a school site does not present any immediate danger to schoolchildren or staff at the site. However, the presence of encapsulated asbestos calls for each school district to maintain continued, active awareness and knowledge of the types of asbestos present, where the asbestos is located, and when asbestos removal needs to be undertaken. In addition, school districts must assure that they hire and closely monitor contractors who are qualified to properly remove (abate) hazardous materials prior to construction work and who know how to avoid disturbing encapsulated asbestos during repairs or modifications of a facility.

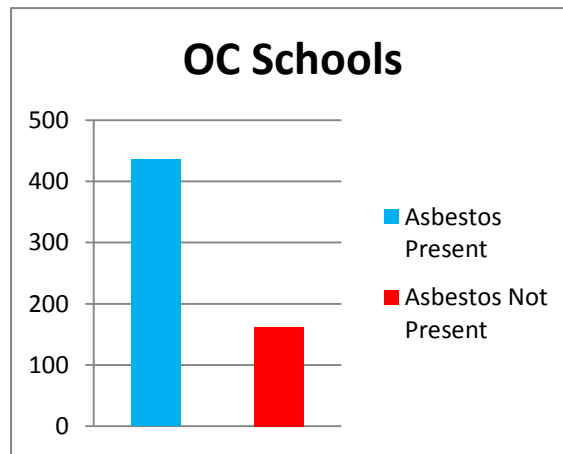


Figure 3. Over Two-thirds of Orange County Schools Have Asbestos Present

The survey (results not shown graphically) also revealed that progress in being made in removing asbestos from schools in Orange County, albeit slowly. At the time of the survey,

asbestos abatement work was in progress in four school districts, affecting a total of 22 schools in those districts.

AHERA Records

Based on the survey, the Grand Jury found that Orange County public schools are compliant with some top-level AHERA regulations, with all 28 districts having current AHERA reports available in a central location for each district. However, five districts do not comply with the requirement that each school have a copy of its own applicable AHERA reports available at the main office at each school. On a positive note, two school districts have chosen to place their AHERA reports on-line. The Grand Jury notes with appreciation this effort towards transparency. In addition to the benefits of transparency, placing AHERA reports on-line provides insurance against misplacing these documents or their loss in a fire or other natural disaster, so long as the data is backed up in a remote location.

AHERA Designated Persons and Training

On a much less positive note with respect to AHERA requirements, as shown in Figure 4, barely half of the school districts meet the AHERA requirement for a “Designated Person” at each school site. A Designated Person is required to be knowledgeable of and have received a minimum level of training in AHERA regulations.

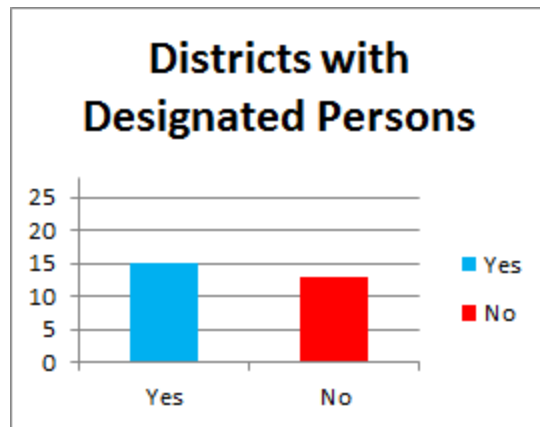


Figure 4. School Districts with AHERA “Designated Person” at Each School in District

Equally disappointing as shown in Figure 5 is the low fraction (less than half) of school staff who receive training on hazardous materials. The Grand Jury notes that it learned during its interviews with school districts that *facilities* staff are generally trained at least once per year, so this weakness is mostly in training of other teaching and administrative staff.

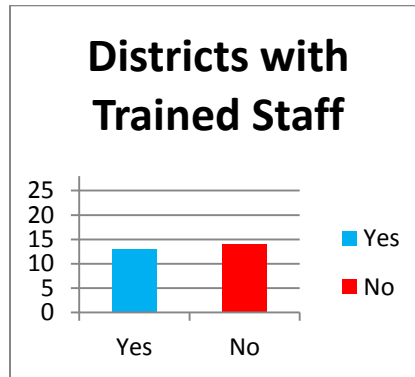


Figure 5. School Districts that Train Staff on Hazardous Materials

Facilities Management

Based on the survey (results not shown graphically), the Grand Jury found that 24 out of the 28 school districts have at least one full time person with facilities management as his/her main job duty, and four of the districts that lack a full time facilities manager have at least one part time facilities manager. Three of the districts with only a part time facilities managers are smaller districts (under 10,000 students), but the Grand Jury did find it surprising that one district with only a part time facilities manager has a student population of over 20,000 students.

Based on the survey (results not shown graphically), 14 districts have both a full time manager plus one or more part time staff with facilities management responsibilities.

Facilities Records

Based on survey results (not shown graphically), the Grand Jury found that 24 of the 28 districts do maintain a consolidated database listing such basic information as each school's facilities/structures, dates of construction, dates of major modifications and/or repairs, and dates of last AHERA inspection. Somewhat surprisingly, 4 districts did not have even this basic information easily accessible. Of the 24 districts that have a facilities database, 12 databases exist only on paper and hence are subject to loss and are difficult to maintain. Only one of the 28 districts posts its facilities information on-line, which, as the Grand Jury has noted earlier, is the best protection against misplacement or loss of this key information.

Facilities Plans

Based on survey results, as shown in Figure 6, over half of the Orange County school districts have plans to build new facilities in their district. Stringent building codes enforced at many levels of the government will preclude the introduction of asbestos containing materials into these new buildings.

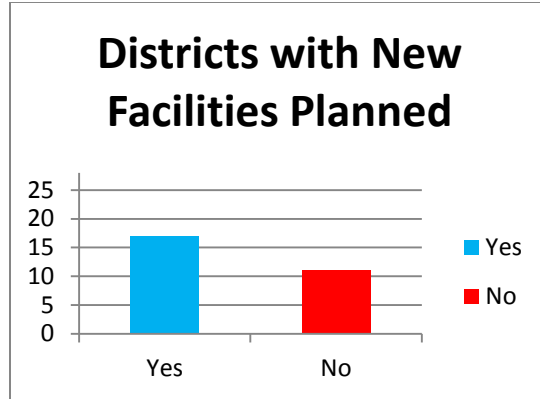


Figure 6. Districts with Plans to Build New Facilities

In addition to new facilities, based on survey results shown in Figure 7, 20 districts plan modernization/major repair efforts, which will involve asbestos abatement at one or more of their schools. All 20 of these districts have progressed in planning to the point of estimating the costs for these efforts. For 13 of these costed efforts, the districts have also identified the funding sources for the work and developed schedules for implementation. In addition to modernization/major repair efforts, which will include asbestos abatement as part of a much larger effort, three districts, are planning facilities work at one or more schools specifically targeted to asbestos abatement. However, only one of these three districts has a completed plan with cost estimates, funding sources, and implementation schedules for this abatement work. Based on these survey results, the Grand Jury sees a commitment for continuing asbestos abatement activities at over two-thirds of the Orange County school districts in the coming years.

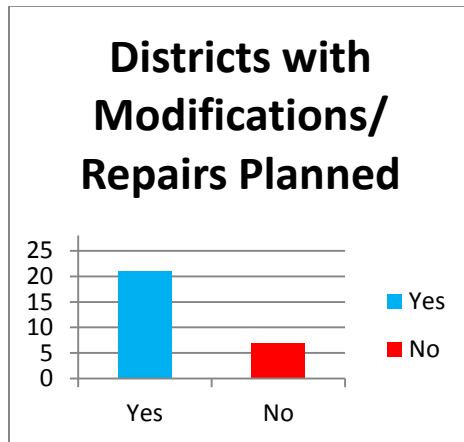


Figure 7. Districts Planning on Major Modifications/Repairs to Their Schools

An interesting result of the survey is that all but one of the Districts' plans for major facilities modifications/repairs will include asbestos abatement at one or more of the schools in their

district as part of these plans. This is not surprising given the presence of asbestos in so many schools in Orange County; many major modifications/repair efforts necessarily will be to buildings with asbestos present.

Given the prevalence of asbestos in Orange County schools, somewhat more surprising is how few districts have any plans specifically targeted to the abatement of asbestos. See Figure 8. The prevailing idea appears to be that it makes more economic sense to do asbestos abatement as part of a larger facilities modernization/major repair effort.

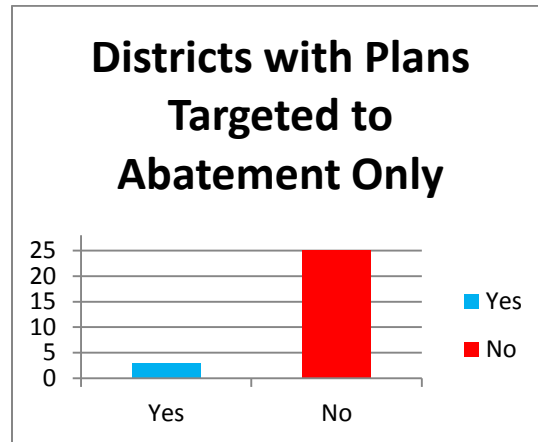


Figure 8. Districts with Abatement-Only Plans

Construction Management

The survey questions related to facilities construction management explicitly asked about the existence of *written* policies and procedures. This emphasis on written documentation reflects the Grand Jury’s strong conviction that a policy/procedure/“common practice” that relies on staff corporate memory/tradition is extremely vulnerable to being lost when staff turns over. One example supporting this concern is the survey question about scheduling construction work for times when students are not present. Although interviewees almost universally volunteered that they tried to schedule work for when students were not present, the survey had only two responders who said they had a written requirement to do this. Similarly, although most interviewees indicated that they made a point of contracting with three separate companies for inspections, abatement, and the construction following abatement, only nine of the 28 districts had a written requirement to do so. Only slightly more than half the districts had written policies requiring explicit schedule performance, including intermediate milestones, in their construction contracts. More details on construction related survey results are presented in the paragraphs below.

Four districts lack written requirements to use California Department of Industrial Relations (DIR)-certified contractors, even though this is a State requirement. However, based on interviews, all districts appear to be aware of and follow this requirement. A best practice cited by most districts interviewed is to limit construction activities to times when students are not present – weekends, breaks, or summer recesses depending on the duration of the planned construction effort. However, the survey showed that documented requirements for following this best practice are nearly universally missing. See Figure 9.

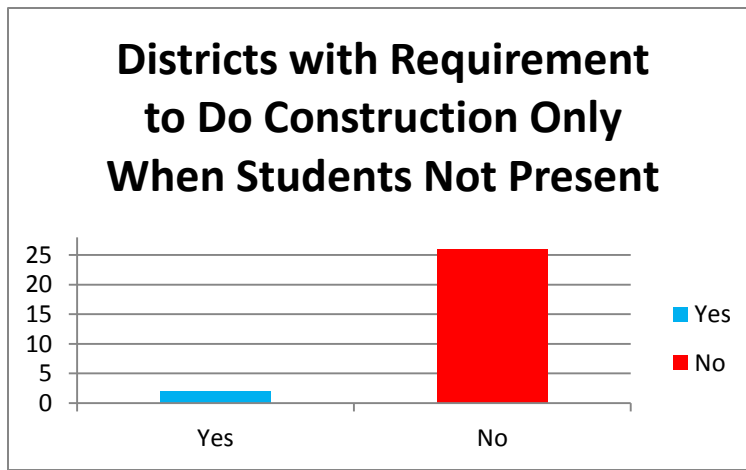


Figure 9. Districts with Written Requirement to do Construction When Students are not Present

Another best practice cited by most districts interviewed is to limit the scope of construction activities being undertaken at one time to the management resources available for active oversight of all construction efforts. However, the survey showed that *documented* requirements for following this best practice are nearly universally missing. See Figure 10.

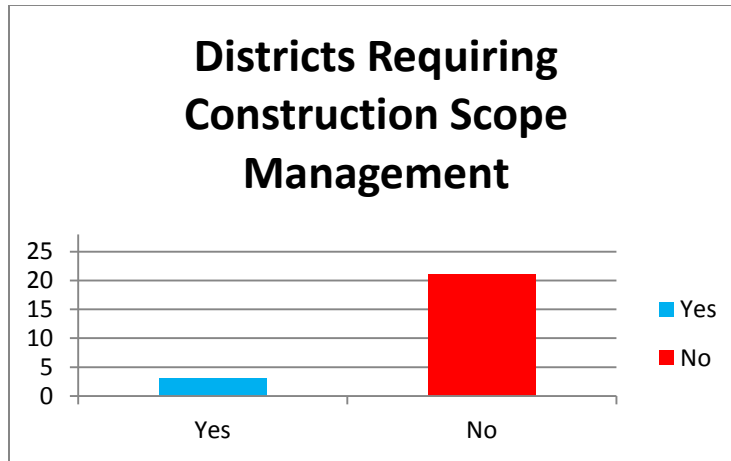


Figure 10. Districts with Documented Requirement to Match Construction Scope to Available Resources to Actively Manage the Work

Another best practice followed by many of the districts is to separate the three construction-related activities of inspecting for hazardous materials, abatement of hazardous materials if an inspection reveals their presence, and the actual construction work. This approach avoids any potential conflicts of interest among the contractors and assures a clear delineation of scope of effort for each contractor. Although many districts follow this best practice, only a third of them have documented the requirement for doing so (See Figure 11.) Note that although the contracted efforts are separated, the contractor doing the abatement work necessarily will have to coordinate work schedules with the building contractor.

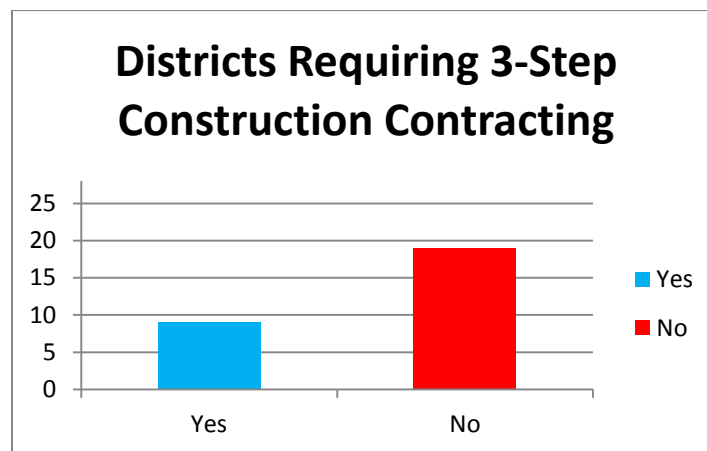


Figure 11. Districts with Documented Requirement to Separately Contract for Abatement

Given that including schedule performance requirements in contracts is a fundamental element of successful contracting, the Grand Jury was surprised to learn that over a third of Orange County school districts did not have a written policy to include explicit schedule performance requirements in their contracts. This lack is particularly concerning given the strong desire for

schools to do construction work when students are not present. Schedule slips are worrisome in any contract, but slipping school construction work into times when students will be present can severely impact school operations. As Figure 12 shows, over a third of OC school districts lack a written policy to include the appropriate schedule performance requirements in their contracts.

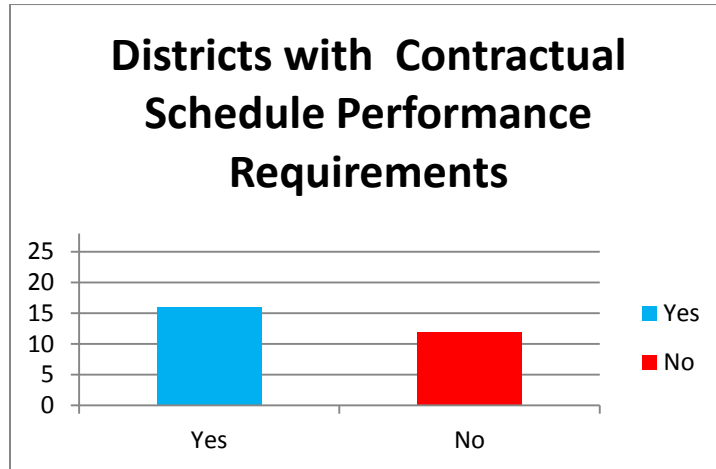


Figure 12. Districts Specifying Schedule Performance in Contract

The only way to stay on top of longer, time critical construction efforts is to define milestones and dates for completed steps along the way to accomplishing the total effort. As Figure 13 shows, barely more than half of OC school districts have a written policy to include intermediate schedule milestones in their longer-duration contracts.

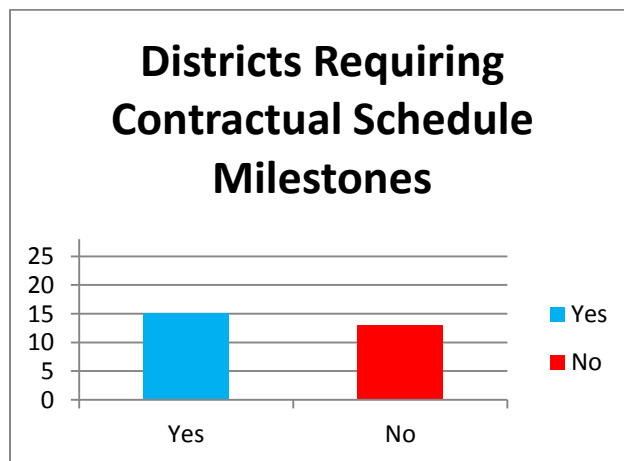


Figure 13. Districts Requiring Intermediate Schedule Performance Milestones

One very positive result found in the survey is that all but one school district has explicit policy direction that facilities management staff personally monitor construction progress through on-site walk-throughs at the construction locations.

Community Communications

The survey asked each district if it in its communication with its stakeholders (parents, students, community, and via its web site) the district provided key information in languages other than English. Given the high ethnic and language diversity in OC schools, the Grand Jury was pleased to learn that 22 districts do make the effort to communicate with their non-English speaking stakeholders. However, the Jury was surprised that two schools replied that they communicate only in English and that four schools feel that such non-English communication is “not applicable” to them. The Grand Jury notes with disapproval that all six of these “English-only communications” school districts have combined Hispanic and/or Asian minority populations exceeding 50% of their total student population. (See Tables 4 and 5 in Appendix E, which detail Orange County the racial and ethnic diversity of Orange County Schools.) The Grand Jury is aware that members of ethnic or cultural minorities may in fact be quite proficient in English, but also believes that this may not be the case for all members of such groups and that outreach to these stakeholders is much needed. Survey results are shown in Figure 14.

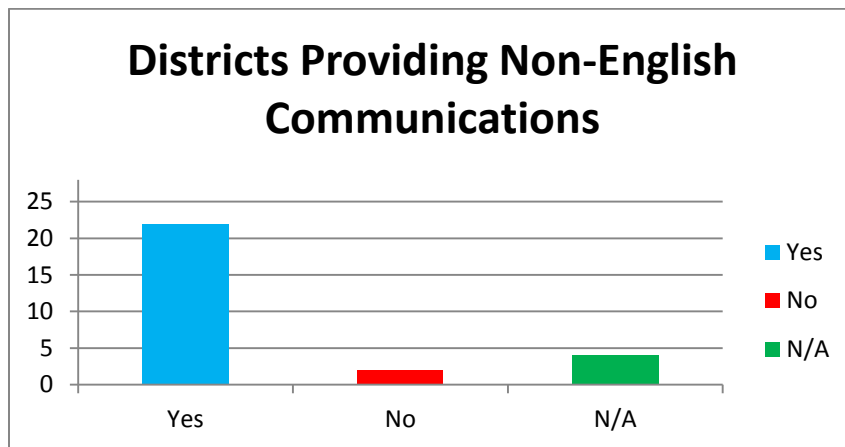


Figure 14. Districts Providing Non-English Communication with Their Community

Language issues aside, the survey showed that only five districts have a written policy to notify their communities about upcoming construction activities. For only three of these five districts did their policy explicitly require notification of abatement activities. Given general community concerns with safety at their schools, a lack of transparency by school districts about upcoming construction activities, and especially if those activities will involve abatement of hazardous materials, has been shown to cause great concern. Openness by school districts should mitigate

such community concerns; it is always better to deal with issues up front than to do damage control after the fact.

FINDINGS

In accordance with *California Penal Code* Sections 933 and 933.05, the 2015-2016 Grand Jury requires (or, as noted, requests) responses from each agency affected by the findings presented in this section. The responses are to be submitted to the Presiding Judge of the Superior Court.

Based on its investigation titled “Dealing with Asbestos in Orange County Public Schools”, the 2015-2016 Orange County Grand Jury has arrived at twelve principal findings, as follows:

Note that the Findings below often make general assertions about Orange County school districts. Each District should respond to these general findings only as each Finding applies to their district and not speculate as to the applicability of the Finding to other districts.

- F1.** All but one of Orange County’s twenty-eight school districts have (encapsulated) asbestos present at one or more its schools.
- F2.** Although current EPA standards provide that encapsulated asbestos does not present an immediate hazard to people who come near it, any physical disturbance and/or weathering which damages that encapsulation and releases asbestos fibers into the air will present an immediate hazard to anyone exposed to those fibers. Hence, broad-based awareness of where encapsulated asbestos is located is essential to avoid disturbing it such that it does become a threat to students and staff.
- F3.** Many school districts are not in full compliance with the AHERA regulatory requirement to have applicable AHERA reports available in the main offices of each school for public review.
- F4.** Many school districts are not in full compliance with the AHERA regulatory requirement to identify at each school in their district a “Designated Person” and to train each Designated Person to EPA-defined standards.
- F5.** Although nearly all school districts train their facilities and maintenance staff on hazardous materials management, many fail to provide hazardous materials training to their teaching and administrative staff.
- F6.** Orange County public schools are subject to very infrequent EPA inspections for AHERA compliance.
- F7.** Inadequately managed construction efforts at more than one Orange County public school have led to expensive and disruptive hazardous materials events. Many Orange County school districts lack one or more *documented* requirements for contracting for construction

that implement generally recognized best practices for dealing with hazardous materials. Such written best practices include:

- a. Performing all work at schools that deals with, or potentially deals with, hazardous materials at times when students and staff are not present,
 - b. Controlling the scope of construction/modernization/major repairs undertaken in any one year to remain within the district's ability to manage the efforts,
 - c. Separately contracting for hazardous materials inspection, abatement, and construction work once hazardous materials are abated,
 - d. Including clear schedule performance requirements in every contract,
 - e. Defining intermediate schedule milestones for all construction-related work that is expected to take over one month to complete, and
 - f. Requiring monitoring by district senior staff of progress on construction work via personal walkthroughs of the work in progress.
- F8.** Many school districts with public charter schools approved and financed by their district, lack, and have not provided their charter schools with, written definitions of the respective roles and responsibilities of the district and the charter school in dealing with hazardous materials and with AHERA regulatory compliance.
- F9.** Many school districts rely on paper documents for recording key information such as facilities data, facilities construction and repair plans, and AHERA reports.
- F10.** Some school districts have no documented facilities plans, and many districts that have plans lack key information in their plans such as estimated costs, funding sources, and schedules for work initiation and completion.
- F11.** Many school districts fail to post key safety-related information on their web sites such as upcoming activities at school facilities involving the abatement of hazardous materials.
- F12.** Despite the fact that all Orange County school districts serve highly language-diverse communities, several districts have no provision for communicating with their community in any language other than English.

RECOMMENDATIONS

In accordance with *California Penal Code* Sections 933 and 933.05, the 2015-2016 Grand Jury requires (or, as noted, requests) responses from each agency affected by the recommendations presented in this section. The responses are to be submitted to the Presiding Judge of the Superior Court.

Based on its investigation titled “Dealing with Asbestos in Orange County Public Schools”, the 2015-2016 Orange County Grand Jury makes the following twenty recommendations:

- R1.** Each school district should request the Orange County Department of Education to devote, in the year following publication of this Grand Jury report, one or more of its monthly “all districts” meetings to discussion and advice on handling hazardous materials. Representatives from each school district should participate in these meetings, and discussions should cover, AHERA compliance, resources available for in-depth AHERA training, and contract management. **(F1, F2, F3, F4, F5, F6, F7, F8)**
- R2.** Each school district should within nine months of the publication of this Grand Jury report develop and document a communications plan for parents and other stakeholders and post the plan on its web site. The plan should identify what information will be provided and by what means this communication will be accomplished. The plan should address how issues relating to hazardous materials will be communicated, and in what languages, to ensure effective communication. **(F10, F11, F12)**
- R3.** Each school district should within nine months of the publication of this Grand Jury report create and have a process in place to use and keep up-to-date their web site communications with parents and stakeholders of that district. **(F9, F10, F11)**
- R4.** Each school district should develop and maintain a computerized database listing all district buildings and structures and post that information on its web site. The database should contain the following for each building: date and types of construction, dates and costs of major repairs and modernization, numbers and sizes of classrooms, lists of other facilities including offices, lounges, gyms, cafeterias, laboratories, computers and other data processing equipment, and playground equipment. **(F9, F10)**
- R5.** Each school district should within nine months of the publication of this Grand Jury report create a comprehensive baseline plan for school facilities construction including new construction, retirement of schools or buildings at schools, modernization, hazardous materials abatement, and major repairs. Each effort should include estimated cost, planned funding source and status, and schedule for start and completion of work. This plan should be updated annually and posted on the district’s web site. **(F9, F10)**
- R6.** Each school district should within nine months of the publication of this Grand Jury report create a plan, identifying funding sources, to remove all asbestos from schools and other facilities in their district within twenty years or sooner and report progress on this plan annually at its board meetings. If the removal of asbestos would include removal of other hazardous materials as part of the same effort, the plan should describe this. **(F1, F2, F10)**

- R7.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements to budget for and perform AHERA inspections every three years. **(F6)**
- R8.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements to make available at the main office of each school in its district the AHERA reports applicable to that school. **(F3, F6)**
- R9.** Each district should within nine months of the publication of this Grand Jury report appoint an EPA-defined “Designated Person” at each school, and provide the EPA-required training for those persons. **(F4, F6)**
- R10.** Each district should within nine months of the publication of this Grand Jury report identify the hazardous materials training requirements for management, facilities (including maintenance contractors if they are used), and administrative personnel, and teaching staff in its district. Each district should maintain records on the training provided, including content, to whom it was provided, when it was provided, who provided it, qualifications of trainer(s). **(F5)**
- R11.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements to schedule and complete any work involving hazardous materials for days when students and staff are not present in the affected areas. **(F7)**
- R12.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements for district schools to contract separately for hazardous materials inspections, remediation/abatement of those materials, and the actual construction in areas requiring remediation . **(F7)**
- R13.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements for district schools to include schedule performance requirements in every contract for repairs, modernization, and/or new construction. Intermediate schedule milestones should be defined in every contract for all work anticipated to take longer than one month to complete. **(F7)**
- R14.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements for district schools to monitor contractor schedule performance. Such monitoring should be via personal staff walk-throughs of work in progress. Procedure should require every contractor to report monthly on that contractor’s performance in meeting schedule milestones and report on the current estimated date of completion of all work. **(F7)**

- R15.** Each district with current plans for modernization and/or major repairs to school facilities which lack schedules for completion, which lack cost estimates, and/or which fail to identify funding sources should within nine months of the publication of this Grand Jury report update its plans to include these data. **(F10)**
- R16.** Each district should within nine months of the publication of this Grand Jury report share all site specific AHERA inspection data with all prospective bidders on repair, modernization, and/or new construction at that site. **(F7)**
- R17.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements to maintain all current AHERA reports electronically with a backup at one remote location, and not rely exclusively on paper copies. **(F9, F10)**
- R18.** Each district should within nine months of the publication of this Grand Jury report document and implement requirements to make its AHERA reports available on that district's web site. **(F9)**
- R19.** Each district should within nine months of the publication of this Grand Jury report prepare written procedures for district charter schools clearly defining roles and responsibilities for facilities maintenance including the handling of hazardous materials. The procedures should address how district charter schools will pay for, achieve, and maintain AHERA compliance (e.g., AHERA inspections, identification and training of AHERA Designated Person(s), and availability of AHERA reports), **(F8)**
- R20.** Each district should within nine months of the publication of this Grand Jury report prepare and implement written procedures defining roles and responsibilities for contracting for and monitoring performance of all construction activities at district charter schools. **(F8)**

REQUIRED RESPONSES

The California Penal Code §933 requires the governing body of any public agency which the Grand Jury has reviewed, and about which it has issued a final report, to comment to the Presiding Judge of the Superior Court on the findings and recommendations pertaining to matters under the control of the governing body. Such comment shall be made no later than 90 days after the Grand Jury publishes its report (filed with the Clerk of the Court). Additionally, in the case of a report containing findings and recommendations pertaining to a department or agency headed by an elected County official (e.g. District Attorney, Sheriff, etc.), such elected County official shall comment on the findings and recommendations pertaining to the matters under that elected official's control within 60 days to the Presiding Judge with an information copy sent to the Board of Supervisors.

Furthermore, *California Penal Code* Section §933.05 subdivisions (a), (b), and (c) detail, as follows, the manner in which such comment(s) are to be made:

(a) As to each Grand Jury finding, the responding person or entity shall indicate one of the following:

(1) The respondent agrees with the finding.

(2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) As to each Grand Jury recommendation, the responding person or entity shall report one of the following actions:

(1) The recommendation has been implemented, with a summary regarding the implemented action.

(2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.

(3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the Grand Jury report.

(4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

(c) If a finding or recommendation of the Grand Jury addresses budgetary or personnel matters of a county agency or department headed by an elected officer, both the agency or department head and the Board of Supervisors shall respond if requested by the Grand Jury, but the response of the Board of Supervisors shall address only those budgetary /or personnel matters over which it has some decision making authority. The response of the elected agency or department head shall address all aspects of the findings or recommendations affecting his or her agency or department.

Comments to the Presiding Judge of the Superior Court in compliance with *Penal Code* Section §933.05 are required or requested from:

Responses Required:

Responses are required from the following governing bodies within 90 days of the date of the publication of this report:

Required Responses - Findings

Responses to the twelve principal findings are required the governing bodies of the twenty-seven independent Orange County School Districts.

Required Responses - Recommendations

Responses to the twenty recommendations are required from the governing bodies of the twenty-seven independent Orange County School Districts.

Responses Requested:

Requested Responses – Findings

Responses to the 12 principal findings are requested from the governing body of the Orange County Department of Education, from the Superintendent of the Orange County Department of Education, and from the Superintendents of the twenty-seven independent Orange County School Districts

Requested Responses - Recommendations

Responses to the 20 recommendations are requested from the governing body of the Orange County Department of Education, from the Superintendent of the Orange County Department of Education, and from the Superintendents of the twenty-seven independent Orange County School Districts.

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APPENDICES

Appendix A: Acronyms

ACBM - Asbestos-Containing Building Materials
ACCESS – Alternative Community and Correctional Schools and Services
ACM - Asbestos-Containing Material
AHERA - Asbestos Hazardous Emergency Response Act
ASHARA - Asbestos School Hazard Abatement Reauthorization Act
DIR – Department of Industrial Relations
DOT - Department of Transportation
EPA - Environmental Protection Agency
HSD – High School District
K - Kindergarten
LEA - Local Education Agency
MAP - Asbestos Model Accreditation Plan
NESHAP - National Emission Standard for Hazardous Air Pollutants
NIOSH - National Institute of Occupational Safety and Health
O&M - Operations and Maintenance
OCDE – Orange County Department of Education
OSHA - Occupational Safety and Health Administration
PCM - Phase Contrast Microscopy
PLM - Polarized Light Microscopy
TEM - Transmission Electron Microscopy
TSCA - Toxic Substances Control Act
USD – Unified School District

Appendix B: Glossary

Asbestos abatement - generally means any demolition, renovation, repair, construction or maintenance activity that involves the repair, enclosure, encapsulation, removal, salvage, handling, or disposal of any asbestos-containing material (ACM) with the potential of releasing asbestos fibers from asbestos-containing material into the air. *Note that in the context of this report abatement of asbestos means its safe removal and is essentially synonymous with remediation, which also implies removal and not mere encapsulation.*

Asbestos remediation - the removal of damaged asbestos materials and fibers prior to building demolition or remodeling.

Asbestos-Containing Material (ACM) -- Any material or product that contains more than one percent asbestos.

Asbestos-Containing Building Material (ACBM) -- Surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a school building.

Encapsulation - Treatment of asbestos-containing materials (ACM) with a sealant material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers.

Friable ACBM -- Material that may be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friable ACBM also includes previously nonfriable material when it becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

Nonfriable ACBM -- Material that, when dry, may not be crumbled, pulverized, or reduced to powder by hand pressure.

Surfacing ACM -- Interior ACM that has been sprayed on, troweled on, or otherwise applied to surfaces (structural members, walls, ceilings, etc.) for acoustical, decorative, fireproofing, or other purposes.

Thermal System ACM -- Insulation used to control heat transfer or prevent condensation on pipes and pipe fittings, boilers, breeching, tanks, ducts, and other parts of hot and cold water systems; heating, ventilation, and air-conditioning (HVAC) systems; or other mechanical systems.

Miscellaneous ACM -- Other, mostly nonfriable, products and materials (found on structural components, structural members or fixtures) such as floor tile, ceiling tile, construction mastic for floor and ceiling materials, sheet flooring, fire doors, asbestos cement pipe and board, wallboard, acoustical wall tile, and vibration damping cloth. Undamaged non-friable ACBM should be treated as friable if any action performed would render these materials friable. When previously non-friable ACBM becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure, it should be treated as friable.

Appendix C: Asbestos Overview

Characteristics of Asbestos

Asbestos is comprised of a group of natural minerals that are resistant to heat and corrosion. Unlike other minerals, however, the crystals of asbestos form long, thin fibers. Once extracted from the earth, asbestos-containing rock is crushed, milled (or ground), and graded. This produces long, thread-like fibers of material. What appears to the naked eye as a single fiber is actually a bundle of hundreds or thousands of fibers, each of which can be divided even further into tiny fibers (fibrils), invisible without the aid of a microscope.

Uses of Asbestos

Asbestos has been used in thousands of products, largely because it is plentiful, readily available, cheap, strong, does not burn, conducts heat and electricity poorly, and is resistant to chemical corrosion. Products made with asbestos are often referred to as asbestos-containing materials (ACM).

Asbestos proved particularly useful in the construction industry. Building materials that contain asbestos are referred to as asbestos-containing building materials (ACBM). Commercial usage of asbestos products in the construction industry was most common from about 1945 to 1980. Some of the most common uses of ACBM include:

- Fireproofing material -- Usually spray-applied to steel beams used in construction of multi-story buildings to prevent structural members from warping or collapsing in the event of fire.
- Insulation material -- Usually spray-applied, trowel-applied, or manually installed after being preformed to fit surfaces such as pipes for thermal insulation and condensation control.
- Acoustical or soundproofing material -- Trowel- or spray-applied. May also be used for decoration. Asbestos was mixed with other materials and sprayed onto ceilings and walls to produce a soft, textured look.
- Miscellaneous materials -- Asbestos has been added to asphalt, vinyl, cement and other materials to make products like roofing felts, exterior siding and roofing shingles, wallboard, pipes for water supply, combustion vents, and flues for waste gases and heat. Fibers in asbestos cement, asphalt, and vinyl materials are usually firmly bound into materials in good condition and typically will be released only if the material is damaged mechanically -- for example through drilling, cutting, grinding, or sanding. In addition, asbestos in roofing shingles and siding exposed to weathering may slowly deteriorate and has the potential to release fibers.

Examples of the more common ACBM found in schools are flooring, vinyl base, mastic, roofing materials, gaskets in heating and air-conditioning equipment, ceiling panels and tiles, wallboard, joint compound, plaster, pipe and boiler insulation, duct-wrap insulation, duct joint tape, duct vibration dampening cloth, fireproofing on structural members, fire brick for boilers, fire doors, acoustical spray-on, cement pipes, and panels.

Friable vs. Nonfriable ACBM:

Friable ACBM will release fibers into the air more readily than nonfriable ACBM. Therefore, the AHERA Rule differentiates between friable and nonfriable ACBM. The regulations define friable ACBM as material that may be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friable ACBM also includes previously nonfriable material when it becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure. Undamaged non-friable ACBM should be treated as friable if any action performed would render these materials friable. When previously non-friable ACBM becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure, it should be treated as friable.

Appendix D: Asbestos Health Hazards

Health Effects Associated with Asbestos Exposure

The health effects associated with asbestos exposure have been studied for many years. Results of these studies show that inhalation (breathing in) of asbestos fibers leads to increased risk of developing several diseases. Exactly why some people develop these diseases remains a mystery, but it has been well demonstrated that most asbestos-related illnesses are dose-response related (i.e., the greater the exposure to airborne asbestos fibers, the greater the risk of developing an illness).

Relative Hazards of Asbestos Exposure

Asbestos is well recognized as a health hazard and its use is now highly regulated by both OSHA and EPA. Asbestos fibers associated with these health risks are too small to be seen with the naked eye. Breathing asbestos fibers can cause a buildup of scar-like tissue in the lungs called asbestosis and result in loss of lung function that often progresses to disability and death. Asbestos also causes cancer of the lung and other diseases such as mesothelioma of the pleura which is a fatal malignant tumor of the membrane lining the cavity of the lung or stomach. Epidemiologic evidence has increasingly shown that all asbestos fiber types, including the most commonly used form of asbestos, chrysotile, causes mesothelioma in humans. There is no "safe" level of asbestos exposure for any type of asbestos fiber.

Almost daily, we are exposed to some prevailing level of asbestos fibers in buildings or experience some existing level in the outdoor air. Some fibers that are inhaled remain in the lungs. Brief "bursts" of exposure, when added to the background level, increase the potential to cause or trigger the development of an asbestos related disease. These brief bursts of exposure occur in many ways. For example, when a carpenter drills a hole in an asbestos fire door without taking any precautions, an increased amount of asbestos may be released into the air. The more often these bursts of exposure occur, the greater the risk of breathing asbestos fibers.

People most at risk for this additional exposure are maintenance and construction workers who work on and disturb asbestos in buildings. This clearly demonstrates the need for an active asbestos policy and an ongoing operations and maintenance (O&M) plan for buildings that contain ACBM.

It is important to recognize that the majority of people who have developed diseases because of asbestos exposures are former asbestos workers. These workers were frequently exposed to high levels of asbestos fibers each working day, with little or no protection. Today's asbestos maintenance workers and AHERA-trained asbestos abatement workers are trained to follow specific work practices and wear appropriate protection, including respirators, to minimize the risk of exposure. However, increased risk may occur when a worker who does not use a respirator or follow specific work practices disturbs any ACBM.

The Respiratory System

The effects of asbestos exposure most often involve the lungs. Air breathed into the body passes through the mouth and nose, continuing into the windpipe. The windpipe divides into smaller and smaller tubes that end up in the lungs as air sacs called alveoli. It is in these air sacs that respiration occurs. Oxygen is absorbed into tiny blood vessels (or capillaries), and waste gases, such as carbon dioxide, pass out of the blood and are exhaled.

The body has several mechanisms to "filter" the air it breathes. First, large particles are removed in the nose and mouth. Many smaller particles are caught on the mucus-coated walls of the airway tubes. These airways have "hairy" linings (ciliate cells) that constantly propel mucus upward. Particles caught in the mucus are swept up into the back of the mouth. From here they are swallowed or expelled (spit out). Unfortunately, cigarette smoking temporarily paralyzes these hair-like cells, disabling one of the body's natural defenses against unwanted dust or fibers. Despite natural bodily defenses, some dust particles inevitably reach the tiny air sacs in the lungs. When this occurs, the human immune system dispatches large cells called macrophages to engulf the particles and "digest" them. These cells deposit a coating on the particles and may begin forming scar tissue around them. This is just another natural defense mechanism the body uses against unwanted debris in the lungs.

Asbestos-Related Diseases

If the body's defenses fail to control or remove asbestos fibers that enter the lungs, the risk of developing an asbestos-related disease increases. Asbestos-related diseases include asbestosis, lung cancer, mesothelioma, and other cancers.

Based on a thorough review of the literature available on the health effects of asbestos, the National Institute for Occupational Safety and Health (NIOSH) has concluded that there is no level below which the risks of contracting an asbestos-related disease are zero. This means that there is no established safe level of exposure to asbestos.

EPA Policy for Asbestos Control in Schools

EPA bases its policy for asbestos control in schools on the following premises:

- Although asbestos is hazardous, the risk of asbestos-related disease depends upon exposure to airborne asbestos fibers.
- Based upon available data, the average airborne asbestos levels in buildings seem to be very low. Accordingly, the health risk to most building occupants also appears to be very low.
- Removal is often not a building owner's best course of action to reduce asbestos exposure. In fact, an improper removal can create a dangerous situation where none previously existed.
- EPA only requires asbestos removal to prevent significant public exposure to airborne asbestos fibers during building demolition or renovation activities.
- Asbestos that has been identified will pose little risk if it is well maintained under an operations and maintenance program. Improper operations and maintenance also can cause dangerous

situations. Therefore, EPA requires a pro-active, in-place management program whenever ACBM is discovered and is not removed.

Summary Key Points About Asbestos Health Risks

Asbestos-related diseases are dose-response related (the greater the exposure to airborne fibers, the greater the risk of developing an illness) and have a latency period (typically 15 to 30 years). Exposure to asbestos may result in asbestosis (a disease characterized by lung scarring, which reduces the lungs' ability to function), lung cancer, mesothelioma (always-fatal cancer arising in the chest or abdominal cavity), and other diseases. Risks associated with low-level, non-occupational exposure (e.g., a building occupant who is not actually disturbing the asbestos) are not well established. The National Institute for Occupational Safety and Health (NIOSH) has determined, however, that there is no established safe level of exposure. Asbestos that has been identified will pose little risk if it is well maintained under an operations and maintenance program. EPA only requires asbestos removal to prevent significant public exposure to airborne asbestos fibers during building demolition or renovation activities.

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Appendix E: Racial and Ethnic Diversity in Orange County Schools

As shown in Table 4, Orange County public schools serve a very diverse population of students in terms of racial and ethnic backgrounds. This diversity in the communities served can present difficulties in communication when dealing with potentially contentious topics related to hazardous materials.

Table 4. Racial and Ethnic Diversity in Orange County Schools

| | Number of Students | Percent of Total Student Population |
|---|---------------------------|--|
| American Indian/Alaskan Native | 2,121 | 0.42% |
| Asian | 84,485 | 16.88% |
| Black/African American | 7,380 | 1.47% |
| Hispanic/Latino | 243,967 | 48.75% |
| Native Hawaiian/Pacific Islander | 1,979 | 0.40% |
| White | 144,012 | 28.77% |
| Multiple responses | 14,271 | 2.85% |
| No Response | 2,272 | 0.45% |
| Total | 500,487 | 100.00% |

As shown in Table 5, in addition to this county-wide diversity in the race/ethnicity of its student population, individual school districts are remarkably diverse both in terms of the size of their student populations and in the racial/ethnic diversity of that population within each district. As a consequence, districts will need to establish requirements for communicating with minority members of their community tailored to the unique demographics of their district and possibly even tailored to individual schools. With apologies to students reflecting the rich language and cultural differences of American Indian/Alaskan Native, Black/African American, and Native Hawaiian/Pacific Islander populations, in order to keep the table below readable the Grand Jury for the purposes of this report has consolidated these groups (along with “multiple responses” and “no response”) into “Other”.

District populations vary from a high of 57,333 students in the Santa Ana Unified School District (SAUSD) to a low of 2,383 students in the Savannah School District. Hispanic students comprise a high of 93.2% of the SAUSD and a low of 9.3% of the Laguna Beach Unified School District. Asian students comprise a high of 46.7% of the Irvine Unified School District and a low of only

2.8% of the La Habra School District. White students comprise a high of 81.0% of the Laguna Beach Unified School District and a low of only 2.7% of the SAUSD.

Note that the figure below on diversity in Orange County schools is from an OCDE 2012-2013 report, the latest available at the time this report was written, and shows data for 586 schools.

The data in the other figures in this section come from the OCDE 2015-2016 report showing data for 598 schools. This minor mismatch in available data doesn't affect the point being made as to the remarkable racial and ethnic diversity of the student populations of the various Orange County school districts.

Table 5. Racial and Ethnic Diversity by School District

| | Number of Schools | Grades | Number of Students | Demographics | | | |
|---|-------------------|--------|--------------------|--------------|--------------|--------------|-------------|
| | | | | Hispanic | Asian | White | Other |
| Orange County K-12 Totals | 586 | | 501,705 | 48.3% | 16.8% | 29.4% | 5.5% |
| Orange County Department of Education | | | 7,184 | 60.1% | 6.1% | 23.9% | 9.9% |
| Anaheim City School District | 24 | K-6 | 19,125 | 86.3% | 6.1% | 4.5% | 3.1% |
| Anaheim Union High School District | 21 | 7-12 | 32,085 | 64.1% | 16.4% | 12.5% | 7.0% |
| Brea Olinda Unified School District | 9 | K-12 | 5,972 | 34.1% | 21.7% | 39.8% | 4.4% |
| Buena Park School District | 7 | K-8 | 5,349 | 63.6% | 19.5% | 9.6% | 7.3% |
| Capistrano Unified School District | 52 | K-12 | 53,785 | 25.1% | 7.1% | 60.0% | 7.8% |
| Centralia Elementary School District | 8 | K-6 | 4,501 | 54.4% | 22.8% | 15.1% | 7.7% |
| Cypress School District | 6 | K-6 | 3,879 | 27.2% | 39.2% | 26.4% | 7.2% |
| Fountain Valley School District | 10 | K-8 | 6,344 | 15.4% | 35.2% | 42.9% | 6.5% |
| Fullerton School District | 20 | K-8 | 13,830 | 50.0% | 22.9% | 20.7% | 6.4% |
| Fullerton Joint Union High School District | 8 | 9-12 | 14,607 | 53.1% | 21.6% | 20.4% | 4.9% |
| Garden Grove Unified School District | 70 | K-12 | 47,599 | 53.5% | 34.2% | 9.9% | 2.4% |
| Huntington Beach City | 9 | K-8 | 7,056 | 19.0% | 10.2% | 62.4% | 8.4% |
| Huntington Beach Union High School District | 8 | 9-12 | 16,400 | 24.6% | 23.1% | 39.7% | 12.6% |
| Irvine Unified School District | 36 | K-12 | 29,072 | 10.5% | 46.7% | 34.2% | 8.6% |
| La Habra City School District | 9 | K-8 | 5,250 | 85.1% | 2.8% | 9.7% | 2.4% |
| Laguna Beach Unified School District | 4 | K-12 | 3,045 | 9.3% | 4.4% | 81.0% | 5.3% |
| Los Alamitos Unified School District | 10 | K-12 | 9,912 | 22.6% | 14.0% | 54.3% | 9.1% |
| Magnolia School District | 9 | K-6 | 6,353 | 69.8% | 14.1% | 9.6% | 6.5% |
| Newport-Mesa Unified School District | 32 | K-12 | 22,003 | 43.5% | 5.2% | 47.7% | 3.6% |
| Ocean View School District | 17 | K-8 | 9,418 | 36.4% | 14.5% | 42.8% | 6.3% |
| Orange Unified School District | 37 | K-12 | 29,854 | 51.8% | 11.5% | 32.1% | 4.6% |
| Placentia-Yorba Linda Unified School District | 33 | K-12 | 25,622 | 39.2% | 14.0% | 42.7% | 4.1% |
| Saddleback Valley Unified School District | 35 | K-12 | 30,355 | 30.6% | 10.3% | 51.9% | 7.2% |
| Santa Ana Unified School District | 61 | K-12 | 57,333 | 93.2% | 3.0% | 2.7% | 1.1% |
| Savanna School District | 4 | K-6 | 2,383 | 59.1% | 19.8% | 13.6% | 7.5% |
| Tustin Unified School District | 30 | K-12 | 23,771 | 46.4% | 18.6% | 29.8% | 5.2% |
| Westminster School District | 17 | K-8 | 9,618 | 42.5% | 39.9% | 13.3% | 4.3% |

Appendix F: Example AHERA Report

This appendix shows what an AHERA report for a school looks like. It is a current report for one school in one district in Orange County. By federal law, this report is available to the public. However, the Grand Jury has chosen to redact the information which identifies the school this report is for so that the focus is on the report and not the particular school. The Grand Jury selected this report for inclusion because the school does have encapsulated asbestos present. Since well over two-thirds of Orange County K-12 public schools have encapsulated present, the selection by the Grand Jury of this particular school where asbestos is present was arbitrary. The full report for this one school is 31 pages long. For this appendix, the Grand Jury selected and numbered the following pages from that report:

Page 1 – Report Cover Letter. (The Grand Jury removed information identifying the particular contractor performing the inspection.)

Page 2 – Table of Contents of the report.

Pages 3 and 4 – Executive Summary. This provides an excellent overview of the status of asbestos-containing-materials at this school including location of the asbestos and recommendations. Recommendations and Status for this particular school include: “Abate upon upgrade of system or material,” “Concealed by carpet,” and “Removed.”

Page 5 – The Vice Principal’s and Principal’s office are shown to have asbestos-containing-materials in floor tiles that are covered by carpet (and hence considered safely encapsulated by the inspector). The “Material Code #” of FLT-02 indicates that the asbestos-containing-material is floor tiles.

Page 6 - This shows a clean report for a heater closet that previously contained pipe elbow fittings (Material Code #01), which apparently had been removed after the prior inspection report.

Page 7 – This page explains the notations used in the reports for each school area for Material Codes and Abbreviations, Priority Levels, Cleaning Levels, and Response Actions and [associated] Priority Levels.

January 3, 2013

Regarding: Asbestos AHERA Re-Inspection Survey Report: [REDACTED]

Dear [REDACTED]

On December 20, 2012, [REDACTED] visited the above referenced school property for the purpose of performing an Asbestos AHERA Re-Inspection Survey. The attached report, which contains background information, a synopsis of the inspection strategies utilized, conclusions, and recommendations, has been prepared to present the survey findings.

If you have any comments or questions concerning the information presented in the report or attachments, or if we may be of additional service, please contact our office at [REDACTED]

Sincerely,

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Asbestos AHERA Re-Inspection Survey

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SECTION 1. EXECUTIVE SUMMARY

On December 20, 2012, [REDACTED] performed a re-inspection for asbestos-containing building materials (ACBM) at [REDACTED] (the Site) located at [REDACTED]. The purpose for conducting the re-inspection survey was to comply with the AHERA three-year re-inspection requirement as outlined in U.S. Environmental Protection Agency (EPA) CFR 763.

[REDACTED] was provided with the previous AHERA three-year re-inspection report for the above-referenced site. Prior to conducting the re-inspection, [REDACTED] thoroughly reviewed the documentation provided to ascertain what building materials were inventoried and which were identified in previous investigations to contain asbestos.

Upon a complete review of the provided documentation, [REDACTED] was provided access to the Site to conduct a comprehensive visual walk-through inspection. On-site campus representatives provided access. [REDACTED] determined through this investigation that Site conditions, materials present, along with building configurations, have remained unchanged since the previous inspection conducted on April 14, 2010, with the exception of the following:

- Rooms 10-12, 17-19, 21-25: Floor tile abated and new carpet installed.

Friable materials located in this re-inspection included:

- None Noted

Non-friable materials located in this re-inspection included:

| Material Type | Material Location | Material Disposition | Recommendation |
|---|--------------------------|----------------------|--|
| 9" Multicolored Vinyl Floor Tile (FLT-02) | Bldg. 1 – Office | Good | Abate upon upgrade of system or material |
| 9" Multicolored Vinyl Floor Tile (FLT-02) | Bldg. 1 – Nurse's Office | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 1 – K-1 | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 1 – K-2 | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Rm. 2 | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Rm. 3 | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Rm. 13 | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Rm. 14 | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Rm. 15 | Good | Abate upon upgrade of system or material |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Rm. 16 | Good | Abate upon upgrade of system or material |

Materials identified in previous inspection efforts that were not able to be located for re-inspection included:

[REDACTED]

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| Material Type | Material Location | Explanation |
|---|-----------------------------------|---------------------|
| 9" Multicolored Vinyl Floor Tile (FLT-02) | Bldg. 1 – Lounge | Concealed by Carpet |
| 9" Multicolored Vinyl Floor Tile (FLT-02) | Bldg. 1 – Vice Principal's Office | Concealed by Carpet |
| 9" Multicolored Vinyl Floor Tile (FLT-02) | Bldg. 1 – Principal's Office | Concealed by Carpet |
| Pipe Elbow Fittings (ELB – 01) | Bldg. 1 – K Heater Closet | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Room 1A | Concealed by Carpet |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Room 1 | Concealed by Carpet |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Room 4 | Concealed by Carpet |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Room 5 | Concealed by Carpet |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 2 – Room 6 CLC | Concealed by Carpet |
| Pipe Elbow Fittings (ELB – 01) | Bldg. 2 – North Heater Closet | Removed |
| Pipe Cover (P/C – 01) | Bldg. 2 – North Heater Closet | Removed |
| Pipe Elbow Fittings (ELB – 01) | Bldg. 2 – South A/C Closet | Removed |
| Pipe Cover (P/C – 01) | Bldg. 2 – South A/C Closet | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 3 – Rm. 7 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 3 – Rm. 8 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 3 – Rm. 9 | Removed |
| Pipe Elbow Fittings (ELB – 01) | Bldg. 3 – North Heater Closet | Removed |
| Pipe Cover (P/C – 01) | Bldg. 3 – North Heater Closet | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 3 – Rm. 10 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 3 – Rm. 11 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 3 – Rm. 12 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 4 – Rm. 17 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 4 – Rm. 18 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 4 – Rm. 19 | Removed |
| 9" Tan Vinyl Floor Tile (FLT-01) | Bldg. 5 – Rm. 21-25 | Removed |
| 12" Tan Floor Tile (FLT-03) | Bldg. 5 - Rm. 20 | Concealed by Carpet |
| Fire Rated Door (FRD-01) | Bldg. 1 – K - Heater Closet | Removed |

Exact material locations can be found in Section 3. Field Notes of this document and includes all building material-specific information.



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Inspector: [REDACTED]
 Certificate No.: [REDACTED]

Material: 8" Multicolored Floor Tile
 Area: Bldg. 1
 Space: Vice Principal's Office

| Material Code # | Friable | Accessibility | Type | Current Condition | Potential Condition | Approx. Amt of ACM | Priority Level | Cleaning Level | Response Action |
|-----------------|---------|---------------|-------|-------------------|---------------------|--------------------|----------------|----------------|-----------------|
| FLT - 02 | No | Low | Misc. | Good | Damage | 160 S.F. | 1 2 3 4 (5) 6 | 1 2 (3) 4 5 | 1 2 3 4 (5) 6 7 |

Justification: Periodic Surveillance
 Implementation
 Start: 12/20/12
 End: 12/20/15

Notes: Concealed by carpet

Inspector: [REDACTED]
 Certificate No.: [REDACTED]

Material: 8" Multicolored Floor Tile
 Area: Bldg. 1
 Space: Principal's Office

| Material Code # | Friable | Accessibility | Type | Current Condition | Potential Condition | Approx. Amt of ACM | Priority Level | Cleaning Level | Response Action |
|-----------------|---------|---------------|-------|-------------------|---------------------|--------------------|----------------|----------------|-----------------|
| FLT - 02 | No | Low | Misc. | Good | Damage | 270 S.F. | 1 2 3 4 (5) 6 | 1 2 3 (4) 5 | 1 2 3 4 (5) 6 7 |

Justification: Periodic Surveillance
 Implementation
 Start: 12/20/12
 End: 12/20/15

Notes: Concealed by carpet

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Inspector: [REDACTED]
 Certificate No.: [REDACTED]

Material: Pipe Elbow (fittings)
 Area: Bldg. 2
 Space: North Heater Closet

| Material Code # | Friable | Accessibility | Type | Current Condition | Potential Condition | Approx Amt of ACM | Priority Level | Cleaning Level | Response Action |
|-----------------|---------|---------------|------|-------------------|---------------------|-------------------|----------------|----------------|-----------------|
| ELB - 01 | No | Low | TSI | Removed | Removed | 0 Each | 1 2 3 4 5 6 | 1 2 3 4 5 | 1 2 3 4 5 6 7 |

Justification: Implementation
 Start: 12/20/12
 End: 12/20/15

Notes: Removed

Inspector: [REDACTED]
 Certificate No.: [REDACTED]

Material: Pipe Cover
 Area: Bldg. 2
 Space: North Heater Closet

| Material Code # | Friable | Accessibility | Type | Current Condition | Potential Condition | Approx Amt of ACM | Priority Level | Cleaning Level | Response Action |
|-----------------|---------|---------------|------|-------------------|---------------------|-------------------|----------------|----------------|-----------------|
| P/C - 01 | No | | TSI | Removed | Removed | 0 | 1 2 3 4 5 6 | 1 2 3 4 5 | 1 2 3 4 5 6 7 |

Justification: Implementation
 Start: 12/20/12
 End: 12/20/15

Notes: Removed

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Explanation of Material Codes and Abbreviations

- | | |
|-------------------------------|----------------------------------|
| ACS – Acoustic Ceiling Spray | FIR – Fire Rated Brick |
| ACT – Acoustic Ceiling Tile | FLT – Floor Tile |
| ACP – Acoustic Ceiling Panels | FRD – Fire Rated Door |
| AIR – Air Cell | FUR – Furnace Pad |
| ASF – Asphalt | GAS – Gasket |
| ASP – Asbestos Paper | MAS – Mastic |
| BBM – Baseboard Mastic | MIS – Miscellaneous |
| BOI – Boiler Insulation | MOR – Mortar |
| BOL – Blown-in Insulation | P/C – Pipe Cover |
| BRK – Brick | PLA – Plaster |
| BUR – Built-up Roofing | SFL – Vinyl Sheet Flooring |
| CAP – Cement Asbestos Pipe | SFP – Sprayed-on Fireproofing |
| CAS – Cement Asbestos Siding | SOL – Soil |
| CIN – Cinder Block | STC – Stucco |
| CEM – Cement | TAP – Tape |
| CER – Ceramic | TAR – Tar |
| CUR – Curtains | RFS – Composite Roofing Shingles |
| DEB – Debris | RFT – Roofing Felt |
| DRY – Drywall | ROL – Rolled Roofing Material |
| DTM – Drywall Taping Mud | WOV – Cloth Joint Expansion |
| ELB – Pipe Elbow Fittings | WPY – Window Putty |
| EXP – Exterior Panels | |

Priority Levels

These levels should be used to establish both immediate and long range plans to act on the recommendations. The priority levels were selected for on of the flowing options:

- Priority Level 1 – Isolate are, restrict access and respond as soon as possible.
- Priority Level 2 – Schedule response action as soon as possible, reduce potential for disturbance.
- Priority Level 3 – Schedule response action as soon as practical, reduce potential for disturbance.
- Priority Level 4 – Schedule response action as soon as practical.
- Priority Level 5 – Schedule response action upon upgrade of system or material.

Cleaning Levels

- Level 1 – Initial cleaning should be done as soon as possible and additional cleaning should be done once every two months until ACM is removed.
- Level 2 – Initial cleaning should be done as soon as possible and additional cleaning should be done once every six months until ACM is removed.
- Level 3 – The material is non-friable therefore initial cleaning is not necessary.
- Level 4 – Initial or additional cleaning is not required for this material.

Response Actions and Priority Levels

- | | |
|--------------|---------------------------------------|
| 1. Removal | 4. Encapsulation |
| 2. Repair | 5. Operations and Maintenance Program |
| 3. Enclosure | 6. Periodic Surveillance |



Appendix G: Survey Questions

In order to have complete statistical data from all districts, the Grand Jury sent the survey questions below to the OC Department of Education and to the 27 OC school districts. The Jury designed the survey to assess each district's current scope of asbestos issues, the ability of each district to manage construction work that might involve hazardous materials, district awareness of and compliance with AHERA regulations, and district communication with its stakeholder community. The Grand Jury designed the survey to elicit straightforward Yes/No/Not Applicable (N/A) or numerical responses to facilitate tabulation of the results.

The Grand Jury instructed responders to answer all questions including all sub-parts and to check only one box per question. Responders were also instructed that within the scope of this survey, a policy exists only if it is a *written* Board of Trustees policy, procedure, or other Board instruction or as a *written* District Superintendent policy/procedure/instruction.

1. Facility management:

- a. Do you have at least one full time district person with facilities management as his/her sole responsibility?
Yes No N/A
- b. Do you have at least one part time person with facilities management as his/her responsibility?
Yes No N/A
- c. Is the position currently staffed? Yes No N/A

2. Facilities records:

- a. Do you maintain a database with key information for each facility/structure for each campus including date of construction, dates of major modifications and/or repairs to each facility/structure, and dates of last AHERA inspections?
Yes No N/A
- b. Do you maintain the above database as paper records, or do you store the database electronically? Paper Electronic Both N/A
- c. Are such electronic records, if they exist, available on-line on your web site?
Yes No N/A

3. Facilities plans:

- a. Do you have a facilities construction plan listing planned new facilities?
Yes No N/A
- b. Do you have a facilities construction plan listing planned modifications and/or major repairs to existing structures? Yes No N/A

- c. Does your facilities plan include any efforts that will require abatement of known hazardous materials on the work site such as asbestos, lead, mold, or chemical contamination?
Yes No N/A
- d. Is any of the planned construction work specifically directed toward asbestos or other hazardous materials abatement and not part of a larger effort?
Yes No N/A
- e. Does the facilities plan include projected/scheduled dates for the work?
Yes No N/A
- f. Does the facilities plan include rough cost estimates for each work effort?
Yes No N/A
- g. Does the plan identify funding source(s) for the planned work?
Yes No N/A
- h. Is your facilities construction plan available on-line on your web site?
Yes No N/A

4. Construction management:

- a. Do you have a written policy to do facilities construction, other than emergency repairs, only when students are not present on the campus?
Yes No N/A
- b. Do you have a written policy to separately contract for facilities hazardous materials inspections, for hazardous materials abatement, and for the actual construction once any hazardous materials are abated?
Yes No N/A
- c. Do you have a written policy to limit the amount of construction/repair work in any given year to a scope that you have resources to manage effectively?
Yes No N/A
- d. Do you have a written policy requiring your construction contracts to have explicit schedule performance requirements?
Yes No N/A
- e. Do you have a written policy requiring clearly scheduled intermediate milestones/checkpoints in each contract that allow you to detect work falling behind schedule?
Yes No N/A
- f. Do you require members of your own facilities management team to personally walk through/inspect construction work as it is being done?
Yes No N/A
- g. Do you have a written policy to notify your staff and the parents and others in your community when you plan to begin and finish construction work on one of your campuses?

Yes No N/A

h. If so, do you specifically address any abatement work that will be part of the construction in such communications?

Yes No N/A

i. Do your written communications with parents and others in your community include translations of key messages into one or more of the non-English languages used by parents/families in your community?

Yes No N/A

5. Training and accreditation:

a. Have you appointed an AHERA Designated Person for each school in your district?

Yes No N/A

b. Have you provided the EPA-required training for such persons?

Yes No N/A

c. Do you conduct regular training on hazardous materials with all your employees including administrative and teaching staff and facilities staff?

Yes No N/A

d. Do you have and enforce a policy of hiring only DIR-certified contractors for all construction/repair work?

Yes No N/A

6. AHERA inspections on your campuses:

a. Do you have current AHERA inspection reports on all of your campuses?

Yes No N/A

b. Do you keep a copy of the results of the AHERA inspections in a central location?

Yes No N/A

c. Do you keep a copy of the results of the AHERA inspections for a particular campus available at each campus main (or other easily accessible) office?

Yes No N/A

d. Do you keep a copy of the results of the AHERA inspections in a central location and a copy available at each campus main (or other easily accessible) office?

Yes No N/A

e. Do you post and maintain current AHERA reports on your district web site?

Yes No N/A

7. AHERA status:

a. Do any of your campuses currently have asbestos abatement work in progress?

Yes No N/A

b. If so, on how many campuses?

Number of Campuses _____ N/A

- c. What is the number of your campuses with AHERA reports that indicate the presence of asbestos materials in a currently safe encapsulated form not included in the number in response to (a) above?

Number of Campuses _____ N/A