

PCBs in Caulk and Other Building Materials – Management Guidelines

In September 2009, the US Environmental Protection Agency released information on PCBs in common building materials. Based on the EPA information, EH&S has developed this Fact Sheet to provide guidance and campus-specific information to departments that may remove or handle these materials.

What are PCBs?

Polychlorinated biphenyls, PCBs, are manmade chemicals that were widely used in construction material and electrical products from the 1950s through 1978. PCBs were used because of their excellent properties as plasticizers.

Are PCBs harmful?

Yes, PCBs may be harmful to both human health and the environment if exposed to a sufficient quantity over a long period of time.

PCBs can affect the immune system, reproductive system, nervous system and endocrine system and are potentially cancer-causing if they build up in the body over long periods of time. They do not degrade easily, so persist in the environment for a long time. When PCBs get in water, they can enter the food chain and concentrate in fish, especially larger fatty fish. In addition to diet, people may also be exposed to PCBs in dust, although this route of exposure is not well understood and EPA is currently conducting research to better define this risk.

If handled properly, building materials containing PCBs can be removed and managed in a way that poses no significant risk to people or animals.

In which buildings are PCBs most likely to be found?

The presence of PCBs in building materials is a nation-wide issue. The EPA has determined that PCBs are most likely to be present in buildings that were constructed between 1950 and 1978. On the UC Irvine Campus, this includes the buildings listed on the attached sheet.

It is unlikely that PCBs would be found in post-1978 buildings because Congress banned the manufacture and use of PCBs in 1976.

In which materials are PCBs most likely to be found on campus?

Mainly in window caulk and door sealant in masonry buildings, but possibly also in concrete joints and seams. PCBs were also widely used in electrical transformers and light ballasts, but these devices were replaced with non-PCB versions in the 1980s.

When should I call EH&S?

If your work involves removing caulking, sealants, or old transformers in any of the buildings listed below, call EH&S (824-6200) well before you begin.

What will EH&S do?

EH&S will review the project scope with you and may visit the work site to evaluate the condition of the caulking. EH&S may also collect a sample of the material for laboratory analysis. EH&S will review this information and provide a summary to maintenance staff. The work area will be isolated from occupants to prevent occupant exposure during removal. EH&S will also ensure that documented training has been provided, and that work and disposal practices are safe and compliant with regulations.

What kind of protective equipment should maintenance staff wear?

EH&S will work with facilities management and other campus maintenance and construction units to determine the kind of protective equipment best suited for each job. When the caulk to be removed is still soft and flexible, EPA recommends use of hand tools. In this case, protective equipment will probably be minimal since hand tools do not generate significant dust or heat. If caulk is dried and brittle, electric tools may be required to remove it. If power tools are needed, respirators may be required and additional measures may be needed to ensure that PCBs are properly contained within the work area. In all cases, workers must wear hand and eye protection, and are advised not to smoke, drink, or eat in the work area, and to wash hands prior to breaks and at the end of the day.

How should PCB-containing caulk be disposed of?

If caulk or other building materials contain PCBs at concentrations greater than 50 parts per million (ppm), then the removed material must be managed as hazardous waste. While collecting the caulk use plastic sheeting to contain any material that falls to the ground. For caulk removed from buildings constructed or renovated between 1950 and 1978, collect the material in a 5-gallon pail with lid, assure the container is closed when not adding caulk, place in a locked and secure location at or near where it was collected, request a hazardous waste pickup online:

- Visit www.ehs.uci.edu/programs/enviro/.
- Fill out the “Chemical Waste Collection” form.
- EH&S will pick up your waste within 1-3 days.

Who can I call if I have questions?

Call EH&S at 824-6200.

You can also visit a website EPA established specifically for this issue:

<http://www.epa.gov/pcbsincaulk/>

UC Irvine Building List for PCB containing construction materials

BUILDINGS

201	Social Science Tower
202	Social Science Laboratory

UC Irvine Building List for potential for PCB containing construction materials (i.e. window caulk, floor joints, etc.)

BUILDINGS

005	Student Health Center
091	Receiving (Storehouse)
092	Interim Office Building
094	Air Pollution Labs
095	Faculty Research Facility
096	Arboretum and Aviary Facility I
097	Auto Maintenance and Corporation Yard - (FM Shops)
101	Gateway Study Center
102	Langson Library
105	Student Services 1
111	Aldrich Hall
200	Social Science Hall
302	Information and Computer Science
303	Engineering Tower (Eng I)
315	Interim Classroom Facility
400	Rowland Hall (Phys Sci 1)
501	Schneiderman Lecture Hall (Bio Sci L H)
502	Steinhaus Hall (Bio Sci 1)
514	Headhouse Greenhouse
522	Arts Computation Engineering Base Building
600	Krieger Hall (Humanities Office Building)
601	Humanities Hall
603	Drama Design Lab
626	Farm School Buildings and Red Barn
710	Winifred Smith Concert Hall
711	Claire Trevor Bren Theatre
712	Beall Center for Arts & Tech. and University Art Gallery
713	SOTA Dance Studio / Studio Theater

714	Arts Instructional & Technology Resource Center (AITR)
715	SOTA Drama Building
718	Choral Studio
720	SOTA Sculpture Studio / Nixon Theater
722	SOTA Art Studio
723	SOTA Production Studio
802	Berk Hall (Medical Education Building)
810	Medical Surge I
811	Medical Sciences B
812	Medical Surge II
813	Medical Sciences A
821	Medical Sciences C
825	Medical Sciences D (Cheney Hall)
827	Medical Student Center (Med Sci E)
831	Tamkin Student Lecture Building (Med Sci F)
902	Central Plant
903	Crawford Hall / Pool
907	Track & Field House (Athletic Utility Building)
NC	Carpenter Office Trailer 2
NC	Experimental Garden Facility
NC	Mate Choice Trailers
NC	Painting Office Trailer 3
NC	Plumbers Office Trailer 1
NC	Shops Building
NC	Storage Containers

CHILD CARE FACILITIES

3300	Verano Preschool
6537	Children's Center

HOUSING

Mesa Court Unit 1:

4003	Loma
4007	Lago
4009	Arroyo
4013	Bahia
4015	Sierra
4017	Cuesta
4019	Cielo

4021	Camino
4023	Viento
4025	Ciudad

Mesa Court Unit 2:

4027	Prado
4029	Brisa
4031	Vereda
4033	Puente
4035	Otero
4037	Cumbre

Mesa Court Unit 3:

4011	La Mirada
4039	Vista
4041	Estrella
4043	Palo
4045	Nubes

Mesa Court Other:

4001	Mesa Court Commons / Recreation Center
4001A	Activity Center
4005	Mesa Court Housing Supply Building

Middle Earth Phase I:

545	Misty Mountain
547	The Shire
549	Rivendell
551	Isengard
553	Lorien
555	Hobbiton
561	Mirkwood

Verano Place Unit I:

100	Building 100
200	Building 200
300	Building 300
400	Building 400
500	Building 500

600	Building 600
700	Building 700
800	Building 800

Verano Place Unit II:

900	Building 900
1000	Building 1000
1100	Building 1100
1200	Building 1200
1300	Building 1300
1400	Building 1400
1500	Building 1500
1600	Building 1600
1700	Building 1700
1800	Building 1800

Verano Place Unit III:

1900	Building 1900
2000	Building 2000
2100	Building 2100
2200	Building 2200
2300	Building 2300
2400	Building 2400
2500	Building 2500
2600	Building 2600
2700	Building 2700
2800	Building 2800
2900	Building 2900
3000	Building 3000
3100	Building 3100
3200	Building 3200

Verano Place Unit IV:

4000	Building 4000
4100	Building 4100
4200	Building 4200
4300	Building 4300
4400	Building 4400
4500	Building 4500

4600	Building 4600
4800	Building 4800
4900	Building 4900
5000	Building 5000
5100	Building 5100
5200	Building 5200
5300	Building 5300