

Health Concerns: Roofing Projects

Reroofing of University Buildings is a necessary part of building preservation. During the project roof tar odors are generated. The following information addresses some of the common complaints associated with roofing projects, and some methods for reducing problems.

I smell roof tar odors. Does this mean I am being over exposed to a chemical?

No. The sulfur compounds in roofing tar have very low odor thresholds (in the parts per billion range). Smelling the odors does not indicate over exposure.

I smell roofing tar; my head aches; and I am feeling nauseated. Is this a short term problem or can it result in chronic health problems?

These can be short term or acute effects of exposure to roof tar odors. The symptoms should resolve within hours after exposure to the odor has stopped. Long term health consequences are not expected for the levels found inside buildings during roofing projects.

I am pregnant, will the roof tar odors affect my baby?

There is indirect evidence that exposure to roof tar chemicals may cause birth defects. Laboratory studies of roof tar extracts have shown DNA changes in human fetal cells exposed to asphalt fume extracts. This may be a concern for asphalt workers because of the higher exposure to fumes, but not for building occupants with a much lower exposure.

Can breathing roof tar vapors cause cancer? What about skin contact?

There is no direct evidence that inhalation of roof tar odors causes cancer. Some epidemiological studies of asphalt workers suggest that they may be at increased risk for skin, lung, stomach, and bladder cancer as well as leukemia. Other studies have been inconclusive. Skin contact with the roof tar has been shown to cause tumors in laboratory animals.

I have asthma, bronchitis and other lung problems. Can inhalation of roof tar odors aggravate my condition?

Yes, the roof tar odors can irritate the respiratory tract and aggravate the condition of a person with asthma or other lung conditions. People with asthma should avoid breathing roof tar fumes.

Can hot roof tar produce hydrogen sulfide? Will it be at levels high enough to affect building occupants?

Yes, hydrogen sulfide can be produced from hot roof tar. The levels produced will not be high enough to affect building occupants. Only levels inside an enclosed asphalt kettle may be high enough to pose a serious health threat.

Methods to reduce odors during roofing projects:

Building occupants:

If your building has operable windows do not open them if they are downwind from the roofing tar or if they are down wind of the asphalt kettle. The odors will enter the building.

If there are window air conditioners in the building, set the air conditioner to recirculate air. Do not draw outside air into the building. The odors will enter the building.

Schedule regular updates on the progress of the roofing project with members of Facilities Management. Establish a building contact person to disseminate project updates and forward building occupant concerns.

Facilities Management:

Occasionally the ventilation system will need to be shut off during the project. It should be restarted during the evening when the roofing project has stopped for the day.

Communication between the roofers, a building representative, the zone project manager and the building occupants needs to be clear.

Placement of the asphalt kettle is important. Keep it as far away from the air intake as possible. Some trucks may also be running during the project. The air from the exhaust may enter the building.