
DUST MITIGATION TRAINING SYLLABUS OUTLINE FOR CONTRACTORS

Construction/Demolition/Renovation can generate dust and debris that may contain germs that can be transmitted by dust.

- People with healthy immune systems are generally not at risk for dust-related disease.
- Patients can be infected by mold and other germs by breathing in contaminated air.
- UCSF Medical Center proudly cares for solid organ transplant patients, bone marrow transplant patients, cancer patients, and other patients with compromised immune systems and who are exquisitely susceptible to dust-related disease.
- Dust can cause life-threatening disease in immune compromised patients such as pneumonia or brain infection.

Dust mitigation for Indoor Construction Projects

The extent of the specific measures employed for dust mitigation in a project will depend on the anticipated amount of dust generation, the location(s) of the project, duration of the project and patient populations in the vicinity of the project.

- The contractor and project manager will complete a risk assessment.
- Adjacent units' managers must be notified of the project and updated when needed.
- Construction barricades must be sealed from floor to underside of floor above.
- When space is available a vestibule will be created adjacent the barricade.
- Barricades will have gasketed door frames; doors with self-closures and OmniLock latching hardware.
- All penetrations into construction areas will be sealed (around piping, windows closed) and air ducts will be capped as determined in the pre-construction meeting.
- Signage with the project manager's name and 24-hour contact information must be posted outside the construction zone.
- Adhesive walk off mats shall be placed inside the construction barricade and outside the barricade door.
- Most projects will require the use of High Efficiency Particulate Air (HEPA) filter units to maintain negative pressure within the construction barricade. The HEPA units will be certified within the last year, contain clean filters, have discharge hoses vented to the outside when possible, and create a negative air pressure within the barricade with door open and an air flow of at least 100 feet per minute at all times.
- A clean jobsite must be maintained. Dust tracked outside the barricade must be removed by wet mop or HEPA vacuum immediately. Debris removal will be performed in clean containers with covers, along a pre-determined route.
- Construction activities outside the barricades require the use of a full height polyethylene sheet barrier, completely taped at the edges and seams. A zipper flap is required for access.
- When ceiling/wall access is required outside the construction barricades, a polyethylene enclosure must be utilized in areas where patients are housed or transported. A ceiling/wall access permit is required and must be obtained from UCSF Facilities Parnassus Room L210 (353-1120) or Mount Zion Room 06 (885-7576).
- Construction workers leaving the construction barricades must vacuum the outside of their clothing with a HEPA vacuum or will put on a clean disposable paper suit just prior to leaving the barricade.
- Air sampling may be collected at strategically important locations and times during the demolition and construction phases of projects to assess the effectiveness of dust mitigation at the project site.
- The Department of Hospital Epidemiology and Infection Control (HEIC), Design and Construction and Facilities staff will regularly inspect the project site for adherence to dust mitigation measures. Any breach of compliance with dust mitigation measures may be subject to a fine, as per project specifications.
- All on-site workers involved in any type of demolition, construction, or remodeling work must attend an in-service sponsored by HEIC. Material reviewed includes: reasons for dust mitigation measures during demolition and construction projects in and around the medical center, patient populations served at UCSF, infectious agents of concern, air sampling for mold spores, and specific measures

for dust mitigation. Contractors must retain a list that documents workers who have attended an in-service. This in-service must be completed at least annually.

- The contractor shall inform all workers on the jobsite not to enter the Medical Center if they suspect they have a symptomatic illness that could spread to others.
- Painting activities may involve dust generation (sanding, removing base coving, etc). Evaluate each project per Risk Assessment.
- Floor covering removal may generate dust. Evaluate each project per Risk Assessment.

Dust Mitigation for Major Outdoor Construction Projects

- Windows on units facing outdoor construction must be shut and disabled.
- Signs will be placed on doors leading to outside stairwells that face external construction projects to limit non-emergency traffic.
- Facilities Management will monitor air filters. Increased dust generation related to construction may require increased maintenance.
- A letter will be sent by Patient Care Services advising patients and visitors of the disruptions and the hazards of dust.
- The Project Manager will inform UCSF Medical Center staff via email as to the procedures in place for dust mitigation as well as construction activity schedules.
- All activities that create dust must be continuously hosed down with water.
- Soil must also be kept moist as soil may contain germs that may be aerosolized.
- Loose debris will be moist when loaded for hauling.
- Debris to be hauled away by trucks will be moist and covered prior to hauling.
- Roadways will be free of dirt and washed daily.
- Soil containing *Legionella* may enter plumbing system through cracked pipes. Report any disturbed, cracked or broken pipes to the project manager.
- Contractor will complete a check-list to ensure above dust mitigation measures are performed each day. Any breach of compliance with dust mitigation measures may be subject to a fine, as specified in the project specifications.
- Contractor to cease dust-producing activities if water is not available or if a situation arises leading to uncontrollable dust generation.
- UCSF HEIC, Design and Construction, and Facilities management staff will regularly inspect the project site for adherence to dust mitigation measures.
- Construction workers working on outdoor projects may not enter the Medical Center unless free of dust.
- Air sampling may be completed at strategically important locations during the demolition and construction phases of projects. The purpose of the air sampling is to assess dust mitigation at the project site.
- If deemed necessary by the Safety Officer, the Project Manager, or HEIC, a traffic attendant may be stationed near the project site to direct traffic.
- All on-site construction workers must attend an in-service sponsored by HEIC. Materials to be reviewed include rationale for dust mitigation measures in demolition and construction projects in and around the medical center, patient populations served at UCSF, infectious agents of concern, air sampling for mold, and specific measures for dust mitigation.
- A "hot line" phone number will be provided to Medical Center staff, patients, and visitors by the Project Manager to answer general questions regarding the project.

Post Test for Infection Prevention for Construction Personnel

(Circle the best answer: True or False)

1. Dust containing mold and other germs can cause serious illness and even death to some patients.
TRUE FALSE
2. Construction, demolition, renovation and excavation can generate dust containing mold spores and other germs.
TRUE FALSE
3. If you find an injection needle in your work site you should pick it up and throw it out in the garbage.
TRUE FALSE
4. Utility services (water, gas, electric) must not be shut off without approval from Facilities Management, except in an emergency.
TRUE FALSE
5. It is acceptable to leave the work site and enter the hallway if your work clothes are covered in dust.
TRUE FALSE
6. Barriers placed around job sites help to prevent dust from entering patient care areas.
TRUE FALSE
7. Adhesive walk-off mats need to be changed only daily.
TRUE FALSE
8. For large construction projects, HEPA filtered fan units running in the job site are required to scrub the air and create negative pressure.
TRUE FALSE
9. Remove debris using an open container via any route and at times when patients are present.
TRUE FALSE
10. During outdoor demolition soil and debris should be kept dry.
TRUE FALSE
11. Air sampling during construction and demolition can help determine if Infection Control measures for dust control are working.
TRUE FALSE
12. All on-site construction workers must attend an Infection Control in-service. This in-service must be completed at least annually.
TRUE FALSE
13. Workers who are sick with a cold, flu or other communicable illness should not enter the medical center.
TRUE FALSE

Print Name: _____ Signature: _____ Date: _____

Project #: _____ Contractor or Company Name: _____

ORIGINAL TESTS MUST BE GIVEN TO FACILITY ENGINEERING AND COPIES RETAINED ON SITE BY CONTRACTOR

**Prueba Posterior de Prevención de Infección para el Personal de Construcción.
(circule la mejor respuesta: Verdadero o Falso)**

1. El polvo que contiene moho y otros germenos puede causar serias enfermedades y aún la muerte a algunos pacientes.
VERDADERO FALSO
2. La construcción, demolición, renovación y excavación pueden generar polvo conteniendo esporas de moho y otros gérmenes.
VERDADERO FALSO
3. Si usted encuentra una aguja de inyección en su sitio de trabajo debería recogerla y tirarla a la basura.
VERDADERO FALSO
4. Servicios de utilidad (agua, gas, electricidad) no deben ser apagados sin aprobación de la Administración de la Instalación , excepto en una emergencia.
VERDADERO FALSO
5. Es aceptable abandonar el sitio de trabajo y entrar al recibidor si su ropa de trabajo está cubierta de polvo.
VERDADERO FALSO
6. Las barreras puestas alrededor del sitio de trabajo ayudan a prevenir la entrada del polvo a las áreas de cuidado del paciente.
VERDADERO FALSO
7. Las colchonetas adhesivas necesitan ser cambiadas sólo diariamente.
VERDADERO FALSO
8. Para Proyectos de construcción grandes, las unidades de HEPA de ventilacion con filtros funcionando en el área de trabajo son requeridas para limpiar el aire y crear presión negativa.
VERDADERO FALSO
9. Remover los escombros usando un contenedor abierto vía cualquier ruta y en momentos que los pacientes estén presente.
VERDADERO FALSO
10. Durante la demolición exterior, la tierra y escombros deben ser mantenidos secos.
VERDADERO FALSO
11. Muestreo de aire durante la construcción y demolición puede ayudar a determinar si las medidas de control de Infección para control del polvo están funcionando.
VERDADERO FALSO
12. Todos los trabajadores en el sitio de la construcción deben asistir a una clase de Control de Infección. Este clase debe ser completado al menos en forma anual.
VERDADERO FALSO
13. Trabajadores que esten resfriados, tengan influenza u otra enfermedad contagiosa no deberían entrar al centro médico.
VERDADERO FALSO

Nombre: _____ Firma: _____ Fecha: _____

Proyecto # _____ Contratista o Nombre de la Compañía: _____

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