

Environmental Hazard
Work Plan

For

Fascia Tile Replacement Project
Merced College
3600 M Street
Merced, CA 95348

Prepared By:
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This plan is intended for the sole use of Merced College and specifically for the Fascia Tile Replacement Project. The scope of services performed in execution of this plan may not be appropriate to satisfy the needs of other users and use or re-use of this document or recommendations is at the risk of said user. Additionally, the passage of time may result in a change in the environmental characteristics at this site. This plan does not warrant against future operations or conditions that could affect the recommendations made. The recommendations or protocols expressed in this plan are based only on conditions/information provided at the time the plan was created.

Environmental Hazard Work Plan

During the course of work for the Fascia Tile Replacement Project at Merced College, Merced, CA, existing bat droppings may be encountered and/or disturbed for the proposed work. Due to the potential hazards of diseases related to contact with bat droppings, this plan shall be adhered to for the duration of the project.

i. Definitions

- a. Bat droppings or guano means any fecal matter from bats that may be present in the work area.
- b. High-efficiency particulate air (HEPA) filter means a filter that is at least 99.97 percent efficient in removing particles 0.3 micrometers in diameter.
- c. Histoplasma capsulatum is a fungus that has the ability to cause the infectious disease Histoplasmosis in humans that inhale the infected spores.
- d. Regulated area means an area, including temporary work areas where routine or non-routine tasks are performed, where an employee's exposure to bat droppings may occur.

I. Location of Work/Background Information:

The work to be completed under this Environmental Hazard Work Plan will be completed at:

Merced College
3600 M Street
Merced, CA 95348
Project Name: Fascia Tile Replacement

Previous inspections performed by Merced College staff have identified several buildings where bat droppings have been identified. When bat droppings are disturbed or improperly cleaned up, personnel may come in contact with or inhale particles and/or spores related to bat droppings. Bats can spread infectious diseases to humans by way of exposure to bat dropping related dust or contact with bat droppings. The most common disease associated with bat droppings is histoplasmosis. Other bat related diseases that may be spread through contact with bat droppings includes salmonellosis and yersiniosis.

Histoplasmosis can be caused by inhaling the spores from infected fungus that may be found in a habitat where there are bat droppings. Histoplasmosis primarily affects the lungs and symptoms can vary from mild to life threatening. Symptoms may include cough, fever, fatigue, chills, headache, body aches, and chest pain. Salmonellosis and yersiniosis are bacterial infections and can be spread to humans that have had contact with infected bat droppings. Symptoms may include fever, diarrhea, and vomiting. To reduce the likelihood of exposure, safe work practices and proper handling of bat droppings must be performed.

II. Description of Work:

A contractor experienced in remediation and removal of hazardous materials shall remove existing bat droppings from building locations where the fascia tile is to be removed prior to the start of the fascia tile removal. Bat droppings shall only be removed by contractor's personnel who have received a minimum of 40 hours of hazardous waste operations and emergency

response (HAZWOPER) training. The contractor's personnel should also receive training specific to the hazards of bat droppings in accordance with CAL/OSHA's Hazard Communication Standard prior to the start of work.

III. Control Measures and Work Procedures:

Dust possibly containing histoplasmosis spores, can be aerosolized during construction activities. In order to reduce dust, the remediation contractor shall implement the following control measures and work procedures to limit exposures to employees performing the work and to prevent contamination of areas outside the work area:

- The site will be secured in such a way as to protect employees, the public, and the environment from contamination.
- Signage and/or barrier tape will be used to warn other contractors and the public of the work being performed in the area. Barrier tape shall be placed a minimum of 20 feet from the work area, where feasible.
- The remediation contractor shall limit access to the work area to only authorized and trained workers that are required to perform work in the area.
- At least one layer of 6 mil polyethylene "poly" sheeting will be placed on the ground under the work area to capture and dust or debris.
- The remediation contractor shall ensure all building windows and doors within 20 feet of the work area are closed during removal and cleaning activities.
- The remediation contractor shall use vacuums equipped with HEPA filters to remove bat droppings and to aid in the clean-up of dust and debris.
- The remediation contractor shall utilize wet methods, which will consist of wet wiping contaminated surfaces, once bat dropping debris is removed. The contractor shall use a suitable disinfectant agent approved by the U.S. Environmental Protection Agency for *Histoplasma capsulatum*.
- A worker decontamination area (decon) will be constructed and attached to the regulated area. The decon will be kept in a clean & orderly fashion at all times.
- The remediation contractor shall perform a final cleanup at the end of each work shift which shall consist of HEPA vacuuming and "misting" the poly sheeting on ground of the work area with an EPA approved disinfectant for *Histoplasma capsulatum*. The "dirty" side of the poly sheeting shall be rolled upon itself and placed in a double bag and sealed with duct tape. The duct tape shall be sealed in a "gooseneck" manner.
- Waste shall be placed in a secure and lockable storage area on a daily basis.

IV. Respiratory Protection and Protective Clothing/Personal Protective Equipment:

The remediation contractor shall maintain a fully compliant Injury Illness Prevention Protection, Respiratory Protection, and Personal Protective Equipment (PPE) Program. Said programs should outline the training employees receive in regard to the types of protection necessary; their use, limitations, and proper use; and care and maintenance. The contractor shall ensure that PPE is provided to personnel to protect them from exposure to dust and materials that may be contaminated with bat droppings.

- Level C protection is anticipated for the majority of site work and will include respiratory protection.
- The minimum respiratory protection for employees removing bat dropping contamination from surfaces shall be a NIOSH certified half-face negative-pressure respirator with HEPA filters (P100). A full face respirator with P100 filters may provide added protection, including eye protection and may be worn in lieu of a half-face respirator.
- Personnel wishing to enter the regulated area shall show proof of training, medical surveillance, and respirator fit testing.

- Employees entering the regulated area shall wear a disposable coverall with hood and booties with disposable rubber or nitrile type gloves with tape at the seams where the coveralls meet the gloves.
- Eye protection shall be worn if half-face respirators are chosen in lieu of full-face respirators.

V. Hygiene Facilities:

The remediation contractor shall ensure the proper decontamination of employees who are working in regulated work areas. The remediation contractor shall establish a decontamination area that is adjacent and connected to the regulated area(s) for the decontamination of employees who may be contaminated with dust and/or debris from bat droppings. The decontamination area will consist of a wash station connected to the regulated area. The wash station will consist of water, soap, and disposable towels.

- The remediation contractor shall ensure that employees enter and exit the regulated area through the decontamination area.
- Personnel shall remove and deposit all personal clothes in a designated area.
- Personnel shall put on protective clothing and respiratory protection before entering the regulated area.
- Before leaving the regulated area, the employees must remove all gross contamination and debris from their protective clothing using a HEPA vacuum or wet methods.
- Employees must not remove respirators in the regulated area. Respirators must be removed after gross decontamination of the body and washing of the outside of the respirator has been done.
- Employees must completely decontaminate prior to leaving the work area.

No eating, drinking, or smoking will be allowed inside the controlled or regulated area(s). Eating, drinking, and use of restroom facilities will be allowed in areas outside the regulated area after proper decontamination. Possession or storage of foods, beverages, chewing gum, tobacco products, and cosmetic products is prohibited in the regulated area.

VI. Medical Surveillance Program:

Employees who are required to wear respiratory protection are required to participate in the remediation contractor's medical surveillance program. Copies of employee medical and respirator fit tests will be provided to the Owner prior to the start of work and will be maintained onsite by the remediation contractor through the duration of the work requiring respiratory protection.

VII. Worker Training:

The remediation contractor shall ensure all employees who are onsite for this project have received hazard communication training with an emphasis in the hazards associated with bat droppings. The following topics, at a minimum, will be discussed during training:

- The health hazards and diseases associated with airborne exposure to and contact with bat droppings.
- The location(s) of affected work areas, including any regulated areas, and the specific nature of operations that could result in airborne or contact exposures.
- The purpose, proper selection, fitting, proper use, and limitations of personal protective clothing and equipment, including respirators.
- Applicable emergency procedures.

- Measures employees can take to protect themselves from airborne exposure to and contact with bat droppings, including personal hygiene practices.
- The purpose and a description of the medical surveillance program required by Cal/OSHA.
- The employee's right of access to records under Section 3204 (Access to Employee Exposure and Medical Records).

In addition to hazard communication training, all employees engaged in work involving the removal and/or handling of bat droppings shall have received initial 40 hour HAZWOPER training and all subsequent refresher training required under 8 CCR 5192.

VIII. Notification:

The remediation contractor's competent person (CP) will be in charge of notifying others trades and/or companies working on the site of the work being performed. The CP will document notification to other trades and/or companies on his/her daily log.

IX. Waste:

The remediation contractor shall ensure all waste is properly containerized to reduce the likelihood of cross contamination or exposures. All waste containing bat droppings shall be double bagged in 6 mil polyethylene bags and sealed with duct tape in a "gooseneck" manner. Prior to sealing waste bags, an EPA approved disinfectant shall be used to "mist" the contents of the waste bags.

X. Preparation of this Work Plan:

Date Prepared: 05/19/2022

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