



DOMINION

Fungal Remediation Work Plan

Double Adobe Elementary School
7081 N. Central Highway
McNeal, AZ 85617

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Client: **Double Adobe Elementary School District #45**

Prepared by: Dominion Environmental Consultants, Inc.
20045 North 19th Avenue, Building 7
Phoenix, Arizona 85027
Phone: (623) 516-1415
Fax: (623) 516-0017

1. Scope of Work

All work shall be performed in accordance with applicable local, state and federal regulations, standard industry practices and specific requirements of this Work Plan. Current standard industry practices include (at a minimum) remediation practices described in Institute of Inspection Cleaning and Restoration Certification (IICRC) - IICRC S520 "Standard and Reference Guide for Professional Mold Remediation" (Exhibit 1). This work plan is based on facts that have been provided to Dominion Environmental Consulting, Inc. (Dominion). Dominion has not conducted a comprehensive hazardous materials evaluation of the proposed impacted materials at the school therefore; the scope of this work plan may change as additional information becomes available.

When a conflict exists, the more stringent requirement shall apply. Furthermore, the Contractor shall familiarize all employees with this Work Plan and site conditions. Contractor is responsible for verifying quantities and locations of all work and for the safety of his employees. All work shall be in compliance with OSHA and any additional existing School District or onsite Health and Safety Rules. The Contractor is responsible for his own processes and procedures at all times.

1.1 Anticipated Scope of Work

Remove and dispose of all water and fungal impacted building materials that are discovered during the construction activities. Any dismantling of components necessary to reach the fungal and/or water impacted materials is the responsibility of the Remediation Contractor. Ensure that the work area containments isolate the entire work area from the remainder of the building and are under constant negative pressure and maintain the proper air exchanges per hour before commencing remediation.

Disconnect or isolate, with independent critical barriers, any return or supply registers and ducting crossing or terminating inside the work area. Ensure that all of the critical barriers, containment walls and decontamination ports are constantly maintained in good condition 24 hours per day to prevent cross contamination of areas outside of the work area. A Manometer data logger will be required at each containment work area to assure that a constant negative pressure is maintained throughout the entire removal process until final sampling has been obtained and the Industrial Hygienist releases the containment work area for reconstruction

- 1.1.2 At a minimum remove and dispose of all impacted drywall from the interior of the building following removal of the exterior stucco system and/or windows as outlined in the "Building Weatherization plans provided by Robert Polcar Architects and RedTree Consulting. All flooring should be protected during the drywall removal process. Also, remove and dispose of

DOMINION ENVIRONMENTAL CONSULTANTS, INC.
20045 North 19th Avenue, Building 7, Phoenix, Arizona 85027
Tel: (623) 516-1415 Fax: (623) 516-0017
www.dominionenv.net

all insulating material inside the affected wall cavities. On completion of the removal, wet-wipe, and HEPA-vacuum any visible dust from all the remaining building materials left in place. Continue the remediation activities in all directions until all identified or discovered fungal contamination is removed.

2.1.2 As of the time of this work plan, only limited asbestos sampling has been conducted. A more comprehensive inspection should be conducted on any known building materials that will be disturbed during the course of this project, prior to the start of work.

3.1.2 As of the time of this work plan, the building has not been evaluated for the presence of lead containing or lead based paint. A lead paint inspection should be conducted on any painted building material that will be disturbed during the course of this project, prior to the start of work.

2. Disposition of Movable Items

The Contractor will be responsible for removing, covering, storing and cleaning all items in the work areas prior to performing the removal of water damaged building materials.

3. Pre-Cleaning

No pre-cleaning is required in the work area.

4. Work Area Set-up

4.1 *Work area set-up requirements for removal of water impacted materials*

All checked items apply to work area set-up requirements

	Full Containment	X	Fire Retardant Poly	X	-0.02" Negative Pressure
X	Poly Walls (min. 4-mil.)		Three-stage Decon w/ Shower		-0.04" Negative Pressure
X	Poly Floors (2 layers 6-mil.)		Two-stage w/ Hudson Wash Station		Charcoal Filters on NPUs
	Poly Pony-wall above ceiling		One-stage		Use Building Power
	Mini-containment		Separate Load-out		Contractor Supplied Power
	Clean-cube		Secure/Isolated Clean-room		Temporary Power Box
	Splash Guards		"Z" Airlocks		Building Water
	Glove Bag	X	No Decon Required		Contractor Supplied Water
X	Critical Barriers (2 layers)		Seal Floor Penetrations		Temporary Lighting
	Drop Sheet		Protect Existing Floor	X	DOP Test NPUs (ANSI/ UI 586-1990)
	View Ports (must see all work areas)	X	Shut-down HVAC		DOP Test Vacuums (ANSI/ UI 586-1990)
	Plywood Construction Barrier		Lock-out Elevator Access	X	Warning Signs
X	NPU Exhaust Location: Outside of the contained work area				

4.2 *Work area set-up requirements for general cleaning*

All checked items apply to work area set-up requirements

X	Full Containment	X	Fire Retardant Poly	X	-0.02" Negative Pressure
	Poly Walls (min. 4-mil.)		Three-stage Decon w/ Shower		-0.04" Negative Pressure
	Poly Floors (2 layers 6-mil.)		Two-stage w/ Hudson Wash Station		Charcoal Filters on NPUs
	Poly Pony-wall above ceiling		One-stage		Use Building Power
	Mini-containment		Separate Load-out		Contractor Supplied Power
	Clean-cube		Secure/Isolated Clean-room		Temporary Power Box
	Splash Guards		"Z" Airlocks		Building Water
	Glove Bag	X	No Decon Required		Contractor Supplied Water
X	Critical Barriers (2 layers)		Seal Floor Penetrations		Temporary Lighting
	Drop Sheet		Protect Existing Floor		DOP Test NPUs (ANSI/ UI 586-1990)
	View Ports (must see all work areas)	X	Shut-down HVAC		DOP Test Vacuums (ANSI/ UI 586-1990)
	Plywood Construction Barrier		Lock-out Elevator Access	X	Warning Signs
X	NPU Exhaust Location: Outside of the contained work area				
	Other:				

4.3 General Set-up Requirements

- 4.3.1 No removal work may commence until the Contractor has notified the Consultant, the Consultant has inspected the containment set-up, the Contractor has corrected any deficiencies and the Consultant has given permission to commence removal activities.
- 4.3.2 Any modifications for hook-ups shall be the responsibility of the Contractor for building supplied water and electricity.
- 4.3.3 All polyethylene sheeting used on this project shall be fire retardant.
- 4.3.4 If required, critical barriers of 6-mil polyethylene sheeting shall be placed over all doors, windows, HVAC openings, and covering all furnishings.
- 4.3.5 If required, the Contractor is responsible for assuring that all mechanical systems have been shut down and locked out, or adequately sealed with two layers of 6-mil polyethylene, to prevent contamination from entering systems.
- 4.3.6 During the use of any solvents and/or mastic removers, all filtration units shall be equipped with charcoal filters. Charcoal filters are to be replaced daily during the course of abatement activities. All filtration units and vacuum cleaners used on this project shall be equipped with HEPA filtration.
- 4.3.7 A minimum of -0.02 inches of water as a differential measurement from inside/outside of all required negative pressure enclosures should be achieved during all procedures or removal activities.
- 4.3.8 If negative pressure containment is required, the Contractor shall provide a manometer and manometer log for each containment area.
- 4.3.9 If identified in the set-up requirements, all HEPA-filtered devices shall be DOP tested in accordance with ASME N510-1989 and ANSI/ UI 586-1990. DOP testing of all HEPA filtration devices (N100 Level), including vacuum and air filtration devices is required to be performed by an independent company prior to using any equipment. The testing procedure shall be conducted at the work site and must challenge the following: around the HEPA filter/air filtration device seal, the HEPA filter, all seams associated with the construction of the HEPA filtered system, and all other possible penetrations points, including but not limited to, the electrical panel and all components, rivets, screws, wheels, etc. All DOP testing shall be performed *outside* of buildings, with the exhaust directed away from building doorways, windows and intakes to ventilation systems.
- 4.3.10 GFCI are required on all electrical circuits in use.
- 4.3.11 Refer to procedures section for additional containment requirements.

5. Security/Safety

During the project, the Contractor is responsible for maintaining a secure and safe work area.

6. Worker Protection

The following personal protective equipment (PPE) and engineering controls are required during project activities that may cause exposure at or above regulatory exposure limits to hazards during set-up, removal, final cleaning and encapsulation activities. Furthermore, the Contractor must abide by all regulatory requirements, including but not limited to training, medical surveillance, and exposure monitoring for all employees and other individuals entering restricted work areas. Respirator cartridge selection shall be based on work area hazards and chemicals used during project activities. At a minimum, respirators shall be equipped with HEPA (N95 equivalent) cartridges or, during the use of any solvent, combination organic vapor/HEPA respirator filters.

6.1 Personal Protective Equipment

All checked items apply to PPE requirements

X	1/2 Face Respirator or		Head Protection	X	Disposable Protective Suits
X	Full Face Respirator		Hearing Protection		Cloth Coveralls
	PAPR		Face Protection	X	Gloves (appropriate type for chemical hazard)
	Supplied Air Respirator	X	Eye Protection (if 1/2 face respirator)		Work Gloves
	SCBA	X	Steel Toe/Steel Shank Boots		Knee Pads
	15-minute escape bottle	X	Disposable Foot Coverings		CO Meter
Other: Respiratory Protection sufficient for hazard and in accordance with OSHA Expanded Standard 29 CFR 1910.1001.					

6.2 Engineering Controls

All checked items apply to engineering controls during project activities

	Work Area Foggers		Local Exhaust/Ventilation		Task Lighting
	Wet Removal Methods	X	4-Air Changes Per Hour	X	Containment as Described in Section 6.0
	Daily Smoke Test of Containment	X	Daily Visual Inspection of Containment		
Other:					

6.3 Personnel Decontamination Procedure

All personnel leaving a regulated area or containment area shall comply with the following decontamination sequence:

- 6.3.1 Remove and discard any suit, clothing, or cartridge prior to leaving the Work Area.
- 6.3.2 Place contaminated clothing in appropriately labeled bags.
- 6.3.3 No smoking, eating, or drinking shall be allowed inside decontamination enclosures. No smoking shall be allowed anywhere inside the building.

7. Air Sampling and Work Area Post-Remediation Sampling

7.1 Work Area Post-Remediation Sampling

The fungal remediation work is considered complete after tape lift, wipe and/or spore trap samples are randomly collected and analyzed for the elevated presence of fungi.

7.2 “Clearance” Criteria

After passing the visual inspection and the work area appears to be visually clean and dry, the consultant shall collect surface and air samples from inside the work area containment along with air samples from the outside air. The work area shall be considered clean with respect to fungi when the spore type and count in the work area samples are consistent with, or below, concentrations and fungal types found on normal exposed surfaces and the outdoor air.

Should the work area not appear visually clean, the Contractor shall ensure that the negative pressure enclosure remains in place and shall re-clean and reapply the biocide as stated in these procedures. The work area shall meet the visual clearance criteria following the re-cleaning activities and prior to encapsulation and re-occupancy.

8. Disposal Requirements

All wastes generated from the completion of this Work Plan shall be disposed of according to all local, state and federal regulations.

9. Permits and Notifications

If necessary, obtaining required permits and/or notifications to all agencies shall be the responsibility of the Contractor.

10. Procedures

All work shall be conducted to meet applicable local, state, and federal requirements.

10.1 Removal of exterior stucco system

- 10.1.1 The exterior stucco system and/or windows should be removed prior to or during removal of the interior drywall.
 - 10.1.1.1 The current expectation for the project is for the contractor to remove the drywall from below and around the impacted windows in all locations.
 - 10.1.1.2 The contractor should provide a per unit price for any removal outside of that around the windows.
 - 10.1.1.3 Upon removal of the exterior stucco and/or windows the interior drywall condition will be evaluated by the consultant and the protocol will be updated.

10.2 Removal of Mold and Water Impacted Materials

- 10.2.1 Set up work area isolation and ventilation of the work area in accordance to Section 4.0. The location of the containment in each is at the discretion of the Contractor and should be constructed to allow proper area to safely conduct removal. Upon approval of the enclosure by the Consultant, Contractor may proceed to remove the material using the following method:
 - The fungal impacted drywall should be removed to at least one foot beyond visible growth. Removal should continue in all directions, including around corners, until all visible fungal growth has been removed.
 - All metal framing or other load bearing materials should be evaluated for structural integrity by the Contractor. Materials that are severely rusted or deteriorated should be replaced. If the metal framing is structurally sound then the surfaces should be HEPA vacuumed and wet wiped.
- 10.2.2 Remove materials in sections small enough to place into 6-mil disposal bags or covered carts, but as large as possible to reduce breakage and disturbance. Place into bag, twist top of the bag and wrap the twisted neck of the bag with duct tape. Twist the excess plastic at the top of the bag, fold it over and wrap with duct tape to seal the bag with a "goose neck." For cart load-out, place debris in a cart and cover it with poly.
- 10.2.3 Ensure that the outside of bags are clean of dust and residue as they are removed from the work area.
- 10.2.4 Clean all construction systems of debris and visible mold growth. Notify Consultant when final cleaning is complete for a visual inspection.

11. Stop Work

Only the owner will have stop work authority. Unless, in cases of threat of immediate danger to life and health.