



**TRAINING EXCELLENCE**  
PRODUCTION

# **SERVPRO®**

## **Fire Damage Restoration Manual**

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## INTRODUCTION TO FIRE DAMAGE RESTORATION

The [National Fire Protection Association](#) reports that public fire departments responded to 1,348,500 fires during the year 2009. More than one-third of those fires (480,500) were structural fires. Many structural fires were home fires, primarily caused by cigarette smoking, heating equipment, electrical systems, and cooking.<sup>1</sup> SERVPRO® Franchises provide restoration services for victims of fire and smoke-damaged structures and contents.



### The Parties of Fire Restoration

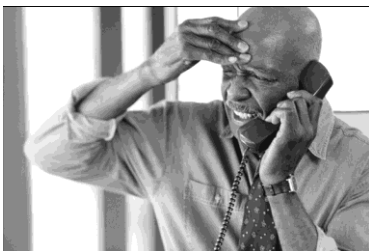
When fire damages a structure, various parties are involved in restoring that structure. Not all structures are insured for fire losses, but in most cases an insurance company works with the property owner to address the damages. When the loss occurs, the insurance agent and adjuster must deliver on the promises for restoration made in the property owner's insurance policy.

SERVPRO® Franchise professionals offer critical services to insurance companies. By calling SERVPRO® Franchises to handle property fire damage claims, the insurance company can fulfill their obligation to restore the damage while avoiding unnecessary administrative costs and reducing the overall loss expense. Charges for restoration services are only a fraction of the cost of replacement, which lowers the cost of a claim for the insurance company.

Services provided by SERVPRO® Franchise professionals have a direct impact on the property owner. A fire damage is a traumatic experience for most homeowners. The Franchisee's professional quality service and close attention to the customer's concerns help restore their lives, as if the fire never even happened.

### The Fire Damage Restorer

The fire damage restoration vendor is a valuable partner to the insurance adjuster. The restorer is usually the first and last person to interact with the policyholder, so a restorer who provides quality service in a polite and professional manner reflects well on the insurance company. Property owners want their loss situations resolved and their homes and businesses restored to preloss condition. They need assistance from the restorer to complete the job quickly and with as little stress as possible.



Restorers must be tactful in dealing with insureds. Property owners are not always themselves after such a traumatic event. They are usually distraught over their loss. The fire damage likely disrupted their personal or professional lives and usually creates significant inconveniences to the property owner. Restorers need to understand the insureds' mental stress and be professionally empathetic and understanding of what they are going through.

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<sup>1</sup> The latest available statistics from the National Fire Protection Association Fact Sheets and Fire Overviews.

Performing fire damage restoration is not the easiest way to earn a living. Every fire damage situation is different in the challenges it presents. Restoring damaged structures could require evening and weekend work, as well as long hours removing dirty smoke residues and overcoming bad-smelling smoke odors. Still, the work is fulfilling and gratifying when customers show appreciation that their loss situation is restored and their lives are back to normal.

## **Customer Service**

Fire restoration includes several functions:

**Satisfy the property owner.** Franchisees meet customers' needs for immediate service. You empathize with their loss. You assure them their property can be restored. You explain the restoration process to them.



**Minimize the extent of the loss.** Franchise professionals perform emergency services to limit secondary damages to property.

**Identify what can be restored.** Franchise professionals pretest to determine what items must be replaced, what items can be cleaned, and what items are questionable, as well as what items do not need cleaning.

**Save the adjuster time.** Franchisees understand how to serve the adjuster. You provide the testing, loss detail, and scope of loss expediently. In addition, Franchise professionals are experienced at managing restoration jobs correctly, so the adjuster is not bothered with problems and issues that might result from inexperience.

**Report the scope of loss.** The Franchisee's inspection and reporting process allows the adjuster to review the estimated services and prioritize the work schedule.

**Produce quality restoration.** Organized, professional crews of uniformed personnel increase the customer's confidence in the Franchisee's capabilities.

Customer service is a theme throughout the *SERVPRO® Fire Damage Restoration Manual*. Satisfying the customer is a priority from the initial inspection of the loss site to a final walk-through of the restored site, and is, in many ways, more important than any other part of the restoration process.

## **COMMUNICATING WITH THE CUSTOMER**

The quality and value of the claim restoration process is judged by the claimant or property owner (who is the customer). The first job of the restoration vendor is to ensure the customer is pleased with the service. A pleased customer reflects positively on the customer's insurance company. The restoration vendor's value to the insurance company increases when the customer develops a good perception about the restoration services.

Because a fire is a traumatic experience, the manner in which the SERVPRO® Franchise Professional communicates is vital. Good communication includes the following:

Patiently listening to the customer's recollection of the events and their personal concerns regarding the restoration process

Reassuring the customer that your services can effectively make the situation better

Providing proper paperwork so the customer knows what you are saying is true



Pretesting the damaged areas with customers present so they can see the results for themselves

Keep the communication lines open between you and the customer. Communication is the key to knowing what your customer feels during the fire damage restoration process.

Communication also allows you to influence your customer's perceptions of the job and the situation as a whole.

### **The Customer's Emotional Bank Account**

Think of the customer's perceptions as an *emotional bank account*. The balance of an emotional bank account results from the number of good things versus the number of bad things that happen to an insured during a claim. If the bad outweighs the good, the customer is unhappy and difficult. If the good outweighs the bad, however, the customer is happy and easier to work with.

During the fire damage work process, deposits and withdrawals continually raise or lower the balance of the customer's emotional bank account.

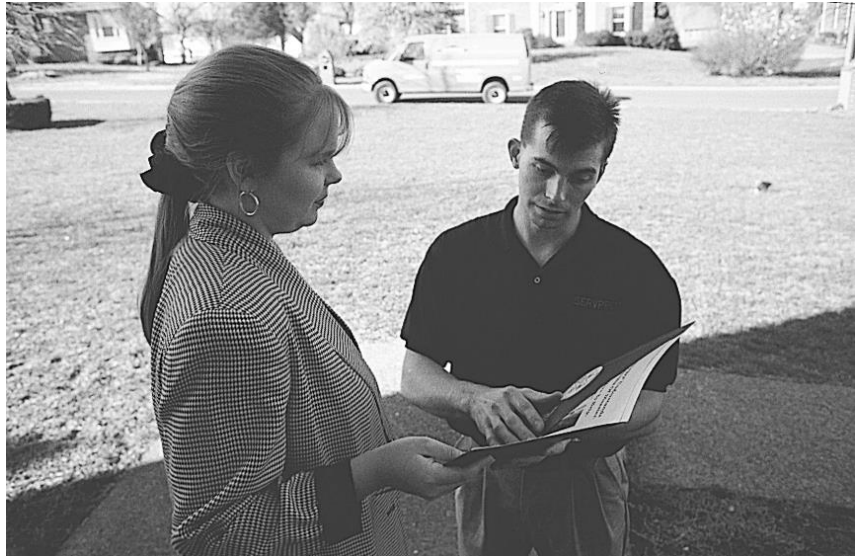
**Deposits**—Whenever the customer is left with a happy or good feeling

**Withdrawals**—Whenever the customer is left with a dissatisfied or bad feeling

Demonstrating genuine concern for the customer will help alleviate many of the customer's fears and concerns. As the restorer builds an emotional account balance and develops a rapport with the insured, the job will run much more smoothly and end with a satisfied customer who trusts your professionalism and credibility. You are building a caring relationship with the customer that will make a difference in their perception and appreciation of your service. If something bad happens during the restoration process—for instance, an item is broken during cleaning—the good impressions you have made with the customer will lessen their reaction to the bad incident.

Begin building the customer's emotional account as soon as the first call comes in. If a caller states that his or her house burned, do not reply, "OK, just a minute . . . I'll get you the estimator." Instead, show concern with, "Oh, I'm so sorry for you. Is everything OK?" and "Let me give you to our estimator. She is very knowledgeable and can help you through this." You can begin building a caring relationship with the customer from the first contact.

Building the customer's emotional bank account can be very important for the last phase of fire damage restoration. On jobs where personal property has been packed out, the move-back is the last major event of the cleaning and restoration process. If the customer has not had good experiences during the claim, you may have to deal with all of the mistakes made by other vendors. The best way to deal with being the last one on the job is to do such an awesome job the customer is amazed when all is completed!



*Make sure deposits outnumber withdrawals.*

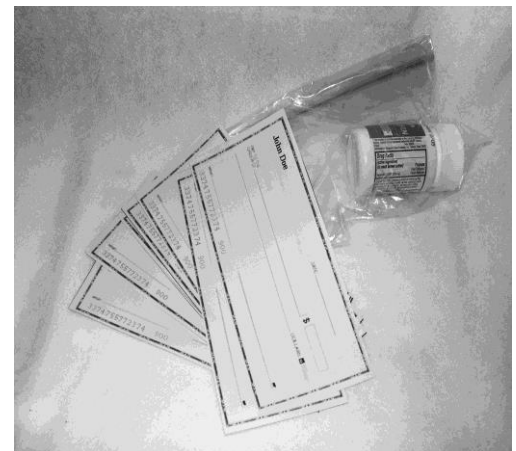
## **Making Deposits During Fire Restoration**

Fire restorers make deposits in a customer's emotional bank account every time they are sincerely concerned about the customer and go above and beyond the call of duty to fulfill customer requests. Here are several ways to make deposits during a fire damage restoration project.

Let customers talk; listen carefully to their opinions and questions. Never interrupt a customer. Often adjusters rush the customer with forms and issues. You can learn much about the situation if you let customers talk to you and express their concerns.

Pretest contents and demonstrate to the customer what items can be cleaned so they will see the results that are possible. Allowing the customer to observe as you pretest will build your credibility with the customer.

Do not promise what you cannot deliver. Be honest! Estimators should not glance at a job from the doorway and promise everything just to get the job. Always pretest and be honest with the customer about what will clean and what will not.



### **Under-Promise and Over-Deliver**

During the scoping, remind customers of valuables, medication, and financial items they should remove before Franchise employees begin working in the home (see SERVPRO® [Customer Information Form – Fire Damage \[#28500\]](#)). Educate customers about medications or cosmetics

being contaminated to ensure they do not inadvertently use them. Tell them to take valuables, like fine jewelry, and financial records out of the house. People may think of taking their checkbook, credit cards, and wallet, but not think about blank checks, bank statements, and unpaid bills. When houses are unoccupied, possibly with plywood over an entryway, would-be robbers in the area become aware that no one is living in the residence. Customers should remove all valuables to avoid any problems.

**Real Life Situation:**

A customer was very worried about a coffee table that had been passed down to her from her grandmother. The table was black with soot. A SERVPRO® Franchise estimator pretested the table using Wood Crème Paste (#209), and the customer was amazed at the results. This is making a deposit!

Identify customers' most important concerns and show attention and concern in handling those items.

If the customer identifies a special item as having sentimental value, take the item with you at the time of the estimate. This demonstrates the delicate care you will be taking with all of the customer's belongings. Tell the customer you will take this favorite item back with you right away, clean it, and store it in a secure place.

Explain the cleaning procedures and move-out process (if applicable) so customers can know what they can expect from your service. Imagine how perplexed the insured might be if the contractor and adjuster inspect the loss, but do not help the customer understand what they are doing or why they are doing it. Imagine the confusion if the adjuster hands the customer a Claim List with no explanation regarding how to complete the list. The customer needs someone to take the time to explain slowly what is happening in their home. Use the SERVPRO® [Customer Information Form—Move-Outs \(#28502\)](#) to explain the steps the customer can expect.

Have contacts for temporary housing in case the adjuster asks for your help. Customers are concerned about where they are going to live while their house is being restored. Sometimes adjusters just tell insureds to call realtors or look in the paper to find housing. You can impress customers and inexperienced adjusters by providing contacts for temporary housing. Even have contacts for temporary pet boarding. Pets are very important to their owners, and owners will appreciate having assistance.

Keep on schedule with all of the work and communicate proactively. Customers are already facing the hassles of living in temporary housing. They don't need additional aggravation from the restoration vendor not being on time for an appointment.

Restoration technicians should always demonstrate professionalism at the jobsite. Crews should show knowledge and technical experience in fire restoration and also present a professional appearance in work dress and personal grooming. Profanity, smoking, and drinking alcohol on the job are not allowed. Equipment, cleaning products, and



supplies should be kept in proper condition. Since fire restorers must be available 24 hours a day, the most professional asset is a positive attitude.

Perform any value-added service the customer did not expect.

Complete any request by the homeowners to their satisfaction.

Allow customers to pick up specific personal items from the boxes of contents stored at the warehouse. Explain to them the process for retrieving an inventory item.

Mail a list of claim and salvage items discovered at the warehouse during cleaning.



## WHAT IS FIRE DAMAGE RESTORATION?

Before learning the details of fire damage restoration, the following provides a general overview of what is involved in restoring fire-damaged structures and contents.

### Types of Fire Damages

Different kinds of damage can occur when structure or contents burn. Of course, many materials are destroyed in the fire, being partially or completely consumed in the combustion process. Beyond that, further damage happens as heat and smoke residues impact the materials. Even more damage occurs as firefighters attempt to extinguish the fire. Water and other extinguishing agents used to fight the fire can actually cause more damage to the building. In reality, a fire damage consists of several kinds of damages. Materials suffer burning, charring, heat damage, smoke damage, and even water damage.



### Levels of Fire Damages

Not all fires result in the same level of damage. Not all fire damages require the same type of restoration procedures. Any particular loss could involve a range of damages from minor to major. A description of three levels of fire damage—minor, medium, and major—will provide an idea of the restoration services required to address each level of loss.

**Minor Fire Damage.** Smoke residues affect only certain rooms or areas. The amount of smoke residues is light to moderate. Restoration may involve dry cleaning and/or wet cleaning of ceilings, walls, floors, and contents. Few areas need to be repainted, and only minor items require replacement.

**Medium Fire Damage.** The amount of smoke residues is moderate, and more materials require wet cleaning to remove residues. The number of areas requiring repainting and items requiring replacement increase. Floors may need to be refinished. Heat damage to drywall, cabinets, and contents requires more materials to be replaced. Contents might be cleaned at the jobsite. Smoke odors are noticeable, possibly requiring additional deodorization procedures after cleaning.

**Major Fire Damage.** Fire and heat damage is severe near the source of the fire. Structural framing and finishes may be charred, requiring structural repairs. Smoke residues are distributed through a large portion of the building, and smoke odors are strong and possibly pungent. Emergency services are needed, such as boarding up the structure, establishing a source of electricity, winterizing the building in cold weather, and removing smoke-filled and charred debris. Restoration will involve extensive cleaning of the structure and probably require restorers to pack and move out all salvageable contents for off-site cleaning. Multiple methods of deodorization are needed to remove smoke odors.

Fire damage losses present restoration challenges different from those of normal cleaning and repair. The combined impact on a building of a burning fire, intense heat, odorous smoke residues, and



moisture from fire-fighting efforts requires the fire restorer to provide several kinds of services and to work together with licensed contractors and subcontractors.

## **Fire Restoration Services**

The various restoration services for fire damages can be described by five categories.

**Mitigation Services**—The goal of mitigation is to secure the structure and prevent further damage. Mitigation could include boarding up openings to secure the structure, winterizing the plumbing to prevent frozen pipes, and establishing a temporary source of electricity to the structure. Structures that are wet due to fire-fighting procedures will need emergency drying to prevent secondary water damage.

**Structural Cleaning Services**—Cleaning of a fire-damaged structure focuses on removing smoke residues from a building's structural components and deodorizing odors given off by residues. The restorer and adjuster consult and advise the property owner on which structural components can be cleaned and which cannot be cleaned. Repair or replacement is needed for components that do not respond to cleaning.

**Contents Cleaning Services**—Personal property within a residence, office, or other building must be cleaned of smoke residues. In some fire situations, the contents can be cleaned on the jobsite. Other situations require contents to be packed and moved to a separate location for cleaning and storage. Pack-outs could occur because a building is not secure or is too damaged for on-site cleaning.

**Specialty Restoration Services**—Restorers of contents often subcontract specialty cleaning of certain contents: electronics cleaning, dry cleaning of clothing, furniture refinishing, and cleaning of expensive artwork.

**Reconstruction Services**—In some fire situations, structural components may be damaged to the point they cannot be restored to preloss condition. The work of reconstructing and repairing fire-damaged structural components may require different skills than those of standard home remodeling. Fire damage restorers typically perform cleaning services while licensed general contractors provide reconstruction services.

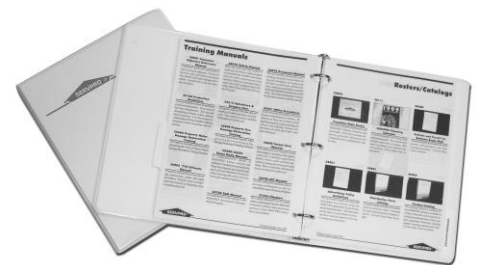
## **THE FIRE DAMAGE RESTORATION MANUAL**

The SERVPRO® *Fire Damage Restoration Manual* offers guidance on the different services involved in fire damage restoration. The topics in the manual describe how procedures for restoration may vary depending on the type of damage to a building and the level or severity of the fire and smoke damage.

### **The Topics**

The topics in the manual cover the basics of restoring a structure and its contents to preloss condition after a fire damage.

**Safety During Fire Damage Restoration**—Safety concerns must be taken seriously and properly addressed before proceeding with fire damage restoration work.



**Theory of Fire**—Understanding what happens while a fire is burning helps us know what to do after the fire is extinguished. The theory of fire relates to scoping the loss and cleaning the residues.

**Basic Cleaning for Fire Damages**—The basic knowledge of how to clean is applied to the task of removing smoke residues and deodorizing smoke odors.

**Fire Damage Work Process**—SERVPRO's basic system of job management shows how to handle a fire damage restoration project from start to finish. The process establishes controls to ensure your customer receives timely, effective service and that all steps of a job are performed.

**Inspection and Estimate**—The inspection and scope determine what steps must be taken to restore the damaged structure. The estimate forecasts the costs for completing the restoration work.

**Deodorization of Smoke Odors**—Learn the procedures and deodorization products used to deodorize odors that often accompany smoke residues.

**Restoring Fire-Damaged Structure**—The restorer utilizes various cleaning and deodorizing products and procedures to remove smoke residues from ceilings, walls, floors, and components attached to those surfaces.

**Restoring Fire-Damaged Contents**—The restorer encounters many different surfaces when cleaning the personal property within a structure.

**Move-Outs**—Packing and moving a customer's contents to a remote location for cleaning is a labor-intensive task. The *Contents Claim Inventory Service* enables the restorer to track an entire move-out project, listing contents room-by-room and providing a detailed Total Loss Contents Inventory.

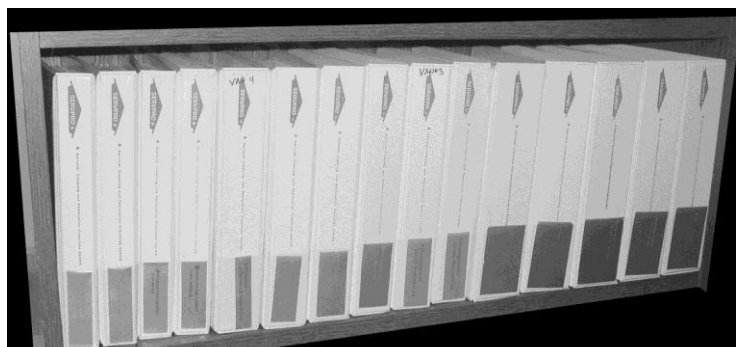
**Working with Subcontractors**—Subcontracting requires active management, careful screening of subcontractors, and specific tracking of subcontract expenses and income.

## Other SERVPRO® Manuals

The SERVPRO® *Fire Damage Restoration Manual* will help you learn how the SERVPRO® Franchise professional restorer handles a fire damage restoration job. This manual, though, should not be your only reference and source of education on fire damage restoration. Consult other SERVPRO® manuals for detailed information on cleaning and restoration.

The SERVPRO® *Production Guidelines Manual* (#35100) describes surfaces to be treated, methods of cleaning, products and equipment needed for each process, safety precautions, and steps to actually perform each service.

The [\*EZ Production Guidelines\*](#) condense the production guidelines into an easy-to-use format. Rookie and veteran employees can carry the *EZ Production Guidelines* on every job to answer questions and make sure they follow the correct SERVPRO® System process.



The SERVPRO® *Professional Cleaning Products Manual* (#35026) provides Safety Data Sheets for each SERVPRO® cleaning product. The manual describes each product and shows how to mix the product and apply it effectively and safely.

The SERVPRO® [\*Water Damage Restoration Manual\* \(#35023\)](#) provides guidance on drying a water-damaged structure and contents.

The SERVPRO® [\*Safety Manual\* \(#35076\)](#) provides details on establishing an effective safety program for the business.

## **ECTP Certification**

Review questions follow each section of the SERVPRO® *Fire Damage Restoration Manual*. Study and answer the review questions to prepare for the Fire Certification in the SERVPRO® [\*Employee Certification Training Program\* \(ECTP\)](#).

## **Industry Certification**

The [\*Institute of Inspection, Cleaning and Restoration Certification\*](#) (IICRC) is an independent, non-profit, certification and standard-setting body within the cleaning, inspection, and restoration industry. SERVPRO's methodology is in agreement with IICRC instruction on fire damage restoration. IICRC offers a certification course titled *Fire & Smoke Damage Restoration Technician*. Reading and learning the information in the SERVPRO® *Fire Damage Restoration Manual* will prepare you for the IICRC course, should you decide to pursue this certification.

**INTRODUCTION REVIEW QUESTIONS**

- 1 Who is a SERVPRO® Franchise professional's customers in a fire damage situation?
- 2 What is a SERVPRO® Franchise professional's role when dealing with customers?
- 3 Name five deposits that you can make to your customer's emotional bank account during fire damage restoration.
- 4 Name five withdrawals that you can make to your customer's emotional bank account during fire damage restoration.
- 5 A fire loss may involve a range of damage: minor damage, medium damage, and major damage. List the types of restoration services performed on major damages that are usually not needed on minor damages.

## SAFETY DURING FIRE DAMAGE RESTORATION

Safety hazards are present at every fire damage work site. Fire restorers must take safety concerns seriously and address them properly before starting emergency services and restoration work. A safe environment must be maintained for everyone on the jobsite.

Everyone should make safety a primary concern. A safety program should be implemented to cover the most common safety hazards. Safety training should train employees in practices to avoid illness or injury. When performing services on the jobsite, employees should be constantly alert for potential hazards and take steps to avoid them.



### Establish a Safe Work Site

To ensure the work site is safe, the restorer and the property owner must communicate and cooperate. The two parties should clarify how the site will be secured during the restoration process. The property owner and restorer should establish the procedures technicians will follow regarding keys, locks, lights, and security systems, especially if the site is unoccupied.

Perform a safety evaluation as the first step in any mitigation situation. Determine all safety risks involved and, whenever possible, ask the property owner or representative to point out any known safety hazards. Once safety hazards are identified, define procedures to minimize the risks and communicate safety procedures to everyone at the jobsite.

Maintaining an organized work site helps promote safety. Identify work areas and staging areas for equipment and supplies. If warning signs or barrier tapes mark off unsafe areas of the work site, communicate the importance of the property owner and occupants respecting the marked areas. Clean up work areas and staging areas at the end of a work session. Do not leave cleaning products where others might be exposed to them. Dispose of debris when possible, but only after obtaining permission from the property owner and adjuster. (You must not dispose of damaged contents before the insured has inventoried and listed items for the Claim List.)

### Follow Government Regulations and Standards



#### [The Federal Occupational Safety and Health Administration](#)

(OSHA) regulations establish uniform and comprehensive provisions to protect workers against workplace safety risks and health hazards. Employers are responsible to provide a safe work environment for employees by establishing a Hazardous Communications Program, training employees in safety procedures,

and providing them with Personal Protective Equipment (PPE). The SERVPRO® [Safety Manual](#) (35076) (Chapter 2) offers information on implementing OSHA regulations in a business' safety program. Employers should also be made aware of and comply with applicable state laws.

## Train Employees in Safety

OSHA requires employees to have safety training *before* going on the job. Ensure employees are trained on safety equipment such as respirators, gloves, and hearing and eye protection. Employees should also receive training on safely applying cleaning products and operating equipment. Explain [Material Safety Data Sheets](#) to them and what to do if exposed to a hazardous product. Record all training, especially safety training, and keep records for at least three years.

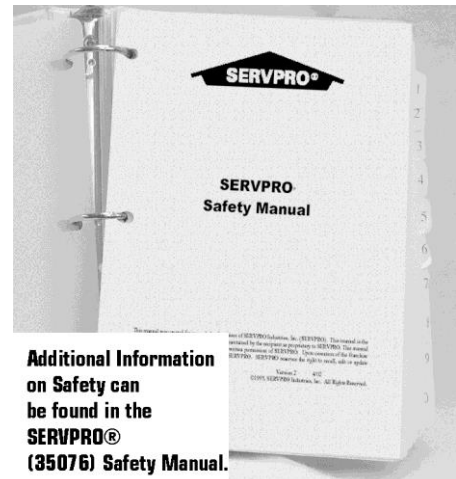
## Wear Personal Protective Equipment

Everyone who performs work that poses hazards or could cause injury must wear personal protective equipment (PPE). Some basic guidelines for PPE are:

1. Keep your PPE clean and restore it to ready-to-use condition following each use.
2. Do not exchange PPE with other employees unless it has been properly cleaned.
3. Wear splash goggles when mixing, spraying, or pouring cleaning products and when operating dangerous equipment or machinery.
4. Wear chemical-resistant gloves for protection against cleaning products that can cause irritation, blisters, or whiteness of the skin. Strong alkaline products and dry cleaning solvents can be especially irritating to skin.
5. Wear respirators when dealing with organic vapors, solvents, or hydrocarbons, and during any exposure to a dangerous situation. To be safe, follow one rule of thumb—if your work environment is unpleasant or if it makes you dizzy, wear your respirator!



See the SERVPRO® [Safety Manual \(35076\)](#), Chapter 6, for details on using and maintaining PPE in a sanitary and reliable condition.



## SAFETY IN HAZARDOUS CONDITIONS

Restoration work in fire-damaged buildings is potentially hazardous. At the start of a restoration project, technicians face a damaged structure containing known hazards and possibly some unknown hazards, as well. Electrical hazards, structural hazards, and slip, trip, and fall hazards call for technicians to exercise special precaution.

### Electrical Hazards

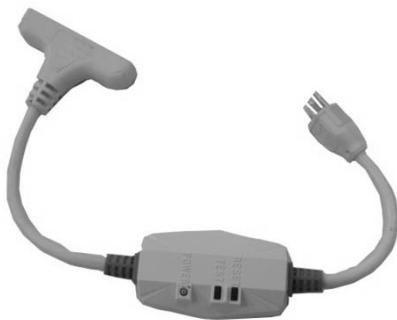
Electrical power is disconnected at many fire-damaged work sites. However, at the work sites where electrical current is still turned on to all or even a portion of the structure, make sure not to work around the damaged electrical wiring.

Fire-damaged work sites are also frequently wet if water was used to extinguish the fire. Water conducts electricity! Mixing water and electricity is dangerous. The water that extinguished the fire may have saturated the wiring system. Use extreme caution when dealing with electricity in wet environments.



To create a safe environment, the first item to check is the power distribution panel (fuse box). Turn off all circuit breakers at the power distribution panel. If only a portion of the building is affected, turn off all circuits providing power to the damaged areas. This is especially important if water is inside wall cavities or electrical outlets, or when electrical outlets are located on the floor. It may even be necessary to have a licensed electrician do an inspection.

When circuits are turned off, use lockout tags and post a sign on the power distribution panel stating: "Work is in progress. Do not reset any breakers or reactivate any electric circuitry." In some cases, it may be necessary to turn off the power source where it enters the building. Usually, power may be turned off at a meter located outside. Turning off the power source at the meter may require assistance from the local power provider or utility company. Use a generator if the electrical system in the home or building is considered unsafe and no other source of power is available.



Using electrical equipment in a wet environment requires the use of **Ground Fault Circuit Interrupters (GFCI)** that will cut the power if they sense too much current. Failure to use a GFCI is one of the most frequent violations cited by OSHA.

Always check your cords, tools, and other accessories for damage. Make sure the ground plugs (the third prongs) are not broken and that the cords have no frays, cuts, or nicks. Always check the equipment owner's manual to ensure you use the proper gauge extension cord. Finally, if any issues exist regarding the electrical system, or you are unfamiliar with the type of system, consult the adjuster and recommend the use of an electrical contractor before proceeding.



## Structural Hazards

Fires often cause structural damages to buildings that can pose safety hazards. Be cautious of loose or falling debris. Watch for damaged structural components that might cause puncture wounds. Hard hats and work safety boots offer head and foot protection when inspecting buildings for unidentified hazards.

Keep people out of the structure until you are sure it is safe. Warn others of the potential risks of entering damaged buildings by posting warning signs or barrier tape. In extreme cases, an engineer may need to inspect the building and verify the soundness of the structure for restoration activities.



## Slip, Trip, and Fall

Slips, trips, and falls are a common cause of accidents and injuries. Most slip or fall accidents can be prevented by following some simple preventative measures. Inspect a fire-damaged building for potential slippery surfaces and tripping obstacles; then apply safety measures to prevent an incident.

People sometimes do not think about the potential hazard of walking on slippery surfaces. Wet floors are slippery. A dry floor may pose a hazard if a surface nearby is wet (for example, someone walks across a wet carpet, gets their shoes wet, and then walks onto a hard surface floor and slips). Use signs to warn people when floors are wet and slippery. Many people do not realize that soot residues deposited on tile flooring is also a potential slippery surface.



Structures that have been damaged by fire can present various kinds of trip and fall hazards. Keep floors, walkways, and aisles clean, dry, and free from protruding nails, splinters, loose boards, holes, or projections. Cover holes in the floor or mount a temporary guardrail, so people do not accidentally trip or fall.

## SAFETY AROUND HARMFUL SUBSTANCES

Technicians may work around potentially harmful substances in the course of restoring fire damages. Some damaged structural components or property items at the loss site might contain harmful substances. The cleaning products used in the restoration process might also be harmful if not used properly.

## Hazardous Materials

Hazardous chemicals, lead, and asbestos may be present in some fire-damaged buildings. Be alert for hazardous materials, and do not try to handle or remove them unless you are certified to deal with hazardous materials. Use qualified subcontractors to remove and dispose of hazardous materials.



Asbestos has been added to many different kinds of building materials for insulation and fire retardation. The use of most asbestos products was banned by the Federal Government in the 1970s, but some asbestos products continued to be used in construction during the 1980s. When asbestos is found, do not disturb it. If demolition is required, use a qualified asbestos abatement contractor to perform the asbestos remediation.

In addition to asbestos, many structures built before 1986 may have lead-based paint (meaning paint that contains lead). When materials containing lead-based paint are demolished or lead-based paint is sanded or scraped, the chips and dust particles from the paint can pose health hazards to anyone breathing or contacting the debris. Materials that are believed to contain asbestos or lead should be tested by a qualified lab. Be sure to consult with the adjuster if you suspect asbestos or lead-containing materials are present.

## Chemical Safety

Safety precautions for workers and occupants are important when using any cleaning, disinfecting, or deodorizing product in fire damage restoration. Follow the guidelines and safety precautions listed on the product labels and in the production guidelines.

Chemical residues bother some people more than others. Before using any product, listen for customer comments indicating concern for odors or chemical usage. Tell customers about the products you will use. If customers are concerned, refer them to their doctors before using a product. Provide the customers with [Material Safety Data Sheets \(MSDS\)](#) at their request. Maintaining all MSDSs in a binder in each production vehicle is a good way to ensure employees have access to them. Also, refer customers to Item 10, "Health and Safety," on the SERVPRO® [Customer Information Form—Fire Damage \(28500\)](#).

Consult SERVPRO's reference materials on cleaning products. Cleaning product usage and safety information can be found in the SERVPRO® *Professional Cleaning Products Manual* (35026) and SERVPRO® *Production Guidelines* (35100). Always follow directions outlined on the product label or on the Material Safety Data Sheets (MSDS). Material Safety Data Sheets (MSDS) for each cleaning product must be kept on hand at every job. (Note: Spanish versions are available.) MSDSs are available in the SERVPRO® *Professional Cleaning Products Manual*. Correct product usage involves selecting the appropriate cleaning product and mixing it properly as recommended on the product label. (Always use a measuring cup and pour concentrated

SERVPRO INDUSTRIES, INC.

Material Safety Data Sheet (USA)  
#351 WALL AND ALL SURFACE CLEANER

SECTION 1 - PRODUCT INFORMATION

Product Name: #351 WALL AND ALL SURFACE CLEANER  
Manufacturer: SERVPRO INDUSTRIES, INC.  
Address: 573 Airport Blvd., Gallatin, TN 37066  
Phone: (615) 451-0200  
Fax: (615) 451-0200  
Emergency Telephone Number: (800) 535-5653

SECTION 2 - INGREDIENTS

HAZARDOUS INGREDIENTS	CONC. REL.	ACGIH TLV	OSHA PEL	TLV
Isopropyl Alcohol	400 ppm	400 ppm	900 mg/m <sup>3</sup>	1.1
Caustic Soda	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>		0.2

SECTION 3 - PHYSICAL DATA

Appearance and Color: Pink liquid with blue odor.  
Boiling Point: N/A  
Freezing Point: N/A  
Flash Point: N/A  
Vapor Pressure: N/A  
Specific Gravity: 1.1

SECTION 4 - FIRE AND EXPLOSION DATA

Hazardous Combustion: None  
Flammable Limits: None  
Flash Point: N/A  
Autoignition: N/A  
Explosion Limits: LEL: N/A, UEL: N/A

SECTION 5 - REACTIVITY DATA

Reactivity: Stable  
Incompatibility: None  
Hazardous Reaction: None  
Polymerization: None  
Decomposition: None  
Stability: Stable  
Toxicity: None

PRODUCT INFORMATION

Product Name: #351 Wall And All Surface Cleaner

SECTION 6 - HEALTH HAZARD DATA

Health Hazard: None  
Irritation: None  
Corrosion: None  
Toxicity: None  
Flammability: None  
Explosion: None  
Reactivity: None  
Stability: None  
Incompatibility: None  
Hazardous Reaction: None  
Decomposition: None  
Stability: Stable  
Toxicity: None

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Use in accordance with label directions.  
Wear and follow for disposal.  
Consult local, state or federal disposal authorities for approved procedures.  
Precautions to be taken in handling and storing.  
Other Precautions: None

SECTION 8 - CONTROL MEASURES

Respiratory Protection: None  
Eye Protection: None  
Skin Protection: None  
Chemical resistant gloves: Safety glasses or goggles  
Eye wash device: None  
Good work habits: Wash hands after use.

product into water!) Always apply products following the procedures specified on the product label, observing recommended dwell times, heating temperatures, pH levels, and ventilation.

Always protect the safety of occupants when applying cleaning products. No one should be present in the area where disinfectants and deodorizers are being applied. When deodorizing with a chemical or gas product, make sure anyone not wearing a respirator vacates the area being deodorized. Before allowing occupants to return to the treated area, ensure the area has been properly ventilated and the product has had time to dry.

Establish safe work procedures at the jobsite to protect occupants from exposure to harmful substances. Do not apply cleaning products into the HVAC system while the system is operating. Make sure containers for storing cleaning products are properly labeled and never left uncapped or open. Always mix cleaning products in a staging area that children and pets cannot access. Never allow the occupants to have any cleaning products leftover from the job. If any occupant of the work site is especially sensitive to chemicals, consider placing an air scrubber equipped with charcoal filtration to remove vapors from the work area.

## SAFETY DURING WORK PROCEDURES

Safety on the job means “working safe.” Evaluate the scheduled work procedures for potential hazards. Take precautions to prevent accidents and unsafe events from occurring. Planning ahead for a safe work process will prevent an unfortunate situation later.

### Ladders and Scaffolding

Restoring smoke damages may require cleaning from heights or high positions, such as very tall ceilings. OSHA Standards establish fall protection requirements for the construction industry, and these standards may apply to SERVPRO® Franchise activities in restoration jobs where employees are working on scaffolds, stairways, or fixed ladders. See the SERVPRO® [Safety Manual \(35076\)](#) (Chapter 2) for safety information on proper fall protection.

### Confined Spaces

Confined spaces are usually hard to enter and exit. Spaces might be considered “confined” if they lack ventilation, are difficult to move around in, and would be difficult to escape from in an emergency. Confined spaces are not meant for continuous human occupancy. Workers must use caution when working in these areas.

Typical confined spaces that workers can enter during restoration jobs include crawl spaces and attics. Crawl spaces may contain serious hazards such as sewer gas, infectious waste, electrical wiring, gas lines, and other hazards.

Follow the guidelines in the SERVPRO® *Safety Manual* (35076) when working in a confined space. If you or a fellow worker has not been trained to work in confined spaces, talk to your supervisor before entering.



## Airborne Smoke Residues

A burning fire releases toxic gases into the air. Organic materials produce *nitrogen* when they burn. Inorganic materials produce *sulfur* when they burn. Nitrogen and sulfur are hydrocarbons, and some hydrocarbons cause cancer. Some of the gases that make up smoke are quite toxic, such as carbon monoxide, hydrogen cyanide, and hydrogen chloride. Once the fire is extinguished, the smoke residues that remain and the airborne particles coming from residues may still be harmful if technicians inhale them.

Steps can be taken to allow technicians to work safely in fire-damaged structures. Structures should be ventilated with Fireman's Fans. Odors from smoke residues develop as gases evaporate from the burned debris into the air. Ventilation removes most of the gases emitted from debris in the building.

Respirators protect technicians from breathing potentially harmful residues stirred into the air by the work process. Whether a respirator is needed depends on the concentration of residues. A loss site with light smoke residues might be cleaned safely without a respirator. A loss site with heavy, loose residues might cause concentrations of smoke particles to become airborne, thus requiring a respirator. The type of respirator needed (paper filter mask or half-facepiece

respirator with HEPA filter) depends on the level of smoke residues. An air scrubber with HEPA filtration will reduce airborne particle concentrations when technicians are cleaning an area with extremely high levels of smoke residues.



## SAFETY DURING DEODORIZATION PROCEDURES

Two methods of deodorization—thermal fogging and ozone—work by putting substances into the air that are irritating to humans if breathed. However, deodorizing with either method can be done safely and effectively with proper safety precautions.

### Safety Precautions for Thermal Fogging

Thermal fogging (also called dry fogging) usually dispenses solvent-based deodorants. The deodorizing product is broken down into extremely small particles by heating and combusting it in the fogging device. Safety precautions are needed to prevent an incident. One potential hazard is the flammable nature of deodorizing products used for thermal fogging. Another risk may be physical reactions of people exposed to the fog.

Post *Thermal Fogging in Progress* signs or warning notices in easy-to-see areas at all points of entry. Also post the time limit people should wait before reentering the building or treated area. Notify the local fire department and the security monitoring company (if appropriate) of the thermal fogging operation to avoid false alarm calls. The thermal fog looks like smoke, and uninformed third parties may report the smoke to authorities.

Before starting the thermal fogging procedure, extinguish pilot lights on appliances such as wood stoves, gas logs, fireplaces, gas ranges, water heaters, and furnaces. The fogging agent can reach a flammable point when exposed to an open flame. Also disconnect any electrical device that could cause a spark.



Ensure all people and pets are removed from the environment to be fogged. Acute over-exposure to some deodorizers used in thermal fogging may result in irritation of the throat and lungs. Headaches are possible. Instruct the customer to remove any food that might be contaminated from the environment to be fogged.

Wear personal protective equipment as noted on the MSDS for the deodorizing product being fogged. Many deodorizers used in fogging require a respirator with organic vapor cartridges, as well as goggles and chemical-resistant gloves. Walk backward, progressing out of the structure, as you fog the treatment area. Be aware that hard surface flooring can become slippery when fogged.

Thoroughly ventilate to remove odors and fumes before occupants reenter the treated area. Reoccupying too soon may cause eye, throat, and respiratory irritation. Open doors and windows. Set up exhaust fans and high-velocity air movers to turn over the air in the building.

Occupants should not reenter the building until they are physically comfortable doing so. Persons who are exceptionally sensitive may want to seek the advice of their physician before reentering. See the [EZ-Production Guideline](#) for “Dry-Fogging (Thermal Fogger)” for detailed procedural instructions.

## Safety Precautions for Ozone

Ozone (also called activated oxygen) is a toxic gas and must be used carefully. The [Occupational Safety and Health Administration](#) (OSHA) has established a permissible exposure level (PEL) for ozone at 0.1 ppm, meaning a safe level of ozone exposure is 0.1 parts per million (ppm) of air volume. Ozone generators produce concentrations from 0.3 to 1.5 ppm, so ozone deodorization procedures could potentially produce levels of ozone that would be hazardous in prolonged exposure situations.



Like most “chemical” products, ozone can be hazardous, but if used properly this method of deodorization is as safe as other available methods. Observe safety precautions when deodorizing with ozone. Use activated oxygen only in unoccupied areas. Ozone is toxic when high concentrations are inhaled, so remove all people and pets from the areas to be ozoned. Place “Ozone Warning” signs at all entries prior to performing activated oxygen procedures.

Avoid overexposure to ozone concentrations of .05 ppm and greater. Recommended personal protective equipment for working with ozone includes safety glasses or goggles, chemical-resistant gloves, and a [NIOSH](#)-approved respirator with an organic vapor cartridge. High concentrations may cause respiratory ailments, dry throats, and severe eye irritation. If you experience any reactions, move to fresh air immediately and seek medical help.

Ventilating the treated area is recommended. Ozone dissipates *completely* within minutes and leaves no residue, strong fragrances, or chemicals to which people may be allergic or sensitive. Wait 15 to 45 minutes after ozone generation has stopped to safely enter an ozoned room. Ventilate the treated area at least 30 minutes prior to reentry. See the [EZ-Production Guideline](#) for “Deodorizing with Activated Oxygen (O<sub>3</sub>)” for ventilation procedures.

**A Rule of Thumb:**  
If you can smell ozone, do not stay in the area.





**SAFETY REVIEW QUESTIONS**

- 1 Whose responsibility is safety on a jobsite?
- 2 When should you wear chemical-resistant gloves? Splash goggles? Respirators?
- 3 True or False: When you find only two-prong sockets in a house, it is safe to cut the third prong off a ground plug.
- 4 What steps can you take to help others avoid slip, trip, and fall accidents?
- 5 If you think you find asbestos in the building in which you are working, what should you do?
- 6 When working in an environment with heavy soot conditions, what PPE should you wear?
- 7 When mixing products, is it necessary to use a measuring cup? Why?
- 8 When working in a heavily smoke-damaged environment, what are three ways to make the environment safer?
- 9 What are the safety steps necessary to safely thermal fog a house?
- 10 What are the safety steps necessary to safely ozone a room full of contents?

## THEORY OF FIRE

Learning the *theory of fire* means understanding the components of smoke and how fire, smoke, and heat affect structure and contents. This knowledge will help you more effectively restore buildings that have been damaged by fire and smoke. Understanding the theory of fire will also help you determine what is restorable and explain to insurance adjusters and customers why you need to perform each of the services involved in fire and smoke restoration.

### Smoke and Soot Residues

Fire damage restoration involves removing soot residues from various surfaces and materials. Not all soot is the same. Some soot is easy to clean, while other soot can be extremely difficult to remove. To understand the different types of *soot*, you need to learn about *smoke* and *combustion*.

### Combustion Is Burning

Combustion takes place when a material is burning. If a block of wood is *burning*, we can also say it is *combusting*. Technically, combustion occurs when a solid turns into a gas by means of heat.



As combustion takes place, the burning material is actually breaking down and combining with oxygen while heat is given off.

Three components must be present for combustion to happen—fuel (meaning a material to burn), oxygen, and heat. In theory, these components being in perfect balance would mean all of the fuel combusting and no residues remaining. Actually, fires form smoke when the components are not in balance, and so incomplete combustion produces smoke and soot residues.



## Characteristics of Smoke

What is smoke? As burning materials decompose, they release solid particles, gases, and aerosols that become suspended in the air. Suspended particles, gases, and aerosols are smoke.

Gases are the invisible components of smoke. Oxides of nitrogen are produced by burning organic compounds, and sulfur dioxide is produced by burning inorganic compounds. Some of the gaseous by-products generated in a fire, such as carbon monoxide and hydrogen cyanide, are extremely dangerous if people are exposed to the smoke while the fire is in progress. After the fire has been extinguished and the smoke evacuated or dispersed, gases are no longer a significant factor.

In addition to fire gases, smoke also consists of fine particles of matter and aerosols. The solid particles of unburned material are usually small particles of carbon. The aerosols are extremely fine solid or liquid particles suspended in the gases. These particles—while they are suspended in the air—are what makes smoke visible to our sight. The particles are also odor-absorbing, which makes soot smell.

Smoke particles can be very small. The approximate size of a smoke particulate is .1 to 4 microns (1 micron = 1 twenty-five thousandth of 1 inch), and these extremely small particles are potentially harmful to a human's respiratory tract. If you are near a fire in progress, keep down low to avoid breathing smoke-filled air. Technicians working long periods where heavy, loose smoke residues are present should wear a respirator. Smoke particles from incomplete combustion can contain polycyclic aromatic hydrocarbons (PAH), which may be cancer-causing (carcinogenic).

Once smoke settles on surfaces as residues, it is often referred to as "soot." Soot residues can contain different types of acids since chlorides and sulfides in smoke mix with the humidity in the air or with moisture to form acids. Acidic soot residues will cause discoloration and corrosion if they remain on materials over time.



*Smoke consists of solid particles, aerosols, and gases.*

## TYPES OF SMOKE RESIDUES

Not all soot residues are the same. Some types of soot are easier to clean than other types. SERVPRO® Franchise technicians will most often clean one of four different types of soot:

- Dry smoke residues
- Wet smoke residues
- Protein smoke residues
- Fuel oil smoke residues

### Dry and Wet Smoke Residues

Every fire progresses through stages, generating both *wet* and *dry* smoke. Some fires produce a large enough proportion of one type of smoke to characterize the entire exposure as predominately wet smoke or predominately dry smoke. Different cleaning methods are used to remove different types of residues. Generally, wet smoke is more difficult to remove than dry smoke.

Whether smoke residues tend to be dry or wet is determined by several factors:

- The rate of combustion.
- The amount of oxygen present during the fire.
- The type of material or substance that is burning.

In many fires, the more oxygen available while the fire is in progress, the faster the combustion process takes place. **Fast-burning, oxygen-rich** fires usually produce a **dry smoke**. **Oxygen-starved, slow-burning**, smoldering fires usually produce a **wet smoke**.

The type of materials burned also affects the smoke particles and aerosols produced by a fire. **Natural** materials tend to produce dry, powdery, small, non-smeary residues, or **dry smoke**. Examples of natural materials are dry wood, paper, cork, and natural fibers (wool, cotton). **Synthetic** materials tend to produce wet, large, easily smeared particles of residue, or **wet smoke**. Examples of synthetic materials are plastics, foam rubber, and similar polymers.

### Cleaning Dry Smoke Residues

More types of materials are restorable in dry smoke conditions than in wet. Dry smoke residue carries few aerosols and deposits small, dry particles on surfaces. Dry smoke does not stain surfaces as deeply as wet smoke, and the odor is less pungent. Less aggressive cleaning procedures will usually remove dry smoke residues. One problem, however, is that dry smoke generally comes from hotter fires, which cause more heat damage than do cooler fires.

### Cleaning Wet Smoke Residue

Wet smoke residues are more difficult to remove than dry smoke, making restoration more difficult. Wet smoke typically contains a high proportion of aerosols such as varnishes, solvents, and other liquid components. With



*Synthetic materials tend to produce wet smoke.*



*Natural materials tend to produce dry smoke.*



a slow-burning fire, air currents do not drive the smoke from the heat of the fire. Wet smoke moves slowly and has time to work its way into crevices and enclosed areas that normally would not be contaminated by a faster-burning fire. Within minutes of contact, very hot oily residues will discolor plastic materials.

In many instances, contents exposed to a smoldering fire and wet smoke are not restorable even though heat damage is minimal. Aerosols in wet smoke soften, penetrate, and stain finished surfaces. Unfinished surfaces also absorb and entrap these residues. Burning plastics and rubbers produce large, black particles that tend to smear or smudge. Removing wet smoke may not be possible, and sometimes even stripping and refinishing may not prove adequate.



*Protein fires produce residues that are often invisible.*

### Protein Residues

Kitchen fires often involve burning meat, poultry, or fish. Burning these materials leaves protein residues, which may be yellow or amber in color or virtually invisible, causing only slight discoloration of painted walls and cabinet surfaces. Protein smoke odors, are extremely pungent, so odor removal is usually the biggest problem in protein fires. Odors in protein fires cannot be controlled without thoroughly cleaning all surfaces contaminated with the greasy protein residue. Sometimes an entire home may require cleaning even though residue concentrations are not visually obvious.

### Fuel Oil Soot

Furnace puff-backs, very common in the Northeast, occur when a malfunctioning oil burner suddenly ignites, jarring loose old soot. Improper venting or a crack in the heat exchanger may cause a puff-back. Soot from a puff-back consists of dust particles from the ductwork and fuel oil that did not properly burn. It may be gray to black in color, greasy, and consist of small or large particles. The fresh soot is usually removable without damaging painted surfaces. However, the soot particles are sometimes hard and crusty, so one must be careful not to scratch surfaces. If the furnace has been emitting smoke over an extended period prior to ignition, the soot may bond to wall paints making it impossible to remove the soot without removing some of the paint.

## BEHAVIOR OF SMOKE (PART 1)

During a fire, soot and smoke particles settle on and adhere to surfaces. Restoration means removing those soot residues. If you understand how smoke behaves during a fire, you will know where to find the heaviest deposits of smoke residues when you inspect a damage. Two factors of smoke behavior deal with temperature—the **temperature of the smoke** and the **temperature of surrounding surfaces**.

### Temperature of Smoke

*Convection* refers to heat being transferred through air movement. Hot air rises because it is not as dense as cold air. As it rises, it displaces cooler air, which flows downwards. As a fire continues to burn, it pulls in the cooler air at lower levels and



*Convection*

heats it. This air rises and forces the air near the ceiling to flow downwards. As long as the fire burns, this pattern continues, resulting in a constant movement and circulation of air in a building or room. These are *convection currents*.

You probably learned as a child to drop to the floor if ever caught in a smoky room. The reason is hot air rises (which means smoke also rises). Smoke continues upwards until stopped by the ceiling. The greatest concentration of smoke residues will be on the ceiling immediately above the fire area, unless strong opposing air currents were present.

Smoke moves into adjacent rooms as the upper portion of the room fills to the doorways. Still hotter than the surrounding air, the smoke stays near ceilings and continues to migrate towards upper levels of the home, depositing smoke residues as it travels.



Heat Lines

Heat lines may be visible in rooms where the fire was very hot. Above the heat line, residues are more difficult to remove because heat opens up pores in surfaces allowing deeper penetration (heat makes materials expand). Aerosols and residues can be literally baked on.

In smaller fires, rooms at levels lower than the source of the fire may have little smoke damage. Ventilating the home immediately will also reduce damage to lower levels. Otherwise, as the air cools and falls, it may carry some residues and odors to all parts of the home.

As the temperature of air rises, the pressure that air exerts on surfaces increases. To be precise, as the air temperature increases by 10°F, the pressure increases and the volume of the air doubles. This means that the hotter the fire, the harder smoke is forced against surfaces. This explains the concept of **driven smoke** and **free floating smoke**.

Hot smoke moves by pressurized air with force and is, therefore, called *driven smoke*. As hot smoke collides with surfaces, it deposits residues and is the cause for soot residues on vertical surfaces.

Cold smoke was once hot and pressurized, but lost its force as it cooled. Cold smoke is called *free floating smoke* because it floats through the building until gravity causes it to settle on horizontal surfaces.

### Temperature of Surrounding Surfaces

Hot smoke tends to move toward colder surfaces. This principle, expressed as *hot goes to cold*, results from convection currents—as hot air rises, the cooler air around cold surfaces falls and is replaced by warm, smoky air contacting the cooler surface. Hot smoke, therefore, migrates toward the colder surfaces of outside walls and windows, closed drawers, closets, and unheated rooms.



Cooler surfaces attract more residues.

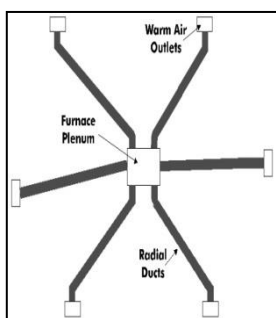
As hot smoke migrates, it deposits residues more heavily around colder surfaces. If walls are well insulated, windows provide a substantial temperature difference so that air currents may concentrate in that area. This difference in temperature (called a *temperature differential*) around a window causes a heavier deposit of tar and smoke residue on the back of draperies than on the front. Closets receive surprising concentrations of residue because they are cooler than the room interiors.

## BEHAVIOR OF SMOKE (PART 2)

Two more factors of smoke behavior deal with smoke leaving residues as it moves through a building—**arrangement of building space** and **ionization (magnetism)**.

### Arrangement of Building Space

As smoke travels from the source, it flows around building obstructions with the air current that carries it. Each obstruction tends to pick up smoke residues from the air as it passes by, acting as a filter. The farther smoke travels from its source, the fewer residues it contains as they are filtered out by contacting building obstructions.



*Duct Supply Lines*

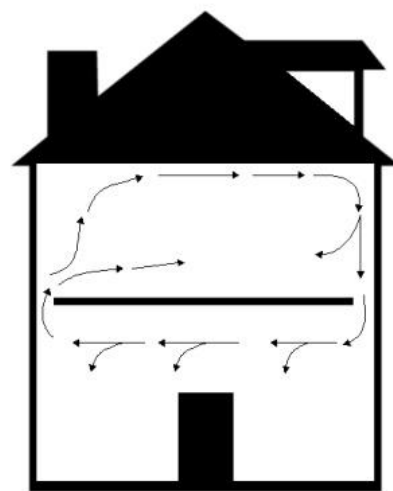
Smoke follows airflow patterns through a building, spreading residues within the structure. Convection currents often follow the direction of heating mains and tubing in homes where hot water heating is installed. Smoke flows upward through openings cut for water pipes. Convection currents continue upward behind radiators resulting in heavier deposits on walls immediately above these units.

Some areas in a building receive more smoke residues than other areas due to the airflow pattern through the building. The cavity above a suspended ceiling may also serve as an air return and have heavier smoke deposits than the finished ceiling beneath. This cavity can also spread residues to a wider area of the building. Since air tends to flow in smooth curves, it bypasses sharp angles and shallow cavities. Corners formed by the junctions of ceilings and walls receive less smoke than adjacent areas.

Smoke can work its way around some obstructions. Rooms that were closed off may have surprising concentrations of residue. Remember: **Closed doors cannot stop smoke!** You may notice heavy residue concentrations under or around closed doors, around cracks, and around the edges of carpets. As smoke flows around and through cracks, it deposits heavier residue concentrations. Generally, smoke concentrations will be present on the far side of door openings and ceilings immediately above them. Also, drawer interiors and other seemingly inaccessible areas can attract smoke.

Some areas of a building's space actually provide shortcuts that carry smoke to areas that otherwise might have received little or no residue. For example, air currents may flow within the HVAC ductwork even if the blower is not operating. If forced air heat or air conditioning is operating, air returns, registers, and walls and ceilings near them will show a greater concentration of residue.

Generally, smoke residues are less concentrated in building areas farther from the source of the fire. The longer a fire continues, however, the more evenly distributed smoke will become throughout the structure. As long as the fire continues to heat the air, circulation patterns are created by hot air rising and cool air falling. All the air in a building will eventually become involved in this circulation, even air in basements and lower levels.



*Smoke follows airflow patterns*

## Ionization and Magnetism

Ionization refers to smoke particles (especially those from burning plastics) that become electrically charged. Since opposite electrical charges attract, smoke residues with strong charges may be attracted to surfaces with the opposite electrical charge.

This charge is present in many synthetic fibers and plastics in general. A synthetic lampshade will frequently attract noticeable concentrations of residue, while a silk or paper shade sitting next to it remains unaffected. A plastic dry-cleaning bag covering clothes also attracts more residues than an unprotected cotton dress hanging beside it.

Due to ionization, you may see **smoke webs** on surfaces in a structure. Residues (such as from burning plastics or the soot from some furnace disorders) may form long chains of ionized smoke particles that assemble in corners or at junctions of walls and ceilings. Smoke webs look exactly like cobwebs, but homeowners are happy to learn they are actually smoke webs.



*Smoke Webs*

Ionized smoke particles cluster on metal surfaces just as metal filings cluster on a magnet. Through magnetism, charged smoke particles are attracted to metal surfaces such as plumbing pipes and coat hangers. Nail heads that are invisible beneath drywall become clearly outlined by smoke because their magnetic attraction remains effective despite the covering of paint and plaster. This is often referred to as *nail pops*, but the statement is misleading since the nails are still in place; it just looks like they have come to the surface.

## FACTORS AFFECTING CLEANABILITY

Fire damages create many different cleaning challenges. A burning building is actually many complicated reactions between various elements, including the following:

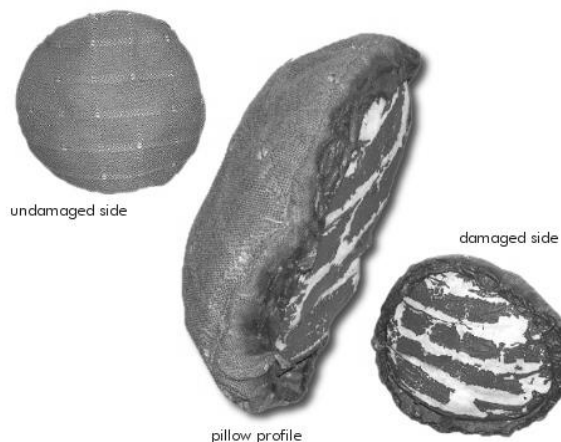
- the type of material burning
- the amount of heat, oxygen, and moisture present
- air flow patterns in the building
- types of smoke residues present
- the types of surfaces impacted by smoke and heat

Fire damages can present extremely different cleaning and restoration situations depending on how these elements interact as the fire progresses. Here are factors you should consider to determine how difficult it will be to remove smoke residues.

- **Type of Surface.** Porous surfaces allow particles and odor to penetrate further and are much more difficult to clean. Nonporous surfaces such as vinyl wall coverings and glossy, enamel paint are easier to clean than flat latex paint or paper wall coverings. Synthetic fibers can attract greater concentrations of residue than natural fibers, but usually synthetics clean better than natural fabrics.
- **Age of Surface.** Generally, the older the surface, the harder it is to clean. This holds true whether the surface is paint, fabric, or carpet. For example, as older paint deteriorates, it becomes more porous and its adhesion to the surface is weakened.
- **Amount of Heat.** The hotter the fire, the harder it will be to clean surfaces. Heat causes surfaces to expand and become more porous. Residue and odors can penetrate all surfaces more effectively. Heat can also char materials or melt and bubble finishes. In these cases, cleaning alone will not restore the surfaces. Refinishing will be required.
- **Amount of Moisture.** Moisture sets residues and makes them more likely to stain surfaces permanently. In fires where sprinklers were activated or surfaces were saturated as firefighters were fighting the fire, residues will be much more difficult to clean. Damp weather and walls that are damp from



*A kitchen fire*



*Heat and smoke may damage some surfaces and not others.*

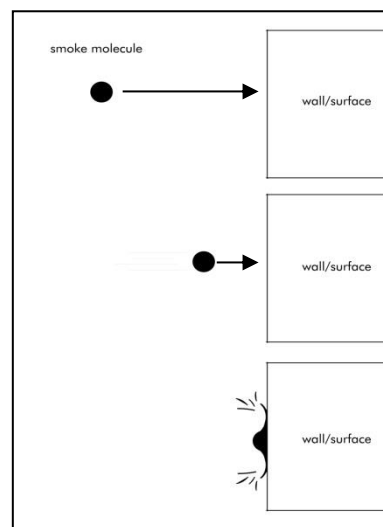


*High heat may cause finishes to bubble.*



condensation also help set residues. Moisture and heat can combine with smoke residues to cause surfaces to become yellowed.

- **Type of Material Burned.** Burned synthetic materials produce residues much more difficult to remove than burned natural materials. Plastics and rubber create wet, smeary residues that can stain surfaces. Wood and other natural materials leave a drier residue that is easier to clean.
- **Air pressure.** Hot air expands. As the temperature of air increases, the volume of air increases. Expanding air creates pressure that can drive soot into cracks and crevices, making cleaning difficult.
- **Impingement.** As the temperature of air becomes hotter, the air movement becomes more turbulent. This turbulent air moves with greater velocity through a structure and collides (or “impinges”) with surfaces. The sharp collisions of smoke residues splattering on vertical surfaces is called “impingement,” and may leave residues that are more difficult to remove.
- **Temperature Change.** Smoke residues may cause some types of damage due to heat changes. If residues contain hot oils and are cooled quickly due to temperature change, the residues may form a film on a surface that is difficult to clean.



*Impingement*

**THEORY OF FIRE REVIEW QUESTIONS**

- 1 What is combustion?
- 2 What is the difference between wet smoke and dry smoke?
- 3 Which is more likely to produce wet smoke? Which produces dry smoke?
  - Oxygen-rich fires
  - Oxygen-starved fires
  - Burned synthetic materials
  - Burned natural materials
- 4 What does the soot of a protein fire generally look like?
- 5 Where are you more likely to find residues of driven smoke? Free floating smoke?
- 6 What are convection currents?
- 7 Are you more likely to find soot on an exterior wall or an interior wall? Why?
- 8 What causes a smoke web?
- 9 What is a nail pop?
- 10 Name the factors that affect how easy or hard the removal of soot will be.

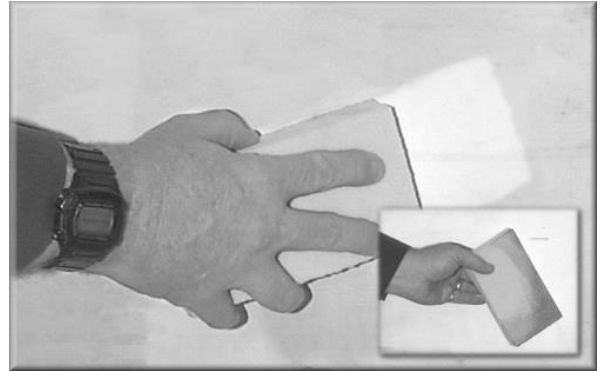
## BASIC CLEANING FOR FIRE DAMAGES

**Cleaning and restoration** services will normally reduce the costs of a fire damage claim. The most expensive option for the insurance adjuster is **replacement**, since the damaged item is disposed of and replaced with a new item. Another costly option is **resurfacing**. Structural surfaces can be repainted; upholstered contents can be recovered; wood contents can be refinished. **Cleaning and restoration** services are usually only a fraction of the cost of replacement or resurfacing. The restorer often can apply the **principles** and **elements** of cleaning to restore materials to preloss condition and lessen the loss expense of the fire claim.

### Principles of Cleaning

When restoring smoke-damaged materials, the goal is to restore materials to preloss condition. Restorers apply the following basic principles of cleaning to accomplish this task.

- **Locate smoke residues by carefully inspecting the affected area.** The inspection will start near the source of the fire and trace how far smoke moved through the structure.
- **Identify the type of residues.** Different types of smoke residues can exist in the same loss environment. The restorer will select a cleaning method that will effectively remove the type of smoke residues present.
- **Identify the type of surface.** The type of surface determines which cleaning methods and products are safe to use on that surface. Restorers must be careful to preserve the material or surface being cleaned, and some materials may be unrestorable because they cannot withstand the cleaning process.
- **Capture and remove residues.** Smoke residues bond with surfaces they contact. The restorer uses dry and wet cleaning processes to release and carry residue particles away from the affected surface.
- **Dispose of residues.** The restorer properly disposes of debris and cleaning waste.

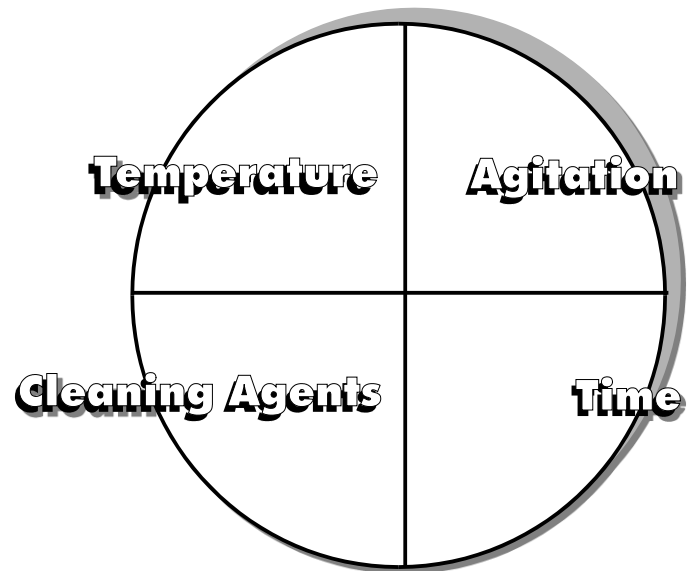


### Elements of Cleaning

Four fundamental elements are required to suspend residues so they can be removed.

- **Temperature.** Heat increases the speed of chemical reactions in cleaning products. The restorer selects an appropriate temperature depending on the cleaning solution and the material being cleaned.
- **Agitation.** The restorer agitates surfaces by using towels, brushes, air and water pressure, and sonic vibrations in ultrasonic machines. Agitation dislodges residues from surfaces and distributes cleaning products across surfaces.

- **Chemical action.** Professional cleaning products work through several chemical reactions with residues and surfaces. The restorer selects the proper cleaning product depending on the action desired, such as dissolving, emulsifying, bleaching, oxidizing, changing pH, or digesting.
- **Time.** The amount of dwell time needed for professional cleaning and deodorization products to work varies depending on the product and the type of residues.



### Combining Principles and Elements

Performing “cleaning” in fire damage restoration means **removing smoke residues** and **deodorizing smoke odors**. Fire damages present a great variety of cleaning challenges due to the many ways that heat, oxygen, moisture, and gases interact to form smoke residues. The different types of burning materials found in buildings and the effects smoke and heat have on materials create other variables for cleaning methods. All these variables make it difficult to establish fixed, defined procedures for cleaning fire damages.

Fire damage restorers must respond to the variety of challenges created when smoke residues and odors affect different surfaces and materials. To be successful, restorers adapt basic concepts of cleaning to each particular situation. They have multiple ways to agitate surfaces, multiple products to produce chemical reactions, and multiple cleaning procedures for using heat and dwell time to remove residues. The complete range of restoration procedures should be utilized before fire-damaged materials are declared unrestorable.

## PRINCIPLES OF CLEANING

The procedures for cleaning smoke residues follow basic principles.

- Find residues.
- Identify the type of residues.
- Identify the type of surface the residue is on.
- Capture residues in dry particulate form or in solution.
- Remove the residues.
- Properly dispose of residues.

### Finding and Identifying Residues

The estimator inspects and tests for smoke residues to evaluate the extent of damages and determine what cleaning services are needed for restoration. Besides the estimator's inspection, the restoration technician should pretest particular items to determine the best restoration procedure. By inspecting and pretesting, the estimator and technician locate residues, identify the type of residues, and determine the types of surfaces to be cleaned.



### Capturing and Removing Residues

Residues must be captured before they can be removed. Restorers use air and fluids to release and carry soils away. Air and fluids carry suspended particles with them on contact. Vacuuming and dissolving are two ways to contact soils and carry them off to be disposed of.

#### ***Vacuuming***

Smoke residues contain solid particles consisting mostly of carbon. Dry particles that are attached loosely to surfaces may be removed by vacuuming. Moisture contacting the particles can cause them to be absorbed by the surface and be difficult to remove. Always try to vacuum dry smoke residues from a surface before applying wet cleaning products.

#### ***Dissolving***

Residues and soils that are not loose particles must be dissolved before they can be removed. Dissolving the residues and loosening their bond with the surface allows them to be suspended in a cleaning product and flushed away as the cleaning product is rinsed or extracted from the surface.

The type of soil and the type of surface are two main factors in dissolving soils. Some soils are water-soluble while others are not and require use of a solvent-based cleaning product. The type of surface must be considered to preserve the material being cleaned. Some surfaces can be damaged by water, while others are damaged by solvents.

The three steps of dissolving are wash, rinse, and dry.

- **Wash**—Apply a cleaning agent to the surface and agitate it to penetrate and loosen soils. Once the soils are dissolved and held in suspension by the cleaning agent, they can be removed.
- **Rinse**—Remove soils with the cleaning solution. This step depends on pressure, absorption, agitation, airflow, or water lift to penetrate the material and extract the cleaning solution.
- **Dry**—Remove the remaining water or moisture and leftover soils from the material. Air movement, heat, and low humidity will allow drying to occur quickly. Use air movers or natural air movement by opening doors and windows, using ceiling fans, or turning on the HVAC system (if free of smoke).

### Disposing of Residues

Determine state and local requirements for properly disposing of cleaning residues. Requirements differ from state to state and may even be different for cities within a state. Some general rules are fairly consistent across the nation:

- **Do not** dispose of dry cleaning solvents in a sewer or septic system. Dry cleaning solvent is an industrial waste and must be disposed of in an approved disposal site.
- **Do not** dispose of **any** cleaning wastes into a storm drain or gutter.
- **Do not** dispose of **any** cleaning wastes into a septic system.
- Waste water that does not contain dry cleaning solvents should be disposed of in a treated sewer line through the commode or a utility sink. Some cities and states require a permit to dispose of cleaning wastes in treated sewer lines.
- Water with biohazards (medical hazards, human blood, or tissue) should be handled by a biohazard disposal firm. Check with local and state authorities.



## THE ELEMENTS OF CLEANING (TACT)

Four elements affect how soils and residues are suspended in a cleaning product:

- Temperature
- Agitation
- Chemical action
- Time

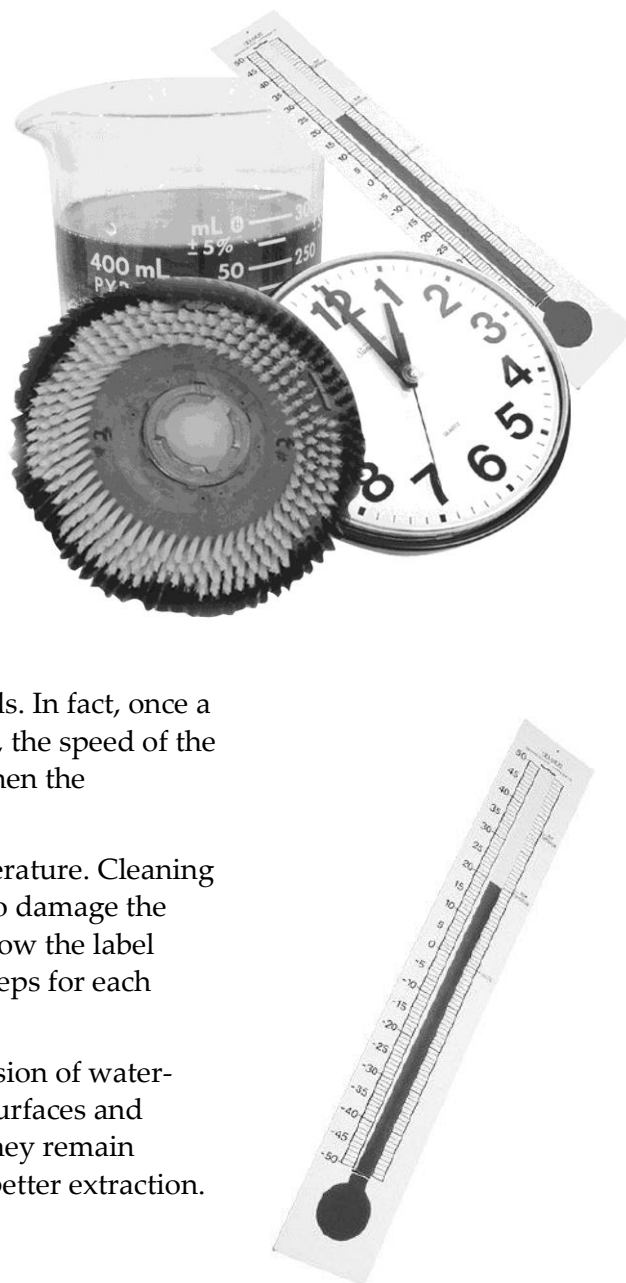
These can be summed up as **TACT**. All of these elements are used in effective cleaning. If you decrease one element, you need to increase the others. For instance, if you are cleaning with cold water, you may need to spend more time, increase agitation, and use more products to get the same results.

### Temperature

Heat makes molecules move faster. The faster molecules move, the faster the speed of the chemical reaction between cleaning solutions and soils. In fact, once a cleaning product heats above 118 degrees Fahrenheit, the speed of the chemical reaction in the cleaning solution doubles when the temperature increases another 18 degrees.

Each cleaning product has its own appropriate temperature. Cleaning solutions can be too hot to use safely or hot enough to damage the materials you are trying to clean. Always pretest, follow the label directions on products, and use the correct process steps for each cleaning method.

Heat has other advantages. It reduces the surface tension of water-based solutions, allowing the products to penetrate surfaces and dissolve soils better. As soil molecules move faster, they remain suspended in the cleaning product longer, allowing better extraction.



## Agitation

Agitation means moving the surface being cleaned, moving the cleaning solution, or moving both. We use agitation to free or dislodge soils. Once the bond between soil and surface is broken, the soils can be washed away.

Several methods are used to agitate during cleaning: water pressure, air pressure, rotating brushes, scrubbing, wiping, and sand-blasting. For example, hot water extraction uses water pressure and airflow to agitate carpet fibers.



## Chemical Action

Cleaning solutions help to bridge the gap between the soil and the water, making the cleaning process easier. The key principle to remember is **like dissolves like**. A water-based soil will dissolve best in a water-based cleaning solution. An oil-based soil will dissolve best in an oil-based cleaning solution (solvent).

Several other types of chemical actions are utilized to achieve results in removing smoke residues. Detergents help oil-based soils mix with water-based cleaning solutions. Acidic solutions and alkaline solutions neutralize each other. Bleaching either adds oxygen or removes oxygen from the chemical structure of a soil. Restorers use these various chemical actions to break the bond between smoke residues and the surfaces they cling to.



## Time

The restoration industry refers to *time* regarding the cleaning process as *dwell* time. **Dwell time is the time needed for the soils to dissolve and the chemical action to work.** Your laundry would not be very clean if you dipped your clothes into the wash water, immediately pulled them out, and dried them. You would not have allowed time for the soils to dissolve, time for the chemical action of the detergent to work, and time for agitation to help loosen the soils.

Dwell time varies for different cleaning processes and professional products. Specific time requirements will be based on a number of factors—the type of material, the type of soil, the method of agitation, and the temperature of the cleaning solution. Always allow your products enough time to work.





## CLEANING ACTIONS

The cleaning process must break the bond between soils and the surfaces they adhere to. Four actions are used to loosen soils from surfaces:

- Mechanical action
- Lubrication
- Chemical action
- Suspension and dispersion

### Mechanical Action

Agitation is often an effective way to dislodge soils from the surfaces they are attached to. When smoke residues adhere to surfaces, utilizing mechanical action prior to other cleaning actions could be advantageous. For example, if you apply liquid cleaning products to smoke particles you may cause the particles to be absorbed by the surface. Use mechanical action as an initial step to preclean excess dry, nongreasy residues from a surface before applying either water-based or solvent-based cleaning products. See “Dislodging Soils by Mechanical Action” on page 49.

### Lubrication

Lubrication is the action of making something slippery. The goal of lubrication is to break the connection between the soil and the surface it is adhering to by making soils “slide” into the cleaning solution. Detergents lubricate some soils from a surface, while also emulsifying them.



### Chemical Action

Chemical actions occur when one substance chemically changes or alters another substance. Often a restorer applies a cleaning product to chemically alter some type of residue. The changes made to the residues allow them to be removed from a surface or material. For example, product [Natural Fabric Brightener \(#153\)](#) is a reducing bleach solution. When mixed with [Shampoo Super Concentrate \(#252\)](#), the product removes oxidized stains from cotton and wool carpeting. See “Chemically Altering or Changing Soils” on page 47.

### Suspension and Dispersion

The most common cleaning action is loosening soils, then suspending and dispersing them in a cleaning product, and finally extracting soils along with the cleaning product. Suspension takes place when a soil **dissolves** in a cleaning product it mixes with or when soils **emulsify** in a cleaning product they will not mix with.

### Like Dissolves Like

“Like dissolves like” is the basic principle of dissolving soils with cleaning solutions. Soils and residues will dissolve in



something that is “like” them. For example, syrup will dissolve easily in water, especially if you heat the water and agitate the syrup in the water. On the other hand, syrup will not dissolve in a solvent no matter how much you agitate it. Motor oil, however, will not dissolve in water. Water is “like” the syrup but not “like” the motor oil.

The principle of “like dissolves like” is explained with the following definitions.

HYDRO means WATER	PHILIC means LOVE
LIPO means OIL	PHOBIC means FEAR

Just put these parts together to define the terms below:

- **Hydrophilic:** *Water-loving*
- **Hydrophobic:** *Water-fearing*
- **Lipophilic:** *Oil-loving*
- **Lipophobic:** *Oil-fearing*

“Like dissolves like” means a **hydrophilic** soil will easily dissolve in water. A **lipophilic** soil easily dissolves in an oil-based cleaning solution. Syrup is hydrophilic; motor oil is lipophilic. When a substance will not dissolve in water, it is **hydrophobic**. When a substance will not dissolve in oil-based solutions, it is **lipophobic**. Motor oil is hydrophobic; syrup is lipophobic.

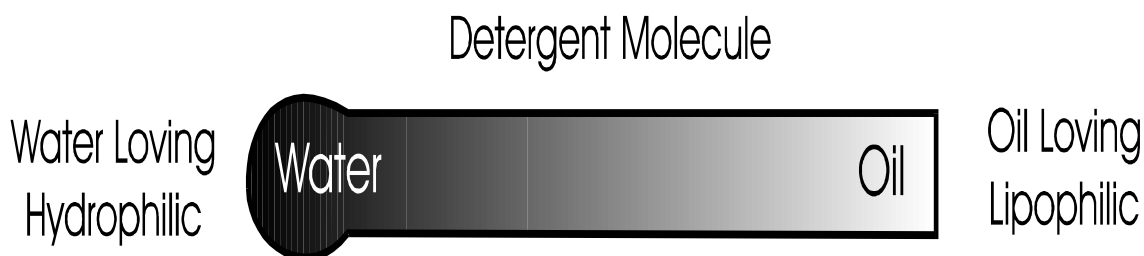
## REMOVING OILY SOILS

Oily soils are removed in different ways. Some oily soils are light enough to be **emulsified** in water-based detergents. Other oily soils may be too heavy for detergents to be effective in removing them. These heavier soils can be **dissolved** with oil-based solvents.

### Emulsifying Oily Soils with Detergents

Can we put something into water to help us clean oily soils? Yes—detergents! Water-based detergents are able to dissolve in water, but they are also able to attach to oily soils. Detergents pull the oily soils away from the surface, so we can extract the soils with the detergent.

Detergent molecules are made so that they have a water-loving head and an oil-loving tail.



The makeup of the tail of a detergent molecule is similar to the makeup of oil, gasoline, grease, and animal fats. The detergent's tail will dissolve substances similar to grease and oil. The head of the detergent molecule is attracted to and surrounded by water molecules. And so, the tail of the detergent molecule breaks oily soils apart and the head pulls them into the water, creating an emulsion. An **emulsion** means that the detergent acts as a connecting link between oil and water molecules, allowing them to be mixed evenly through the cleaning solution. The cleaning solution can then be rinsed out along with the emulsified soils.

Detergents have some drawbacks. If they are not rinsed thoroughly, they leave a sticky residue. Also, when detergents combine with hard water (water that contains minerals, such as calcium or magnesium), they make a salt. These salts will not dissolve in water, so they slow down the cleaning action of the detergent and form a scum.

Oil and water will not mix, but by using a detergent, a connecting link is made between oil and water molecules allowing them to be evenly distributed in the cleaning solution. This is called an **emulsion**.

## Dissolving Oily Soils with Solvents

The word “solvent” can mean any substance capable of dissolving another substance. In the cleaning industry, however, **a solvent is a cleaning agent that is not water-based**. Solvents are used in situations where water might damage materials or in removing soils that are not water-soluble.

Some solvents used in the past are too flammable or toxic by today’s standards. Today, the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) set standards for toxicity and flammability. You can find specific ratings for each product on the [Safety Data Sheets](#) (SDS).

Some solvents can dissolve in water and be mixed with water. For example, many pre-spray cleaning products contain water-soluble solvents. Other solvents will not dissolve in or mix with water.

Solvents may cause damage to some surfaces. Protect all finished wood, plastic, and painted surfaces. If overspray does affect one of these surfaces, **only blot the area** (do not rub or you may remove the finish or paint). Solvents can also damage some textile backings.

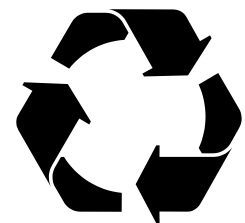
Never dispose of solvents in a septic or sewer system. Solvents are industrial waste and must be disposed of properly at an approved site. (This applies to hazardous water-based solvents as well.) Keep an extra, properly-labeled solvent bucket with a tight-fitting lid to hold solvent wastes.

## Recycling Solvents

Solvents may be recycled. Filter used solvent into a 25 or 50 gallon drum. Over a period of a couple of days, any soils left will separate to the bottom. You can then pump off the top layer of solvent for reuse. Over a period of time, the solvents may become less effective; however, products are available to boost a solvent’s effectiveness.

### Solvent Safety

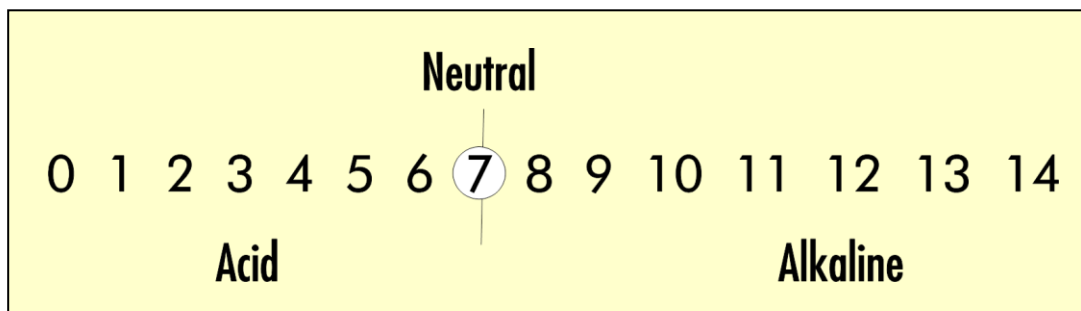
When using solvents, wear proper PPE including goggles, chemical resistant gloves, and a respirator with an organic vapor cartridge. Make sure all people, plants, and animals (especially birds) are out of the environment. Make sure the area is well ventilated, and **do not use** the central HVAC system because it will spread vapors throughout the house. Explain to the customer the reasons for taking these safety steps.



## THE pH OF WATER-BASED PRODUCTS

pH is one of the most important concepts to understand in cleaning. pH stands for the *Potential for Hydrogen* and **is a measurement of acidity or alkalinity**. The pH scale goes from 0 to 14 with 7 being neutral. Pure water is neutral.

Knowing the pH will help you know how to attack soils. The general rule is that you use acids to neutralize alkaline soils, and alkalis to neutralize acidic soils. In addition, after cleaning, materials should be left in a condition as close to a neutral pH as possible. This will help prevent color bleeding and browning in textiles.



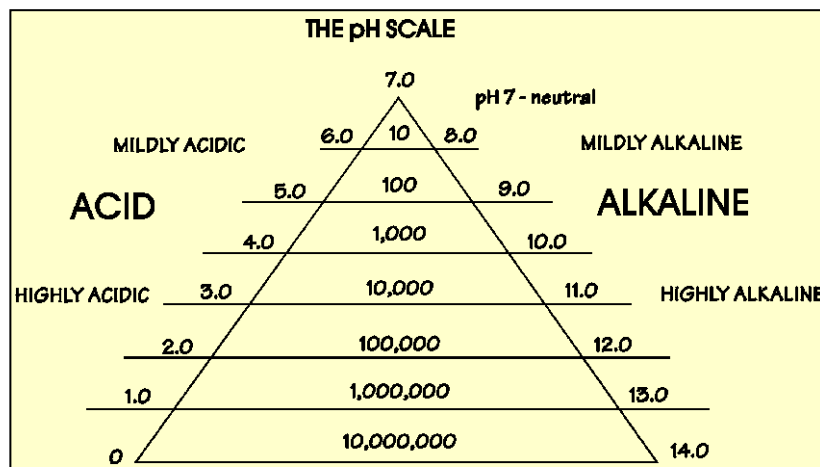
Acids are substances with a pH less than 7. Acids are normally thought of as sour. **Most soils are slightly acidic.** Mild acids won't burn the skin or cause much damage to materials. Strong acids (like battery acid) can do considerable damage to the skin, materials, carpets, or fabrics, and are dangerous if taken internally. In cleaning, acids can help to stabilize dyes, prevent browning, prevent yellowing, and neutralize alkalis.

Alkaline substances are typically bitter, feel slippery, and have a pH greater than 7. **Most cleaning agents are alkaline.** Soap has a pH of about 9, making it a mild alkali. Mild alkalis will not damage skin or fabrics. A solution of baking soda, sometimes used for an upset stomach, has a pH of about 10. Liquid drain cleaners have a pH around 14. These are strong alkalis that will burn your skin and damage materials. One way to be more aggressive in cleaning smoke residues is to increase the pH of alkaline water-based cleaning products. **A general rule of thumb is to not use a pH greater than 10 on synthetic fibers.**

Solvents do not have a pH. **A substance must contain water to have a pH.** This means that substances like oil and grease don't have a pH.

As the steps on the pH scale move from neutral, they increase in strength by multiples of 10. That is, a pH of 9 is 10 times stronger than a pH of 8. A pH of 10 is 100 times stronger than a pH of 8. A pH of 11 is 1,000 times stronger than a pH of 8. This is true on the acid side of the scale as well.

This concept about increasing strength is important when trying to neutralize a very strong acid or



alkali. To return a material to a neutral pH, you must select acids or alkalis of equal strength. For example, to neutralize an acid with a pH of 2, you would use an alkali with a pH of about 12.

## Testing pH

How do you determine the pH? Most cleaning agents indicate their pH on the bottle. To test the pH of a soil, moisten the soil with water known to be neutral (this means bottled or filtered water), and blot a piece of test paper (called Hydrion paper or pH paper) into the moisture. Unexposed Hydrion paper is a light tan color. When exposed to mild acids, the color changes to a darker tan or light orange. Strong acids change the paper to a dark red. Mild alkalis change the paper to a light green or light blue. Strong alkalis change the paper to a dark blue. You can compare the color of the paper to the color scale on the Hydrion Paper package to tell the specific pH.

Test all spots and areas that have been cleaned with a strong acid or alkaline solution to make sure that the material has been returned to a neutral pH level. Leaving a surface in a strong acid or alkaline state can sometimes result in damage to materials.

After a fire damage, pH paper can test smoke residues to determine whether acids are present. Several byproducts of combustion produce acids. When plastics burn, they produce chlorides that combine with moisture to form hydrochloric acid. Another byproduct of combustion is carbon dioxide, which combines with moisture to form carbonic acid. These acids will cause discoloration and corrosion if the acidic smoke residues chemically react with materials over time.

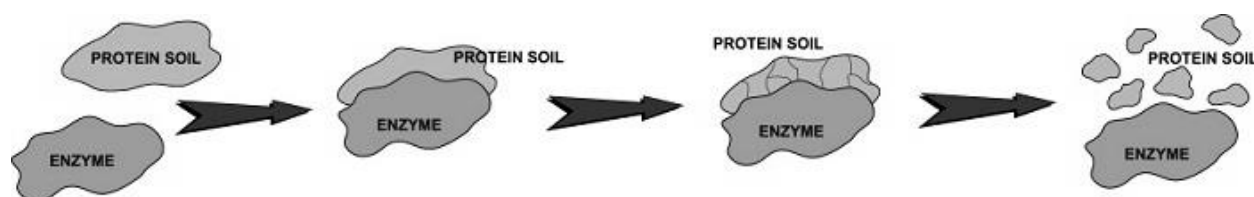


## CHEMICALLY ALTERING OR CHANGING SOILS

Some cleaning procedures work by **altering** or **changing** the soils or residues. Alterations occur when restorers use **enzyme digestion**, **bleaching**, **oxidizing**, and **strong acids** for certain types of cleaning tasks.

### Enzymes

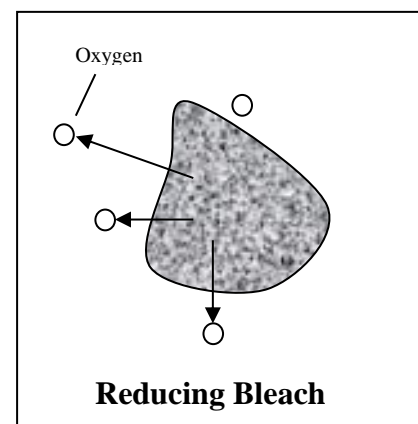
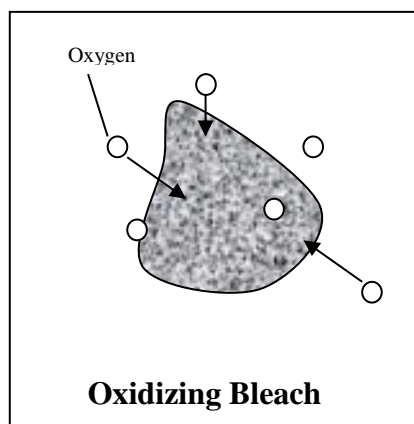
Enzymes are living organisms that digest protein soils like blood, starch, perspiration, body discharges, dairy products, eggs, and fish slime. They work by changing the condition of the soil from insoluble to soluble. Water, detergents, or ammonia solutions can then remove the soil.



Enzymes come from living organisms, so to use them effectively you must control the temperature, the pH, and the amount of moisture present. The temperature must be kept between 100 and 120 degrees Fahrenheit, and the soiled area must be kept damp. The pH must be kept neutral. Allow 15 minutes to one hour for effective dwell time. Also remember that some enzyme cleaning products may have a “shelf life.” (Shelf life means the amount of time the mixed product may be stored and still remain effective for use.)

### Bleaching Agents

Some soils chemically bond with the materials they are on. The objective of cleaning is to reverse this bond without removing the color of the material. Bleaching is an example of chemically altering a stain to reverse the coloration of a stain. Do not apply bleaches to dyed materials, since they will remove the dyed color from the material.

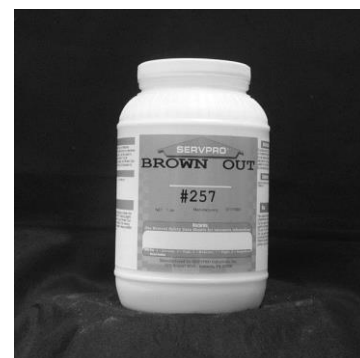


There are two types of bleaching agents. **Oxidizing bleaches** (like chlorine bleach) add oxygen to stains, which changes their chemical structure and breaks them down. **Reducing bleaches** (also called strippers) take oxygen away, also changing the chemical structure and breaking down the stains. A reducing bleach is the opposite of an oxidizing bleach; a reducing bleach will somewhat neutralize the bleaching action of the oxidizer.

## Removing Water Stains

SERVPRO's water stain remover called [Brown Out \(#257\)](#) is a **peroxide water stain remover**. Brown Out produces a chemical change to remove "browning" caused by overwetting or slow drying of fabrics or carpets. When mixed with [Shampoo Super Concentrate \(#252\)](#), the product Brown Out turns alkaline and decomposes slowly, liberating hydrogen peroxide and then oxygen. Be careful using Brown Out on dyed fabrics. The chemical reaction removes colored spots and stains, but can also remove dyes from fabrics and carpet.

[Brown Out \(#257\)](#) is an oxidizing bleach, and an opposite chemical reaction occurs with [Natural Fabric Brightener \(#153\)](#), which is a reducing bleach. While Brown Out is an effective brightener for synthetic carpets, Natural Fabric Brightener is recommended for removing oxidized stains from natural fibers, such as cotton and wool carpeting and fabrics.

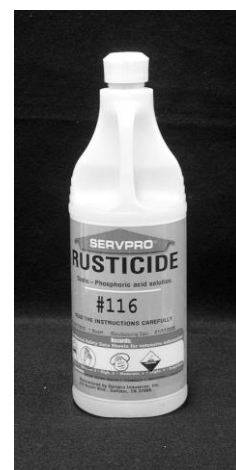


## Removing Rust

Another chemical alteration occurs when removing rust stains. The rust remover product [Rusticide \(#116\)](#) is an oxalic-phosphorus acid solution. This strong acid has a pH of 2 and dissolves rust stains on cotton, linen, silk, wool, synthetic fibers, and carpeting. The chemical change may take place slowly, so you may have to allow 10 to 20 minutes of action time before extracting the rust remover.

## Deodorizing through Chemical Changes

**Ozone** is a colorless to pale blue gas consisting of highly volatile O<sub>3</sub> molecules. When ozone molecules contact odor-causing molecules, they oxidize the odor molecules, neutralizing them and breaking them down to smaller, less offensive materials.





## DISLODGING SOILS BY MECHANICAL ACTION

In fire damage restoration, various kinds of mechanical actions produce friction to agitate and loosen smoke residues. For some smoke conditions, mechanical action may be sufficient to remove residues without applying a cleaning product. Light concentrations of non-greasy smoke particles, as sometimes produced by a dry type of smoke, may be cleanable from nonporous surfaces through mechanical action. An example might be removing a light soot from a glossy painted surface with dry cleaning sponges.



### Mechanical Actions for Mild Agitation

Some mechanical actions produce only mild agitation and are safe to apply to almost all surfaces.

- **Feather duster**—Excess residues on hard-surface furniture might be removed just by dusting.
- **Brushes**—Paint brushes of various sizes and softness are useful for brushing residues from decorative or ornamental areas of hard-surface furniture.
- **Vacuum**—Heavy deposits of loose smoke particles and smoke webs can be vacuumed from wall and ceiling surfaces. Use the cleaning brush attachment to agitate residues from the surface.
- **Compressed air**—Loose soot residues may be blown from electronic equipment by using regulated compressed air. Be careful to control the amount of air pressure applied to surfaces and not allow the air blast to blow particles into crevices or under edges or moldings of the item being cleaned.



### Mechanical Actions for Medium Agitation

- **Dry Cleaning Sponge**—Rubber sponges used to remove loose soils. As the dry cleaning sponge is pulled across a soiled surface, soils transfer to the sponge because of friction and the porous nature of the sponge. Dry cleaning sponges are not effective in removing greasy smoke residues—they tend to smear them—but are incredibly effective on dry smoke residues.
- **Dusting Cloths**—Dusting cloths treated with a light mineral oil that attracts light soot and dust.
- **Crumbly Cleaner** works like an eraser absorbing pencil graphite from a paper surface. As Crumbly Cleaner is rubbed on a surface, it self-destructs and the pieces of the cleaner absorb soils from the surface. The Crumbly Cleaner is most effective in removing dry smoke residues from flat-painted surfaces or loose smoke residues from paper surfaces or from art paintings like watercolors or acrylic oils. Glossy surfaces do not provide

enough friction to break up the cleaner, so the cleaner smears residues rather than absorbing them. Crumbly Cleaner will not remove greasy residues. Drop clothes are needed to catch the mess created as the Crumbly Cleaner breaks apart.

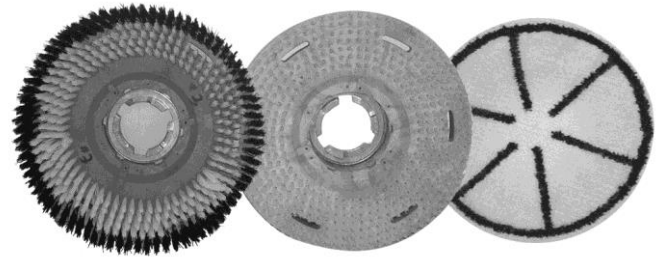
- **Cleaning Towels**—A clean, white towel used to apply wet cleaning solutions. Towels help prevent streaking of a surface. They also absorb and remove soils and moisture from the surface.



### Mechanical Actions for Heavy Agitation

Several tools are capable of producing heavy amounts of agitation.

- **Abrasive Powders** provide different degrees of agitation depending on the product. Liquid Crème Cleaners like [Stain Scrub \(#110\)](#) contain a mild abrasive. Rub with the grain when applying to stainless steel. When cleaning high-gloss surfaces, apply Liquid Crème Cleaners sparingly with a damp sponge and rub gently to avoid scratching the surface.
- **Sandpapers and steel wool** come in a variety of grades, each grade offering greater or lesser amount of abrasiveness. The grade 0000 steel wool pad is extra fine.
- **Roto pads and brushes.** Various types of pads can be attached to the drive block of the Roto. The rotating pads and brushes agitate, buff, or polish flooring surfaces.
- **Blast Cleaning** involves using either compressed air or rotary blasting equipment to blast some type of media against the soiled surface. Several different types of media are used in Blast Cleaning, including sand, baking soda, CO<sub>2</sub>, dry ice, and ground corn cobs. The amount of agitation depends on the size and shape of the media and the speed at which the media is blasted against the soiled surface.



## CONTROLLING APPLICATION OF CLEANING PRODUCTS

The restorer can vary the aggressiveness of cleaning by controlling the application of the cleaning product. Some materials might suffer damage if exposed to heavy concentrations of product. By utilizing different techniques, the restorer controls the amount of product applied.

### Absorption

Some surfaces or materials may be too fragile to withstand aggressive agitation or a direct application of either water-based or solvent-based cleaning products. These materials might be cleaned safely by absorbing residues from the material.



Absorbent powders clean through absorption. Soils and residues absorb into the powder and are extracted or vacuumed from the surface along with the powder. Absorbent powders can be effective at removing soils from porous surfaces such as concrete, marble, brick, upholstery fabrics, carpets, and draperies.

Powders are sometimes used in conjunction with solvents or other cleaning agents. The soils are treated first with the solvent or cleaning agent, then absorbent powders are applied to the treated area. When the area is dry, the surface is vacuumed. In other situations, solvents may be mixed with the absorbent powders. For example, [Stain Absorb Powder \(#109\)](#) can be mixed with [Solvent Spotter \(#107\)](#) to make a slurry of thin paste consistency. The paste is applied and allowed to dry before being vacuumed off.

### Surface Techniques

Surface techniques prevent the material from being saturated with cleaning product. By limiting the amount of cleaning product, surface techniques avoid overwetting a material and allow a surface to dry quickly.

- **Spray and wipe.** The cleaning product is sprayed lightly or misted onto the surface, then the surface is wiped with a dry cleaning towel. This technique is used for cleaning hard-surface contents and furniture. After cleaning smoke residues from appliances, apply [Glass Cleaner, Ready-to-Use \(#208\)](#) with the spray-and-wipe technique to leave a shine.
- **Foam cleaning** is appropriate for cleaning materials that could be damaged by excessive moisture of cleaning products. By cleaning with foam generated from the cleaning product, the technician applies less moisture to the surface than when cleaning with the liquid cleaning product itself.

Foam cleaning is effective for shampooing upholstery. Dip a natural sponge into [Shampoo Super Concentrate \(#252\)](#) and squeeze most of the moisture out of the sponge. Squeeze the sponge several times until a lathery foam develops. An alternative is to use a pump-up sprayer to generate a foam that is dryer than foam from shampoo in a bucket.



## Saturation Techniques

The advantage of saturation techniques is applying a greater amount of cleaning product on the material. This allows for more dissolving action from the product and for more extraction of residues and odors from the surface. The use of more cleaning product increases the risk of overwetting, color loss, or other changes in the material, so effective drying is important.

- **Hand wash and rinse.** Wet clean by immersing cleaning towels in a bucket of surface cleaning solution and wringing excess solution back into the bucket. After the wash step, rinse with a cleaning towel immersed in a bucket of rinse solution. Finally, towel-dry the cleaned areas.
- **Upholstery Cleaning Machine wash and rinse.** The Upholstery Cleaning Machine applies water-based solutions for wet cleaning or solvents for dry cleaning. Wet cleaning processes are generally more effective in cleaning heavily soiled fabrics than dry cleaning. Some fabrics, however, are sensitive to water-based products and must be cleaned with a solvent. The Upholstery Cleaning Machine allows for more agitation than hand cleaning, and rinses and vacuums emulsified or dissolved soils from the fabric.



## Immersion Techniques

The immersion technique allows for the greatest application of cleaning solution, since the material is immersed in the cleaning agent. With immersion, the restorer controls the quantity and temperature of the cleaning product, as well as the time the material is immersed. The technique is limited to contents items small enough to be placed in a tank or machine.

- **Ultrasonic Cleaner.** Ultrasonic cleaning uses sound waves to form and instantaneously implode millions of tiny vapor bubbles. The energy produced by the collapsing bubbles makes an efficient cleaning process to remove residues.

Restorers can control the amount of product applied. The amount utilized varies based on the selected cleaning technique—spraying, saturating, or immersing.



**BASIC CLEANING REVIEW QUESTIONS**

- 1 What are the four fundamental elements of cleaning?
- 2 Where should you dispose of waste water?
- 3 What safety steps should you take when cleaning with solvents?
- 4 What number is neutral on the pH scale? Which side is acidic? Which side is alkaline?
- 5 What is the difference between an oxidizing bleach and a reducing bleach?
- 6 How does enzyme cleaning work?
- 7 List ways to agitate soils while cleaning. Which methods do you most commonly use?
- 8 When would you decide to use a foam cleaning or spray-and-wipe method over a hand wash and rinse or upholstery machine method? What are the benefits/drawbacks of each?
- 9 Briefly explain how ultrasonic cleaning works.
- 10 On what sort of surfaces/residues are mechanical actions (dry cleaning methods) typically sufficient? On what sort of surfaces/residues are cleaning products and wet cleaning methods necessary?

## FIRE DAMAGE WORK PROCESS

Managing fire damage work is easy if you follow the same process on every job. Each job will present a challenge with its numerous details, but if you follow the Fire Damage Work Process step by step, you will not miss important details.

The SERVPRO® System is a valued supplier to our insurance partners because we process each customer's claim in a professional manner. An insurance agent wants to feel confident that SERVPRO® Franchises will handle the claim without creating paperwork hassles. Follow the Fire Damage Work Process to ensure quality service is provided on every job.

### Fire Damage Job File

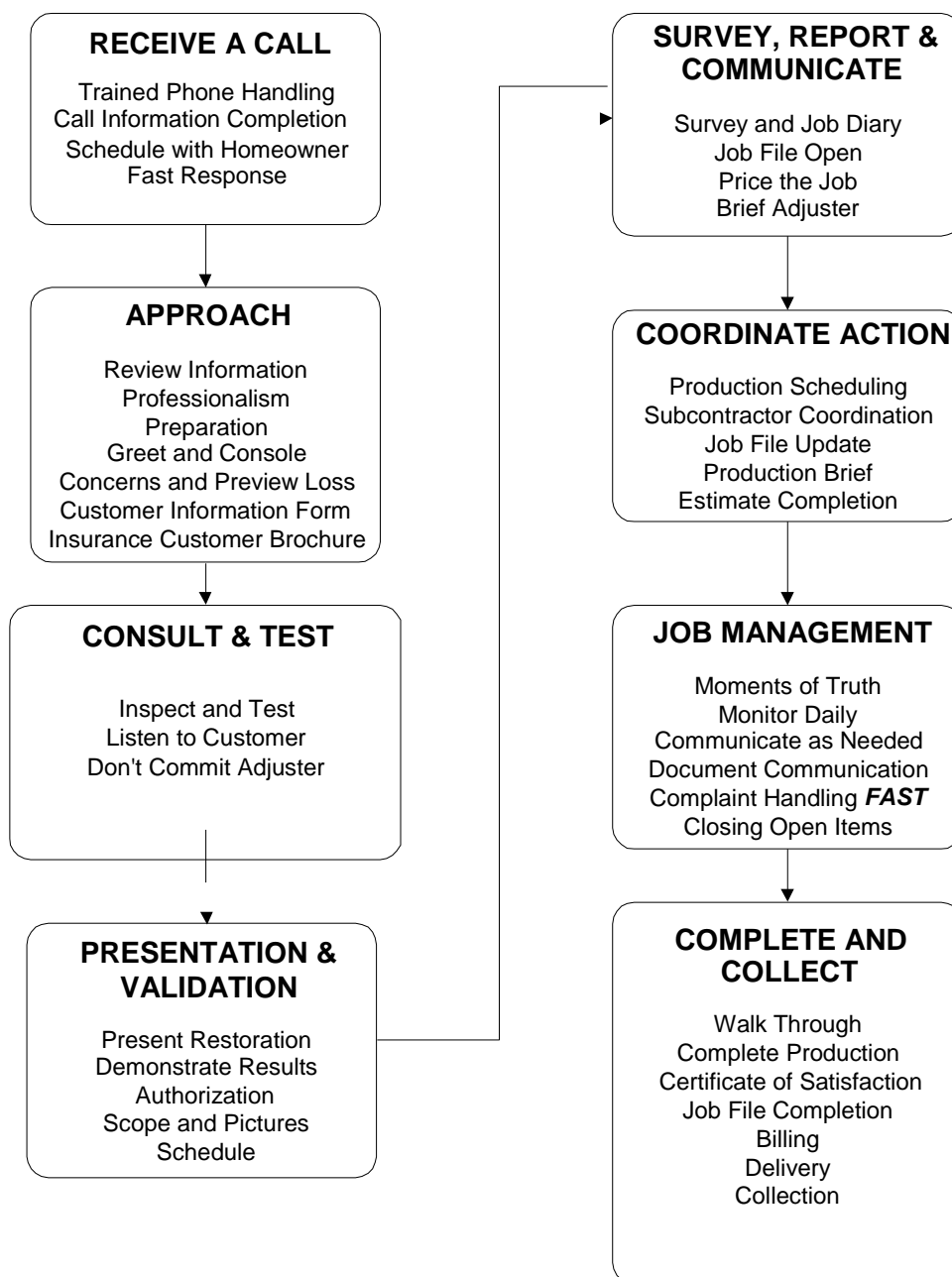
The activities, documentation, and process to complete a job are an easy step-by-step system (see the diagram on the next page). A detailed file is vital to your insurance customer and provides legal protection, as well. Complete documentation will make the adjuster's job easier as he or she reviews the file for payment. Many National Account customers now require a complete job file to be uploaded electronically before payment is considered.

Performing each step of production and filling out each form will ensure every job is completed in the same detailed manner. Use all of the SERVPRO®-recommended paperwork to ensure the following:

- You have asked and received answers for all important questions.
- You have communicated vital information to the insured and the adjuster.
- You have provided quality service to your customers.
- You have documented all details required to justify your bill.



## FIRE DAMAGE WORK PROCESS





## RECEIVING A CALL

Fire damage calls must be handled professionally and quickly. Someone should answer the phone and respond quickly 24 hours a day. When receiving a call, be prepared to listen carefully and collect adequate information to respond properly to the claim.

### Using the First Notice of Loss (FNOL)

During the call, collect the information you will need to respond to the damage, such as the name, phone number, address, directions, type of loss, and time of loss. Write the information on the SERVPRO® [First Notice of Loss \(FNOL\) \(#28570\)](#) form. If the call is a National Accounts job lead, SERVPRO's National Call Center will provide this information in the electronic FNOL sent to the Franchise. The FNOL must be downloaded during normal business hours. After hours, the Call Center will provide SERVPRO® Franchise personnel with the details over the phone.

**SERVPRO® First Notice of Loss** Page 1

**Caller Details**

Call Received By (employee initials): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Initial call received By Call Center? ☐ Y ☐ N Timestamp: \_\_\_\_\_ Dispatched By: \_\_\_\_\_

Caller Name: \_\_\_\_\_ Company: \_\_\_\_\_

Caller Phone: \_\_\_\_\_ ( C W H ) Email: \_\_\_\_\_

The Caller is The Customer? ☐ Y ☐ N Caller Type (if no): \_\_\_\_\_

How did you hear about SERVPRO®? ☐ Individual ☐ Advertisement Referral Name/Source: \_\_\_\_\_

**Customer Details**

Customer Contacted By (employee initials): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Customer Name: \_\_\_\_\_ Company: \_\_\_\_\_

Customer Phone: \_\_\_\_\_ ( C W H ) Phone 2: \_\_\_\_\_ ( C W H )

Email: \_\_\_\_\_ Customer Type: \_\_\_\_\_

Loss Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

The Customer is the On-Site Contact? ☐ Y ☐ N On-Site Contact Name (if no): \_\_\_\_\_

Relationship to Customer: \_\_\_\_\_ Authorized to sign paperwork? ☐ Y ☐ N

**Loss Details**

Type of Loss: \_\_\_\_\_ Cause of Loss: \_\_\_\_\_

When did the loss occur: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ am | pm ☐ Unknown

Structure Type (circle): Residential Multi-Unit Resid. Property Type: \_\_\_\_\_

Commercial Multi-Unit Comm. Year structure built: \_\_\_\_\_

# of rooms affected: \_\_\_\_\_ # of floors affected: \_\_\_\_\_

Is water available? ☐ Y ☐ N Is electricity available? ☐ Y ☐ N

Is there standing water? ☐ Y ☐ N Is hardwood affected? ☐ Y ☐ N

Is a crawlspace or attic affected? ☐ Y ☐ N Is there visible mold? ☐ Y ☐ N

Sizeable amount of contents affected? ☐ Y ☐ N Emergency board-up/tarping required? ☐ Y ☐ N

Insurance / Client: \_\_\_\_\_ Is this job self-pay? ☐ Y ☐ N

Claims Professional: \_\_\_\_\_ Phone: \_\_\_\_\_ ( C W H )

Emergency Services Scheduled? ☐ Y ☐ N Time (if yes): \_\_\_\_\_ Assigned to: \_\_\_\_\_

**FNOL Notes:**

28570 11/10 *Each SERVPRO® Franchise is Independently Owned and Operated.*

### How to Take the Fire Loss Call

When taking a call, a trained person should let the insurance contact or customer provide information about the loss. Keep the First Notice of Loss form within reach of the phone. Fill out the form as information is given to you. Then ask questions to fill in the balance of the FNOL. Ask whether water was used to extinguish the fire (to determine if emergency mitigation is needed). Throughout the call, you should listen with care and demonstrate your concern for the caller's information.

You must call the insured within 30 minutes of receiving the FNOL to set up an appointment to inspect the loss site. If you have trouble reaching the customer, notify your manager (or the SERVPRO® Franchise owner) immediately. Be sure to follow up on any problem in reaching the insured. If necessary, verify the insured's phone number with the individual that dispatched the job lead. Ask for alternate phone numbers. Communicate that a SERVPRO® Franchise professional will continue trying to reach the insured. This will demonstrate your commitment to customer service and timeliness of service.

### Schedule with the Customer

The next step is to schedule a time within four hours of notification to inspect the customer's loss site. While talking with the insured, get as much of the remaining information on the First Notice of Loss form as possible. Confirm that the policyholder has insurance coverage for the loss. **Listen** to the customer's concerns! Some customers will want to tell you a lot about the loss. Others just want you to come out and help them. Pass on tips to help them avoid making damages worse (see "Restoring Fire-Damaged Structure," page 123).



Determine if emergency services are needed to dry water damage in the structure. Ask the policyholder if the structure suffered water damage in addition to the fire damage. If so, schedule a time (within four hours of the original contact) for a crew to perform the emergency drying service. During regular business hours, the person in charge of scheduling should find the closest available crew for the job.

### Fast Response and Being on Time

The SERVPRO® System has educated the insurance industry regarding the importance of fast service, and provides a nationwide commitment to “1-4-8” response times. In order to follow the “1-4-8” response times 24 hours a day, a person must be available to answer the phone. Even when an answering service takes an after-hours call, immediate response by a trained employee is important.

Keeping the “1-4-8” promise is vital when a structure has suffered water damage in addition to fire and smoke. Many fire damages do not involve water damage emergency situations, but keeping the four-hour promise for an estimator to be on-site is important. Slow response could result in competitors receiving the loss because they arrived first. Being on time for the initial inspection is as important as for emergency services. Give the customer a firm time the estimator will arrive. **If you are going to be late for any reason, call the customer and let him or her know.**

After completing the call with the insured, the office person writes any additional customer comments or notes to clarify the call for the SERVPRO® Franchise estimator. Notify the estimator as quickly as possible about the call.

#### Our Service Promise



Within one hour from notice of loss, SERVPRO will contact your insured to arrange for service.

Within four hours of loss notification, we're on site to start mitigation services.



Within eight hours a preliminary report of the loss will be back to the appropriate person.

## APPROACHING THE JOB

An estimator is the first Franchise employee the customer may see. Showing professionalism to the customer is critical. Customers judge Franchise professionals by the way the personnel look, speak, and act, so the estimator should dress appropriately and speak to the insured in a manner that demonstrates concern, empathy, and the ability to properly solve the customer's problem. SERVPRO® Franchise professionals communicate their professionalism and concern through their actions by listening, pretesting, and treating each customer with respect. You gain the customer's trust in the SERVPRO® System by beginning the job professionally. This results in a better job from beginning to completion.

### Preparation

Preparation for making the first visit to the jobsite is important. Being prepared will ensure the estimator has all the items needed to complete the estimate and services properly and in a timely manner. The Estimator Test Kit should contain all necessary supplies, equipment, and the Job File Folder (see "Inspection and Estimate," page 77.)

### Review the Information

The estimator should review the First Notice of Loss form and initiate a [Fire Damage Initial Inspection Report \(#28559\)](#) prior to arriving at the jobsite. The FNOL or Initial Inspection Report should contain the following information:

- **Address of the jobsite.** Is it clear where the jobsite is located? Driving around trying to find the location of the job is frustrating and increases response time to the customer.
- **Information about the loss.** Professionalism begins by being on time with good information about the loss. What was the customer's primary concern on the phone? Was anyone injured? All of this information will make the estimator better prepared to relate to the customer.

### Greeting and Consoling the Client

Estimators should greet the insured, give them a business card, introduce themselves, and mention they represent your Franchise. People do not care what you know until they know how much you care. Let the customer see that you care.

Show customers your care and concern at all times. Make them feel important. Answer their questions. Be attentive to them, listening to what they say. Customers normally want to tell you about the loss. By listening, you usually discover the customer's primary concerns within the first few minutes on the jobsite. You will make customers happy by addressing their primary concerns. Explain in clear and simple terms what you are going to do and how it will solve their problems. Remember, the customer is experiencing a traumatic and stressful situation. They want to know you can solve their problem.



## Previewing the Fire Loss

Customers will relate their primary concerns to the estimator. Listen and take good notes. Are the customers especially worried about the table they received from their grandmother? Take these concerns seriously and make notes so you remember the concerns as work begins.

Let the customer show you the damage. Maintain a neutral or even consoling attitude during the preview. Do not give opinions as to whether something can be restored without testing. Tell the customer you will need to carefully pretest to determine how well the affected structure and contents will restore.

## Customer Brochure and Customer Information Form

Previewing the loss is an opportunity to educate customers about the fire restoration process and demonstrate professionalism. One way to teach customers about fire restoration is through the Customer Brochure and the [Customer Information Form—Fire Damage](#). **Do not read these pieces to clients.** Let them review the forms while you are pretesting the structure and contents. Highlight important points in the forms. After customers have reviewed the forms on their own, ask if they have any questions.

The customer may ask whether certain items will be replaced. Do not commit the adjuster or the insurance company concerning replacement of contents items or structural components! One way to answer the customer is “That’s a good question. We will explain our cleaning processes to you and your adjuster. Your adjuster will help you interpret your policy. The adjuster will know those specific answers.”



## CUSTOMER INFORMATION FORM—FIRE DAMAGE

While completing the preview, present the SERVPRO® [Customer Information Form—Fire Damage \(28500\)](#). Cover the important topics with the customer (see below), and explain in detail any items the customer seems concerned about. Give the form to the customer to review the rest of the information.

While you will not discuss every point with the customer, be sure to cover the following items:

### Point #2—Work Authorization

- Explain that the SERVPRO® [Authorization to Perform Services \(28000\)](#) must be signed before any work can begin.
- Verify insurance coverage. Be sure to write down the name of the insurance carrier, the claim number, and the amount of the deductible. If the deductible is to be collected, or a deposit taken, you can collect it at this time.

### Point #4—How We Proceed

- Explain your concern to protect the customer's structure and contents.
- Explain to the customer what services you are going to perform, and answer any questions or concerns.
- Explain the steps the customer can expect during the restoration process. Customers need someone to explain to them slowly what will happen in their home.

### Point #6—Preexisting or Preloss Conditions

- Explain to the customer the difference between preexisting soils and the smoke residues resulting from the fire damage.

### Point #7—Personal Items

- Ask if it is OK to inspect all areas of the structure during the inspection and cleaning. Note any areas the customer wants the crew to avoid.

SERVPRO® — Customer Information Form – Fire Damage	
<p><input type="checkbox"/> 1. A NATIONWIDE SERVICE PROVIDER.</p> <p>* SERVPRO® is a Franchise system with over 1,300 independently owned and operated locations nationwide. Servpro Industries, Inc., the Franchisor, may be reached at 1-800-SERVPRO.</p> <p><input type="checkbox"/> 2. WORK AUTHORIZATION. In order to start our mitigation and restoration services, you must sign the Authorization to Perform Services form. This allows us to take action immediately. We do not know your insurance coverage; therefore, it is impossible for us to know exactly what your insurance will cover. It is important to understand you are financially responsible for our services. Your deductible is payable before we start work. If for any reason insurance coverage cannot be verified at the time of our emergency service, an additional deposit may be required.</p> <p>Date Damage Occurred: _____ Insurance / Client: _____ Claim #: _____ Deductible Amount: _____</p> <p><input type="checkbox"/> 3. REFERENCES. The Franchisee would be pleased to provide references upon request.</p> <p><input type="checkbox"/> 4. HOW WE PROCEED.</p> <p>* Surveying and Pretesting: The process of surveying the job environment is an in-depth process. First, we will walk through the job with you to determine the areas that have been affected. Second, we will pretest the cleanability of surfaces as needed. Pretesting is a SERVPRO® process designed to identify those items that will be restorable. Third, we will make a detailed scope and inventory of each affected area in your home. Finally, we will give you a summary of our findings and explain the best steps for restoration.</p> <p>* Extent of Cleaning: We will review the full extent of the smoke damage. However, you and your insurance adjuster have the final say as to the extent of cleaning to be performed. Please consult with your adjuster if you have any questions. You will be responsible to pay for anything your insurance company does not pay for.</p> <p>* Specialized procedures are required for materials like mold, lead paint, asbestos, Chinese drywall, etc. If we notice a significant presence of these types of materials, or believe there is a likelihood that such materials exist in the structure, we will notify the involved parties so they may determine an appropriate course of action.</p> <p>* Window Cleaning: For normal smoke damage, windows will be cleaned on the inside only.</p> <p>* Metal Polishing: Unless conditions warrant chemical restoration, metal such as silver and brass will be cleaned and buffed only. Polishing will only be done if we are authorized by both you and the adjuster.</p>	<p>* Floor Finishing: Hard surface floors will be mop cleaned. Stripping, sealing and refinishing will only be done if conditions warrant them and we are authorized by both you and the adjuster.</p> <p>* Clean/Prep-for-Paint: Wall and ceiling surfaces which are heavily smoked and will not clean completely will be cleaned so that sealer paint will adhere. These surfaces may clean up better with additional work. However, this type of additional work is usually not authorized by (or paid for by) insurance companies when painting is still required. If you request any non-covered services, you will be responsible to pay for them.</p> <p>* Deodorizing: We guarantee our deodorizing to be complete provided that all sources of odor have been removed, cleaned or sealed.</p> <p>* Clothing: Your insurance company might encourage you to clean any affected clothing in your home. If the damage is too heavy or if facilities are not available, we may recommend a local professional laundry and dry cleaners we use to do the work. You may use any laundry or dry cleaner that you wish. It is important, however, that they be familiar with smoke damage.</p> <p>* Ductwork: If you have forced air heat, we will inspect your system to determine if smoke has entered the ductwork. If so, we will recommend measures to remedy the situation.</p> <p>* Live Plants: SERVPRO® Franchisees recommend the removal of live plants from the affected property, as we do not take responsibility for these items.</p> <p><input type="checkbox"/> 5. WHAT IS RESTORABLE. We will separate and save any items which do not clean completely. Our crews will never throw anything out unless you request it.</p> <p><input type="checkbox"/> 6. PRE-EXISTING OR PRE-LOSS CONDITIONS. During the course of cleaning, we will likely remove day-to-day soiling which existed prior to your loss. We are happy to do so. If, however, the removal of pre-existing soil requires significant extra effort, our crews will be instructed to move on to the next item. Pre-existing damage will also be noted.</p> <p><input type="checkbox"/> 7. PERSONAL ITEMS. In the course of our survey and cleaning, we will sometimes be required to open doors, cupboards, etc., to qualify and/or restore the damage. If you prefer to remove personal items and personal or financial information from these areas before we start, please let us know.</p> <p>Area(s): _____</p> <p>* Guns and Ammunition: Our crews are instructed NEVER to touch guns or ammunition. For this reason we request you remove any such items from the areas we are cleaning.</p> <p>* Jewelry, Valuables, Heirlooms, Sterling Silver and/or Prescription Drugs: Please remove any valuable items from the areas we are cleaning before the job is started. We are not responsible for those items. List any special heirlooms or collectibles that should be given extra special or extra delicate treatment due to their value.</p> <p>List any personal items, jewelry, valuables, heirlooms, sterling silver and/or prescription drugs being removed by customer: _____ _____ _____ _____</p> <p><input type="checkbox"/> 8. OVERLOOKED ITEMS. Although our supervisors inspect all work, you should accompany the supervisor on the final walk-through and bring any overlooked items or concerns to the supervisor's attention.</p> <p><input type="checkbox"/> 9. INSURANCE ADJUSTERS OR AGENTS. We are neither insurance adjusters nor agents. We cannot authorize anything to be replaced, repaired or painted. Our job is to preserve and protect, stop further damage from occurring, and restore damaged items to their prior condition when possible.</p> <p><input type="checkbox"/> 10. HEALTH AND SAFETY. Maintaining your personal health and safety is of great concern to us. All occupants and pets should stay away from the work areas to protect their health and safety during the work process. Material Safety Data Sheets for our products are available upon request.</p> <p>* Treatments: Our process may include the application of EPA-registered disinfectants. Would you like copies of the MSDS? <input type="radio"/> YES <input type="radio"/> NO</p> <p><input type="checkbox"/> 11. APPROXIMATE COMPLETION. The actual time required to complete the restoration process is difficult to estimate. We estimate approximately ____ days.</p> <p>I HAVE READ AND UNDERSTAND THE ABOVE STATEMENTS AND INFORMATION CONTAINED HEREIN. MY ANSWERS TO THE ABOVE QUESTIONS ARE ACCURATE AND COMPLETE.</p> <p>Customer Name: _____ Customer Signature: _____ Provider's Signature: _____ Date: _____ Franchise Legal Name: _____ d/b/a SERVPRO of _____</p>
<p>©SERVPRO® INTELLECTUAL PROPERTY, Inc. ALL RIGHTS RESERVED FE-051707 1.0 28500 07/11</p> <p>Each SERVPRO® Franchise is Independently Owned and Operated.</p>	

- Inform the customer that the crew will not touch guns or ammunition, and the customer should remove them from the work areas.
- Ask the customer to list any expensive or valued items, such as **jewelry, valuables, and heirlooms**. Recommend such items be removed if possible. Write down any information including the name of the items and what is being done with them. For example: "Jewelry removed by customer." Before you continue, ask the customer, "Is this everything?"

***Point #10—Health and Safety***

- Explain to customers that you are concerned for their personal health and safety.
- Ask customers what health or safety matters they are concerned about.
- Explain that it is necessary for customers to stay out of work areas.
- Inform customers that Safety Data Sheets are available upon request. Make sure the customer checks either "Yes" or "No" for copies of SD Sheets.
- Ask the customer if he or she is aware of any hazards or safety concerns.

***Point #11—Approximate Completion***

- Tell the customer the estimated time needed to complete the job, but do not overcommit. Always provide a conservative estimate.

After presenting the Customer Information Form—Fire Damage, ask the customer to read it over and acknowledge by signing on the appropriate line. If the customer is uncomfortable signing the form, note the time you reviewed it with the customer in the signature space and ask the customer to initial it.

## CONSULTING AND PRETESTING

Testing has several advantages. When customers see the results of pretesting, they are less likely to insist on unnecessary repainting, refinishing, or replacing. They are more likely to accept items being cleaned to preloss condition. When customers observe a quality testing procedure, they better understand what is involved in restoration and the expected results of cleaning.

### Inspect and Test

When possible, testing for cleanability should be done in the presence of the customer. A pretest demonstration can be a powerful selling tool because customers can see the evidence for themselves. Testing also helps adjusters make adjusting decisions based on accurate information.

An experienced estimator will have good judgment about the cleanability of most items. Still, the customer should be shown test results on each job. The estimator's role is to test, demonstrate, explain, and answer questions for the customer. The estimator should pretest for the benefit of the customer regardless of whether he or she is certain of the results.



### Questions to Answer

Pretesting answers four basic questions for the customer and the insurance company:

1. **Which structure and contents items will clean to a preloss condition?** Usually the estimator may discuss test results with customers, showing them what items can be cleaned and restored. Every item that is restored is an item that the insurance company does not replace. This saves the insurance company millions of dollars a year.
2. **Which structure and contents items will not clean?** The adjuster makes all decisions about replacing items that will not clean. Be careful when discussing uncleanable items with the customer. The SERVPRO® Franchise estimator should never give opinions about the loss or claim items to the customer without adjuster approval.
3. **Which structure and contents items are unaffected and do not need cleaning?** The estimator properly demonstrates a pretest to the customer to point out areas that do not need to be cleaned. Discussing with the customer the areas that do not need cleaning is advantageous because the insurance company will not be asked to pay for unneeded services.
4. **Which structure and content items are questionable as to their cleanability?** Each adjuster has a different approach to handling these situations. Always communicate with adjusters and follow their preferred approach. Again, the estimator should refer all questions by the customer to the adjuster for his/her decision.

## Listen to the Customer

As you pretest, the customer may ask many questions. Pay close attention to the questions, and answer them completely. Explain each testing step and discuss the **benefits** of the process. Customers want to be told that their home or business will be back to preloss condition quickly.

## Keys to Pretesting

Two important things to remember:

- **Do not commit the adjuster.** Instead, tell customers they need to discuss requests or questions with their adjuster.
- **Focus on the customer's primary concerns.** Show the customer you understand and can solve his or her problem or concern.



Insurance adjusters are paid to restore properties to preloss condition. Certainly, they want to minimize claims loss expense while keeping the insured happy. Each adjuster will use discretion when adjusting claims. **Never** confuse your role. Adjusters are paid to adjust. SERVPRO® Franchises are paid to restore. **Do not commit an adjuster to anything.**

The estimator walks a fine line between the insured and the adjuster. Although SERVPRO® Franchises work for the insured, the adjuster is also a customer. The estimator must always communicate with the adjuster and let the adjuster make the decisions. Do not put yourself in a position where the adjuster perceives you have committed him or her to something. If you think this has occurred, call the adjuster and explain the situation before it becomes “your fault.” When the adjuster thinks you have made his or her job more difficult, you will not likely get more referrals from this adjuster. Good communication is vital.

As the estimator performs testing, the questions customers ask and what they say will make evident what they are most concerned about. Those concerns should be the estimator's major focus as he or she talks with the client.



## PRESENTING THE RESTORATION SOLUTION

After pretesting, the estimator explains the restoration steps to the customer and obtains a signature on the Authorization to Perform Services form. The presentation should include an overview of how the job will be completed by covering the following points:

- **Approximate the time to completion.** To prevent a misunderstanding, offer a conservative estimate of the time needed to complete restoration.
- **Address the customer's primary concerns.** Whatever the concern (whether odor, prize possession, or something else), explain to the customer how you will take care of his or her concern and solve the problem.
- **Explain which services will be performed.** Explain what the customer can expect from the production crew and what outside service companies will be involved. Emphasize that your qualified technicians will be on this job. Also explain that you can recommend subcontractors who can handle outside services for the customer.
- **Explain the steps required for restoration.** Explain what steps will be taken and in what order.
- **Review the test results.** Review what is cleanable and what will not clean. Also, review the areas that do not need cleaning and the areas or items that will need a decision by the adjuster.
- **Answer any questions.** End the presentation by asking, "Do you have any other questions before I begin my scope?" This is the final question before you ask for the signing of the Authorization.

After presenting the overview, ask for the Authorization. SERVPRO® Franchises must have an Authorization to Perform Services form signed before beginning work.

### Authorization to Perform Services

Before you begin measuring and scoping, present a completed SERVPRO® [Authorization to Perform Services \(28000/28001\)](#) to the customer to review and sign while you are performing the scope. If the customer hesitates to sign the Authorization, calmly explain that without his/her approval (authorization) the Franchise crew cannot begin performing services. Ask for the signature in a natural tone by saying, "I just need your OK right here." Also, ask the customer to initial the back, acknowledging the terms and conditions.

- Explain that the Authorization to Perform Services gives you permission to do the work.
- Do not begin work unless the customer has signed the Authorization form.

SERVPRO® — Authorization to Perform Services and Direction of Payment	
Customer Name: _____	Date of Loss: _____
Loss Address: _____	
City: _____	State: _____ Zip: _____
Client: _____	Claim Number (if available): _____
<p>The undersigned client, being the building owner, owner's representative, or resident, authorizes the Provider identified below to perform any and all necessary cleaning and/or restoration services on Client's property located at the property address above, and with respect to items that need to be cleaned at a remote location to remove and clean such items as necessary.</p> <p>Client authorizes _____ Insurance Company, herein referred to as "Insurance Company," to pay Provider solely and directly for that portion of the work covered by Client's insurance policy.</p> <p>If, for any reason, Client receives a check from Insurance Company made payable to Client, Client agrees to pay Provider immediately upon receipt of the check. In order to expedite payment to Provider, Client hereby appoints Provider as attorney-in-fact, authorizing Provider to endorse Client's name on insurance company checks or drafts, and to deposit insurance company checks or drafts for Provider services.</p> <p>Client agrees to pay Client's deductible in the amount of \$ _____ that applies to this claim. If any amounts owing to Provider for Provider services are not covered by insurance, Client agrees to pay those amounts to Provider within fifteen (15) days of Client's receipt of invoice. It is fully understood that Client and its agents, successors, assigns and heirs are personally responsible for any and all deductibles and any costs not covered by insurance. Interest and finance charges will be charged at the maximum allowable by law, or at 1.5% per month, whichever is less, on accounts over thirty (30) days past due. Time is of the essence.</p> <p>Client agrees that Provider is working for the Client and not Client's insurance company or any agent/adjuster.</p>	
Property Owned By: _____	
Remarks: _____	
<p>I HAVE READ THIS AUTHORIZATION TO PERFORM SERVICES AND DIRECTION OF PAYMENT, INCLUDING THE TERMS AND CONDITIONS OF SERVICE ON THE REVERSE SIDE HEREOF, AND AGREE TO SAME.</p>	
Client's Signature: _____	Provider's Signature: _____
Printed Name: _____	Franchise Legal Name: _____
Client Reviewed Customer Information Form: <input type="radio"/> YES <input type="radio"/> NO	d/b/a SERVPRO® of: _____
Date: _____	Date: _____
<p>White: SERVPRO®      Yellow: Claims Professional      Pink: Customer</p> <p>©SERVPRO® INTELLECTUAL PROPERTY, INC.      ALL RIGHTS RESERVED      FE-051707 L.0      28000 3/11</p>	



- If applicable, collect the deductible. You can introduce the subject by saying: “We accept personal checks, credit cards, or cash.”

## Performing the Scope

Once work is authorized, perform a detailed scope for restoration. (See “Inspection and Estimate,” page 77, for an explanation of the scoping procedure.) Review with the customer the details discovered during the scope.

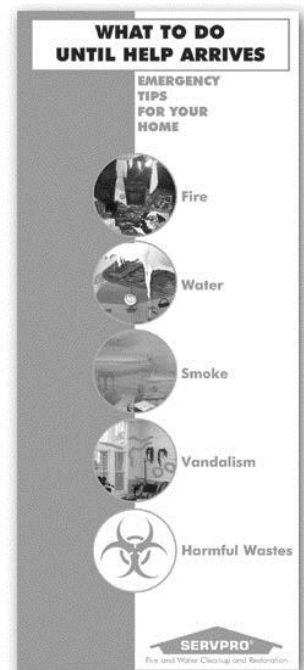
## Scheduling the Restoration Job

After gaining approval from the insured, schedule the cleaning and restoration services. Again, state the time needed to complete the job, and answer any final questions from the customer.

## Emergency Tips

The estimator should remind the occupants about steps they can take to prevent further damage to their property, and about things they should not attempt to do themselves. Many effective tips are presented in the SERVPRO® (#47000) [\*What to Do Until Help Arrives\*](#) brochure.

- Do not attempt to wash any walls.
- Do not attempt to shampoo carpet or upholstered furniture without first consulting a professional restoration service.
- Do not use any canned or packaged food or beverages that may have been stored close to fire, heat, or water. They may have been contaminated.
- Do limit the movement in the house to prevent soot particles from being impregnated into upholstery and carpets.
- Keep hands clean. Soot on hands can impregnate upholstery, walls, and woodwork, causing more damage.
- If electricity is off, empty freezer and refrigerator completely and prop doors open to prevent odors from developing.



## REPORTING AND COMMUNICATING

As a job progresses, you will communicate internally with your SERVPRO® Franchise teammates, regularly with the adjuster, and throughout the job with the insured. You should document all communication in the electronic job file and the Job File documents.

### Brief the Adjuster

As soon as possible (within eight business hours of the on-site visit), the estimator should prepare a preliminary estimate for the adjuster. The estimator emphasizes with the adjuster that



the preliminary estimate is not 100 percent complete. A fire loss has many variables, often making it impossible to capture 100 percent of the loss during the initial scope. The estimator can price the large items to develop a general idea of the final charges.

The estimator should organize the job information before calling the adjuster. The Job File, including the First Notice of Loss form, scope sheets for each affected room, and a preliminary estimate for restoration are readily accessible. Make certain the estimator knows which items will need to be left open until a specific price can be determined.

Call the adjuster and give him/her an overview of the loss. Before you start, ask the adjuster if he/she has a few minutes to go over the customer's file. Present a brief overview of the job. Provide the adjuster with a preliminary estimate and qualify the items that need to remain open.

### SERVPRO® Franchise Technology

SERVPRO® Franchise Technology equips the Franchise office with electronic estimating and reporting tools. The local SERVPRO® Franchise can communicate electronically with insurance industry customers and create a complete electronic claim file for each individual loss.

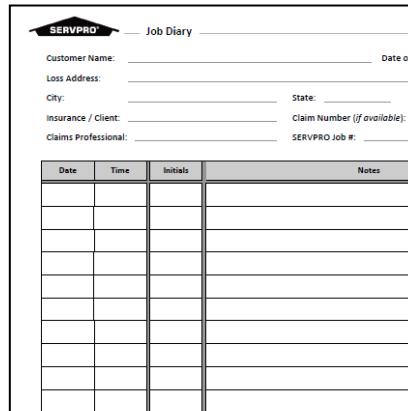
Adjusters can review losses and prioritize their workload. Office technology allows SERVPRO® Franchises to become an adjuster's eyes and ears at the jobsite.

Electronic claims files are mandatory for all jobs performed by Franchisees participating in the National Accounts Program. For all National Accounts job leads that require a completed electronic file, documentation of 1-4-8, estimate, images, and required forms must be included in the file and uploaded to SERVPRO® Corporate as soon as practical after completing the job. After the job file has been updated and uploaded via *ServproNET*®, an *e-Viewer*™ should be sent to the assigned adjuster based on the requirements outlined in the specific National Accounts program bulletin.



## Open the Job File

The customer Job File (hard copy) should be completed while the estimator prepares the preliminary estimate. Usually the office staff opens the file and stores all paperwork relating to the loss in the customer Job File. The customer Job File provides the office with a summary of the job. The basic types of information include the following:

- **Customer Information**— Verifies the contact information, deductible, and payment arrangements.
  - **Job Overview**— Describes the type of loss and whether a move-out or water damage emergency services were performed.
  - **Crew Instructions**— Describes for the crew chief the extent of the damage on the loss and the basic services needed to perform the production work.
  - **Documentation**— Includes the required forms that must be presented at the loss, along with video or pictures that were taken of the loss.
  - **Subcontract Information**— Lists the subcontractor needs for the job, notes specific instructions for the various subcontractors, and tracks the progress of subcontractor services.
  - **Adjuster Verbal Briefing Notes**— Describes comments made to the adjuster and any input from the adjuster when the verbal briefing was completed.
- 

The image shows a 'SERVPRO Job Diary' form. At the top, there is a header with the SERVPRO logo and the title 'Job Diary'. Below the header, there are several fields for customer information: 'Customer Name', 'Loss Address', 'City', 'State', 'Insurance / Client', 'Claims Professional', 'Date of Loss', 'Claim Number (if available)', and 'SERVPRO Job #'. At the bottom of the form, there is a table with four columns: 'Date', 'Time', 'Initials', and 'Notes'. The table has 10 rows for recording daily activities.

## Job Diary

Log all contacts with the customer in the SERVPRO® [Job Diary \(#28516\)](#). The Job Diary provides a written record in the event of a dispute or miscommunication. List on the Job Diary everything that happens on the job, including any conversations and concerns of the customer. The Job Diary can prove invaluable for follow-up and when questions arise.

<b>SERVPRO</b>		Job Diary		Page ____ of ____
Customer Name:				Date of Loss: _____
Loss Address:		_____		
City:	_____	State:	_____	Zip: _____
Insurance / Client:	_____	Claim Number (if available): _____		
Claims Professional:	_____	SERVPRO Job #: _____		

Date	Time	Initials	Notes

28516     11/10

Each SERVPRO® Franchise is Independently Owned and Operated.

## Coordinating Production

Coordinating the fire loss production process means getting the job off to a good, organized start and ensuring work activities run efficiently through completion.

### Restoration Service Scheduling

Cleaning and restoration services should be scheduled as quickly as possible. Be certain to communicate the job status to the customer. Timely restoration saves the insurance company money; therefore, both the adjuster and the customer like jobs completed quickly.

### Subcontractor Coordination

The SERVPRO® [Subcontractor Control Form](#) (#28511) may be used to manage subcontractors. Reliable subcontractors are important to successful job completion. The quality of the subcontractors' work reflects on your Franchise's image and reputation. The customer knows the Franchise is managing the job, so monitoring the subcontractors is important. A good idea is to have backup subcontract suppliers in case an emergency prevents one from producing work.

Be aggressive in coordinating the actions of the subcontractors. Many delays on jobs occur because you are waiting on subcontract work. The subcontractor's responsibility is to get the job done; your responsibility is to make sure they do what they are supposed to in a timely manner. Make sure subcontractors are fulfilling their commitments and providing excellent customer service to your customers.

### Updating the Job File

The Job File is key to a smooth production process. The office staff, the production manager, and the estimator keep the Job File in the office updated. A Job File that is up to date and complete keeps the work process moving in an orderly fashion. Updating the Job File documents and electronic job file is a continuous task, from receiving the FNOL, to keeping the file current during the job, to completing the job.

### Completing the Estimate


The comprehensive restoration estimate should be completed as quickly as possible. After review by the SERVPRO® Franchise owner or estimator, a copy is forwarded to the insurance representative or adjuster within eight business hours.

SERVPRO® Subcontractor Control Form		Page 1
Customer Name:	_____	
Loss Address:	_____	
City:	State: _____	Zip: _____
Insurance / Client:	Claim Number (if available): _____	
<input type="radio"/> Dry Cleaning (or Laundry) Services Name/Company: _____		
Rush Items:	OY ON	# of Bags: _____ Deodorize: OY ON
Date Out: _____	Return Date: _____	
Service Included in Estimate: OY ON	Date Invoice Received: _____	Invoice #: _____
Notes: _____		
<input type="radio"/> Carpet Installation (or Reinstallation) Services Name/Company: _____		
Start Date: _____	Date Completed: _____	Square Yards: _____
Service Included in Estimate: OY ON	Date Invoice Received: _____	Invoice #: _____
Notes: _____		
<input type="radio"/> Painting Services Name/Company: _____		
Areas to Paint: _____		
Start Date: _____	Completion Date: _____	
Service Included in Estimate: OY ON	Date Invoice Received: _____	Invoice #: _____
Notes: _____		
<input type="radio"/> Electronics Inspection Services Name / Company: _____		
Date Out: _____	Return Date: _____	Items List in Job File: OY ON
Service Included in Estimate: OY ON	Date Invoice Received: _____	Invoice #: _____
Notes: _____		
<input type="radio"/> Subcontractor Name / Company: _____		
Description of Services: _____		
Start Date/Date Out: _____	Return Date: _____	or Completion Date: _____
Service Included in Estimate: OY ON	Date Invoice Received: _____	Invoice #: _____
Notes: _____		
<input type="radio"/> Additional Subcontract Services Listed on Page 2/Back of Subcontractor Control Form		
28511 07/11		Each SERVPRO® Franchise is Independently Owned and Operated.

Photo documentation of the loss, along with the Authorization to Perform Services and Customer Information Form, should be completed and uploaded into the electronic job file along with the verbal briefing notes. All photos, diagrams, and documents must be labeled properly. Take pictures of the front and rear of the structure and interior pictures of the damage, if possible. Photographic documentation is required on losses and is standard for the emergency service portion of the fire work process.

As each open item on a loss is completed, immediately send a copy to the insurance representative or adjuster. Timely upload of the electronic job file is the most efficient means to ensure the adjuster has an up-to-date file at his/her fingertips. The job file may be uploaded multiple times during the job process. **Communicate everything!**

Date: 8/30/02 3:40:52 PM Page: 1


**SERVPRO of Anytown, IL**

---

123 Oak Ave.  
Galesburg, IL 61030  
(815) 875-7278  
Fax ID #: 543534534  
Email: slegan@servproil.com

**ESTIMATE**

---

Insured: John Smith  
Adjuster:  
Claim #:  
Policy #:  
Job Type: Water  
Room: 000

FMO Date: 8/30/02  
Agent:  
Loss Date: 8/30/02 2:19:11 PM  
Price List: NFTP  
Estimator:

---

Quant	Service	Qualifier	Quantity	UOM	Price	Total	Tax	Type
Structure	Thermal Fogging		2,800.00	CF	\$0.03	\$84.00	\$	
Emergency Service	Emergency Response - Regular Hrs.		3.00	EA	\$55.00	\$165.00	\$	
Emergency Service	Emergency Response - After Hrs/Weekend		3.00	EA	\$75.00	\$225.00	\$	
Emergency Service	Emergency Response - Holiday		3.00	EA	\$125.00	\$375.00	\$	
<b>Structure Total</b>								\$649.00
<b>Contents Total</b>								\$0.00
<b>Room Total</b>								\$649.00

ROOM NOTES:

## Fire Damage Initial Inspection Report

The SERVPRO® [Fire Damage Initial Inspection Report \(#28559\)](#) helps document findings from the initial inspection of the loss site. Complete the Inspection Report to help ensure all necessary photos have been taken and all paperwork has been signed, dated, and/or documented appropriately. The form documents any additional emergency response services that will be needed. The crew can review their work with this report before they depart from the jobsite, ensuring all services and procedures were properly performed.

## MANAGING THE JOB

Estimators and crew chiefs play a vital customer service role. They are the point of contact to the customer; they are the people customers see and communicate with throughout the job.

### Make a Good Impression

Every time a SERVPRO® Franchise employee comes into contact with a customer, a moment of truth occurs. What that employee says is judged. How the employee looks is judged. How the employee acts is judged.

Production employees must make a **good first impression**. Good impressions result from professionally uniformed crews arriving on time, setting up in a professional manner, politely discussing what work will be done, and understanding the customer's concerns. Bad impressions result in the customer becoming more critical of the work. Make the customer feel at ease and confident they are dealing with professionals.

Employees should not discuss the results of cleaning with the customer. Happy customers can change their mind if they hear an employee making comments that an item is not cleaning properly. Every SERVPRO® Franchise employee should learn the significance of good first impressions and professional conduct and performance.



### Monitor the Loss Daily

The fire damage job should be monitored daily. The estimator should be accessible to the customer and communicate with the customer on a regular basis. If the estimator is difficult to contact, or does not check in with the customer, everyone will hear about it from the customer. The estimator logs all customer contacts in the Job Diary. This will keep the file up-to-date and provide a record should a dispute or miscommunication arise later.

Monitoring the job can be as easy as asking, "Is everything going well, Mrs. Customer?" and then listening and tactfully dealing with the responses. The process of monitoring the loss is a mix of quality customer service and hand-holding the customer to reassure them that everything is under control.

### Communicate as Needed with the Insurance Adjuster

Careful communication with the insurance carrier is an important part of the estimator's job. Any significant information should be communicated. The adjuster should be updated quickly on any change in circumstance or billing. As each open item on an estimate is closed, immediately send a copy to the adjuster (a copy to the customer is also recommended).

The adjuster does not want to be bothered with needless calls. When communicating with an adjuster, always ask whether he or she has time to talk, and then be brief and to the point. The adjuster will take more time to visit if it is needed.

## Document Communications with Adjusters

Document every conversation with the adjuster. For instance, if the customer requests an additional room to be cleaned and the adjuster approves the cleaning, the estimator enters the change in the Job Diary and sends a confirmation note (or fax) to the adjuster. This is an easy habit to develop and will stop most miscommunications before they happen.

When the estimator is not sure about any part of managing the job, he or she should ask for direction. Communicate, qualify, and clarify as often as possible, then follow the preferred method of the adjuster or SERVPRO® Franchise management. A problem is sure to occur when the estimator takes something for granted.

## Complaint Handling FAST

When a complaint arises, the estimator should address the matter quickly with professionalism and tact. Solve the customer's perceived problem. Dealing with complaints by "ignoring them" or "hiding from them" is the worst reaction. In most cases the complaints will not go away, but will get worse by not being addressed.

Everyone involved in the issue should be made aware of the complaint. The production crew, the SERVPRO® Franchise owner, the office staff, and the adjuster should be aware of the situation. Strive to solve all complaints quickly, so the adjuster need not become involved beyond being aware of the problem and the action that was taken to correct it. **Never** let the customer complain to the adjuster before you have talked to the adjuster. Communicate, listen, apologize, and solve the problem **fast!** Finally, fill out a complaint form and put it in the Job File.



## Completing the Job and Collecting Payment

Finishing the job and receiving payment for services should be handled as professionally as the rest of the job. The customer remembers more about the end of the job than any other part. An estimator's job is to make certain the customer is satisfied with the SERVPRO® brand.

### Final Walk-Through

When the job has been completed, walk through the job once alone and inspect to make sure everything is truly finished. Then, walk through with the customer to ensure everything is done to the customer's satisfaction. Take notes during the walk-through, showing concern for the customer's opinion and making notes for follow-up, if needed.

The best time for a final walk-through is just before the crew finishes the job. This prevents sending a crew back if a problem is identified. If the estimator will do the walk-through, the production crew should notify the estimator when the production work is almost finished.

### Resolve Problems

The production crew should complete any reservice needs the customer identifies during the final walk-through. Be understanding, even if you do not see the problem the customer sees. Be professional and reservice, as needed. Remember, perception is reality to your customer!

### The Certificate of Satisfaction

After the final walk-through, ask the customer to complete and sign the SERVPRO® [Certificate of Satisfaction: Job Completion \(#28531\)](#). The Certificate of Satisfaction should always be scanned and uploaded and a copy included with the bill sent to the agent or adjuster.

### Job File Completion

When the job is complete and the subcontractors have completed their work, the office should complete the Job File. The office staff puts all the paperwork and checklists in the Job File, reviews and completes the file audit, and enters all payments, bills, and expenses into QuickBooks® Pro to generate the final invoice.

### Billing, Delivery, and Collection

The invoice should be correct the first time. Adjusters do not like supplemental bills, so make every effort to avoid them. If another bill must be sent, make sure it

Certificate of Satisfaction: Job Completion

Customer Name: \_\_\_\_\_ Date of Loss: \_\_\_\_\_

Loss Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Team Members: \_\_\_\_\_ Claim Number (if available): \_\_\_\_\_

SERVPRO® and its Franchisees strive to be the Premier Cleaning and Restoration Company. Please take a moment to complete the following questionnaire and help us evaluate how we're doing. On a scale of 1 to 10, with 1 being "Strongly Disagree" and 10 being "Strongly Agree," how would you rate the following:

	Strongly Disagree		Strongly Agree
1. The SERVPRO® Franchise's office staff was courteous, polite and helpful throughout the duration of the job.	1	2 3 4 5 6 7 8 9	10
2. The SERVPRO® Franchise's on-site personnel were prompt, courteous and attentive to my concerns.	1	2 3 4 5 6 7 8 9	10
3. The SERVPRO® Franchise's on-site personnel clearly explained the cleaning and restoration process throughout the duration of the job.	1	2 3 4 5 6 7 8 9	10
4. I was confident in the knowledge and professionalism of the SERVPRO® Franchise's on-site personnel who performed the services at my home or place of business.	1	2 3 4 5 6 7 8 9	10
5. I was impressed by the SERVPRO® Franchise's on-site personnel that performed services at my residence or place of business.	1	2 3 4 5 6 7 8 9	10
6. I would use the SERVPRO® Franchise who assisted me during this loss for future cleaning and/or restoration needs.	1	2 3 4 5 6 7 8 9	10
7. I would recommend the SERVPRO® Franchise to my friends, family and colleagues.	1	2 3 4 5 6 7 8 9	10
8. Overall, I am satisfied with the service(s) provided by the Servpro® Franchise.	1	2 3 4 5 6 7 8 9	10
9. What recommendations would you have to help the SERVPRO Franchise improve its performance in the future?			
10. Additional Comments:			

Customer, \_\_\_\_\_, acknowledges that the restoration / cleaning project for which the SERVPRO® Franchise has provided Emergency Services has been performed to the customer's satisfaction.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Thank you for your feedback. We appreciate your patronage and look forward to serving your future cleaning and restoration needs.

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28531 11/10

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is sent as soon as the charge is identified. In addition, the bill should show clearly the basic details of the job. Attach a copy of the estimate to the invoice. Also submit a copy of the Authorization to Perform Services and Certificate of Satisfaction with the bill to the insurance company.

The office staff should call the customer before the bill is given to the estimator for delivery. This call is to ensure that the customer is 100 percent satisfied with the work performed and will not call the adjuster later with a problem.

Deliver the final bill in person whenever possible. Maintain your personal satisfaction that this customer was given the best service possible.

Finally, be sure to mark your electronic job file complete and upload the file one final time. Your complete and accurate electronic job file shows the decision makers at the insurance company home office that you are a professional SERVPRO® Franchise operator.

Remember, the decision makers review your past files when they are deciding to begin or renew Vendor Programs. Your job file is your way to show your excellence!

<i>"The following is the content estimate for the cleaning of contents at the Jones' residence." Due to the extent of damage, contents had to be moved to our warehouse for cleaning and storage.</i>		
<b>Cleaning of Various Contents</b>		
Clean large picture including unpack and repack	4@ \$12.00	\$48.00
Clean ironing board		\$6.00
Clean (in & out) entertainment center		\$22.00
Clean (in & out) refrigerator		\$35.00
Clean (in & out) stove		\$36.00
Clean (in & out) 2-drawer file cabinet		\$8.00
Clean telescope		\$24.00
Clean (R. & R) air conditioner		\$19.00
Clean lg. Lamp and shades including unpack and re-pack	2@ \$14.00/each	\$28.00
Clean sm. Lamp and shades including unpack and re-pack	3@ \$7.50/each	\$27.00
Clean (in & out) microwave		\$12.00
Clean pole lamp		\$7.00
Clean large ceramic vases including unpack and re-pack		\$15.00
Clean brass magazine rack		\$6.00
Clean large coat rack		\$9.00
Clean (R. & R) box fan	2@ \$17.00/each	\$34.00
	Subtotal of cleaning	\$336.00
<b>Storage and Warehousing</b>		
200 square feet @ 90/per square feet per month	180 @ 3 months	\$ 540.00
<b>Move Back</b>		
2 employees and truck @ \$50.00 per hour	3.5 hrs.	\$175.00

**FIRE DAMAGE WORK PROCESS REVIEW QUESTIONS**

- 1 What is the purpose of the paperwork used during a fire damage restoration job?
- 2 What does “1-4-8” stand for?
- 3 How does recognizing a customer’s primary concerns make the job easier for SERVPRO® Franchise technicians?
- 4 What are the key items to point out on the Customer Information Form—Fire Damage?
- 5 Why should pretesting be performed in front of the customer?
- 6 What form must be signed before any work can begin?
- 7 What is a moment of truth? What are ways that a SERVPRO® Franchise employee can leave a good impression?
- 8 How often should SERVPRO® Franchise professionals communicate with the insured? With the adjuster?
- 9 Why is it important to deal with complaints quickly?
- 10 When delivering the bill, what documents should be attached?

## INSPECTION AND ESTIMATE

One of an estimator's most important jobs is to obtain accurate measurements and descriptions for all items to be cleaned, restored, or moved out. In addition to the estimate of restoration services, an adjuster may request an inventory of "unrestorable" or "claim contents." Using a consistent approach to scoping and estimating will help ensure accuracy and avoid missing items on the estimate.

**Scope:** an evaluation of the damage.

**Estimate:** a written summary of the damage, including prices.

**Scoping** and **estimating** actually represent separate functions for the estimator.

- The **scope** is the estimator's evaluation of the damage. How much is damaged? How severe is the damage? The estimator inspects the loss, identifies the areas to be cleaned, pretests, takes the basic measurements, determines the type of cleaning processes to be used, and notes variables that will affect the job.
- The **estimate** is the estimator's written summary of the damage, detailing the costs to restore or replace structure and contents. The estimator calculates the total cleaning or other services required, calculates the time the job will take to complete, and projects the expense for materials and labor on the job.

### Who Is the Estimate For?

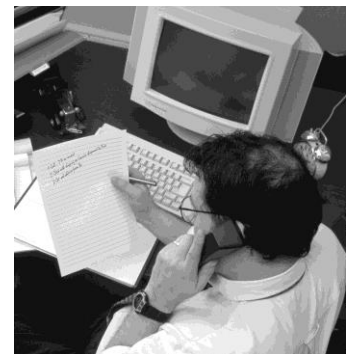
Who finds value in a written estimate? The **insurance adjuster** is responsible for providing funds to cover the costs of restoration and repair of fire-damaged structures and contents. The estimate helps the adjuster project the costs of restoring the damages. The **insured** (customer) owns the damaged property. The estimate helps the insured understand what will be done to the property to restore it. The **restoration vendor** performs the cleaning and restoration services. The estimate helps the restoration vendor project the resources (personnel, equipment, time) needed to complete the work. All these people gain valuable information from an estimate.

### ***Insurance Adjuster***

The more SERVPRO® Franchises can restore on each loss claim, the more they help adjusters hold down claim costs. Restoration of damaged property is usually less costly than replacing the property. The estimator should communicate what SERVPRO® Franchise services have saved the adjuster, not just what has been cleaned. Explain to adjusters why certain restoration or cleaning procedures or services are necessary for restoring the property.

### ***Insured (Property Owner, Customer)***

Before beginning an inspection, the estimator makes sure the property owner knows he or she is affiliated with the SERVPRO® Franchise and is agreeable to the Franchise conducting an inspection. To determine exactly what the customer expects, the estimator listens carefully to learn the customer's wants, needs, and desires. Pay close attention to a customer's concerns to create a happy customer.



The estimator also helps the customer understand the possible results of restoration. You will never please the customer who thinks everything will be new again after restoration. You can please the customer who understands the property will be returned to “preloss” condition. When speaking with customers about the restoration process, follow the basic rule — **Under-Promise and Over-Deliver**.

Your close attention to each individual customer’s needs impacts their satisfaction. Property owners face a traumatic experience, and the SERVPRO® Franchise professional helps restore their lives. Providing professional quality service will hopefully earn a long-term customer.



### ***Restoration Vendor***

The estimator walks the fence between two customers—the insurance adjuster and the insured—and must communicate with both adjuster and customer with as little conflict as possible. Insurance companies want to please and retain their insureds for future business, so when a Franchise provides customer satisfaction the insurance company improves their policyholder retention. By providing quality service, the SERVPRO® System builds a relationship with both customers.

Clarify with the customer or adjuster the extent of the inspection. Sometimes inspections may be limited to either contents or structure. For instance, an apartment complex may insure only the structure, while the renter may or may not carry insurance on contents, so the inspection might be limited to structure only. In a condominium, the condo association may insure part of the building while the condo owner may insure other parts. Clarify the extent of the damage inspection and communicate that to the building owner or occupant before inspecting.

The estimator should respond promptly when asked to inspect a damaged structure. If circumstances, such as bad weather or an overextended workload, delay the inspection, the Franchise office should notify the person who called in the loss and make appropriate arrangements. When a customer has had a traumatic event like a fire damage, they want help quickly. Always try to respond immediately.



## Estimator's Test Kit

Scoping a fire damage requires a few tools and supplies. Make a separate Estimator's Test Kit for each estimator to use on fire damage estimates.



The Test Kit enables the estimator to test smoke residues on structure and contents to determine whether they can be restored through cleaning. If the insured or the adjuster asks whether something will clean, the estimator tests before offering an opinion. Remember, cleaning an item is usually less expensive than resurfacing, reupholstering, refinishing, repainting, or replacing it. Still, the estimator should not tell a customer or adjuster an item can be restored by cleaning when, in reality, fire, smoke, or heat damage requires it to be replaced. The cardinal sin of a restoration company is to charge to restore an item that ultimately has to be replaced. Testing allows the estimator to provide accurate, professional advice to customers.

Testing tells you more than just whether an item can be cleaned. By testing, the estimator also determines which cleaning process will produce the best results. Is a dry soil removal process or a wet cleaning process required? Will the surface withstand agitation or abrasion?

Testing also presents an opportunity to sell SERVPRO® Franchise services. At the time of the first visit you may not yet be authorized to perform restoration. The initial scope is an opportunity to sell yourself as the most qualified restorer for the job, and pretesting is key to selling your services. If possible, pretest with the customer before the contractor scopes the loss. Once a contractor "sets the mind" of the customer on the need for replacement, they are not likely to consider restoration as an option. Pretesting allows you to demonstrate cleaning effectiveness. With the customer watching, say something like, "Why don't we see if we can get this clean? Let's try to clean it and then evaluate if it is acceptable."

### Contents of the Test Kit

The Estimator's Test Kit should include the following items:

- **Respirator masks** as protection against the smoke residues in the air. The NIOSH-approved N95 disposable respirator can be worn by estimators and also offered to customers. A mask costing about \$1.00 can build good relationships with customers, adjusters, and agents.
- **Personal Protective Equipment**, including latex gloves and goggles or safety glasses.
- **Steel wool**. A piece of extra fine steel wool (0000) provides agitation for heavy residues.
- **Scrapers** to test plastic melted onto appliances. A scraper enables you to find out immediately whether the melted plastic will come off.
- **Dry cleaning sponges** to identify if smoke residues are present on a surface and can be removed by dry cleaning.



- **Brushes** of various sizes and shapes (nylon bristles, toothbrushes) for agitating light soils in crevices.
- **Dusting Cloth.** The cloth is treated with light mineral oil and is effective for cleaning light soot or heavy duty dusting.
- **Caution tape.** A damaged structure might have a hole in the floor or some other safety hazard that needs to be marked.
- **Tags.** The estimator often inspects a structure before the adjuster has seen it. While pretesting, the estimator may tag some items as “damaged” or “claim.” This initial tagging makes the adjuster’s job easier and helps him set reserves. Tagging also assists the production crew when they later inventory items as cleanable or “claim” items.
- **Markers.** Both fine print and king size in black.
- **Rubber bands and safety pins** to attach tags and labels to furniture.
- **Orange and white labels** to mark items as “Claim.”
- **Spray bottle** for spray application to avoid saturation of a surface during testing.
- **pH paper** (also called Hydrion paper). This paper changes color to indicate whether water-based liquids are acidic or alkaline.
- SERVPRO® Spot Removal Procedures (#38010).
- SERVPRO® Fire Damage Job File Folder (#46019) and SERVPRO® Water Damage Job File Folder (#39600).

### ***Professional Cleaning Products for the Test Kit***

- [Stain Scrub \(#110\)](#)
- [Rusticide \(#116\)](#)
- [Industrial Cleaner \(#357\)](#)
- [Stain Absorb Powder \(#109\)](#)
- [Glue Spotter \(#445\)](#)
- [Fabric Rinse and Color Set \(RTU\) \(#446\)](#)
- [Furniture Stain Remover \(#447\)](#)
- [Carpet and Upholstery Cleaner \(RTU\) \(#448\)](#)
- [Ammonia Spotter \(#449\)](#)
- [Solvent Spotter \(#453\)](#)
- [StainZap \(#485\)](#)
- [Wall and All Surface Cleaner \(#351\)](#)
- [Formic Acid \(#9951\)](#)
- [Wood Crème Paste \(#209\)](#)



## Testing to Locate Smoke Residues

The first step in fire damage restoration is to test. Testing is done to determine three factors:

1. Where the smoke residues are located.
2. If the residues are cleanable.
3. If the residues or damages were preexisting or caused by the recent event.

### Locate Residues by Observing Contrast

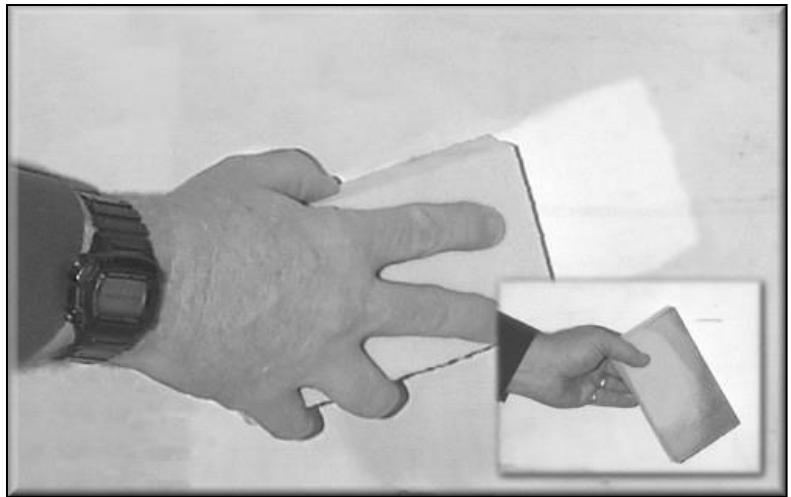
Finding smoke may be a simple matter of observation—the smoke residue is clearly visible in all areas. You know the smoke is there by observing the contrast between affected and unaffected areas, or between smoked walls and normal undamaged walls. When you can easily see the residues, you focus your investigation on the effects the smoke has had on various items and what procedures will be required to remove the smoke from these items.

In some situations, however, smoke residues may not be so obvious. Evidence of smoke on walls, ceilings and so forth, may not be apparent from a distance. Testing makes it possible to verify that smoke residues are present by observing the contrast between affected and unaffected areas or by cleaning a spot and comparing the cleaned spot to unclean areas.

In general, the contrast between areas is the key. For example, you can lift the edge of a stack of towels to compare the exposed edge with the unexposed area under the towels.

Table and drawer interiors will indicate contrast when a protective object such as a piece of paper is moved. Carpeting also provides an excellent medium for checking contrast between protected and unprotected areas. Look under chairs and sofas with skirts that almost reach the floor.

A common test is to wipe a surface with a dry cleaning sponge and examine the sponge to see whether smoke residues are present. Also examine the surface for contrast between the wiped area and untouched areas. The amount of contrast reveals the degree of damage. A marked contrast indicates the smoke damage may be considered heavy. On the other hand, if you have to wipe a large area to reveal a contrast, the damage is light. After testing, wipe lightly and outward from the test spot, feathering so as not to leave a strong contrast between the test area and surrounding area.



*Dry cleaning sponges “erase” soot from surfaces.*

## Follow a System for Testing

Develop a system for testing based on the following principles:

- **Begin testing at the source of the fire** and work outwards. In most fire damage situations, you will begin testing the heavier deposits of residues and work towards lighter deposits.
- **Test areas with heavier concentrations first.** If the areas that have been affected the most will clean, the less affected areas normally will also clean.
- **Test all different kinds of surfaces.** If a wall is partially painted and partially covered with wallpaper, test both surfaces. The type of soot and level of soot in a room may clean from one kind of surface, but not from another.
- **Test surfaces using the cleaning process appropriate for that surface.** Test glossy, nonporous surfaces using wet cleaning methods. Test flat porous surfaces with a dry cleaning sponge. Wood furniture that has a heavy concentration of soot may need to be tested with [Wood Crème Paste \(#209\)](#).
- **Test areas that are likely to collect smoke residues.** You should normally test ceilings, walls, areas directly over doorways and openings, all flat surfaces, and walls and ceilings opposite air registers. Test upholstery fabrics, particularly the top of cushions and back of chairs and sofas. Velvet and napped upholstery fabrics will frequently attract and yield more residue than smooth finished fabrics. The top and back of drapes can have heavy deposits because of air currents near windows. Venetian blinds and lamp shades are excellent indicators of smoke residue.
- **Test on the other side of barriers.** Do not assume that smoke was unable to reach certain areas. Smoke penetrates closed areas as it migrates to cooler spaces. Check rooms even if the doors were closed during the fire. Check inside closets and drawers.
- **Test inaccessible areas when necessary.** Estimators are aware that smoke or moisture can penetrate into wall cavities and other inaccessible areas of a structure. Some situations may require an estimator to conduct an invasive procedure to look for hidden residues. Always obtain permission from the building owner or customer to perform such investigations.





## Testing for Cleanability

Testing is done to determine three factors:

1. Where the smoke residues are located
2. If the residues are cleanable
3. If the residues or damages were preexisting or caused by the recent event

Testing for cleanability is done to learn enough about the damages and affected items to prepare an accurate estimate. The estimate will list the work procedures needed to restore the damaged areas to preloss condition. Testing gathers information for preparing the estimate by helping the estimator determine the following:

- What items can be cleaned
- What items cannot be cleaned
- What items do not need to be cleaned
- What items are questionable

### Before the Estimator Begins Testing

Be sure to qualify with the customer the time needed to test and scope the loss. Testing for cleanability should be done from the source of the fire or smoke outward until no signs of smoke are found. When possible, perform pretesting with customers present so they see the test results and have a good idea of the necessary cleaning processes.

Before beginning to test, ask customers if they have attempted any cleanup prior to your arrival. If so, what have they done? In situations where smoke residues are very light, the customer may have removed the visible residues during their cleanup. Ask the customer what surfaces they cleaned. Check those areas to determine whether further cleaning is needed to avoid smoke odor problems or for restoring the areas to preloss condition. Test in areas the customer most likely did not clean, such as the tops of doors and upper vertical surfaces.



### The Benefits of Testing

Pretesting helps the estimator determine several things about the fire damage restoration process. Test results provide more information for deciding what methods of cleaning will be used to restore structure and contents. Other benefits of testing relate to the pricing of the estimate. The estimator will be better informed about the damages and thus more accurate in estimating three aspects of the restoration work:

- The time needed to perform cleaning
- The inventory of supplies needed to perform cleaning
- The equipment needed on the job

Benefits of quality pretesting are that the production crew is better prepared to work on the job and the estimate is priced more accurately. Testing also helps adjusters make adjusting decisions based on accurate information (for example, projecting the costs to restore the claim).

### **Relating to Construction Contractors**



When a fire damages parts of a structure beyond restorability, construction contractors are involved in demolition of the damage, followed by reconstruction or rebuilding. The contractor's approach to a fire-damaged building is different than a restoration vendor's approach. Restorers focus on restoring contents and structure through cleaning; construction contractors focus on replacing or rebuilding items. We should not consider their approach as being dishonest. Rather, we should realize that due to contractors' training, background, and skills, their approach is simply different from a restorer's.

Testing helps in situations where you must contrast your restoration services with the contractor's approach. A contractor may arrive at a loss site first, sweep away soot from surfaces with a broom, seal the surfaces, and repaint. If the soot is light, the "sweep-seal-repaint" method may pass without any smoke odor problem. Still, the estimator should demonstrate to the adjuster how much cleaner the same surfaces will be after cleaning with the SERVPRO System's dry or wet cleaning processes. Testing shows how well surfaces will clean, and the customer will be happier with a "clean" process than a "sweep and seal" process.

Testing for cleanability can demonstrate to adjusters how cleaning and restoration results in lower claims costs. In some situations, contractors may raise doubts in adjusters' minds whether carpets or structure can be saved so that they can replace them. By testing, estimators can demonstrate to adjusters how restoring items is less expensive than replacement.

## Testing for Preexisting Conditions

Testing is done to determine three factors:

1. Where the smoke residues are located
2. If the residues are cleanable
3. If the residues or damages were preexisting or caused by the recent event

During the inspection, estimators must distinguish between preexisting damage and damage caused by the current event. Insurance companies are liable only for removal of residues caused by the recent fire, not for restoring preexisting damages.

### Preexisting Dust and Soil

In testing, you will normally find preexisting dust. Experience is necessary to distinguish between dust and smoke, since both collect on flat surfaces. Soot tends to be black and dust gray. In some cases soot is gray but lacks the physical bulk of dust.

Forced-air heating and cooling systems produce preexisting conditions. The interior of air ducts will almost always have some kind of residue in them. Lint or dust adheres to the sides of ducts and cannot be completely removed by vacuuming. The presence of such residues does not constitute smoke damage.

### Preexisting Smoke

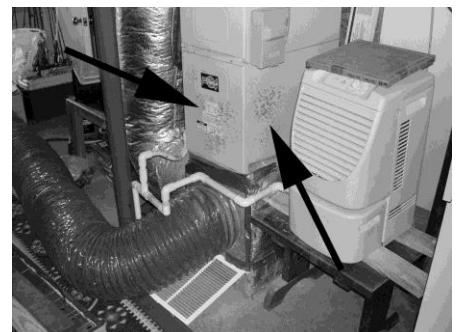
Where forced air systems are present, some smoke residue may be a preexisting condition. Smoke residues may accumulate over time from a heating system disorder. Heating systems sometimes emit smoke over a long period until they deposit enough residues to constitute a damage that in another situation might have occurred in a sudden, concentrated, single event. Even in homes where no sudden loss has occurred, conditions can be observed. For example, pictures shift on the wall and reveal a dark outline. Dark rings or coronas may be visible over wall outlets. Such residue buildup may have occurred gradually.



*Is it soot or dust in this air duct?*

Distinguishing between old and new soot damage may be difficult. Over time, residues tend to bond with the surface. Soot residues of recent origin can usually be removed more easily than old residues unrelated to the sudden loss.

When inspecting a fire damage situation, the estimator may find cumulative residues from preexisting conditions present along with residues from the recent fire damage. Cigarette and cigar smoke can cause distinct shading on upper walls and



ceilings. The color ranges from yellow-amber to brown, and sometimes has a pink cast. Heating systems may have emitted long-time residues. These conditions may be unrelated to the insurance claim and are only noticed after a fire occurs in the home. The estimator should examine all areas to determine an accurate “damage” condition. These conditions should be shared with the adjuster so the insurance company can determine what will be approved for restoration.

### **Preexisting Conditions Affecting the Scope**



Some types of preexisting conditions may affect the scope. During the inspection, the estimator may notice conditions that will raise the cost of restoring fire or smoke-damaged areas, even though the conditions themselves were not caused by the fire damage. For example, termites may have weakened structural materials that otherwise might have had smoke residues removed. In commercial buildings, estimators may encounter structural issues that must be updated to comply with building codes or fire codes. The estimator

should document these situations in a separate section of the estimate from the listing of fire/smoke restoration services. This information will be communicated to the adjuster.

## The Scoping Process

The purpose of scoping is to list the work that must be performed in restoring the damage to the property. The actual itemization of the loss should be detailed and accurate. Each estimator has a preferred way to scope a fire loss; however, following a consistent approach to scoping offers benefits. A consistent system helps ensure accuracy, avoiding missing items on the estimate, and allows the estimator to review the estimate easily. The basic guidelines for scoping are the following:

1. Start at the source of the fire and work outwards.
2. Inventory the structure first, then contents.
3. Start from the ceiling and work towards the floor.
4. Move from left to right.

## The Scope Sheet

Complete a separate scope sheet for each individual room, listing the title of the room at the top of the sheet. Next, measure the dimensions of the room, including length, width, and height. Then list the measurements of the offsets in the room (such as closets).

The scope sheet is used to scope both **Structure** and **Contents**. Insurance adjusters prefer estimates to summarize items in these two groupings. *Structure* includes the ceilings, walls, floors, and attached items, such as doors and windows. Any item permanently attached to the building is also considered to be *structure*, such as wall cabinets, base cabinets, or light fixtures. *Contents* are items of personal property, such as furniture and clothing. Any item that is not nailed down or otherwise permanently attached to a structure is usually considered contents. A simple image of structure and contents is to visualize turning the property upside down. Whatever falls out is contents; whatever does not fall out is structure.

## Scope Structure Then Contents for Each Room

Scope one room at a time, completing a room before moving to the next. Begin at the room containing the source of the fire and work outward to rooms farther from the source.

Start the itemization by measuring and listing the **structure** items. For instance, start with the ceilings and ceiling fixtures, then continue with the walls and wall fixtures, moving clockwise around the room. Start with the wall that includes the entry door. Finally, itemize the floor and any fixtures attached to the floor.

Next, the estimator itemizes **the contents** to be cleaned in the room. Start in the left corner of the wall first listed in the structure and move clockwise, listing every item to be cleaned. Estimate small items by boxes or hours, depending on the billing preference of the insurance customer.

Always check for smoke residues in closed areas, such as closets and inside drawers. Pull items out of the closets to be sure everything is identified. Missing a closet containing many items for cleaning is an easy mistake that can greatly affect the time and cost to complete a job.



## Make the Scope Complete

The estimator includes in the scope any information that clarifies the loss. Make good notes, listing anything out of the ordinary (e.g., “ornate item, difficult to access”). Add a note on any item requiring a price adjustment. Price unusual or tricky items while completing the scoping form. If the employee inputting the scope in the estimating program guesses at a price, the guess may be too low or incorrect.



The next step while scoping a room is to list subcontracting needs (e.g., painting, dry cleaning). Documenting any information concerning subcontractor services allows for better communication with your subcontractors.

To complete a room, inventory and note any **Total Loss Items**. Many adjusters value this extra service. The estimator should check with the SERVPRO® Franchise owner to determine if an estimate should inventory and list Total Loss Items. The Contents Claim Inventory Service allows the Franchise to make a detailed Total Loss Contents Inventory for the customer. (See “Classify the Inventory” on page 210.)

## Reviewing the Scope

The estimator should make a final check to ensure all affected areas have been scoped and inventoried. Review the scope sheets to be sure all writing is legible and appropriate notes are included. Make sure each sheet is labeled by room name, the dimensions listed are accurate, and the quantities are correct. A final check will save time and ensure the scope is complete.

During the final walk-through, the estimator can take pictures of each area. Advise the customer you are taking pictures. Taking pictures may alleviate future headaches, like an unscrupulous insured claiming items that did not exist. Some Franchises utilize video in addition to still pictures.

## Scoping Structure

Begin scoping the structure in the area that was the source of the fire. This area should contain the heaviest deposits of smoke residues. Work outwards from the source area, room after room.

### Taking Measurements



Measure the length, width, and height of the room (rounding only to the nearest inch). The estimating program calculates measurements for the square feet, linear feet, or cubic feet of ceilings, walls, floors, and trim moldings. Draw a sketch of the room, showing offsets in the room, missing space, and so forth.

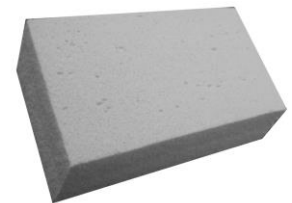
Follow the pattern of scoping known as “Up, Around, and Down.” Scope the ceiling (UP), then the walls from left to right (AROUND), and finally the floors (DOWN). For each individual item, write on the scope sheet the cleaning or restoration service (SRV) and the percentage (%) of the item being cleaned. Then record the quantity (QTY) of the item and the unit of measure (UOM). The quantity is based on the unit of measure. For example, carpet is measured by *square feet*, so quantity is the number of square feet of carpet to be serviced.

### Testing Surfaces

Test all surfaces that show evidence of smoke residues. Test vertical surfaces, such as walls, doors, windows, and door trim, since smoke residues adhere to these surfaces in many fire situations. Always consider whether smoke penetrated behind materials. Check the walls inside of closets. Check inside drawers and cabinets and inside furnace registers. Make sure all affected areas have been tested. Sometimes an adjuster will inspect the loss after the restorer leaves.

### Pretest Using a Dry Cleaning Sponge

Using an edge of a Dry Cleaning Sponge, test-wipe a section of the surface to be cleaned. Make a test wipe approximately two feet long. Look at the surface to observe contrast between the cleaned and uncleaned areas of the ceiling or wall. The results of the test will help determine whether the surface should be dry cleaned or wet cleaned. Observe the residue picked up by sponge:



- Light grey to black indicates soot/soiling residues. Proceed with Dry Sponge cleaning.
- Light grey to hazy white residue in most cases indicates dust or fire extinguisher dust.
- If the test wipe smears, do not use the Dry Cleaning Sponge technique. Wet cleaning is the preferred method.
- If residue is extremely heavy or is oil- or grease-based, wet cleaning is required.
- After testing, wipe lightly and outward from the test spot, feathering so as not to leave a strong contrast between the test area and surrounding area.

## Pretest Using Wet Cleaning

Pretest with dry cleaning first. If that does not work, test with wet cleaning, using a ready-to-use solution of [Wall and All Surface Cleaner \(#351\)](#). Spray a moderate amount on a cleaning cloth. Test-wipe a section of the surface to be cleaned. Wipe lightly and outward from the soiled spot. Feather the strokes, so a ring is not left on the wall. For greasy residues, you may have to boost the solution with [Solvent Additive \(#253\)](#).

On a painted surface, beware of any effect cleaning may have on the color or appearance of the paint. Do not rub as you test-wipe the surface. Pay attention to possible color change, especially on darker color paints. Watch for a change of surface color or of color transferring to the cleaning towel.



## Documenting Preexisting Damages

Be careful to note all preexisting structural damages on the scope sheet. Any preexisting damage might be blamed on the Franchise employees who pack and move out contents. If the Franchise is not authorized to clean the structure, the estimator will still use a scope sheet for scoping contents and should note the structure damage on the scope sheet.

## Preventing Secondary Soot Damage

Smoke residues containing acids may corrode materials. Some estimators carry a spray bottle of detergent, cleaning towel, and lubricant in the Estimator's Test Kit. While scoping, the estimator will clean soot residues from the expensive metal surfaces (faucets, appliance trim, etc.) and coat them with a lubricant, such as [Stainless Steel Cleaner \(#490\)](#), to protect them from corrosion. The estimator should point out to the adjuster how this protective step can save the cost of replacing some expensive metal items.



## Encountering Hazardous Materials

Special precautions must be followed if, during testing, the estimator suspects that materials may contain asbestos or lead. Do not disturb these hazardous materials, and immediately communicate with the adjuster. Any material believed to contain asbestos or lead should be tested by a qualified lab. If demolition is required, a qualified abatement contractor must perform the remediation. See "Safety During Fire Damage Restoration," page 13. If mold-contaminated materials are found during scoping, similarly stop and immediately communicate with the adjuster and building owner.



## Scoping Contents

After scoping the structure, scope the contents in a logical order.

### Look for Contrast

As with structure, the estimator looks for contrast. Clean a spot and note the contrast between the cleaned area and the unclean portion of the contents item. Also look for the contrast between portions of a contents item that were exposed to residues and the portions that were protected from them. When testing a table top, contrast the parts of the table exposed to residues with the parts of the table that were under a lamp or placemat and thus protected. Through testing, the estimator determines whether cleaning the exposed parts will restore them to match the protected parts of the item.



The effect called photographing may also produce a contrast. An object, such as a lamp, placemat, or book, protects the surface under it from settling residues. When the object is moved, the object's outline is visible on the surface in the contrast between exposed and protected areas. The outline resembles a "photograph" of the lamp or book. If pretesting is unable to remove the outline and contrast, the estimator should consider the item to be unrestorable.

### Note Type of Surface and Material

Test each surface with a cleaning method appropriate for the type of surface. Surfaces can usually be described as porous or nonporous. In most cleaning situations, nonporous items can be cleaned with a wet cleaning process. Porous materials typically require a dry cleaning process.

Another factor in testing is whether materials are synthetic or natural. Synthetics tend to attract more soot residues, but will generally clean better than natural materials. Additionally, the restorer may use more aggressive cleaning methods with synthetics (dyes are usually more stable).

### Communicating with the Customer

Contents items are the personal property of the occupant or customer, and inspecting contents damage requires the estimator to interact with the occupant. Contents include many personal items that occupants store in closets or in the drawers of furniture. Before opening drawers or closets, discuss **personal items** with the customer (see the [Customer Information Form—Fire Damage](#), Item 7.) Many times, customers will not be thinking of private contents due to the stress of the fire event. By alerting customers to remove personal items, you avoid potentially embarrassing situations.

- **7. PERSONAL ITEMS.** In the course of our survey and cleaning, we will sometimes be required to open doors, cupboards, etc., to qualify and/or restore the damage. If you prefer to remove personal items and personal or financial information from these areas before we start, please let us know.

**Area(s):**

\_\_\_\_\_

Estimators should consider the value of contents items. Try to determine an item's value if the cost of restoration might exceed that value. Ask the occupant, "How much did you pay for this item?" (Customers often will provide information to a restorer.) For items that are expensive or require extra care, make detailed notes to ensure the item is properly handled during restoration.

## Cleaning Services for Contents

An estimator should be familiar with the various cleaning services used for contents restoration.

- **Dusting** removes surface dust by using a treated cloth to lightly wipe or a feather duster to brush dirt from the surface. In very light soil situations, dusting may be sufficient as a lone cleaning service and listed in the estimate as "clean."
- **Dusting cloth** is a light cleaning or dusting method using a towel impregnated with a cleaning agent or mineral oil to remove non-grease-based soil or dust. If the dusting cloth is the primary service, it is usually described generically as "clean."
- **Dry clean sponge** removes light to medium non-grease-based soils. It can be used for pre-cleaning excess non-grease-based soils prior to wet cleaning.
- **Foam cleaning** uses the foam of a cleaning agent to clean. Foam cleaning is primarily used for upholstery cleaning of fabrics whose dyes are likely to bleed or those that shrink when wet.
- **Polishing** is a mildly aggressive cleaning method using furniture polish or paste wax agents. Compound cleaner or liquid polishing agents are recommended for metal items.
- **Wet cleaning** is an aggressive cleaning method for moderate to heavy soiling. Wet cleaning uses water with or without a cleaning agent. Wet cleaning usually infers that the item to be cleaned will be thoroughly wet in the cleaning process.
- **Semi-refinishing** is an aggressive cleaning method that removes the top layer of finish on hardwood surfaces. The method is more time-consuming than wet cleaning.

## Estimating Boxes for Cabinets

An estimate must list the number of boxes required to pack contents from cabinets. The actual number of boxes needed is probably a lot more than what most people would think. To determine a ballpark number, count the number of cupboard doors and drawers. The number of doors and drawers will approximate the minimum number of boxes required. Although the actual packing will probably use boxes of different sizes (e.g., small size and medium size), the estimate may be priced by only one box size for simplicity.



## Working with Adjusters During the Scope

Maintaining good communication with the adjuster throughout the fire damage work process is important. The estimator should demonstrate to the adjuster that the SERVPRO System can restore damaged structure and contents while reducing claim costs.

### Getting the Job

In some situations, the estimator may scope a damage without yet having authorization to provide restoration services. Inspecting the damage offers an opportunity for the estimator to sell his or her skills and knowledge to the adjuster. During the initial briefing to the adjuster, the estimator emphasizes the benefits of SERVPRO® Franchise services.

- **Explain to the adjuster how you scoped the loss.** What areas did you check? Inform the adjuster of what structure and contents you will not need to clean. (This tells adjusters how you are saving them money). A competing restorer may include the whole house in the scope without even testing. Adjusters appreciate an honest approach in cleaning only what actually needs to be cleaned.
- **Mention to the adjuster that the insured agrees with your scope.** As you scope, explain to the insured where the smoke damage is and how you will restore the item. Later, as you brief the adjuster, emphasize that you are providing a scope the insured agrees with. This indicates to the adjuster that your services will satisfy the insured.
- **Tell the adjuster what concerns the customer has.** Explain to the adjuster how you are going to handle the customer's concerns. This lets the adjuster know your desire to make the customer happy.



If you know the adjuster, you can talk to the adjuster about adding a carpet cleaning or other minor item that goes beyond the loss. The customers are happy because they think the adjuster is giving them something at the beginning of the job. The adjuster is pleased because the customer is less likely to nitpick with criticisms at the end of the job. Plus, the restorer receives the extra work added to the scope.

### Determining SERVPRO's Role

To settle a fire damage claim, the adjuster works with several parties who provide mitigation, restoration, and reconstruction services. During the initial scope, the estimator should clarify with the adjuster exactly what role the SERVPRO® Franchise will have in the job.

- **Areas to clean.** Clarify with the adjuster what areas of the structure the Franchise will be authorized to service. What areas are to be moved out? What areas will be cleaned and what areas not cleaned? What areas should not be touched at all? Will contents be moved from the garage?
- **Selecting subcontractors.** Clarify with the adjuster what specialty restorers will need to be involved. Adjusters tend to use preferred contractors for contents restoration services, such as dry cleaning of clothing, electronics cleaning, art restoration, document drying,

and appliance checks (and maybe furniture restoration, though not as frequently). When possible, select subcontractors from the adjuster's preferred vendors. This builds your relationship with that adjuster. Do not assume the adjuster will use the same vendors on every job. Help the adjuster understand that the work process will be more successful if each vendor knows exactly what services he or she is to provide and what services other vendors will provide.

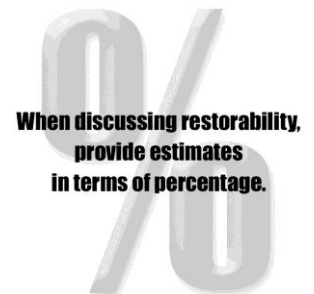
### **Estimating Questionable Items**

An adjuster may ask whether you can clean and restore a certain item. Perhaps your pretesting was successful, but you have concerns due to other factors, such as strong odors in the house. Be honest with the adjuster in estimating the chances for successful cleaning of items. If you have around an 85 percent chance of restoring something, tell the adjuster you estimate an 85 percent chance of success. Allow the adjuster to decide whether to authorize the cleaning.

Extremely expensive items may be worth a cleaning attempt even though the odds of successful restoration are lower, from 65 percent to 80 percent. To determine the value of an item, begin by asking the customer, "How much did you pay for that sofa?" (Customers often will provide information to a restoration vendor.) Adjusters may authorize cleaning on a questionable item of \$8,000 value, whereas they would decline on a \$300 value. Of course, not all adjusters react the same way, but SERVPRO® Franchise experience with adjusters has indicated the following trends:

- For most items, an adjuster will authorize cleaning if given an 80 percent chance of success.
- For an expensive item, an adjuster will authorize cleaning if given a 60 percent chance of success.
- If 80 percent of all questionable items are successfully cleaned, the adjuster is usually happy.

Be realistic and honest concerning questionable items. Restorers who frequently attempt to restore items that cannot be saved will eventually ruin their relationship with the adjuster. Do not claim, "Sure, I can clean this item," just to obtain more work when you doubt that the item will restore. The loss of future business will far offset any profits from cleaning questionable items. Always communicate clearly and accurately to the adjuster.



## Meeting with Subcontractors

The estimator may meet with a number of subcontractors concerning specialty restoration during a fire damage project. Among these subcontractors are electronics restorers, furniture refinishers, dry cleaners, document restorers, and art restorers.

### Electronics Specialist's Inspection

Most households today have electronic items that will require inspection and cleaning by a professional electronics restoration expert. At a minimum, equipment should be opened to remove all soot from wiring and circuit boards (the acids contained in soot will deteriorate circuit boards and damage wiring). All electronics should be removed from the damaged environment as quickly as possible, preferably before the Franchise crew performs the packing and moving.



Each electronic item should be tagged and numbered prior to removal. Include a brief description of the item and what restoration is required for each individual electronic item. Note the number of items to be sent to the electronics specialist. In many cases, the electronics restoration company charges a per-item fee for electronic inspection. Built-in electronics may require an expert to remove the item in addition to inspecting and cleaning. Have the electronics specialist pick up the electronics items at the house.

### Dry Cleaning Estimate



Almost every fire requires some dry cleaning, including draperies or closets of clothes damaged by smoke and soot. The restoration vendor should work out an agreement with a dry cleaner to respond and pick up fire-damaged items as quickly as possible. Ideally, the dry cleaner should pick up items before the Franchise crew starts a pack-out, since this will empty many closets and reduce the crew's packing task.

Make sure the dry cleaner understands the type of service required for fire damages. The dry cleaner should inventory items onsite and provide an inventory list and estimate to the restoration vendor within eight business hours of picking up damaged items. Dry cleaned clothing can be deodorized before, during, or after cleaning, depending on the level of residues. Cleaning may remove a large percentage of odors. For heavy smoke residue odor, dry cleanable clothing should be deodorized as soon as possible.

### Furniture Refinishing Estimate

Depending on the peak temperature of the fire, furniture refinishing may be required. Bubbles in the finish are a sure sign of damage requiring refinishing. Items with a heavy layer of black, baked-in soot may only require semi-refinishing for satisfactory restoration.

During the initial walk-through, the estimator should note any furniture that might require refinishing. Keep in mind that refinishing can be expensive. If a customer requests a piece to be refinished, always



*The semi-refinishing process may remove heavy soot from hard furniture.*

ask, “How much did you pay for it?” The cost of refinishing can quickly exceed the value of the item. In addition, once a piece is refinished the customer must accept the work. If a customer does not accept an item that has been refinished, the adjuster will not be happy!

The restoration vendor should meet the refinishing expert on the jobsite for an initial estimate of any required furniture refinishing. The furniture refinisher’s estimate should be included with the cleaning estimate to the adjuster.

### Art Restoration Estimate

Art works include a wide range of items and present challenges to fire restoration. Often, art items are fragile and must be handled carefully during restoration processes. Also, since art



works are appreciated for their appearance, the acceptance of the restoration result is based on appearance. Attempts at restoration may not be accepted unless the art work matches the preloss appearance.

While scoping, the estimator should determine whether art works fall in one of two groupings: **high value** or **moderate/low value**. Ask the customer their opinion of an art item’s value. The restoration vendor can attempt restoration of moderate to low-value art items, depending on whether the cost for cleaning is less than or greater than the value of the item. Art items of high value should be subcontracted to an art restoration specialist.

### Overseeing Subcontractors

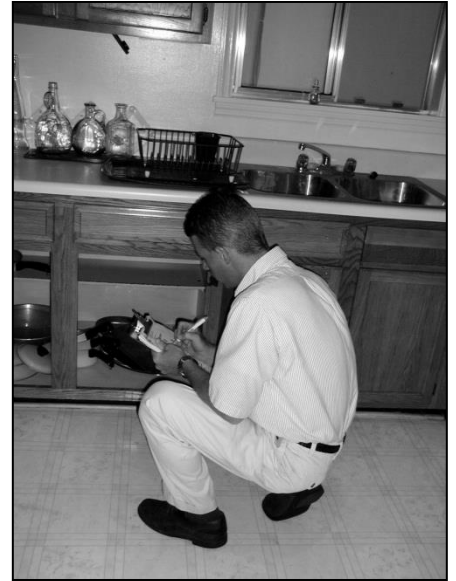
Carefully choosing and managing all subcontractors you utilize is vitally important. Prepare a document file for each subcontractor you approve. See “Working with Subcontractors,” page 229.

## PREPARING THE ESTIMATE

To prepare an accurate estimate, the estimator must understand the three major components of bidding—service, time, and materials. Estimators should know how much revenue must be generated per man-hour for the business to be profitable. They should also learn the expectations of the customer and analyze the time needed to meet or exceed those expectations. Finally, estimators should present the price of restoration in a detailed manner, making certain customers know what steps will be taken and what benefits they will receive from their investment.

### Justify the Charges for Move-Outs

Costs for cleaning contents are higher when the contents are moved from the loss site to a warehouse. Even after contents are stored at the warehouse, cleaning them involves several extra steps: unshelf items to be cleaned, unpack boxes, clean items, deodorize (ozone) items, repack items, reshelv boxes, stage items for customer or adjuster viewing, and move items back. These steps mean that a \$4,000 contents cleaning inside a house may turn into a \$10,000 to \$15,000 job if the same contents are moved out to another location for cleaning.



You may need to justify your move-out estimates. Contents charges for a move-out should cover the shelving and reshelving of items from storage to cleaning and back to storage. Write sufficient notes to clarify why charges for cleaning contents are higher for move-outs than when cleaning on-site. The notes will help the adjuster understand the reasoning behind your charges, and you will receive fewer calls from the adjuster questioning the charges and trying to negotiate them downward. Here are some examples of notes that might appear on an estimate.

- *“No electricity, light, or heat available at jobsite.”*
- *“Items were packed out.”*
- *“Heavy contents.”*

Object	Service	Qualifier	Quantity	UOM	Price	Total	Tax	Type
Bric-a-Brac	Clean		8.00	BOX	\$35.00	\$280.00		C
***includes unshelving, unpacking, cleaning, deodorizing, re-shelving***								
Boxes	Deodorize		10.00	EA	\$25.00	\$250.00		C
***includes unshelving, unpacking, cleaning, deodorizing, re-shelving***								
Boxes	Clean		10.00	BOX	\$50.00	\$500.00		C
***includes unshelving, unpacking, cleaning, deodorizing, re-shelving***								

Describe any work conditions that required more time for the tasks to be completed.

### The Successful Estimate

Estimates should always be generated in an estimating program, be free of errors, and look professional. Following are more tips for producing a successful estimate.

#### List Boxes and Furniture Separately

Indicate the total number of boxes used for the packing. Divide into the different sizes used. Do not list boxes and furniture in the same section of the estimate. List boxes and furniture on separate sheets since you will be charging separately.

Categorize cleaning charges into groups: Electronics, Upholstery, Mattresses, Boxed Contents, and Hardwood Furniture. Listing charges in categories makes it easier for an adjuster to scan through the estimate and understand what the various charges cover. On some estimates the charges for subcontractors (electronics, dry cleaning, etc.) may be extensive, so the adjuster will be able to see that the Franchise's portion of the estimate is reasonable and not the reason the total estimate is high. The more quickly an adjuster can review your estimate, the less likely he or she will be to question the charges listed.

Describe on the estimate exactly what services you are providing. Explain that the cleaning of boxed contents “includes unshelving, unpacking, cleaning, deodorizing, reshelving.” Also, the cleaning of hardwood furniture “includes unshelving, cleaning, deodorizing, polishing, and reshelving.” Remind the adjuster that your cleaning services for a move-out include several steps that are not needed when cleaning on-site. By describing these additional steps, which may not be apparent to many adjusters, you are justifying your charges.

Insurance adjusters require a copy of the subcontractor's estimate or billing. Send the subcontractor's paperwork to the adjuster along with your cleaning and restoration estimate. To facilitate reference by the adjuster, add the comment "per attached estimate" on the estimate at the applicable line item.

ESTIMATE

Estimate of Expenses

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Page: 1

4542

Carlisle, TN 37035

Estimate # 4542-1888

Email: est4542@aol.com

ESTIMATE

Invoiced: Charles Boudreau

Adjusted: Kathy Tate

Client #

Project #

Job Type

Lead Address:

121 E. 26th St.

Columbia, TN 38401

PNOL Date: 06/20/2012

Agent: Jim McLaughlin

Loss Date: 06/20/2012

Print Line: ANNUAL ACCOUNT

Estimator: Joe Estimator

Loss Phone: (615) 555-5555

Reason: 205

Client	Service	Quantity
Structure	Roofing	

Structure Total

Roofing Total

Roofing Notes:

Reason: (Roof) Contents - Box U-1221 (W-1227) (H-1227)

offices 1,152.00 sq/footing

offices 144.00 sq/footing

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## Communicating About the Estimate

Once an estimate is written, the estimator will need to communicate with the insured or the adjuster or both on certain matters.

### Communicating on Policy Limits

Estimators should consider whether the charges on the estimate will exceed the insured's policy limits. Customers tend to think their policy takes care of everything. Often they are not aware that the costs of mitigation, restoration, and reconstruction cannot exceed certain limits expressed in their insurance policy. At the time of the fire, customers are thinking about where they are going to live. They are not thinking about policy limits.

SERVPRO® Franchise professionals should learn what a customer's insurance policy limits are. Just the major items of a loss may have already surpassed an insured's limits.

Ask the adjuster for the limits on the policy and discuss them with the customer so they do not exceed their limits with the claim. Some adjusters do not think to explain limits to the insured. Inexperienced adjusters may overlook the policy limits. You should remind the adjuster of policy limit concerns. Talk to the adjuster and customer about things the customer might do for themselves so they do not run out of money.



### Briefing the Adjuster

Contact the adjuster with the initial estimate within eight business hours. Summarize the estimated cleaning services in a verbal briefing. Some offices provide the adjuster a verbal briefing without submitting a detailed estimate until open items have been completed. The briefing should answer the following questions for the adjuster:

- What can be saved and what must be replaced?
- What are the customer's hot buttons? What are they concerned about?
- What is the schedule for restoration? (e.g., "We should be done in three days.")
- What contents will be moved and to where will they be moved?
- What emergency services are needed?
- What services does the Franchise need from subcontractors?

(For example, a Franchise office that does not offer emergency electrical services will need a contractor to establish emergency electricity to the structure for heating purposes.)

## Dealing with Adjusters

Always submit invoices and completed job files immediately. Do not wait days or weeks while you are doing other jobs. Once the adjuster has reviewed the written estimate, he or she may have questions or concerns about the charges. Learn to negotiate with the adjuster to preserve a long-term relationship. Give in on \$100 of questioned charges to make sure you get the next \$5,000 cleaning job. Do not jeopardize the adjuster's future referral business.

Learn how adjusters think. Adjusters are eager to show their supervisors they brought down costs on some items. When adjusters question your estimate, tell them that you will look at the estimate and see what you can do. Then reduce the price somewhat, giving the impression you have analyzed the estimate. Offer a reduced price and ask them if the price is acceptable. Never threaten to bill the customer for the difference. You will lose the adjuster's future business.

To build good adjuster relationships, scan your estimates to identify any inadvertent errors. Correct any error before you mail the estimate. Should you identify an error after you have submitted the estimate, call the adjuster, point out the mistake, and reduce the estimate. Check your boxes of cleaned contents for how full they are. If the boxes are not full, only charge for a half box. When you explain to the adjuster what a "half box" is, you win that adjuster's respect and future business.



**Inspection and Estimate Review Questions**

- 1 What is the difference between the scope and the estimate?
- 2 What items should be included in the estimator's test kit?
- 3 Where should you start testing when scoping a fire loss?
- 4 What are the benefits of pretesting?
- 5 Why is it important to identify preexisting conditions?
- 6 When scoping, what information should you note for each item to be cleaned?
- 7 How do you pretest with a dry cleaning sponge?
- 8 How do you pretest with the wet cleaning method?
- 9 What is the best way to estimate questionable items?
- 10 What makes an estimate successful?

## DEODORIZATION OF SMOKE ODORS

Removing the odor of smoke from fire-damaged buildings presents a challenge. Technicians can be more successful at removing smoke odors when they understand how odor molecules permeate a structure and how to utilize the various methods of odor removal.

### Individual Perception

SERVPRO® Franchise professionals must understand how customers perceive odors. The term *odor* describes both good and bad smells. Whether an odor smells good or bad is in the mind of the individual. Some odors—such as putrefying flesh—are considered unpleasant by almost everyone. Other odors—such as gasoline or paint fumes—may be considered good odors by some people, but extremely offensive by others. The interpretation of whether a smell is good or bad may differ with each individual. The Franchise’s task is to neutralize the odors customers consider to be unpleasant.



Once odors reach the brain, past experiences and impressions are applied to create an interpretation as to whether the smell is good or bad.

No mechanical instrument is capable of detecting the presence of an odor or the intensity of an odor. Humans depend on the nose as the “instrument” for detecting odor. Odors result from airborne chemicals, gases, or tiny particles. As we breathe, these substances are absorbed by the mucous membranes in our nose and mouth. Receptors in the nose send a message to the brain, where the odor sensation is interpreted. The interpretation of

whether an odor is good or bad is first based on the sensation of pure odor, but past experiences and impressions are also involved in the interpretation. Thus, each individual reacts to odors differently.

### Heightened Awareness

Deodorization technicians deal with two types of odors—real and imagined.

- **Real odor** is the sensation of smell caused by a real substance. Odor molecules interact with olfactory nerve cells in the nose. The olfactory nerves send a message to the brain that is interpreted by the olfactory lobe.
- **Imaginary or psychological odor** is what people think they smell. They are stimulated by a given set of circumstances and strong impressions formed from similar circumstances before. Some people think they smell something because of the circumstances, not because of an odor actually being present. Imaginary odors are

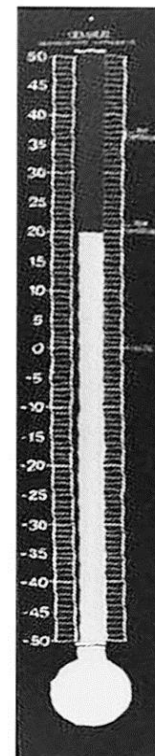
sometimes called **heightened awareness odors**, because circumstances have made the individual more aware of odor than he or she normally would be, and thus more likely to smell something that no one else smells.

Deodorizing unpleasant odors is a challenge! *Real odors* must be neutralized while also addressing *imaginary odors*. Imaginary odors are some of the most difficult odors that restorers must deodorize and can leave a customer just as unhappy as a real odor if left “untreated.”

### Effects of Humidity and Temperature on Odors

Odor molecules are very volatile; they vaporize easily. High humidity levels help dissolve and carry odor vapors to the nose. This makes odors in humid air seem stronger than those in dry air. High temperatures also allow odors to more easily penetrate surfaces. Weather conditions thus impact how evident odors are to people; odors become more detectable by the nose as humidity and temperature increase.

Always brief your customers on the potential of odors returning in humid or warm weather. You may think you have an odor problem solved, but days or months later when the weather becomes humid again, the odor can reappear. Deodorizing some areas, such as materials inside walls, may be very difficult. If odors become noticeable again, additional deodorization procedures will be required.



## BASIC DEODORIZATION PROCEDURES

- 1) Remove
- 2) Clean
- 3) Recreate
- 4) Seal

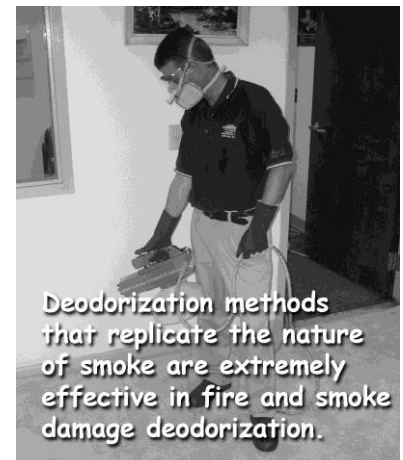
Deodorization would be simple if all odors came from one source and one deodorization method could eliminate all of them. Unfortunately, all odors do not come from one source. Franchise professionals deal with some unique odor problems—things you have never heard of or dealt with before. Do not panic! Four basic procedures will be effective in most deodorizing situations.

1. ***Remove the odor source and debris.*** Remove the odor source, rather than attempting to deodorize the source. For example, if the source of odor is a dead animal you would not dream of leaving the animal in place and trying to deodorize. In a building that is damaged by a fire, you should remove charred structural materials before deodorizing. Debris that is contaminated with smoke residues can continue to give off smoke odors or soils if not removed. Removing the odor source is the universal first step in deodorization.
2. ***Clean surfaces that have odor-causing residues on them.*** Small particles of odor-producing residue will continue to generate odors if not cleaned effectively. For example, in a grease fire you may need to clean significant concentrations of residue from the stove, countertops, vent hood, vent filter, cabinets, walls, ceilings, and so forth to stop odor problems. Check all rooms—not just the kitchen—to see how far odors have penetrated. Sometimes the entire structure and its contents may need to be cleaned to remove smoke odors.
3. ***Recreate the conditions that caused odor penetration.*** Distribute a deodorizer to a surface in a manner similar to the way odor-causing substances penetrated the surface. For example, if smoke created the problem, a deodorizing “smoke” or fog will be most effective in following odors to their source. If urine contaminated an area, then “flood” affected areas with deodorizers (sanitizers, neutralizers, and digesters).

Odors can be distributed in more than one way. For example, decaying flesh produces fumes and gases, which are distributed on air currents to surfaces not in direct contact with the source. This situation may require multiple methods of deodorization. Directly saturate any areas that were physically contacted by the source. Fog other areas to seek out odor vapors that have penetrated surfaces.

4. ***Seal surfaces exposed to malodors.*** Sealing is not required in all circumstances, but may be called for in severe situations. If odor removal would be too expensive or impractical, sealing might eliminate the problem. Two common sealing situations are painting walls and sealing inaccessible duct surfaces in air handling systems.

You may not need to perform all of the basic steps to remove odors successfully. Always remove the source of odor and clean odor-causing residues from surfaces. Next, ventilate the area and reassess the odor situation. Are the malodors gone? If not, then consider the additional steps: recreate odor penetration conditions and, if necessary, seal surfaces.



Deodorization methods that replicate the nature of smoke are extremely effective in fire and smoke damage deodorization.

## Recreate Conditions of Odor Penetration

Not every odor situation will need Step 3—recreating odor penetration conditions. You can better understand the use of this step by learning something about how odor particles penetrate surfaces.

### Characteristics of Odor Particles

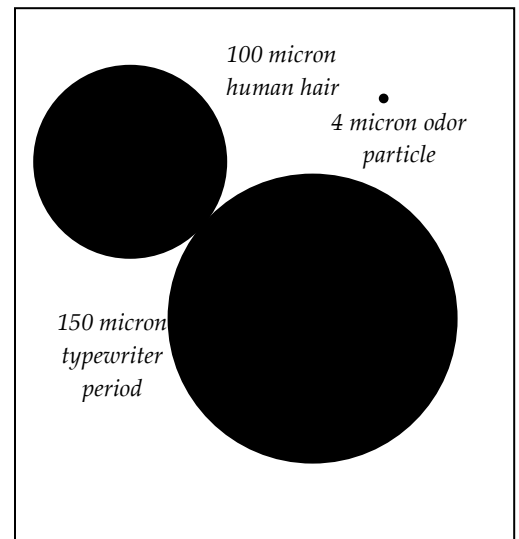
Smoke odor particles are tiny—in some cases even microscopic in size. They are measured in *microns* and range in size from .1 (one tenth) micron to about 4 microns. Compare a tiny odor particle to a period created by a typewriter (about 150 microns) or to the tip of a human hair (about 75 to 100 microns).

The small size of odor particles allows them to penetrate surfaces easily. Deodorant particles must be small enough to penetrate where the odor particles are in order to combine with the odor particles and neutralize them. This is why you recreate the conditions of penetration; your deodorant particles must go where the odor particles went.

Other factors besides size can help smoke odors penetrate materials:

- **Surface porosity**—The more porous a material, the more likely it is to absorb odors.
- **Heavy concentrations of residue**—The more concentrated the residue, the greater the surface area of materials that it can impact.
- **High exposure time**—The longer a surface is exposed to odor particles, the greater the number of odor particles that will penetrate.
- **Heat**—Heat causes porous surfaces to expand, allowing odors to penetrate even deeper. When heat is removed, the surfaces contract and trap the odor particles.

Deodorant particles must be very small and have thrust behind them to effectively reach and neutralize odor particles. The restorer recreates the conditions that allowed the odor particles to penetrate, so that deodorant particles also penetrate and neutralize the odor.



## TYPES OF DEODORANTS

Neutralizing the many kinds and types of malodors sometimes requires more than one type of deodorizing action. The various deodorants described below affect malodors in different ways.

### Masking Agents

Masking agents are not a primary deodorizer for a real odor situation because they do not eliminate odors. Instead, masking agents cover malodors with a more pleasant odor. Usually masking agents are packed in a time-release form, such as beads, wicks, gels, blocks, or solid cakes, and generate pleasant-smelling vapors for long periods of time. This slow release of deodorant vapors makes masking agents a good weapon against imaginary odors.

### Pairing Agents

Pairing agents are chemicals that combine with (or pair with) odor particles. Most deodorants used for fire restoration contain both masking agents and pairing agents. Two different types of pairing agents affect odor particles in different ways:

- A **humectant** (highly absorptive) material combines with airborne odor particles and causes them to precipitate onto surfaces where they can be cleaned up. Wet fogging uses this process.
- A **counteractant** (neutralizer) combines chemically with odor particles and changes the chemical properties of the odor molecule or destroys odor-causing bacteria. Thermal fogging works in this manner.

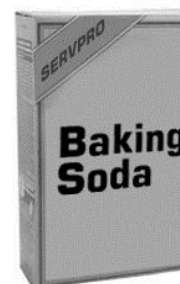
### Absorption and Adsorption in Filtration Agents

Absorption and adsorption are different ways to collect odors. **Absorption agents** primarily absorb moisture into the agent. Absorbing action occurs when baking soda is placed in a refrigerator to pick up odors. **Adsorption agents** work by capturing odor gases from the air and holding them on the surface of the agent. These processes are used to filter odor gases from air passing by or through the filtration agent.

- One type of **absorption agent** is a **powder** composed of highly absorptive compounds, inert fillers, and perfume. These powders are not very effective because they mostly absorb humidity and oils and do not attack the real odor problem. They are sprinkled on carpets, but can build up in carpets and damage fibers.
- **Activated charcoal** is a type of **adsorption agent** often used in air filtration systems. When the surface of an adsorption agent is full, it loses effectiveness for deodorization.

### Disinfectants and Sanitizers

Bacteria and fungi growths create odors by producing gases or by decomposing organic host materials. Killing these odor-causing organisms is a form of deodorization, so various things deodorize by disinfecting (for example, sunlight and fresh air, ultraviolet light, ozone, hot or cold temperature extremes, and chemicals).





Some chemicals are classified as *disinfectants* or *sanitizers*. In the restoration industry these terms have specific technical meanings; disinfectants are stronger than sanitizers. A sanitizer is usually identified by the suffix *-stat*, which means “to control or limit.” Disinfectants have the suffix *-cide*, which means “to kill.” Some common disinfectants are pine oil, alcohol, bleach, phenolic disinfectants, and quaternary ammonia solutions. These agents are usually combined with a pleasant fragrance. The disinfectants kill the odor causers—bacteria and fungi—and the fragrance handles the psychological odors.

### Enzyme Digesters

Enzyme digesters work effectively on organic or protein materials. Unlike chemical deodorizers, enzymes break down organic molecules into substances without odor, such as carbon dioxide (CO<sub>2</sub>), water (H<sub>2</sub>O), and water-soluble by-products. These substances dissipate rapidly into the air and the odor is “eradicated.” Enzymes also break down insoluble protein molecules into simple, soluble substances, which can be absorbed by the bacteria and digested.

### Air Purification

Purifying the air is a means of removing odors from indoor air. **Electronic filters** use an electrically charged grid to kill airborne microorganisms as they pass through the filter. **Air scrubbers** pull air through charcoal filters, capturing odors onto a filter and recirculating the filtered air back into the indoor environment. **Ventilation fans** exchange indoor and outdoor air, exhausting odors outside and drawing fresh air indoors from outside.

### Oxidation

Oxidation occurs when a substance combines with oxygen. Ozone generators produce ozone gas (O<sub>3</sub>), which permanently destroys odor through an oxidation process. Ozone gas is an unstable oxygen molecule composed of three oxygen atoms. When this unstable molecule comes in contact with an odor particle, the extra atom of oxygen combines with the odor particle and oxidizes it.



## PROFESSIONAL PRODUCTS FOR DEODORIZATION

A variety of professional cleaning products bring about different types of deodorizing actions. These professional deodorization products can be grouped into several basic categories. (An example of a SERVPRO® product is mentioned for each category, but other SERVPRO® products not mentioned may also be effective for similar deodorizing tasks.)

### Odor Counteracting Beads

Odor Counteracting Beads are made of a specially treated porous material that has been permeated with solvent-based counteractants. When the package of beads is opened, the volatile odor counteractants are released and migrate on air currents. They are a masking agent that works by time release, giving off pleasant fragrances to freshen up the area being treated.

Place Instant Odor Counteracting Beads ([#306 Cherry](#) or [#316 Cinnamon](#)) in the air intake area of the heating or air conditioning system. The beads can be placed in other areas of a structure, but should not contact painted or plastic surfaces. Solvents in the beads can soften plastics and paints, so place them in a container or on glass or aluminum foil. The useful life of the beads varies depending on how close they are to air currents. The farther the beads are from constant airflow, the longer they will retain deodorizing effectiveness.



### Deodorant Granules or Pellets

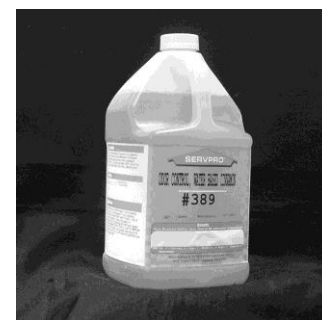
Deodorizing pellets or granules are an odor absorber. The major active ingredient is a mineral known as Fuller's Earth, which acts as a sponge to absorb and hold odors. [Instant Odor Counteractant Pellets—Fruity \(#307\)](#) is formulated to provide continuous odor control of lingering smoke odors coming from areas not accessible to other deodorizing processes (for example, in cracks or behind molding).

Pellets can be applied to a specific area or to an entire structure. Place the pellets in a shallow pan to deodorize a room or closet. Two ounces of pellets should cover 160 square feet of floor space. Place a pan of pellets in the air intake of a furnace or air conditioner to remove odor from an entire home or office. Make sure the pan is inaccessible to children or pets.



### Water-Based Odor Counteractants

Concentrated water-based deodorizers can instantly mix with water in a variety of dilution ratios and applications. They can be added to cleaning solutions to provide odor control of smoke odor and other odors. Water-based deodorizers work at a variety of temperatures and pH extremes to neutralize most malodors and replace them with a pleasant scent. [Odor Control, Water-Based Cinnamon \(#389\)](#) is formulated with a wide range of neutralizers for the control of organic malodors.



## Water-Based Wet Fog Deodorizer



A water-based Wet Fog Deodorizer can be applied with a ULV fogger to produce a fine mist or fog. A superfine mist, barely visible to the eye, allows the chemical to penetrate surface cracks and crevices, where smoke odors are present. Apply [Citrus Deodorizer, Water-Based \(#304\)](#) with a ULV fogger and allow two to four hours for the product to penetrate. At the end of this time, open windows and doors to create air movement for ventilation. Use exhaust fans, if necessary, to exhaust airborne smoke odors.

[Citrus Deodorizer, Water-Based \(#304\)](#) can also be mixed with water and sprayed directly onto charred surfaces. Using a pump-up sprayer, spray ducts, structural timber, and other fire-damaged surfaces and allow the product to dry.

## Solvent-Based Thermal Fog Deodorizer

Thermal fog deodorizers are a blend of aromatic phenolics, odor counteractants, and fragrances in a solvent base. They are applied with a thermal fogger, allowing a reaction period from 30 minutes to overnight for the fog to penetrate materials and counteract smoke odors. The length of the reaction period needed varies depending on the severity of the odor.



Some people may be sensitive or allergic to solvent-based deodorants. Verify possible reactions with customers prior to thermal fogging. People who may be bothered by scents from deodorants like [Cherry Fog Deodorizer \(#335\)](#) may find [Neutral Fog Deodorizer \(#338\)](#) to be appropriate.

## Water-Based Thermal Fog Deodorizer



A water-based Thermal Fog Deodorizer is not designed to be applied with a ULV fogger, but with a thermal fogger. Unlike solvent-based fog deodorizers, [AquaFog Cherry Deodorizer \(#392\)](#), [AquaFog Cinnamon Deodorizer \(#393\)](#), and [AquaFog Lemon Deodorizer \(#394\)](#) eliminate the flammability concerns while still producing a very fine particle size fog that will find its way into small cracks and crevices. You still need to disable all fire detectors and alarms since the fog produced is able to set these devices off.

## Equipment for Deodorization (Part 1)

Effective deodorization often requires a combination of multiple deodorization techniques. The same deodorizing product or the same deodorizing process will not solve all odor problems. Some odors will require fogging, some direct spraying, some activated oxygen. The deodorization technician uses a variety of equipment, depending on the odor situation.

### Safety Equipment

Always wear personal protective equipment appropriate for the procedure, professional products, and equipment being used to perform deodorization. Respirators must be worn when dispersing a fog or gaseous deodorant. Chemical-resistant gloves should also be worn, especially when applying disinfectants. Eye protection and protective clothing are necessary for many procedures. See Chapter 2, "Safety During Fire Damage Restoration." Also check the label and Safety Data Sheet for the products used.

### Pressure Sprayer/Electric Sprayer

Hand pump-up sprayers or powered sprayers can dispense chemicals at about 50 psi. They are used to spray applications directly onto surfaces being deodorized. The most common applications for direct spraying in fire restoration are on heavily charred structural components or on fabrics and carpets. Since direct spraying wets the surface being treated, only use this method in situations where discoloration is unlikely or of no consequence.



### Ventilation Box Fan

Ventilation box fans generate airflow of great velocity, from 3,000 to 5,000 cubic feet of air per minute (cfm). Such air movement is used for general ventilation to remove odors, fumes, and vapors from a structure. Box fans perform various functions when deodorizing fire damages. They are commonly used to ventilate a structure after thermal fogging. The air in a structure that has been thermal-fogged for deodorization must be exchanged 40 times to ensure complete removal of all vapors and residues. Box fans may also be used if a structure is wet from firefighting procedures. The fans introduce dry air from outdoors (when appropriate) to dry the structure.



### Ozone Machine

The portable ozone machine eliminates a variety of odors caused by animals, cigarette smoke, mold and mildew, or fire and water damages. The machine generates ozone, an unstable gas of oxygen molecules (containing three oxygen atoms). Ozone chemically reacts with odor-causing molecules to oxidize residues and remove the odors. All people, pets, and plants should vacate the environment during ozoning. Materials made of natural rubber will break down unless removed or protected from contact with Ozone. Once the deodorization process is complete, ozone quickly reverts to the normal oxygen molecule, leaving no residues. See [EZ Production Guidelines](#), "Deodorizing with Activated Oxygen (O<sub>3</sub>)."



## Duct Cleaning Systems

Duct Cleaning Systems contain all the equipment and accessories needed to clean the HVAC systems in residential and commercial buildings. In many cases, the duct system must be cleaned after fire and smoke damages. If not properly cleaned, the HVAC system can transmit odors and soils throughout a structure.



The Duct Cleaning package includes a strong vacuum and an efficient filtering system. The vacuum pulls soils and contaminants to the filtering system, which prevents bacteria and residues from being reintroduced into the indoor environment. Physical agitation is required to effectively remove residues from a duct system. The Duct Cleaning System includes brushes, augers, and air whips to enable agitation and removal of soils from all parts of the ventilation system.



## Air Scrubbers

Air scrubbers can remove airborne particles, as well as odors and gases, from the air. The device draws dirty indoor air through a series of filters, capturing particles, gases, and odors, and then exhausts clean air back into the environment. HEPA filters capture particles as small as .3 micron. The activated carbon and potassium permanganate filter removes a wide range of gases and odors by attracting odor molecules to the filter through adsorption.

## Injection Devices

A syringe and needle (or a pump and injection needle) can be used to inject relatively small amounts of deodorant into confined spots on carpets or upholstery. This method is effective in situations where you cannot easily lift the carpet to get to the padding or backing material.

## Vaportek Unit

The Vaportek system is a compound of natural oils sealed into a membrane. The ingredients of the compound volatilize into air passing through the membrane. Air currents distribute the Vaportek molecules, which react with and neutralize odor molecules upon contact.

## EQUIPMENT FOR DEODORIZATION (PART 2)

Fogging is a common deodorization process. The deodorizing product is dispensed as finely divided particles in a mist, which makes the deodorizer particles small enough to penetrate surfaces where odor particles are emitting odor. Two different fogging procedures are used for deodorizing smoke-damaged environments—wet fogging and thermal fogging.

### Wet Fogging—The Ultra Low Volume (ULV) Fogger

The Ultra Low Volume (ULV) fogger is used for “wet” fogging. The ULV fogger atomizes liquid deodorizing agents, producing a fine mist. These foggers generate deodorant particles of approximately 8 to 15 microns in size, small enough to penetrate into most areas where odor-causing residues accumulate. The ULV fogger works with either water or solvent-based deodorizers.

ULV foggers are effective in a variety of general air deodorizing applications. The ULV mist can deodorize and seal ventilation ducts and air-handling systems and is effective for deodorizing contents in fire damages. A restorer can use the ULV fogger to apply sealers and deodorants onto large surface areas, such as structural components in attics and crawl spaces. In addition, hose attachments enable the fogger to inject disinfectants into wall cavities and other difficult-to-access areas.



Be careful when wet fogging. When applying a water-based product, watch for potential moisture damage to furnishings. Care should be exercised to prevent drips or overfogging onto building contents or carpets. Drop cloths should be used to protect surfaces.

Several factors make ULV fogging effective against smoke odors. The fogger produces small deodorant particles (8 to 15 microns in size) suspended in the air for a few hours. The particles are also small enough to penetrate into cracks and crevices. The fogger itself is lightweight, making it easy for the technician to fog in different directions. The small deodorant particles are carried by air currents in the building or by the air discharge from the fogger itself. Use fans to keep the deodorant particles airborne for longer periods of time.

See [EZ Production Guidelines](#), page 33, “Wet-Fogging with a ULV Fogger.”

### Dry Fogging—The Thermal Fogger

Thermal foggers vaporize solvent-based deodorizers generating a “smoke” consisting of very small particles. The droplets generated by the thermal fogger are about one-half micron in size, approximating the size of odor-generating molecules. The droplets make a smoke, physically similar to the smoke produced in a fire, enabling the deodorizer to interact more effectively with odor-causing residues. Thermal fogs are pairing agents, meaning they chemically react with odor-causing residues and eliminate odors rather than just masking them.



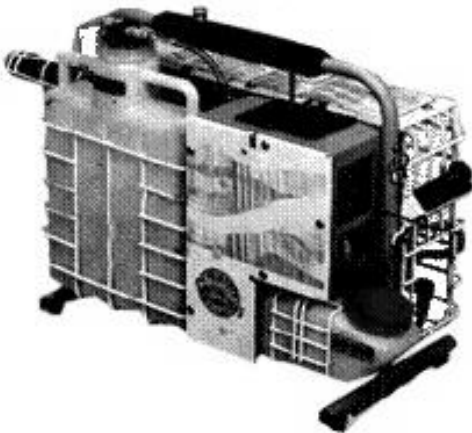
A technician spends more time preparing to fog a house than in the actual fogging process. All people, pets, and plants should be evacuated from the environment. Fogging agents are flammable, so all sources of flame, electrical arc, or flash should be eliminated from the structure being fogged. All sources of ignition, such as pilot lights, should be extinguished during the fogging operation.

Follow [EZ Production Guidelines](#) when operating the thermal fogger. The fogger should be started outside the structure to reduce fire hazards and drips. Fogging units usually work best when held in a level position; some units quit fogging when tilted at an incline or decline. Do not overfog. Foggers produce a lot of fog in a short time, and too much fog increases the fire hazard and causes oily residues to fall out onto surfaces. The fog should be thick enough for a technician to see 10 feet, but not able to see 20 feet. A good rule of thumb is to cease fogging when the other side of the room becomes slightly obscured.



After fogging is completed, the air in the structure should be thoroughly ventilated to remove odors and fumes. Open doors and windows and set up exhaust fans and air movers. Occupants should not re-enter the building until they are physically comfortable doing so. Persons who are exceptionally sensitive may want to seek the advice of their physician before re-entering.

See [EZ Production Guidelines](#), page 29, "Dry-Fogging (Thermal Fogger)."



## COMBINING MULTIPLE TECHNIQUES

Deodorization usually requires a combination of multiple techniques to be successful. To identify all the sources of odors and determine specific methods to counteract each source is not realistic. Even with technical equipment and a vast amount of knowledge, you will be unable to identify the source of every odor problem.

In many deodorizing situations, fire restorers use multiple procedures to produce results. You may never know exactly which technique actually did the **primary** job of odor elimination, but you will be successful in neutralizing the odor.



Combining multiple techniques for effective deodorization does not mean you must always use multiple techniques. After completing the first steps, you may have solved the odor problem and not need to perform additional steps. Always reassess whether any odors remain to require additional procedures.

Of the multiple deodorization techniques, **odor removal** differs from **odor control**. The universal first step of any odor situation is to remove the source causing the odor. The second basic step is to clean the area of residues. Removing odor sources and cleaning odor-causing residues are basic steps to perform in every deodorization task. Follow cleaning with ventilation or air scrubbing to remove odor molecules from the indoor air.

### Multiple-Phase Odor Control

Multiple techniques can be used in controlling odors. Think of an odor control system as having multiple phases.

#### ***Phase 1: Chemical Containment***

The first phase in controlling odor is called containment. The goal is to contain or block odor molecules from vaporizing into the air. Spray a chemical deodorizer onto odor-causing materials. The chemical forms a barrier which will slow down or stop odor molecules from evaporating off the source material.



Chemical containment is accomplished by directly spraying the smoke residues on charred areas with an odor counteractant such as [Smoke Deodorizer \(#302\)](#). Spray charred areas using a pump-up sprayer. The barrier created by the odor counteractant will prevent odor molecules from continuing to vaporize into the air.

#### ***Phase 2: Vapor Odor Control***

The second phase in controlling odor is vapor control. The goal is to counteract odor particles that became airborne before the spraying for containment (Phase 1). Apply products designed to release deodorant vapors into the atmosphere. The deodorant vapors counteract the malodor vapors they contact in the air.





Vapor odor control is especially effective in fire damages. After Phase 2, you have placed two chemical barriers to stop smoke odor molecules. The Phase 1 chemical containment stops many odor molecules from becoming airborne. The Phase 2 vapor control counteracts remaining odors before they can be detected by the nose. For vapor odor control, apply either a granular odor counteractant like [Instant Odor Counteractant Pellets—Fruity \(#307\)](#) or [Instant Odor Counteracting Beads—Cinnamon \(#316\)](#).

### ***Phase 3: Thermal Fogging***

A third phase of odor control is thermal fogging. Solvent-based deodorants are dispensed using thermal fogging equipment. The deodorants pass through a heated area and are combusted. Combustion breaks down the deodorant solution into very small particle sizes (about one-half micron). Because of their small size, the deodorant particles can go anywhere the malodor particles have gone, pair with the malodor, and neutralize it by changing its chemical composition.

The thermal fogging process produces a large volume of fog in a short time. Dry fogs penetrate quickly and deodorize rapidly because of the small particle size. Most of the fog evaporates within a few hours, leaving a relatively small amount of residue. The solvent-based fogging product offers little danger of moisture stains on surfaces in the building. Be aware that overfogging can produce an extremely dense fog in a confined area and leave oily residues on surfaces. In all fogging situations, the last step of the fogging procedure is to ventilate the treated area (“turning over the air”).

Remember, performing all phases of odor control may not be needed. Reassess after each phase.



## DEODORIZATION FROM LIGHT TO HEAVY

The following scenarios demonstrate different odor situations where smoke damage is light, moderate, or heavy. Remember, use only as many techniques as needed to remove the odors.

### Light Smoke Odor Situation

An inspection of a **light** smoke odor situation shows the following:

- Smoke damage affects only a small area.
- Usually the affected area has no structural damage.
- Smoke residues in the affected area are light or not visible.
- Farther from the source area, smoke odors become less noticeable. Odors are not perceptible in rooms farthest from the source area.



### Deodorization Procedures

- The first step is to remove the source of odors, if possible. Do not dispose of debris, however, until insurance representatives or fire authorities have inspected for arson or subrogation issues.
- Ventilate the area affected by odors.
- Clean surfaces having smoke residues with a detergent/deodorant solution such as [Wall and All Surface Cleaner \(#351\)](#). Most of the cleaning will be in the source area and in the adjacent rooms. Areas farther from the source area will require only minimum cleaning.
- Ventilate the area again and reassess whether odors remain. If so, distribute deodorizers in multiple phases of odor control.
- Control vapor odors by applying [Instant Odor Counteractant Beads—Cinnamon \(#316\)](#) or [Instant Odor Counteractant Pellets—Fruity \(#307\)](#) to floors.
- Thermal-fog the affected area. Begin fogging in the source area, but dispense less fog as you move away from the source area.
- Inspect for pockets of odor in crawl spaces, spaces above suspended ceilings, wall cavities, and so forth. Isolate odor pockets and fog them.
- Inspect the HVAC system if it was operating during the fire. Placing cheesecloth over vents may detect whether smoke contamination is coming from the ventilation system. Cheesecloth also keeps the HVAC system from resoiling during cleaning of the structure.

### Moderate Smoke Odor Situation

An inspection of a **moderate** smoke odor situation shows the following:

- Smoke residues are on both horizontal and vertical surfaces in the affected area.

- Structural damage in the affected area involves burned materials such as cabinets, countertops, or contents items. Odor problems are greater when a fire burns for a longer time or when an increased number of materials burn.
- Convection currents carry smoke residues farther from the fire source and beyond the source area.



### ***Deodorization Procedures***

First steps again are removing the odor source, ventilating, and cleaning. Some of the following steps may be needed to remove the increased levels of smoke residues.

- Remove as much of the charred debris as possible. If odor-causing materials cannot be moved, wrap them with polyethylene to stop odor vapors from escaping into the air.
- Using the ULV fogger, saturate remaining charred materials with [Odor Control, Water-Based Cinnamon \(#389\)](#) to contain odor particles. Spray or mist areas of malodors, checking floors and horizontal surfaces where most odor residues settle.
- Smoke damage to the HVAC system is more likely. Deodorizing the HVAC system may not solve an odor problem; you may need to thoroughly clean and seal the HVAC system.
- Ventilate the affected areas again. Possibly run an air scrubber with an activated carbon and potassium permanganate filter to remove gases and odors.
- Place a pan of deodorant granules or pellets in the attic insulation and furnace air intake.

### **Heavy Smoke Odor Situation**

The procedures noted above are also used for **heavy** or severe smoke odor situations. Longer periods of deodorizing activity may be required as well as some additional steps.

### ***Deodorization Procedures***

- Spray structural surfaces with an odor counteractant such as [Smoke Deodorizer \(#302\)](#).
- Seal unexposed structural timber with [Duct Sealer \(#121\)](#). Water-based deodorizers, such as [Regular Deodorizer \(#301\)](#), can be mixed with [Duct Sealer \(#121\)](#) to seal and deodorize. Do not use this mixture if surfaces are to be repainted.
- Severe smoke odors in hardwood furniture can be treated with dry solvent deodorizers. If odor persists, apply activated oxygen (ozone).
- Use activated oxygen to concentrate on areas of heaviest contamination.



## SMOKE ODOR DEODORIZATION TIPS

### Smoke Odor Removal for Confined Areas

Sometimes odor remains after the general deodorization steps are performed. The charred remains of whatever materials burned have been removed. The remaining charred materials have been saturated with a water-based deodorizer by direct spraying or ULV fogging. The area of heavy contamination was cleaned. If odor remains in a confined area, consider the following additional steps:

- Ventilate the confined area.
- Place an activated oxygen unit overnight.
- If necessary, thermal-fog the entire structure.



### Automobile Smoke Odor Removal

Smoke odors from a fire can impact many surfaces of an automobile. Odor particles may attach themselves to areas difficult to reach, such as under the dashboard, inside door cavities, or within the ventilation system. To deodorize, consider the following procedures:

- Remove automobile components destroyed by the fire and direct-spray durable surfaces with [Odor Control, Water-Based Cinnamon \(#389\)](#).
- Ventilate the automobile interior.
- Carefully clean all interior surfaces and thermal-fog the interior.
- Protect rubber components with a dry silicone, then operate an activated oxygen unit inside the automobile for about 48 hours.
- If odor remains, clean the interior and exterior and thermal-fog again, if necessary.

### Attics

Attics present unique challenges for deodorization. Contents stored in the attic may have to be moved out to determine whether odors are coming from the contents or from the structure. Two materials in attics are particularly affected by smoke residues—insulation and structural materials, such as rafters. The extent to which smoke penetrated these materials determines what deodorization procedures are utilized.

### Insulation

When high air pressure during the fire causes smoke residues to penetrate insulation deeply, the insulation may need to be removed and replaced. When air pressure was low during the fire, smoke residues probably settled on top of insulation, which might be deodorized by the following steps:

- Ventilate the attic area.
- Spray or ULV-fog a water-based odor counteractant.
- Thermal-fog the attic.
- If needed, place a layer of new insulation over the old. This will hide the smoke damage as well as add to the insulation value.



### ***Rafters***

The intensity of the fire affects whether structural materials are covered with light smoke residues or charred and damaged by heavy smoke. Ventilate the attic, then clean smoke residues before sealing.

- For light smoke residues, clean residues by dry sponging or brushing, then apply an odor counteractant, such as [Smoke Deodorizer \(#302\)](#).
- Remove charring and heavy smoke residues by scraping, wire brushing, or abrasive blasting, then apply a deodorizing pre-sealer by mixing up to 4 ounces of [Regular Deodorizer \(#301\)](#) per gallon of [Duct Sealer \(#121\)](#). Spray this mixture directly onto charred surfaces until a thin film forms, then allow to dry. Do not use this mixture on surfaces that will be repainted.

**DEODORIZATION OF SMOKE ODORS REVIEW QUESTIONS**

- 1 What is an imaginary/heightened awareness odor?
- 2 Are odors likely to return in warm humid weather or cold dry weather? Why?
- 3 What are the four steps used to remove odors from a damaged space? Which is considered the universal step for deodorization?
- 4 What size is a smoke particle? The particle produced by a ULV fogger? The particle produced by a thermal fogger?
- 5 What is the chemical symbol for ozone gas?
- 6 What does the suffix “-cide” mean? What does the suffix “-stat” mean?
- 7 When using a thermal fogger, what safety steps should you take?
- 8 What does the multiple methods strategy mean for deodorization?
- 9 What are the steps to take to deodorize a light fire damage? A medium fire damage?
- 10 How do you chemically contain an odor?

## RESTORING FIRE-DAMAGED STRUCTURE

Insurance policies normally distinguish between **Structure** and **Contents**, so restorers commonly separate *Structure* and *Contents* when scoping and estimating a fire loss. Restorers also clean structure and contents separately. In some situations, contents are moved out of the structure and cleaned at a separate location. When cleaned on-site, contents are moved to a clean area of the structure for cleaning.

### What Is Structure?

Structure is considered any part of a structure that is permanent. Items are called *structure* if they are permanently attached to a building. For example, the framework of a building including walls, ceilings, floors, attached floor coverings, doors, and windows are structure. Other items might be called structural components, such as cabinets, light fixtures, the heating and cooling system (HVAC), and bath fixtures. An easy way to distinguish structure from contents is to imagine turning the building upside down and shaking it; what falls out is contents and what remains is structure.



### What Is Fire Restoration Cleaning?

The fire damage restorer, the carpet cleaner, and the building maintenance janitor all perform cleaning. The restorer's cleaning task, however, is slightly different from the task of the other two cleaning professionals. The restorer faces a unique situation—a building damaged by fire and smoke. The task is to remove the damage and return the building to the way it was before the fire. The industry describes this task as restoring the building to *preloss condition*.

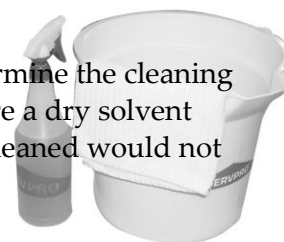
Cleaning to preloss condition means removing the effects of the fire damage. The restorer will remove smoke residues from interior and exterior surfaces of the building. The residues will often give off smoke odors, so the restorer must also deodorize to rid the building of the malodors. The fire possibly damaged some parts of the structure so badly they cannot be returned to preloss condition, so the restorer will dispose of structural items that are blistered by heat or charred by flame.

Fire restoration cleaning is a unique form of cleaning in which the goal is returning items to a preloss condition. The restorer determines what items can be restored and what items must be replaced. The restorer identifies what items do not need any restoration and estimates the odds of restoring items that are questionable. The restorer will identify for the customer and insurance company any conditions that likely existed before the fire occurred, since fire restoration cleaning does **not** mean cleaning structure to a better condition than it was before the fire. Preexisting damages or conditions do not need to be addressed as part of fire restoration, but should be recognized and documented.

## Methods of Structural Cleaning

Before cleaning structure, the restorer tests to determine the appropriate cleaning method. *Appropriate* means a method that will effectively remove the residues from the surface or material without damaging the surface or material itself. One goal of testing is to categorize materials as washable or non-washable:

- **Washable:** Materials that can be wet cleaned. Applying a water-based cleaning product to the material will not damage the material.
- **Non-washable:** Materials that cannot be wet cleaned. Applying a water-based cleaning product to the material could result in additional damage, so the material must be cleaned by a dry cleaning method.



The type of residues on a material may also determine the cleaning method. Oil- or grease-based residues will require a dry solvent cleaning agent, even though the material being cleaned would not be damaged by water-based products.



## EMERGENCY SERVICES FOR STRUCTURE

Restorers provide emergency services to protect both the loss site and human health. A restorer's immediate objectives are (1) to prevent fire and smoke damages from causing additional damage to the property, (2) to provide a safer work site for people who enter the structure, and (3) to prepare the site for mitigation and restoration work to begin. The restorer may perform a variety of emergency services to meet these needs.

Emergency services play a different role for fire losses than for water losses. The following defines the benefits of emergency services:

Emergency services are actions performed immediately following a loss to reduce damages to property, reduce claims expense, and minimize disruption to the insured.

Since every fire loss is unique, the types of emergency service activities will vary from one job to the next, but might include some of the following:

- **Conduct building inspections.** Evaluate the loss site for any safety or health hazards.
- **Board up the structure.** Secure the property to prevent intrusions.
- **Dry the structure.** Water is often used to extinguish a fire. Extract excessive water, set up drying equipment, and monitor humidity and moisture content levels.
- **Establish emergency electricity.** Arrange for a temporary power source to provide electricity to the jobsite. Electricity is needed for lighting and heat.
- **Deodorize the affected areas.** In rare situations, the degree of smoke odors present may require deodorization to make the structure more habitable. The method of deodorization might be thermal fogging or the use of air scrubbers.
- **Initial cleaning.** In some situations, initial cleaning is advantageous. If occupants are moved out of the structure, their personal contents may be cleaned for use in their temporary housing. If restoration does not begin immediately, initial cleaning may prevent additional damages from soot residues. Pre-clean carpets and furniture to remove the heaviest soot. Wipe acidic soot residues from porcelain and metals. Remove charred materials that remind occupants of the fire loss.
- **Pest extermination.** Exterminating roach infestations may be needed before Franchise employees can begin packing, inventorying, or cleaning. Contents being relocated to a warehouse may in turn infest the warehouse and other customers' contents.

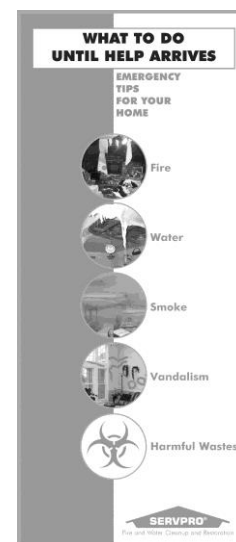


## Advising Occupants About Emergency Steps

Most occupants of fire-damaged residences feel their homes are not just homes, but rather a treasure chest of memories. When their home is damaged, people naturally ask themselves, “What can I do to help?” They may attempt to clean some portions of the building or contents on their own. Sometimes the wrong cleaning action by an occupant can hinder the effectiveness of professional restorative actions by restorers. Inappropriate cleaning may cause permanent damage. Advise the occupants of *Do’s and Don’ts* they should follow to make sure their personal efforts are positive steps toward restoring their home or building.

### ***Do’s and Don’ts***

- Don’t attempt to wash any walls.
- Don’t attempt to clean carpet or upholstered furniture without first consulting a professional restoration service.
- Do place dry, colorfast towels or old linens on carpet and upholstered furniture to limit the potential for further damage.
- Do limit the movement in the house to prevent soot particles from being embedded into upholstery and carpets.
- Do keep hands clean. Soot on hands can impregnate upholstery, walls, and woodwork, causing more damage.
- If electricity is off, do empty the freezer and refrigerator completely and prop doors open. This prevents the food from leaving odors in the appliance.
- Do clean and protect chrome on kitchen and bathroom faucets, trim, and appliances with a light coating of lubricant.
- Don’t operate any electrical appliances or equipment until they have been cleaned and checked. Smoke residues can be conductive.
- Don’t send clothing with smoke residues to dry cleaners not experienced in cleaning fire-damaged garments. Inexperienced efforts may result in setting residues or odors.
- Do wash plants on both sides of leaves with water.
- If the HVAC system was operating during the fire, do change the furnace filter and tape folded pieces of cheesecloth over air registers.



Also advise occupants of steps to protect their safety. They should **not** use any canned or packaged food or beverages that may have been stored close to fire, heat, or water. Cosmetics or medications may have been contaminated and should not be used.

## EMERGENCY SERVICE PROCEDURES

The type of emergency services needed depends on whether occupants are to remain in the building during restoration procedures, or if they are relocating while the restoration occurs.

### When Occupants Remain in the Structure

An adjuster may request a restorer to provide emergency cleaning when occupants are to remain in the structure after a fire damage. The emergency cleaning makes part of the building “livable” and saves the adjuster the costs of placing the occupants in temporary housing (known as ALE or Additional Living Expenses). Emergency procedures might include the following:



- Deodorization if strong odors are present, such as those from a protein fire.
- Immediate cleaning of any areas of the home the family will need to utilize while remaining in the structure. Such areas might be the kitchen, a bathroom, and a bedroom.
- Laundry/dry cleaning services by a laundry or dry cleaner qualified to clean smoke-damaged garments. Have occupants identify clothing needed immediately.
- Containment. If only a portion of the structure has been damaged, seal off the affected areas and advise the occupants to limit movement in those areas.

### When Occupants Vacate the Structure

Occupants are often vacated from a structure when fire damages are more severe. This situation necessitates a different set of emergency procedures.

- Secure the property. Perform a board-up (see the next section) or other action necessary to protect the property.
- Restore power to the structure after addressing electrical safety issues (such as bare electrical wires).
- Check for any loss of stability or integrity to structural components (such as floor joists or roof trusses).
- If water was introduced into the structure by a sprinkler system or by the firefighting efforts, perform water mitigation procedures. See the SERVPRO® [Water Damage Restoration Manual \(#35023\)](#), Chapter 8, “Emergency Services.”
- Restore heat to the structure during winter months to prevent freeze damage.
- If unable to restore heat, protect plumbing and sewer lines from freezing. Turn off the water source and, if possible, drain water lines and fill toilets and drains with a mobile home type antifreeze.
- If unable to restore power, advise customers to remove food from refrigerators and freezers to prevent damage from food spoilage.
- Protect against corrosion (see instructions below).



## Boarding Up the Structure

A board-up secures a structure by closing up openings caused by the fire damage. Boarding up openings with sturdy and durable materials protects the structure against weather or intrusion by outsiders. Restorers may perform board-ups themselves or utilize subcontractors. Some local regions may require a contractor's license to perform a board-up, so check local regulations.

Various tools, equipment, and materials are needed to perform a board-up properly. Covering materials include exterior grade plywood, roofing tarpaulins, and a roll of polyethylene sheeting. Roll insulation may be needed, depending on the damage. Miscellaneous nails, screws, bolts, nuts, staples, and furring strips are needed for fastening cover materials. Tools needed to erect covering materials are hammers, hand saws, power saws, staple guns, power cords, and standard tool box tools (screw drivers, wrenches, etc.). A work site may need such equipment as ladders, rope, saw horses, and temporary lighting (a portable generator if power is not available on-site).

Different methods are used to attach covering materials to the structure. To provide maximum security, the restorer strives to attach covering materials firmly over the damaged opening. Also, the restorer wants to keep to a minimum any additional damage to building surfaces adjacent to the coverings. The following three options involve varying degrees of security or building damage. Take each concern into consideration when boarding up a structure.

- **Cover over.** Covering over the opening with plywood by attaching it to the surface around the opening makes installation easy, but provides less security since materials can be pulled off easily.
- **Insert.** Cutting plywood so that it can be inserted into an opening offers more security.
- **Bolt with tension.** Plywood can be bolted to two-by-fours so that the plywood covering is held in place by tension. The plywood overlaps the exterior of the opening; the two-by-fours overlap the interior. The bolts pass through the opening, holding the plywood and two-by-fours tightly against the structure. This option provides security without damaging the exterior surface.

## Protect Against Corrosion

Some types of smoke residues are highly corrosive to surfaces. Wipe residues off plastic surfaces, light-colored painted surfaces, the tops of furniture with finished surfaces, fiberglass surfaces, and Formica® countertops. Consider cleaning and protecting metal surfaces containing iron and chrome trim, such as window frames, faucets, door hardware, or lamps. Pre-cleaning the surface and coating it with a lubricant will retard further corrosion and protect it until the restoration process begins.



## CLEANING PRODUCTS—SURFACE CLEANERS

Professional cleaning products fall into some basic categories. Listed below are categories of products used for cleaning structural surfaces. Many are also used for contents cleaning.

### General Surface Cleaners

General surface cleaners are detergent cleaners for use on all painted and washable surfaces. Their alkalinity is low enough (pH of around 10) to protect semi-gloss interior paint. General surface cleaners can be used for wet cleaning a variety of surfaces, including painted walls and ceilings, appliances, hard surface furniture, wet cleanable wallpapers, paneling, plastics, Naugahyde, and countertops.



Example: [Wall and All Surface Cleaner \(#351\)](#)

### Heavy-Duty Cleaners



Heavy-duty cleaners are excellent at removing heavy grease and difficult soil. They are typically highly alkaline solutions and contain ammonia. **Do not** use heavy-duty cleaners on aluminum, chrome, enamel paint, or other highly polished surfaces, because of the ammonia content. Mix the product with warm water for general purpose cleaning, or mix with a general surface cleaner. Use full-strength for scouring metal air filters, range hoods, and grease traps.

[Industrial Cleaner \(#357\)](#) is a heavy-duty cleaner that can be mixed with [Shampoo Super Concentrate \(#252\)](#) for cleaning fire-damaged carpets.

Industrial Cleaner acts much like [Showcase Cleaner and Rinse \(#255\)](#) by raising the pH of the shampoo solution. Be careful when using on carpets, always extract twice from fabrics, and use only on synthetic fabrics. (Natural fabrics tend to yellow and/or bleed when exposed to high alkaline solutions.)

Example: [Industrial Cleaner \(#357\)](#)

### Glass Cleaners

Glass cleaners contain a combination of solvents and cleaning agents for removing soils without streaking. They are slightly alkaline, and contain ammonia to boost the cleaning strength. After the ammonia content evaporates, residues dry to a neutral pH. Glass cleaners are designed to be non-streaking when mixed at the proper dilution ratio. If streaking does occur and you are not using a ready-to-use product, mix with distilled water instead of tap water (streaking may result from hard water). The product is appropriate for cleaning window glass and Formica surfaces.



Example: [Glass Cleaner, Ready-to-Use \(#208\)](#)

### Liquid Crème Cleaners

Liquid crème cleaners are used for cleaning hard surfaces and will also brighten, polish, and deodorize. They contain mild abrasives that make them excellent at removing soap scum, stubborn spots, rust stains, black marks, and grease. Liquid crème cleaners are thick liquids that



cling to vertical surfaces. Use them only on surfaces that are not harmed by mild abrasives, such as porcelain, metal, enamel, stainless steel, pots and pans, urinals, rubber, plastic, sinks, bathtubs, chrome, drinking fountains, ceramic tile, Formica, and fiberglass.

Example: [Stain Scrub \(#110\)](#)

### Strong Acid Cleaners

Strong acid cleaners are excellent for removing soot and smoke from stone and brick, as well as mildew, soap scum, and hard-water deposits. Phosphoric acid cleaners are used for ceramic tile and grouting and aluminum window frames. They can be used for lightly etching concrete before applying a finish and for removing calcium deposits. Do not use strong acids on wood finishes, polished metals, or polished marble or stone surfaces. Do not mix strong acids with products containing chlorine bleach because the combination might release chlorine, a toxic gas.

Example: [Stone and Porcelain Cleaner \(#355\)](#)



### Wood Crème Cleaners



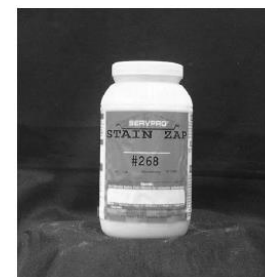
Wood crème cleaners are gentle, but effective, cream composites for restoring smoke-damaged wood surfaces. They can remove water stains or rings, and also aid in the deodorization process. The product acts as a mild stripper and will remove some finishes if left to penetrate a surface. Wood crème cleaners can be applied to appliances that have yellowed from smoke residues, in addition to their normal use on finished wood.

Example: [Wood Crème Paste \(#209\)](#)

### Oxidizing Cleaners

Oxygen-based products remove water-based organic stains such as coffee, tea, wine, fruit juice, food, sauces, grass, and blood. Oxidizing cleaners are used effectively in cleaning bathrooms, kitchens, boats, decks, roofs, vinyl siding, lawn furniture, driveways, and camping and RV equipment. In addition to stain removal and cleaning properties, these products are also effective deodorizers that work by breaking down and eliminating odor-causing molecules.

Example: [StainZap \(#268\)](#)



## DRY CLEANING FOR NON-WASHABLE SURFACES

The method used to clean structural items depends on the type of surface you are cleaning. In general, some surfaces can be **wet cleaned**, while other surfaces must be **dry cleaned**. Wet cleaning means cleaning with a water-based cleaning product. Dry cleaning is used for surfaces that might be damaged or affected by a water-based product and are thus called **non-washable surfaces**.

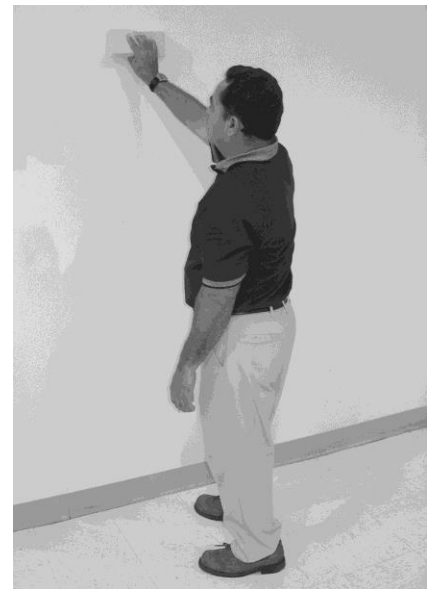
### Dry Sponge Cleaning

The Dry Cleaning Sponge is used to clean smoke residues from surfaces. Dry Cleaning Sponges are rubber sponges that contain no chemical products for the purpose of cleaning. Rather, sponges clean through friction and absorption. As a sponge is pressed, rubbed, and pulled across a soiled surface, the porous sponge absorbs soils from the surface. Firm pressure is needed to “erase” soot from a surface.

Dry Cleaning Sponges are effective in some situations, but not in others. Sponges clean flat, nonglossy surfaces better than glossy surfaces. The sponge often smears residues on a glossy surface, where a wet cleaning process is needed to remove the residues. Dry Cleaning Sponges can usually remove light-to-medium soils and residues that are non-greasy but should not be used for greasy residues.

Dry cleaning is the best alternative when wet cleaning is not possible. Wet cleaning is a more effective process for removing residues, but some surfaces may be damaged by a wet cleaning process. For example, moisture can set smoke residues into a porous surface, causing stains. Dry cleaning is the safest method to use on unfinished wood surfaces to avoid moisture setting residues into the porous wood.

Dry Cleaning Sponges last longer when kept wrapped during storage. Over time, the rubber in the sponge will combine with oxygen and become brittle. Keep the sponges wrapped to keep them soft and usable.



### Tips for Dry Cleaning with Sponges

- Dry Cleaning Sponges will continue to remove soils after absorbing a lot of residue. However, sponges eventually become so heavily soiled that they cause streaking and leave marks. Watch for this point of saturation.
- Even when walls are restorable by dry sponge cleaning, it may be necessary to wet clean around door frames, switch plates, and places where more residues may have accumulated.
- Small pieces of rubber will wear from the sponge's exterior during cleaning, crumbling into minute pieces. Use plastic or canvas tarps to protect furniture and contents. After cleaning, visually inspect work areas for dry sponge residue, and vacuum or wipe off the area. Vacuum floor areas, as necessary.

- When wet cleaning surfaces with heavy soiling, preclean excess nongreasy soils using a Dry Cleaning Sponge as an initial step. This precleaning step should make the wet cleaning procedure more successful.
- Low humidity conditions may increase static electricity, causing smoke residues to stick to flat-painted surfaces. Vacuum these residues before dry sponge cleaning.
- In many situations, dry cleaning will not remove all residues. After dry cleaning, the restorer will need to wet clean to remove remaining residues.

## Dry Pre-cleaning Procedures

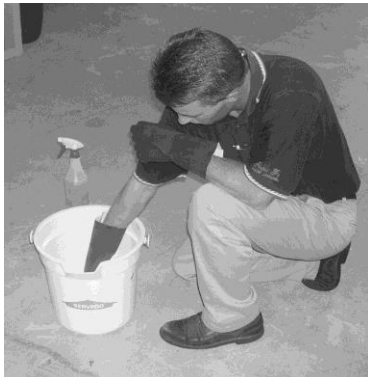
In the restoration industry, *pre-cleaning* and *preconditioning* refer to cleaning steps restorers use prior to the selected cleaning process. Pre-cleaning removes excessive residues and soils, so that the normal cleaning process will be more effective at restoring the surface or material. Following are some dry cleaning processes that can be used for pre-cleaning.

- **Vacuuming** is a cleaning process using a vacuum device to remove light debris and particulate soiling. Vacuuming is usually performed prior to performing another cleaning method in order to remove excess residues.
- **Compressed air** is a mildly aggressive means of agitation, depending on the psi (pounds per square inch) of air pressure. The force of pressurized air removes loose particulate residues.
- **Brushing** provides agitation ranging from mild to very aggressive. Soft brushes can remove some loose residues while being appropriate for delicate surfaces that might be scratched by stiffer-bristled brushes. Wire brushes provide strong agitation for surfaces where damage is not an issue.





## CLEANING WASHABLE SURFACES



**Washable surfaces** can be wet-cleaned. **Wet cleaning** uses water (with or without a cleaning agent) to clean. Usually the item to be cleaned will be thoroughly wet during the cleaning process.

Wet cleaning is an effective and aggressive cleaning method for moderate-to-heavy soiling. A wet cleaning process is necessary for dealing with oil-based, greasy residues or soils, whether on flat-painted or glossy-painted surfaces. Surfaces with gloss and semi-gloss finishes can usually be wet-cleaned successfully: for example, doorjambs, trim moldings, and painted walls in bathrooms and kitchens. Flat-painted finishes are more porous and absorb the wet cleaning solution, resulting in stains and

discoloration. In some fire damage situations, the restorer may wet-clean a flat-painted surface to prepare it for repainting (known as “prep for paint”).

### Pretest Before Wet Cleaning

Before wet cleaning, you should pretest the surface to be cleaned. Pretesting helps determine whether wet cleaning will be successful in restoring the surface. While pretesting, you also determine whether the cleaning product will remove soils and residues without damaging the surface.

To pretest a surface for cleanability, begin testing an area that shows the heaviest residues. Mix a ready-to-use solution of a general surface cleaner, like [Wall and All Surface Cleaner \(#351\)](#), in a spray bottle. Spray a moderate amount on a cleaning cloth. Test-wipe a section of the surface to be cleaned. Wipe lightly and wipe outward from the soiled spot. Feather the cleaned area so as not to leave a ring. For information on pretesting, see “Pretest Using Wet Cleaning,” page 90.

### Wet Cleaning Structure

Prepare the work area before cleaning. Remove breakable items from furniture, and then move furniture to the center of the room. Carefully remove all wall hangings and take down draperies from windows. Protect furniture, contents, work area floor, and horizontal surfaces by covering with plastic drop cloths.



Most wet cleaning processes involve three steps: (1) wash, (2) rinse, (3) dry. Mix a bucket of the appropriate cleaning product. Fold cleaning towels into quarters and submerge in cleaning solution. Remove towel from cleaning solution, and squeeze excess water from towel back into bucket. Cut in an area to be cleaned, then wipe in a circular, overlapping pattern. Always use a clean side of the towel. Wipe surface being cleaned until exposed portion of towel is soiled. **Do not** dip dirty towels back into the cleaning solution. Rinse the area after cleaning, as instructed by the cleaning product, and then always dry the area with a clean, dry towel. As a final step, vacuum any debris or residue on the floor.



An alternate method is to apply the mixed product to surfaces with an electric or pump-up sprayer and then wipe the surface down in a spray-and-wipe type application.

### Wet Cleaning Painted Surfaces

Many painted surfaces can be wet-cleaned.

**Water soluble paints** are the most common type used for walls. They may have latex or vinyl plastic as a base. Even water-soluble paints may be washable if they have cured adequately — from 30 to 90 days after being applied. This type paint absorbs moisture readily and may require pre-cleaning of smoke residue with a Dry Cleaning Sponge. Clean any spots remaining after dry cleaning with a general surface cleaner, such as [Wall and All Surface Cleaner \(#351\)](#).



**Oil-soluble paints**, frequently referred to as enamels, are soluble in turpentine or mineral spirits. They are most often found on woodwork and trim. Flat enamel is sometimes used on walls and looks like latex. Enamel paints are very durable and are fairly easy to wash. Gloss and semi-gloss paints are more cleanable than flat enamels.

*Caution:* Paints manufactured before 1978 may contain lead.

**Clear finishes** are produced by varnishes, sealers, lacquers, and shellacs. These coatings are used on wood and masonry surfaces to protect them and enhance their beauty. Most of these are oil-based and can be safely washed. Some older types of clear finish are removed by water, so pretesting is always important.

## CLEANING CEILINGS AND WALLS



Wall and ceiling cleaning procedures address a variety of surfaces. Wall surfaces can be painted, finished or unfinished paneling or wood, sprayed-on acoustic plaster, acoustic tile, metallic tile, stipple, or textured plaster. Some walls may be covered with wallpaper, fabrics, flocking, and even carpeting. You normally will not find carpeting, fabrics, wallpaper, or flock materials on ceilings. Acoustical ceilings, though, are very common in both the commercial and residential arenas.

The restorer identifies wall and ceiling surfaces while pretesting for cleanability. The factors that determine the best cleaning method include the type of soil, the type of surface, and whether a surface is wet cleanable or dry cleanable. Three methods for cleaning will handle most ceilings and walls:

- Cleaning using the **Dry Cleaning Sponge** for ceilings of all types with light-to-medium non-grease-based soiling. The Dry Cleaning Sponge is also used often to pre-clean excess non-grease-based soils prior to wet cleaning.
- **Wet cleaning** is used on painted, metal, or wood ceilings with heavy dry ash or soot residue or light-to-heavy oil-based residues.
- **Peroxide active cleaning** may be used to clean acoustical ceilings and other porous and nonporous ceiling surfaces, especially those with heavy tar and nicotine soiling. The coating on textured, blown ceilings might dissolve if treated with aggressive wet cleaning procedures. Instead, use the peroxide active ceiling cleaning process.

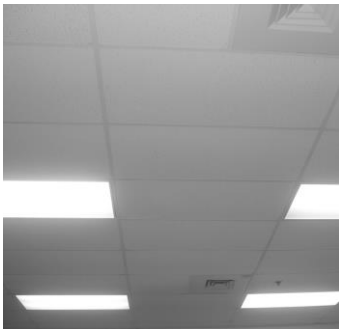
### Tips for Cleaning Walls and Ceilings

- Organize the dry cleaning of structure to avoid resoiling from falling soils or sponge residue. Dry clean ceilings before cleaning walls. Dry clean walls before cleaning floors. Dry clean walls beginning at the top working down the wall. When dry cleaning is the only process to be performed, avoid resoiling by wiping from dirty areas to clean areas.
- When wet cleaning ceilings and walls, clean the walls first. If ceilings are wet cleaned first, cleaning solution from the ceiling might drip on soiled walls and cause streaking. Also begin cleaning the wall from the bottom and work upward. This prevents cleaning solution from dripping down onto a soiled surface area and causing streaking.
- Use the spotting pad holder and extension pole to reach high ceilings. A five-foot ladder can also be used to reach eight-foot ceilings.
- In heavily soiled areas, use steel wool pads for more aggressive cleaning. As pads become moderately contaminated, rinse thoroughly and continue to use. Since pads may scratch the surface area, use them only where ceilings or walls will be repainted.



## Peroxide Active Ceiling Cleaning

SERVPRO® has developed a special process for cleaning acoustical ceilings. Peroxide Active Ceiling Cleaning preserves the sound-deadening characteristics of acoustical tiles and restores



their appearance. The process is also effective on ceiling materials like blown ceilings that might dissolve or deteriorate with a wet cleaning method.

The Peroxide Active Ceiling Cleaning process can be used on porous surfaces that are not damaged by water-based solutions. Vacuum the entire surface. Brushing will remove large or tightly held residues.

Apply [Oxi-Zap \(#278\)](#) with the Ultimate Upholstery Machine. Evenly wet the ceiling surface by applying with a fan spray pattern (at 40–60 psi). Do not overwet or dripping may occur.

Some precautions are needed with the process. The product contains a stabilized hydrogen peroxide. Natural materials (wool, cotton, paper) should be covered to protect from overspray. Technicians should wear safety goggles and a respirator fitted with an organic vapor cartridge to protect against the mist and falling wet residues.

## “Clean for No Paint” or “Clean for Paint”

The cleaning process for walls and ceilings must consider whether the cleaned surface will require painting. When smoke residues are light, dry sponge cleaning or wet cleaning may be sufficient to remove all residues. This is sometimes referred to as “clean for no paint.”

Cleaning alone may not be successful for walls and ceilings impacted by moderate-to-heavy smoke residues. When cleaning cannot remove all residues, sealing and repainting are necessary. Smoke residues must still be cleaned to prep the surface before applying sealants, primers, or paints. This is called “clean for paint” or “prep for paint.”

“Cleaning for paint” does not mean cleaning a surface to be visually clean. All loose residues are removed. The acids in smoke deposits are neutralized. Smoke odors are deodorized as much as possible. While the surface does not look clean, the soils have been set and the surface is prepared for painting or for sealing and painting. A pigmented alcohol shellac is an effective sealer for preparing a smoke-stained surface for repainting.

## CLEANING OTHER WALL SURFACES

### Cleaning Wallcoverings

Wallcoverings include several different types of materials. The level of success in restoring smoke-damaged wallcoverings depends on whether the covering is porous or nonporous.

- How well does the material resist heat and smoke?
- How is the material affected by different kinds of cleaning products?

The restoration technician may encounter five basic kinds of wallcoverings.

- **Paper wallpaper.** Since paper is porous, paper wallpaper will absorb water-based cleaning products, possibly allowing residues and moisture to stain the paper. Dry cleaning with a Dry Cleaning Sponge is usually the only safe method for paper wallcoverings.
- **Vinyl wallpaper.** The nonporous vinyl coating applied to the face of the wallpaper resists penetration by moisture. Pretest and clean with a general surface cleaner, such as [Wall and All Surface Cleaner \(#351\)](#) and rinse with [Wall Rinse \(#353\)](#).
- **Foil wallpaper.** Foil wallpapers are finished with a glossy, metallic face. The surface resists moisture like vinyl wallpaper, and wet cleaning is needed to remove acidic soot residues that might affect the metallic finish. Be careful not to wet clean too aggressively. This could wash off anything printed over the gloss finish.
- **Grass cloth.** Dried natural fibers, like flax and hemp, are woven together and bonded to paper. Grass cloth can only be dry cleaned, and smoke residues may make it uncleanable.
- **Flocked wallcoverings.** Flocked wallcoverings have fibers applied to the paper face to create patterns. Dry cleaning is preferred since wet cleaning could dissolve the adhesives that hold the flocked fibers to the paper. The friction of the Dry Cleaning Sponge may pull the flocked fibers off, so be gentle.



### Tips for Cleaning Wallcoverings

- When pretesting wallcoverings, test in a hidden area, such as behind the wall and switch plates.
- When dry cleaning wallcoverings, examine all wallpaper for loose or frayed edges or seams that could be damaged if caught by the Dry Cleaning Sponge.
- Do not over-wet the surface. The wheat paste glue used to apply some wallcoverings readily dissolves in water.
- Streaking is caused by incomplete rinsing of detergents used in wet cleaning. Product [Wall Rinse \(#353\)](#) neutralizes the light residue left on the wall surface and removes or prevents streaking. Lightly apply [Wall Rinse \(#353\)](#) over wall areas. If streaking still occurs, stop using the rinse because this type of streaking may not be removable and may require replacement of the wallcovering.

## Cleaning Tiles

Tiled surfaces consist of different types of material—the tile itself and the grouting. The tile varies in porosity depending on how it was constructed. The grouting varies in porosity depending on how well it is sealed.

### **Ceramic Tiles**

Ceramic tiles are made of clay and manufactured by a fire-heating process. The tile is then coated with a glaze, fused to the tile by heat. The glazed surface resists smoke residues, but residues can penetrate hairline cracks in the glaze coating. Unglazed tiles are more porous and will absorb smoke residues. Ceramics can be wet cleaned using strong alkaline cleaners formulated for ceramic tiles, such as [Industrial Cleaner \(#357\)](#). For lighter levels of smoke residues, [SERVPRO® Green \(#138\)](#) can be used in a spray-and-wipe process.



Tile grouting can absorb smoke residues if it is not well sealed. A strong acid cleaner (either phosphoric acid, muriatic acid, or a stabilized acid) will clean grouting stains, as well as stone, brick, and ceramic tile. [Tile & Grout Cleaner \(#362\)](#) is a concentrated stabilized acid and [Stone and Porcelain Cleaner \(#355\)](#) contains phosphoric acid; both are highly acidic with a pH of about 2. Technicians applying strong acid cleaners on tiles in bathrooms should wear chemical splash goggles and rubber gloves and ensure the work area is adequately ventilated. A respirator is needed when ventilation is not adequate. When grouting does not respond to cleaning, tiles will need to be re-grouted.

Grouting can be bleached with a chlorine bleach cleaner. **Caution:** Chlorine bleach should never be mixed with any acid product such as [Stone and Porcelain Cleaner \(#355\)](#). The combination may react and release toxic chlorine gas.

### **Other Tile Surfaces**

Some types of tiles are less easy to clean than ceramic tiles. Plastic tiles may attract excessive smoke residues through the ionization process and not be able to be restored. Other tiles have painted or textured surfaces that limit the amount of scrubbing the technician can apply.



## CLEANING WOOD SURFACES

Wood surfaces require a variety of cleaning methods depending on how the wood is finished. Three basic types of surfaces are the following:

- Unfinished wood
- Finished wood
- Photo-finish, simulated wood grain

### Unfinished Wood

Unfinished wood is porous and can absorb smoke residues causing staining or discoloration. Applying wet cleaning products may allow smoke residues to penetrate deeper into the wood's porous surface. For light residues use dry cleaning methods, such as vacuuming, brushing, and dry sponge cleaning. Medium-to-heavy residues may be cleaned with denatured alcohol. If these methods fail, the wood may need to be sanded and sealed. Rough surfaces on unfinished wood may require more cleaning time and supplies.



### Finished Wood

Finished wood has some type of protective coating, making it somewhat nonporous. The coating could be varnish, polyurethane, lacquer, shellac, or paint. Finished wood and finished paneling can usually be wet cleaned. Pre-clean excess residues by vacuuming heavily soiled areas and/or dry sponging. Wet-clean residues using a general surface cleaner, such as [Wall and All Surface Cleaner \(#351\)](#), or a low alkaline cleaner, such as [Concentrated Wood Oil Soap \(#405\)](#). Finally, rinse the surface and dry the cleaned area.

More aggressive procedures are needed to remove heavy smoke damage. Wood surfaces damaged by smoke stains may respond to a wood crème cleaner, such as Wood Crème Paste (#209). Always apply Wood Crème Paste with the grain of the wood. Some heavy soils may require the use of extra-fine steel wool (0000) to provide more agitation of the surface. When you apply Wood Crème Paste with steel wool, use enough of the paste so as not to damage or remove the finish of the surface, and agitate in the direction of the wood grain. For severe damage to wood finish, the wood can be completely stripped and refinished (as long as such restoration services cost less than the replacement value of the wood).

Polishing wood surfaces is often necessary after cleaning smoke residues. Heat during a fire may cause wood fibers to dry and open, allowing the wood to lose oils. The alkalinity of cleaning products also affects wood oils. Polishing with [Lemon Oil Polish \(#414\)](#) will replenish the oils.

### Photo-Finish, Simulated Wood Grain

Laminated woods are made of a pressed wood, particle board, or plywood base to which a surface material is adhered with glues. A photo finish on the surface material may give the appearance of real wood. Pre-clean excess, loose residues with a dry cleaning method (dusting, vacuuming, Masslinn® cloth, or Dry Cleaning Sponge). Wet-clean using a general surface cleaner, such as [Wall and All Surface Cleaner \(#351\)](#). Be careful of applying a heavy-duty

cleaner like [Industrial Cleaner \(#357\)](#). Strong alkaline solutions may remove the print from the finish. Apply a rinse solution to rinse residues and dry the cleaned area.

## Restoring Structural Wood Framing

In some cases heat damage causes charring and scorching of wood framing. In such situations, do the following:

- Replace framing when damage results in a loss of structural integrity. When framing shows significant loss of surface material, always comply with state and local regulations, such as having a building inspector or structural engineer approve the restoration. Also consider consulting a structural engineer before abrasion-blasting supporting structures, such as rafters, headers, or load-bearing walls.
- Scrape, wire-brush, or abrasion-blast charred framing until the surface is clear wood. Otherwise, installing new structural materials might trap in smoke residues and odors.
- After residues are removed, surfaces may be sealed before installing new materials.



In other cases, smoke damage will result in staining and smoke odor in wood framing. The discoloration affects the appearance of framing, but usually not its structural integrity. Unfinished wood will absorb smoke residues and thus emit smoke odors.

- **Light or moderate residues.** Dry clean with Dry Cleaning Sponge or wet clean with detergent, depending on the porosity of the surface.
- **Heavy residues.** Use abrasion blasting with dry ice, sponge, soda ash, or ground corn cobs. Blasting usually removes only a small amount of surface from the framing material.
- **Sealing.** The preferred method of restoration is to remove residues through cleaning. When removal processes fail to remove all residues, sealing the surface can be considered. Sealers can be tinted in color to match the color of the surface being sealed, which lessens the unattractive visual effect of the sealer.

Uneven and rough attic surfaces, such as joists, studs, and roof decking, can be porous. In addition, residues may affect surfaces that are inaccessible or hard to reach. If visual staining or smoke odors remain after all attempts to clean, sealing may be required as a last step. For a solution of deodorizing sealer, see “Rafters” on page 120.



## CLEANING POROUS AND UNFINISHED SURFACES

Porous surfaces absorb residues and cleaning solutions. To avoid setting smoke residues, restorers typically must use a dry cleaning process on porous materials.

### Unsealed Wood

Unsealed wood has no finish or only a light wash of color or toner that dissolves easily in cleaning solutions. Unsealed wood may be found in kitchen cabinets or in paneling. Raw wood absorbs and holds most solutions, which can permanently discolor the surfaces. Always be careful to identify unfinished surfaces from clear finished surfaces. For light residues, clean unfinished wood with a Dry Cleaning Sponge. For heavy soils, clean with denatured alcohol.

### Plaster

Plastered walls and ceilings present a variety of surfaces, such as sprayed-on acoustic plaster, stipple plaster, or swirled textures. Some plastered materials are almost impossible to clean without damaging them, since finished material may dissolve in water-based cleaning products. Sprayed acoustics are especially fragile since the slightest contact may remove some of the material.



### Carpeted Walls

Carpeted walls, usually found in commercial buildings, may present cleaning problems. If the carpet fibers have been treated with flame retardants, they may be especially absorbent. Try to determine the type adhesive used to adhere the carpet to the wall. Also identify the type of carpet fibers. After cleaning, be sure to reapply any protective coatings.

### Acoustical Tiled Walls

Acoustical tile is sometimes used on walls to absorb noises. These tiles may be finished with paint, vinyl, or metallic appliques. Some are fairly rigid and others are extremely light and flexible. Pre-clean with the Dry Cleaning Sponge or vacuum. Then follow the Peroxide Active Cleaning procedure for acoustical ceilings (see "Peroxide Active Ceiling Cleaning" on page 136).

### Concrete and Masonry

Masonry includes several structural materials. Natural stone materials (such as marble and slate) are considered masonry, as well as other materials installed with mortar (such as brick, cinder block, and concrete). Masonry materials are porous, allowing them to absorb smoke residues and odors. Removing residues completely is sometimes not possible.

Check whether a masonry or brick surface (floors more often than walls) is coated and protected by a sealer. Sealers simplify cleaning by hindering residues and cleaning products from penetrating the pores of the material. If no sealer has been applied, the mineral content of the masonry could be chemically altered by a cleaning solution, resulting in color changes.



Restorers use a range of cleaning processes to remove smoke residues from concrete and masonry surfaces. Start with the least aggressive procedure. If that process is not successful, move to more aggressive procedures.

- **Dry cleaning.** Remove dry, loose residues first, using a Dry Cleaning Sponge and vacuum. Masonry and concrete are porous, so dry cleaning will not remove smoke residues that were absorbed by the material. Mortar joints may be cleaned by light, manual (mechanical) brushing if residues are a dry soot, rather than a wet, smeary soot.
- **Wet cleaning with alkaline cleaner.** Wet clean with an alkaline cleaning product and some light, manual agitation. Pretest in an inconspicuous area to see if the strong alkaline solution will cause any color change in the surface. (*Note:* Decorative brick can be damaged by mechanical action like scrubbing.)

One option is to use a highly alkaline product like [Fire Star \(#356\)](#). The concentration for mixing will vary depending on residue level. Apply the product with a pump-up sprayer or from a bucket. Agitate by brushing or scrubbing the solution into the masonry and allow a dwell time. You may need to reapply solution to ensure the material stays wet during the dwell time, allowing the product to penetrate the porous surface. Finally, rinse completely with water by hosing or pressure washing. You can only judge the effectiveness of wet cleaning when the porous masonry is completely dry.

- **Wet cleaning with a strong acid:** A highly acidic product can sometimes remove smoke residues from stone and brick. Pretest to check for possible color changes. Product [Stone and Porcelain Cleaner \(#355\)](#) has a pH of 2, so use with caution. Protect surrounding wood finishes and polished metals. Do not use on polished marble or polished stone surfaces. Be aware that strong acids may etch concrete and other masonry materials and may remove a layer of the brick facing.
- **Abrasion Blasting:** Blasting is the most aggressive masonry cleaning method. Various types of blasting media are available. More “gentle” abrasion is possible with dry ice, sponge, soda ash, or ground corn cobs. Aggressive abrasion can be done with sand; however, sand blasting is actually changing a surface and sand blasting a historic building may affect the building’s historic value.

## CLEANING HARD FLOORING

Floors collect a large portion of smoke residues during and after a fire. Gravity ensures that smoke particles that do not adhere to ceilings and walls eventually end up on the floor. Heavy smoke residues may require two cleanings of flooring—at the beginning and end of the work process. Hard floors have several types of surfaces—wood, tile, vinyl, masonry, stone, and so forth—that can be grouped into four major categories: resilient, non-resilient, concrete, and wood.

### Resilient Hard Floors

Resilient hard floors (like vinyl flooring) are composed largely of resins or polymers. They are relatively soft when compared to concrete or wood and come in tiles or sheeting.

Restoring resilient hard floors after a smoke damage utilizes a variety of processes, depending on the severity of the damage. Light-to-moderate surface residues might be removed by sweeping, dust mopping, or damp mopping. A more aggressive process is spray buffing, which in some situations might allow the restorer to avoid completely stripping the floor. Spray buffing picks up residues and replaces them with a spray buff solution. The process also levels the surface, filling in scratches. Heavy smoke residues may necessitate completely stripping the floor and recoating with three or four coats of floor finish. **Caution:** *Never spray-buff or strip asbestos tile floors.*



Fire damage may prevent some resilient flooring from being restored. Aerosols from smoke may penetrate the flooring causing irreversible stains. After cleaning, the flooring will show visible contrast between areas exposed to smoke residues and unexposed areas. Heat during a fire may blister or otherwise damage resilient floors.

All resilient tiles are somewhat sensitive to solvents. Solvents can discolor and partially dissolve the tile or the binder used in installing the tile. Avoid solvent-based products unless unusual circumstances require their use, and then use only after pretesting.

Resilient floors may contain asbestos if they were installed before 1985. Only a qualified asbestos abatement contractor can perform demolition of asbestos containing materials. Fire damage restorers must not disturb flooring suspected of containing asbestos. Be familiar with federal, state, and local regulations regarding asbestos.

### Non-resilient Floors

Non-resilient floors are a form of masonry. Terrazzo, magnesite, marble, slate, ceramic tile, and brick are examples. Some of these floors are nonabsorbent, while others are porous and very absorbent. Some floors have highly polished or glazed surfaces. Some have mortar or grouting joints that may show cracks or other deterioration. Refer to “Concrete and Masonry” on page 141 for more detailed cleaning procedures.

## Concrete Floors

Concrete produces a strong floor with the ability to withstand heavy traffic. The quality of the original construction and the degree of exposure to heat and smoke residues determine how well concrete floors respond to restoration after a fire. If floors were properly mixed and put down, then sealed, they may restore easily. Improperly installed floors may show cracks, staining or discoloration, and chipping. Carefully document and note to the customer any signs of preexisting deterioration. Preexisting conditions can limit the restorer's effectiveness of cleaning.

The porosity of a concrete floor helps determine cleaning method. If not sealed, concrete floors may be porous and require vacuuming or brushing first to prevent residues from penetrating and staining the surface. Sealed concrete can be wet cleaned, using a mild detergent such as [Bright-N-Neutral Cleaner \(#408\)](#).

## Wood Floors

Some of the most beautiful floors are made with wood. Both hardwoods (such as maple, oak, teak) and softwoods (such as pine) contain cellulose that causes wood to absorb water readily. Refer to the SERVPRO® [Water Damage Restoration Manual \(#35023\)](#), pages 4-3 and 11-5, for information on drying wet hardwood floors.

Wood flooring comes in various styles. Strip flooring, the most widely used, consists of strips with a tongue on one side and a groove on the other side. Plank flooring is similar to strip, but comes in wider, random widths. Parquet flooring is made up of small strips or pieces laid together in a pattern.

The restorer should attempt to remove smoke residues without affecting the floor's finish, if possible. For light to moderate residues, damp mop with a neutral pH cleaner such as [Bright-N-Neutral Cleaner \(#408\)](#). Smoke residues containing aerosols may penetrate the floor finish. More aggressive restoration might involve stripping or sanding and refinishing; however, only restorers experienced at refinishing hardwood floors should attempt these procedures. Otherwise, use a subcontractor who specializes in hardwood floor refinishing.



## CLEANING HVAC SYSTEMS

HVAC is an abbreviation for Heating, Ventilation, and Air Conditioning. The focus of the fire restorer is on the **ventilation** system. A Franchise professional may consult a qualified, licensed HVAC subcontractor for services dealing with the **heating** or **air conditioning** systems.

### Smoke Damage to HVAC Ventilation Systems



The ductwork of the HVAC system can spread residues throughout a structure by distributing hot, smoke-filled air. Restorers may not need to clean the HVAC system on every fire damage, but they do need to inspect the system on each job to test for smoke residues. HVAC cleaning is usually needed for moderate-to-heavy smoke damages. Contaminated ducts, if not cleaned, can distribute smoke particles back into a restored structure when the HVAC is operated again. Before offering HVAC duct cleaning services, check whether any state or local contracting laws apply to HVAC cleaning.

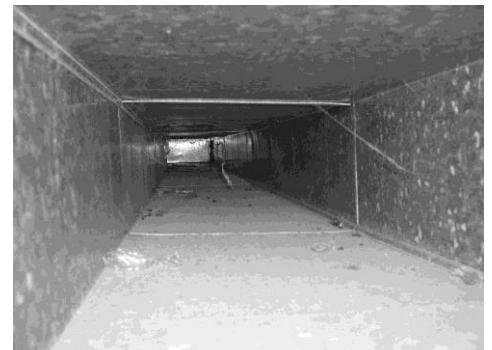
### HVAC Inspection

The restoration estimator inspects the HVAC system by asking questions concerning the fire:

- Where was the fire located in relation to the HVAC vents or furnace unit? Did smoke enter the supply side or the return side of the system?
- How long was the fire in progress?
- Was the HVAC blower operating during the time of the fire? Do not assume the system is uncontaminated if it was off during the fire. The air pressure created by a fire may force smoke into the ducts. Also, sheet metal ductwork may attract smoke residues through magnetism or ionization.

When fire and smoke have contaminated the HVAC system, the inspection checks for the extent of damage:

- What type of smoke residue is in the system?
- Are the residues light, moderate, or heavy?
- Are smoke odors present?



To properly assess the damage, a restorer needs knowledge of HVAC system design and operation. The inspection should answer the following questions:

- Are any mechanical components of the system damaged and need replacing? Components would include dampers, turning vanes, mixing boxes, and the cooling coil.

- Are the ducts made of sheet metal, duct board, or flex duct? Sheet metal is easier to clean, but if metal ducts are lined with insulation, the insulation can be difficult to deodorize. Flex duct may not be cost-effective to clean due to the pleated folds.
- Will the system need to be disassembled? Effective cleaning of heavy smoke situations may require mechanical components to be disassembled. Only a qualified HVAC technician should disassemble and service HVAC systems.
- Are the filters clean? If an HVAC system suffered smoke damage, clean or replace reusable filters. Replace disposable filters.

## Duct Sealing

Duct cleaning may not be possible in some portions of a duct system and duct sealing is required. A general procedure for cleaning and sealing of ducts involves the following steps:

- Remove and clean vent registers and air intakes.
- Remove the air-handling system's filter and discard (unless it is a permanent type).
- Vacuum dust and soot from all accessible surfaces such as inlet plenum and each outlet.
- Wash all accessible interior surfaces with a general purpose detergent such as [Wall and All Surface Cleaner \(#351\)](#).
- Carefully inspect mechanical components and clean them or subcontract this service.
- If the furnishings are in the structure, place cheesecloth over all outlets and insert vent covers before fogging.
- Use a ULV fogger with duct sealer and deodorizer to apply the sealing agent. Place the nozzle in the plenum and turn the central blower on. Fog the sealer from the inlet towards the outlets. Turn the fogger off and on periodically to avoid runs and drips.
- Turn the central blower off and back-fog from each outlet towards the inlet.
- Turn the central blower on and run it to dry the system.
- Reinstall outlet and inlet covers and place odor counteracting beads in the system before occupants return.



## CLEANING OTHER STRUCTURAL COMPONENTS

Structural **components** are the various items attached to the structure.

### Cabinets

The cleaning method for cabinets varies depending on whether the surface is finished or unfinished. For wood or paneled cabinets, refer to “Cleaning Wood Surfaces” on page 139.

Always check the wood finish around a cabinet’s drawer handles. This area often has preexisting damage that should be documented during the inspection and noted to the customer before cleaning begins. Remove knobs and other hardware, if necessary, to clean in crevices and recessed areas.

Cabinet interiors are typically unfinished wood. As a first step, remove residues with the Dry Cleaning Sponge. If residues remain, use denatured alcohol to avoid setting smoke residues into the pores of the wood. If residues still remain, sanding may be required.



### Lighting Fixtures

Generally, lighting fixtures are cleaned as part of ceiling cleaning. Make sure the electrical power is turned off before cleaning any electrical fixture. Pretest cleaning solutions to make sure they will not affect the finish on the fixture. Clean behind light fixtures and not just around them.

Chandeliers can present a challenge since they often involve decorative trim and require detailed cleaning. When smoke residues are light to moderate, hand cleaning may be the more efficient option. Other options are low pressure steam cleaning or submerging in an ultrasonic machine. If a chandelier must be disassembled to clean, the estimator should account for the hours needed to reassemble the fixture after cleaning. Also, snap pictures of the chandelier before taking it down, so you will remember how to reinstall it correctly.

### Attics

Attics present unique challenges for fire-damage cleanup. The surfaces of an attic are usually porous, unfinished wood with irregular shapes, making residue removal more difficult. Access to some of these surfaces is often limited. Unexposed structural timber can be sealed with [Duct Sealer \(#121\)](#) or with a deodorizing presealer (see “Rafters” on page 120 of “Deodorization of Smoke Odors”).

Attics may also contain contents items that the customer is storing. Some of these contents need to be removed from the attic for cleaning. Other contents may not be cost-effective to clean and should be moved from the attic as items of questionable value.

### Insulation

Insulation may be less expensive to replace than to clean. Smoke residues change the appearance of insulation, but do not normally compromise its





insulating capabilities. One restoration option is to remove and replace the top 3" to 4" of insulation. Make sure that the lower layer of insulation is free of smoke odor before covering it with a layer of new insulation.

### **Windows and Glass**

Cleaning windows means cleaning the window glass, but also the framework and any hardware that is part of the window construction. For removing residues from the glass without streaking, use a low-alkaline glass cleaner like [Glass Cleaner, Ready-to-Use \(#208\)](#). Apply with a spray bottle and squeegee off the smoke residues. After the ammonia in the product evaporates, the remaining glass cleaner dries to a neutral pH.

### **Drapery Rods and Fixtures**

When inspecting draperies, always check the drapery rod in addition to checking the drapery material. Make sure the rod is firmly attached to the wall and will not come loose during cleaning. If you have to take down valances, tie backs, or an intricate mounting situation, make careful notes so you can reinstall them properly after cleaning. Even better, take several pictures so you can see how the draperies were mounted.

Drapery rods can usually be wet cleaned, using a cleaning product appropriate for the level of residues and the type of material (for example, wood, metal, plastic, etc.). After cleaning, lubricate moving rod components with silicone spray, if needed.



**RESTORING STRUCTURE REVIEW QUESTIONS**

- 1 List four different tasks that would count as emergency services in a fire damage.
- 2 On what surfaces will dry cleaning be most effective?
- 3 On what surfaces will wet cleaning be most effective?
- 4 On what type of soot will dry cleaning be most effective?
- 5 On what type of soot will wet cleaning be most effective?
- 6 What kind of paints can be wet cleaned? What type of paints must be dry-cleaned?
- 7 Why should you wet clean walls from the bottom up?
- 8 Should you always perform an inspection on the HVAC system after a fire damage? Must you always clean it?
- 9 If wood framing is scorched, but still structurally sound, what are the steps necessary to restore it?
- 10 What sort of cleaner is best to restore smoke damaged grout, stone, porcelain, and brick?

## RESTORING FIRE-DAMAGED CONTENTS

Restoring contents is often a less costly option than refinishing or replacing them. As a SERVPRO® Franchise professional, you are relied upon more than any other vendor to restore contents items successfully. You will utilize several methods to clean the wide range of personal property items in a fire loss. Regardless of method, your care and concern for the customer's personal property makes the SERVPRO® brand continue to succeed.

### Dry Cleaning

Dry cleaning is used for removal of light-to-medium non-grease-based soils or to pre-clean excess residues prior to wet cleaning. Feather dusters or dusting cloths can remove surface dust by brushing or lightly wiping the surface. Dry cleaning sponges and vacuuming may remove light debris and particulate soiling.

### Wet Cleaning

Wet cleaning is an effective and aggressive cleaning method for removing moderate to heavy residues. The process involves cleaning using water, with or without a cleaning agent. Wet cleaning usually means the item being cleaned is thoroughly saturated during the cleaning process.

### Spray and Wipe

"Spray and wipe" refers to a wet cleaning process in which the cleaning product is applied using a spray bottle. After spraying, the surface is wiped with a clean white towel. Spraying allows the restorer to mist the product onto the surface being cleaned. This method gives the restorer more control over the amount of cleaning product being applied than does a cleaning towel. Spray and wipe is effective for materials that might be damaged if saturated with cleaning product.



### Foam Cleaning



This cleaning method uses the foam of a cleaning agent to clean. The technique is used primarily for upholstery fabrics that might shrink when wet or whose dyes would likely bleed. Use a tampico upholstery brush to agitate shampoo solution in a bucket, creating lots of foam. Dip the brush to pick up foam from the top of the solution. Another method for generating foam is to pour ready-to-use shampoo solution into a pump-up sprayer. Spray the foam onto a brush or sponge and then apply to the item. Foam Cleaning is effective for light residues or delicate materials. Mattresses and box springs with light smoke residues usually respond well to Foam Cleaning.

### Abrasive Cleaning

Abrasive cleaning refers to methods involving agitation of the surface being cleaned. Refer to "Mechanical Actions for Heavy Agitation" on page 50 of "Basic Cleaning for Fire Damages" for more information on agitation.

Restorers have different methods of abrading or agitating residues from a surface. One way is to apply a cleaning product containing abrasive ingredients. The product [Stain Scrub \(#110\)](#) is a

liquid crème cleaner that contains a mild abrasive. Use caution with such products so the abrasives do not damage the surface being cleaned. On smooth, high-gloss surfaces, use the product sparingly, apply with a damp sponge, and rub gently to avoid scratching.



Another method of abrasive cleaning is to apply a cleaning product with an abrasive material. The material could be steel wool or abrasive scrubbing pads, both of which come in different grades of abrasiveness. To prevent scratching of the surface, apply sufficient cleaning product to provide lubrication between the abrasive material and the surface.

### Immersion Cleaning

Immersion cleaning is effective for materials that can withstand being completely saturated with the cleaning product. Contents items are dipped into a bath of the cleaning product. The process is effective for Venetian blinds.

One example of immersion cleaning is ultrasonic cleaning. Contents are placed in an ultrasonic tank filled with water and an appropriate cleaning solution. High-frequency sound waves in the tank create millions of bubbles, by compressing and expanding molecules of liquid in the tank. The bubbles implode, meaning they collapse or burst inward. In fractions of a second, the imploding bubbles produce extremely high temperatures and microscopic jet streams of fluid that agitate and scrub contaminants from any contents placed in the tank. [Ultrasonic Cleaning Agent \(#273\)](#), [Marantz Activator \(#275\)](#), [Morantz Synergizer Degreaser \(#276\)](#), and [Morantz Miracle Chemical \(#277\)](#) can be used in this process.

Effective ultrasonic cleaning requires training. The restorer selects the amount of electrical power, the frequency of the sound waves, the temperature of the water, and the type of cleaning solution based on the cleaning task. The cleaning solution used should be designed to clean effectively in the temperatures and sound wave frequencies of the ultrasonic system.



## Cleaning Products—Contents Cleaners

Some professional cleaning products are designed specifically for cleaning contents (such as upholstery fabrics). However, many of these products can also be used on structural surfaces.

### Dry Cleaning Solvents (Petroleum-Based)



The petroleum-based dry cleaning solvent should be kept away from flames. This solvent blend is designed to be used in the Ultimate Dry Cleaning Machine and may safely be heated. The product is used to dry clean draperies and fabrics that might shrink or experience distortion or browning if wet cleaned. Dry cleaning is effective on light soiling, but not normally on heavily soiled fabrics. Do not use the Dry Cleaning Solvent on draperies or textiles with a rubberized backing; the solvent will damage the backing material.

Example: Heatable Upholstery/Drapery Solvent ([#211](#); [#214 = 1 Gal.](#))

### Volatile Dry Solvents

Volatile dry solvents evaporate quickly and leave no residue. They work well as spotting agents for removing fresh paint, oils, grease, tar, wax, asphalt, and some inks from fabrics. Volatile dry solvents will suspend and act as a lubricant to remove carbon, soot, and graphite, so they can be used to remove smoke residues. Use care when applying volatile dry solvents to fabrics, so as not to distort fiber texture or remove color from fibers. Do not apply to large areas at any one time, and allow for adequate ventilation.

Example: [Solvent Spotter \(#453\)](#)



### Wood Oil Soaps



Wood oil soaps are mild detergents that contain no harsh or strong alkalis. They are not harsh on surfaces and are effective for cleaning light soot residues. Wood oil soaps are excellent cleaners for finished wood surfaces, including kitchen cabinets, wood floors, and paneling. The product can also be applied to no-wax floor finishes, walls, appliances, leather, vinyl, ceramic tile, and counter tops.

Example: [Concentrated Wood Oil Soap \(#405\)](#)

### Furniture Polishes

Furniture polishes are all-purpose wax polishes for use on furniture, woodwork, appliances, kitchen cabinets, plastic counters, and tabletops. The polishes combine oil and hard finish waxes to provide cleaning, polishing, and wax protection. Besides lemon oil and silicone, some furniture polishes also contain mink oil and beeswax, which provide more luster, shine, and protection.

Example: [Furniture Polish \(#207\)](#)



## Carpet and Upholstery Cleaners



Carpet and upholstery cleaners include different types of cleaning products.

**Carpet and upholstery shampoos** are blends of detergents, solvents, and cleaning agents for brightening of all fabrics. When mixed with water, they have a neutral pH and work well on wool, cotton, nylon, and other synthetic fibers. Always pretest in an inconspicuous area for color fastness since certain types of furniture fabrics and dyes may be adversely affected when exposed to water-based cleaning products.

**Example:** [Shampoo Super Concentrate \(#252\)](#)

**Carpet pretreatments** utilize the latest surfactant technology, making them extremely effective in pre-conditioning carpets and upholstery, while also being strong enough to tackle tough traffic lane soiling. The neutral pH formula is safe for all common fabric types, including fourth- and fifth-generation carpets, wool, and cotton.

**Example:** [Pre-Spray & Traffic Lane Cleaner \(#272\)](#)



**Fabric rinses** are pleasantly scented and mildly acidic. They are used after cleaning to rinse furniture fabrics and carpeting. An acid rinse aids in stabilizing fabric dyes and leaves fabrics in an acid condition and with a squeaky-clean feel. The product is excellent at rinsing out shampoo detergent and leaving a pleasant, fresh smell.

**Example:** [Fabric Rinse and Color Set \(#205\)](#)

## Cleaning Hardwood Furniture

Restorers can be effective at restoring hard furniture from smoke damage. Both the **type of finish** on the furniture and the **extent of the damage** affect the success of restoration.

### Type of Finish

Wood surfaces can be finished with a variety of substances, such as varnish, shellac, lacquer, paint, or waxes. Finish affects furniture's resistance to heat exposure, smoke particles, moisture, and smoke odors. The type of finish on a furniture item will limit or expand the range of cleaning methods that can be used.



Unfinished wood is porous and easily absorbs smoke residue, moisture, and odors. Dry cleaning is the safest method for unfinished wood, since water-based cleaning products may allow smoke residues to be absorbed deeper into the wood's pores, causing stains. Unfinished wood on furniture is found on bottoms, backs, inside and bottoms of drawers, and tops of tall items. If a dry cleaning sponge does not work, sometimes denatured alcohol is effective.

### Extent of the Damage

Restoration may not be possible when the surface of wood furniture is heavily blistered or permanently stained. In such cases the item will require refinishing.

- **Blistering.** How near was the furniture to the heat line? Exposure to heat can result in blistered or scorched finishes or allow smoke to penetrate the finish, possibly discoloring the surface.
- **Staining.** What type of smoke residue is present? While dry, loose particles are easily removed, wet particles (often containing aerosols) can permanently stain a surface.

### Dry Cleaning Hardwood Furniture

Dry cleaning is useful for cleaning unfinished or unsealed wood and for pre-cleaning excess, loose residues. Various dry cleaning methods include the feather duster, dusting cloth, dry cleaning sponge, or vacuum with the dusting tool. Dusting cloths will not remove all oily residues. For detailed cleaning of smoke residues from crevices and decorative trim, use different sizes of brushes with either soft or stiff bristles. An art gum eraser may rub away some residues through friction.

### Wet Cleaning Hardwood Furniture

Moderate levels of residues usually require wet cleaning. Use a low alkali surface cleaner like [Wall and All Surface Cleaner \(#351\)](#). A mild detergent for wood furniture is [Concentrated Wood Oil Soap \(#405\)](#). Clean in the direction of the wood grain. After using alkaline cleaning products on wood, apply an oil-based furniture polish like [Lemon Oil Polish \(#414\)](#) to restore the wood's natural oils.

### Semi-Refinishing Hardwood Furniture

Heavy smoke residues may require semi-refinishing of hard furniture. The semi-refinishing method uses [Wood Crème Paste \(#209\)](#), a solvent-based cleaner that removes an ultra-thin top





layer of finish. Apply Wood Crème Paste with the grain using a soft cloth. For agitation, use extra-fine steel wool (0000), but apply with enough Wood Crème Paste as to not damage the finish. Allow the crème to penetrate for three to five minutes, then remove with a soft clean cloth, wiping in the direction of the grain. Allowing the crème to dwell more than five minutes may remove the finish.

Semi-refinishing is often effective at removing water marks. During a fire, moisture develops as a by-product of combustion and from condensation under lamps as the building cools. Firemen spray water during firefighting efforts. Chalky or gray areas on the wood's surface are caused by moisture separating layers of finish and then evaporating. The semi-refinishing method can sometimes remove the water marks by softening the top layer of finish.

### Polishing Hardwood Furniture

Polishing is a mildly aggressive method for quick removal of dust, smudges, fingerprints, and stains. Clean smoke residues before applying [Furniture Polish \(#207\)](#). Apply polish in small sections, not allowing the polish to dry. Wipe the surface with a soft cloth, rubbing in the direction of the wood grain. [Furniture Polish \(#207\)](#) contains carnauba and beeswax to give added luster to the surface. *Note:* Do not apply [Lemon Oil Polish \(#414\)](#) to polyurethane and other nonabsorbent surfaces. The oil does not absorb into the surface and dust collects in the polish.



### Tips for Cleaning Hardwood Furniture

- Never stack wood furniture after cleaning with [Wood Crème Paste \(#209\)](#). The finish is softened and may become distorted.
- Applying solvent-based or liquid deodorizers to unfinished wood may darken the surface.

## Cleaning Appliances

Appliances are found in most buildings, especially residences. A typical kitchen contains a refrigerator, oven, and stove, and may also have a dishwasher, trash compactor, and freezer. Laundry rooms normally have a washing machine and clothes dryer. The surfaces found on appliances are similar to those of hard surfaced furniture, so cleaning involves similar methods. The most common methods are wet cleaning and polishing.



### Appliance Finishes

Materials used in constructing appliances include metal, paint, glass, plastic, composite materials, and Formica. These surfaces are nonabsorbent and easily cleaned using a water-based detergent solution such as [Wall and All Surface Cleaner \(#351\)](#) or [Glass Cleaner, Ready-to-Use \(#208\)](#).

Smoke damages may present more challenging situations, involving heavy smoke residues and greasy soils. One option for aggressive appliance cleaning is to increase the alkalinity of the cleaning solution. Add 4 to 8 ounces of [Industrial Cleaner \(#357\)](#) (pH = 13) or 1 to 2 ounces of [Fire Star \(#356\)](#) (pH = 13.5) to 1 gallon of [Wall and All Surface Cleaner RTU \(#351\)](#) solution. Wear rubber gloves and goggles when working with these highly alkaline products, and avoid overspraying onto wood or plants.

Appliances often have highly polished finishes. Rinse thoroughly when using [Industrial Cleaner \(#357\)](#) or [Fire Star \(#356\)](#) on appliances. Aluminum or chrome may pit if Industrial Cleaner is left on those materials. Fire Star is designed to remove heavy smoke damage from metal surfaces, but is strongly alkaline, so residues should be rinsed. Also, be careful using abrasive cleaners since they can dull the appliance's finish.

Another option for aggressive cleaning is to use [Wood Crème Paste \(#209\)](#), which is effective when heat has caused yellowing of the finish. Apply the product using a white towel. Allow the crème to set on the yellowed area for two to three minutes. (*Caution:* Too much dwell time may allow the crème to affect the finish.) Use a "0000" steel wool pad to lightly scrub the affected area in a circular motion. Keep the surface well-lubricated with crème to avoid scratching. Finally, polish the area clean with a white towel.

### Electrical Components

Most appliances are powered by electricity. Electrically operated appliances should be disconnected from their power source before cleaning. Appliances contaminated by soot or smoke should first be cleaned and then checked or serviced by an authorized electronic service technician. Make sure this safety check confirms the appliance is ready for operation before it is turned on.

Refrigerators and freezers should not be stored for long periods without being operated. If they contain food items, power should be restored after cleaning. When power cannot be restored, leave the doors of refrigerators and freezers open until they can be operated again.





### Check for Preexisting Damage

The appearance of an appliance, as well as its function, determines the item's value. Restorers should inspect an appliance carefully for preexisting damages. Wear and scratches are common around parts that are frequently used, such as handles, knobs, dials, and buttons. The edges of the casing may show dents, scratches, and chips if the appliance has been moved often. Objects accidentally dropped on the tops of units can crack, flake, or chip the enamel finish. A thorough inspection may avoid having the restorer's cleaning procedures blamed for preexisting defects.

### Tips on Cleaning Appliances

- Remove excess residue from the appliance using a feather duster, Masslinn® Cloth, or dry cleaning sponge.
- After applying the cleaning solution, rinse the surface with [Wall Rinse \(#353\)](#) to neutralize the light residue remaining and prevent streaking.
- To leave a shine after cleaning, apply [Glass Cleaner, Ready-to-Use \(#208\)](#).
- Use [Industrial Cleaner \(#357\)](#) full strength for scouring metal air filters, range hoods, and grease traps.
- Remove knobs, if necessary, to clean in crevices and recessed areas.
- When cleaning grease residues on built-in stoves, clean the mounting cavity and interior surfaces, as well as the exterior of the stove.
- All parts of vent hoods should be checked and cleaned if necessary. These parts include filters and the vent pipes, as well as exterior and interior surfaces.



## Cleaning Fibers and Fabrics

Many contents in a structure are constructed completely or partly of fibers. Carpets and rugs consist of fibers twisted into face yarns. Furniture may be upholstered with various fabrics in which fibers have been woven or knitted together. Mattresses and expensive lampshades are covered with fabrics.

Fabrics are produced with a variety of fibers and constructions, using different dyes, finishes, and coatings. The fire restorer will utilize the tips below for cleaning smoke residues from fabrics without forcing residues deeper into a fabric.



### Mattresses

Mattresses and box springs often are protected from smoke residues by layers of bedding (blankets, sheets, quilts, etc.). The area most exposed to smoke particles during a fire is the sides of the box springs. Residues can settle and adhere to the fabric covering (called *ticking*) of mattresses and box springs.

Mattress fabrics tend to be colorfast, allowing cleaning by wet cleaning processes. The dyes in colorfast fabrics remain stable as most water-based cleaning products are applied. The Hot Water Extraction upholstery method is effective for moderate residues. See the SERVPRO® [Employee Training Program Carpet and Upholstery Certification manual \(#39025\)](#), page 139.

Restorers should explain to customers that restoration cleaning may restore a mattress's **function**, but the restoration does not typically give the mattress a "like-new" appearance. Cleaning normally fails to remove preexisting stains and discolorations of the mattress fabric.

### Lampshades

Restoration of inexpensive lampshades may not be cost-effective. Dry cleaning methods like brushing, dry sponging, or vacuuming may clean light smoke residues. The shade is probably not worth more costly restoration procedures and should be replaced when dry cleaning is ineffective.

Expensive lampshades are worth attempting restoration, but must be handled carefully. The fabric of the shade may require wet cleaning or dry cleaning with a solvent. When wet cleaning, dry the fabric quickly or problems with browning, water marks, or rust stains (from the metal frame) can occur. Decorative trim may come loose from the shade, shrink, or bleed, so use extra care. Always wear latex gloves while cleaning (stops transfer of oils from hands to fabric) and handle the shade by the metal cross member (avoids pressing residues into the fabric).



### Carpets

Identifying the type of carpet and carpet fibers is important to determine how to clean smoke residues from a carpet. For pretesting and cleaning carpets, see the SERVPRO® [Employee Training Program Carpet and Upholstery Certification manual \(#39025\)](#), pages 21-109.

Carpets are often restorable after a fire damage, since floor coverings are not impacted as much by heat as are ceilings and other high surfaces. However, when heat damage does change the

texture of carpet, the damage is usually permanent. Carpet collects the fallout of airborne smoke particles, which are usually cleanable. Some darkening of the carpet's color may occur if residues bond with carpet fibers. In this situation, cleaning may not completely remove the dark/light contrast between exposed areas and the protected areas under furniture.

## Upholstery

While 98 percent of carpets are synthetic, upholstery and drapery fabrics use a wider range of natural, synthetic, and manmade fibers. The restorer identifies fabrics (including type of fiber and weave) to select an effective cleaning method for each item cleaned. For cleaning upholstery and draperies, see the SERVPRO® [Employee Training Program Carpet and Upholstery Certification manual \(#39025\)](#), pages 111–168.

The level of smoke residues determines how well upholstery will respond to restoration. During the inspection, the restorer checks the type of smoke residues and severity, as well as looks for preexisting damages. In many situations, smoke residues falling on the cover fabric do not penetrate beneath to internal areas of the item.

Cleaning smoke-damaged upholstery begins with pre-cleaning of dry soils. This prevents residues from absorbing into the fabric. For light or moderate levels of soot, dry cleaning by vacuuming or applying dry solvents may clean the upholstery and avoid problems of browning, bleeding, or shrinking that can occur when wet cleaning. Fabrics may be stained by exposure to wet smoke or by smoke exposure for long periods of time. In these situations, salvage cleaning using a 1 percent chlorine bleach solution may remove stains from colorfast fabrics. This step is a last resort. Move the item off-site and perform salvage cleaning only after pretesting.



*A dry cleaning sponge will help remove excess soot.*

## Cleaning Items Requiring Special Care

Certain contents items require special care during restoration. Clothing are items people wear on their bodies. Firearms are weapons. Jewelry items often have great value. Toys are items young children play with, touch, handle, and possibly chew on! Food items are consumed by people. Due to such sensitive issues, these kinds of contents require special cleaning procedures.

### Clothing

An element of urgency is present with smoke-damaged clothing. Since many items of clothing are manufactured with synthetic fibers, smoke particles and smoke odor molecules can bond with fabrics if they are not cleaned quickly. Organize garment restoration by instructing the customer to make three groups of clothes: (1) clothing they need immediately, (2) clothing they will need at a later time, and (3) seasonal clothing. Processing garments in prioritized groups is excellent customer service. If utilizing a subcontractor, make sure the subcontractor inventories clothing items before removing them from the work site.



Cleaning and deodorizing clothing may involve multiple steps and a combination of techniques.

- Remove clothes from metal clothes hangers immediately and dispose of the hangers. Smoke residues can cause hangers to oxidize onto the clothing.
- Remove dry, loose residues from fabrics. Blow out garments using compressed air. The force of the air will evaporate odor molecules and blow off smoke particles.
- Spray garments with a solvent-based odor counteractant. Products Dry Mist Air Freshener—Linen (#284), Dry Mist Air Freshener—Ocean Breeze (#285), [Dry Mist Air Freshener—Red Apple \(#283\)](#), and [Dry Mist Cinnamon Freshener \(#341\)](#) are blends of odor counteractants and fragrances in a solvent base that will counteract the effects of smoke odor. All four products can be used on garment bags, carpet, and upholstery.
- Thermal fogging may be needed to deodorize clothing. Often dry cleaning or laundering garments will not remove smoke odors. Place clothing into garment bags and then fog into the bags. For heavy residues and odor, fogging may be done before, during, and after the cleaning procedures.

### Firearms

The SERVPRO® [Customer Information Form—Fire Damage \(#28500\)](#) informs the customer that Franchise crews will not touch guns or ammunition and asks the customer to remove those items from areas to be cleaned. Firearms must be handled by following an appropriate procedure.

- The customer should prepare an inventory of firearms that lists the name of the manufacturer, the model number, and the serial number.
- Local laws may govern the transportation of firearms. Be aware of local and state laws regarding the transportation of firearms. When delivering firearms, the insured should unload and clear the weapons.

Advise the customer that firearms should be cleaned quickly. Smoke residues can cause corrosion of metal parts. The dry type of fire extinguishing material contains salts in the extinguisher dust that can cause rusting. Refer the insured or building occupant to a qualified gunsmith (your list of reliable subcontractors should include a gunsmith).

## **Jewelry, Valuables**

The SERVPRO® [Customer Information Form—Fire Damage \(#28500\)](#) informs the customer to list valuable heirlooms or collectibles that require special care. The restorer might ask the customer to remove jewelry and other valuables from the area to be cleaned to avoid liability in handling these items. When restoration procedures are performed, valuable jewelry should be professionally appraised and itemized before cleaning and the appropriate insurance should be obtained.



## **Toys**

Restoration means returning items to their preloss condition. With toys, the restorer must make sure that toys are returned to a condition that is safe for young children to play with. Toys should be cleaned and sanitized before allowing children to use them again. The items should be disposed of if any doubt exists as to whether the toys are free of smoke residues. For example, the porous surface of plastic toys makes it difficult to remove all residues. Also, do not clean stuffed animals with dry cleaning solvents. The animal stuffing may retain fumes from the solvents.



## **Food**

Dispose of any food items affected by smoke particles or heat damage. Canned goods should be evaluated as to how close they were to heat and smoke. Food items with discolored or scorched labels or packaging should be disposed of after being inventoried by the insured.

Never dispose of items without a signed Disposal of Belongings Release. One technician threw out a damaged soup can. The can was actually a fake storage can containing the customer's valuable jewelry.



## CLEANING BOOKS AND ARTWORK

Books and artwork present unique cleaning challenges due to their construction and the materials they are made of.

### Hardcover Books

Hardcover books can usually be restored after a fire, though the success of restorative procedures depends on the severity of damage. The restorer's inspection evaluates several areas:

- **Type of construction.** Hardcover books may be printed on coated or uncoated paper stock. Uncoated stock will absorb more smoke particles if exposed. Coated stock has a glossy surface that is more resistant to smoke. Special editions of books sometimes have leather covers. Page edges of books might be gilded or dyed.
- **Preexisting damage.** As books age, pages become brittle or discolored. Bindings become worn, cracked, discolored, and faded from exposure to light.
- **Water damage.** Water and moisture can cause staining and the buckling of bindings. Longer exposure to moisture results in mildewing. When coated (glossy) pages become wet, they may fuse together permanently. For the drying of books and documents, see the SERVPRO® [Water Damage Restoration Manual \(#35023\)](#), Chapter 12, "Specialized Drying Processes."
- **Heat damage.** Heat from a fire mostly impacts the spines of books and is usually more severe on books stored on the highest shelves.
- **Smoke residues.** Restoration procedure varies depending on whether residues are light or heavy and whether they are dry, loose particles or have absorbed into the paper.
- **Value:** Some books possess high value and require special handling and care.



### Light Smoke Residues

When books are stored on shelves, smoke residues normally impact the spine of the book and the top edges. Dry smoke residues can often be removed by dry cleaning methods. Vacuuming, brushing, or blowing with compressed air are effective for loose particles. Particles that adhere to the book may require use of the dry cleaning sponge or an art gum eraser

### Moderate to Heavy Residues

When residues remain after dry cleaning, a more aggressive process involves the following steps.

- Book jackets offer some protection for the book binding. Remove jackets before cleaning the book itself.
- Remove excess residues from the book cover and page edges that were exposed (top edges) with a dry cleaning sponge.

- Flip through the pages noting where smoke has penetrated inside the book. Smoke particles on pages might be erased using an art gum eraser.
- Clean the hardback cover by applying a slightly alkaline general surface cleaner—such as [Wall and All Surface Cleaner \(#351\)](#)—to a cloth and wiping. Pretest before cleaning.
- Check to see if smoke residues have absorbed into page edgings. Clamp the book's pages together in a vise or with large binder clips. Rub the page edges with medium grade sand paper to abrade or wear off the smoke.
- To restore gilded or dyed page edging, again clamp the book's pages together. Apply fountain pen ink or gold paint with a cotton swab. Once the edging has dried, fan the book's pages to make sure page edges are not stuck together.

To deodorize books, flip the pages and spray or thermal fog inside with a solvent-based odor counteractant. Products Dry Mist Air Freshener–Linen (#284), Dry Mist Air Freshener–Ocean Breeze (#285), [Dry Mist Air Freshener–Red Apple \(#283\)](#), and [Dry Mist Cinnamon Freshener \(#341\)](#) are blends of odor counteractants and fragrances in a solvent base that will counteract the effects of smoke odor. Apply ozone if further deodorization is needed.

## Artwork

Artwork ranges from inexpensive framed pictures to extremely valuable fine art. Art can consist of fragile surfaces of pastels, charcoals, and watercolors to canvas paintings with oil pigments and acrylics, which are less fragile and easier to restore. Fire-damaged artwork will fall into one of two categories:

- Valuable art requires the skill of a trained art restorer (known as a *conservator*). The fire damage restorer will usually subcontract fine art restoration to a conservator.
- Less expensive art does not warrant the costly specialized services of a conservator. The restorer can attempt to remove smoke residues and odors, after qualifying with the customer that cleaning procedures may affect the visible appearance of the item.



When cleaning, the restorer should use the least aggressive methods first, since more aggressive procedures may affect the surface appearance. An example when dry cleaning is to use low air pressure for blowing off residues or soft brushes for brushing.

Always pretest before applying a cleaning product! Test the cleaning product on different colors and textures in the artwork while looking for changes in the surface.

## Cleaning Miscellaneous Contents

### Electronics

A key to restoring electronics is taking prompt action to prevent further damage. Smoke residues can contain acids that corrode metal surfaces when moisture is also present. If the residues are not removed, corrosion eats away at metals and causes electronic failure in the device.

The interior of electronic items should be cleaned and inspected by a qualified electronics technician. The fire damage restorer can clean the outside casing and treat exterior rubber parts with a lubricant to stop further corrosion. Qualify with the adjuster before sending the electronics to be cleaned/inspected by the electronics technician. Electronics interiors, especially of computers, should be cleaned and rinsed with deionized water, rather than with ordinary tap water. Also advise the customer not to turn on electronics until all cleaning is completed.



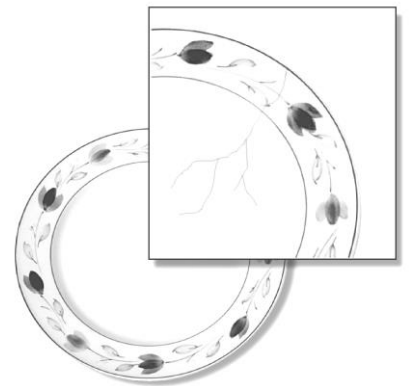
### Dry Flower Arrangements



Dry flower arrangements cannot withstand strong agitation during cleaning. Smoke particles can be brushed off using a soft brush or blown off by using compressed air (controlling the psi of pressure). An alternative procedure is to clean the flowers with table salt. Pour a few handfuls of table salt into a plastic bag. Hold the flower arrangement by the base of the bouquet, turn it upside down, and place it into the plastic bag. Twist the bag opening around the base of the bouquet and hold it closed. While still holding the bouquet upside down, shake the bag gently, allowing the salt to mix with and clean the flowers.

### Dishware

Dishes are fragile, delicate items that are easily affected by heat damage. During a fire, dishware absorbs much heat. Once the fire is extinguished, dishes that cool rapidly can suffer stress cracks. These fine cracks are weak areas on the item that may be covered with soot and not visible before cleaning. The damage may not even be discovered until the dishes are cleaned at the warehouse. Always disclaim liability for unknown heat damage before packing or cleaning of dishware. Dishes that are contacted by hot, oily residues from a grease fire should be cleaned promptly and inspected for stress cracks.



In some fire situations, dishware may need to be cleaned as quickly as possible. Kitchen grease fires often produce oily residues that become harder to remove the longer they coat the dishes. Presoak the dishes in a mild alkaline detergent, such as [Wall and All Surface Cleaner \(#351\)](#) before attempting to wash dishes. For extremely heavy smoke residue, presoak with a heavy duty cleaner for removing grease, such as [Industrial Cleaner \(#357\)](#).





Crystal and china are delicate; inspect and handle carefully. Clean them by hand rather than in a dishwasher. Crystal and china should be cleaned without delay since the acidic smoke residues can cause etching of the surface. Unlike other dishware, these more decorative items should not be exposed to alkaline detergents or placed in an ultrasonic machine. Aggressive cleaning methods might remove the accent trims and metallic paints used for decoration.

### **Bath Fixtures**

While bath fixtures are made of various materials, heat and smoke residues cause stains frequently on fiberglass fixtures, especially fiberglass surfaces with light colors. Often a liquid crème cleaner such as [Stain Scrub \(#110\)](#) will effectively remove residues.

### **Draperies**

Draperies may respond to machine dry cleaning or to hot water extraction. Several factors determine the best cleaning method—type of fiber(s), dye stability, type of backing on draperies, durability and condition of the material, and type and level of smoke residues (see SERVPRO® [ECTP Carpet and Upholstery Certification manual \(#39025\)](#), pages 161–168).

Inspect draperies carefully before cleaning. Look for weakened fabric, loose seams, fading, or sun damage. Watch for water stains that may require wet cleaning. Check how the draperies are hung, watching for uneven hanging at the top or bottom.

### **Venetian or Vertical Blinds**

Window blinds may be venetian blinds with horizontal slats or vertical blinds, sometimes covered with fabric. Venetian blinds can be immersed in an ultrasonic tank or placed on a padded surface and wet cleaned. The slats of vertical blinds can be snapped out easily from the blinds and cleaned on a tarp or drop cloth. Pre-clean fabric-covered slats with a Dry Cleaning Sponge, then vacuum the fabric.

**Restoring Contents Review Questions**

- 1 What problems with upholstery fabrics might require the foam cleaning method?
- 2 What steps are involved in the semi-refinishing process for wood furniture?
- 3 How do you clean the unfinished wood found inside drawers?
- 4 Alkaline products tend to pull moisture and natural oils out of wood. What products can be used to restore such oils?
- 5 How do you go about cleaning a lampshade?
- 6 Ask customers to divide clothing into what three categories?
- 7 What is SERVPRO's policy on cleaning firearms?
- 8 What signs should you look for to determine if food has been affected by smoke or heat damage?
- 9 When examining artwork, what is one of the main items to determine before attempting restoration?
- 10 As dishware absorbs heat during a fire and then cools rapidly after the fire, the dishes may suffer \_\_\_\_\_.

## MOVE-OUTS

A move-out can be a challenging project for a SERVPRO® Franchise. Move-outs involve many tasks and significant labor. The key to performing a successful move-out is knowing what is most important to the customer. What will make the customer happy and satisfied?

### What Is a Move-Out?

A move-out involves moving a customer's contents to a remote location. During restoration the insured (the customer) may live in temporary housing, leaving the primary residence to be restored. In some cases, moving the contents to another location will facilitate a quicker restoration of the damaged structure.

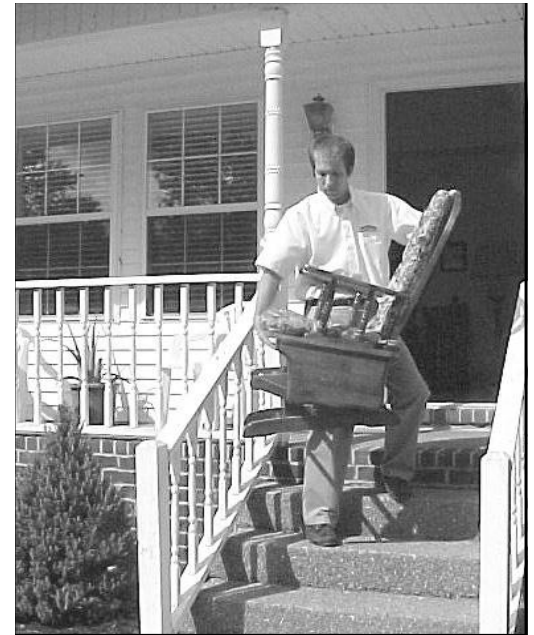
Move-outs are very labor intensive because the customer's contents are handled several times—packing, moving, unpacking, cleaning, repacking, and moving back. Restorers must be detailed and extremely accurate in their work to avoid breakage and to maintain a proper inventory of the contents.

### Why Are Move-Outs Done?

Several situations may require moving the contents out of a home or business. Make certain the reasons for the move-out justify the additional expense associated with a move-out.

- Moving out contents may enable a quicker remodeling process. Maintaining temporary housing for large families can be expensive to an insurance company. The sooner the remodeling is completed, the sooner the family can move back.
- Contents may need to be protected from potential damage occurring after the fire loss event or during the remodeling process.
- The structure may be damaged to such an extent that the contents also could become damaged, or security may be a problem. The roof or flooring may have been damaged making the structure unsafe.
- The structure may be saturated with so much water that contents could become damaged from the interior moisture levels. High humidity can damage expensive artwork or upholstery.
- The adjuster may decide a move-out is necessary based on his or her professional judgment.
- Contractors often prefer to have contents moved out to make the job site more favorable for construction. The cost of moving contents, however, should be considered as well.

Do not, however, assume that contents must be moved out on every fire damage job. Your goal should be to reduce costs for the insurance company while performing quality mitigation and



restoration. A move-out is generally a longer and more expensive process than a basic fire or water damage restoration job. SERVPRO® Franchisees can often save the insurance company money by avoiding unnecessary move-outs.

### **Avoiding a Move-Out**

Avoiding a move-out may enhance good relations with adjusters and customers. For example, remodeling contractors often prefer that contents be moved out of the house or garage. They would rather work in an empty house, and many contractors want to use the garage as a work trailer. The SERVPRO® Franchise should not perform a move-out for the convenience of a contractor. Costs can average \$5,000 to move out a garage, so you should teach adjusters about the savings of not moving out the garage. Such cost savings may avoid situations where insureds exceed the limits of their policies. Insureds will appreciate you for helping them stay within policy limits, and adjusters will appreciate you for helping to control costs.

**Sometimes it is more profitable  
NOT to perform a move-out.**

Customers are not happy when their possessions are broken, and avoiding move-outs may also help to avoid breakage problems. Every time contents are handled, the odds of breaking or damaging something increase. Restorers should look for ways to handle items as few times as possible. Look for ways to keep all or some of the contents on the property if a strong reason for a move-out does not exist.

## COST-SAVING STRATEGIES

Even when a move-out becomes necessary, restorers may not have to relocate all contents. Before moving everything out, consider whether some of the following options may be feasible.

**Move to another area.** Does the possibility exist to move contents to some other area in the home while repairs and cleaning are being completed?

- Move contents to other areas or rooms in the house that are not damaged.
- Move one or two rooms of contents into the garage. This option depends on the weather and on the amount of contents in the house and garage.
- In rural areas, consider using a semi-trailer for storage on the property. (Be alert to situations where climate control is required; in such cases alternate plans must be made.) Some customers prefer this option because it gives them more control over their belongings.



**Store items on premises.** If the work site has a safe, secure area where the restorer can store some contents, everything does not need to be moved out. Can you leave the larger pieces of furniture and only move out boxes? If water, heat, and electricity are available at the work site, consider some of the following possibilities:

- Move out only boxes. Clean and pack small contents. Move large furniture and contents to the center of rooms.
- Clean and shrink-wrap china and leave on premises.
- Leave appliances on location. Freezers and refrigerators should not be left unplugged for long periods, so this option depends on the availability of electricity.
- Leave pianos and other large items on location.
- Clean and shrink-wrap furniture.



**Clean items before moving.** When moving contents out of a house, if possible, clean the items before packing them. If restorers do not have to unshelve, unpack, clean, repack, and reshelve contents at the warehouse, they reduce the number of times they touch these items. (The more you handle items, the more likely you are to damage something.) Cleaning contents in the house, then packing and moving them out, will also reduce labor hours, making the move-out less costly to the insurance company.

An alternative is to clean items and then move the items to the insured's temporary residence. Adjusters sometimes rent furniture for insureds who live in temporary residences. When the SERVPRO® Franchise cleans contents at the loss site and moves them to the customer's temporary residence, you save the adjuster the cost of renting furniture, and you gain the customer's confidence in your ability to clean and restore their contents. Instead of living with rented furniture and wondering what will happen to their own furniture, customers can see that the SERVPRO® Franchise was able to remove the soot and odor from their contents.

Cleaning contents and delivering them to the customer has another advantage. Customers are more likely to accept the restored items. A SERVPRO® Franchise moves the cleaned contents



back to the insured after the structural repairs are complete. At this point, the customer may have new carpet, new flooring, new paint, and some new contents items that had to be replaced. All of the new items may make the customer less willing to accept the restored, used contents being moved back by the Franchise. On the other hand, if the customer has been using some cleaned items while in temporary residence, they are more likely to accept all of the contents cleaned by the Franchise.

When considering any cost-saving alternative, be sure to factor in breakage and time costs. A cost-saving alternative that saves time, but results in higher breakage, may not turn out to be a cost saver in the end!

## OVERVIEW OF A MOVE-OUT

The primary tasks involved in a move-out fall into six phases. Understanding each phase of a move-out will allow you to proceed through the job smoothly and efficiently and finish with a satisfied customer.

- Conduct initial scope and estimate.
- Pack, tag, and inventory.
- Sort clean items and claim (salvage) items.
- Move contents to warehouse or storage.
- Clean, deodorize, and repack.
- Move contents back to the insured's property.

Communicate clearly and consistently throughout all the phases of a move-out.



### Conduct Initial Scope and Estimate

The initial scope plays an important role in determining the production staff and supplies required to complete the move-out. The scope also assists in reaching agreement with all parties on what should be done to restore the loss. An exact estimate may not be possible during the initial scope; however, the restorer provides enough information for the adjuster to make a projection of insurance costs for that claim (meaning to “set reserves”).

### Pack, Tag, and Inventory

The most time-consuming part of any move-out is the hours spent inventorying, packing, and moving contents to the warehouse or storage area. An organized approach to this phase of the move-out process helps production employees be more efficient and make fewer errors in what is, without a doubt, the most important part of a move-out.

### Sort Clean and Claim Items

During the packing and inventorying process, packers will sort items into *Clean Items* and *Claim Items*. Clean items are those contents that can be cleaned and returned to the insured. Claim items are the damaged contents that cannot be restored and will be replaced by the insurance company.

**Move Contents to Warehouse or Storage**

Movers must take precautions not to damage contents while moving items from the loss site to the warehouse or a storage area. Once the contents have been moved to the warehouse, the work of cleaning and restoring begins.

**Clean, Deodorize, and Repack**

Cleaning, deodorizing, and restoring move-out items should be completed in an orderly manner using an assembly line approach. Keeping the process of cleaning, deodorizing, and restoring organized will improve efficiency and reduce the possibility of items being returned to the insured without being cleaned.

**Move Contents Back to the Insured's Property**

Once the contents have been cleaned and inspected, they are approved as ready to return to the customer's house or building. The restorer will make arrangements to deliver the contents back to the customer's home or building after construction and restoration of the structure is completed. A quick turnaround from construction to move-back makes insureds very happy. Usually by this time customers are anxious to get back into their homes and get their life back to normal.

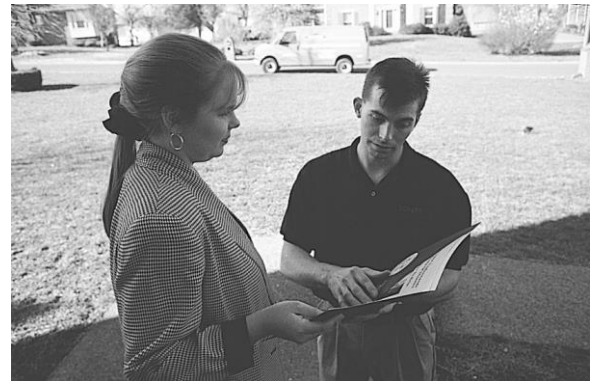


## INITIAL SCOPE AND ESTIMATE

The estimator is the usually the first SERVPRO® Franchise employee to visit the jobsite. During the inspection, the estimator assesses how much of the fire- and smoke-damaged materials can be restored through cleaning. The estimator also determines whether contents need to be moved out. Communicating with the customer is key. The estimator's job is to pretest, demonstrate testing results, explain the restoration process, and answer questions for the customer. For specific details on scoping, estimating, and communicating, see "Inspection and Estimate" on page 77.

### The Claims List

One of the most daunting tasks facing the insured is putting together the Claim List for the adjuster. The Claim List shows the name and value of all claim items. The estimator can provide a valuable service to the insured by offering some guidance on how to do the paperwork for the Claim List. While inspecting the damage, the estimator should take time to explain to the insured about claim items and making a Claim List. The SERVPRO® *Contents Claim Inventory Service* can help alleviate the customer's frustration by creating a complete inventory quickly and accurately, providing a value-added service to the adjuster.



### Beginning the Inventory Process

While inspecting damages, the estimator will sort some of the contents items and tag them as *Damaged* or *Claim*. This initial marking of affected items will help the adjuster set reserves (estimate insurance costs) for the claim. When the crew begins taking the inventory later, they will know not to move out items already tagged as *Claim*.

### Avoiding Unnecessary Move-Outs

During the scoping, the estimator should point out to the adjuster how SERVPRO® Franchises can save the insurance company money. Move-outs are usually expensive, so one cost-saving measure is to avoid an unneeded move-out. While scoping the structure with the adjuster, the estimator can also suggest alternatives to doing a full move-out. For example, an adjuster might suggest moving out contents immediately; however, if the construction contractor is not due to start work for two weeks, the Franchise has time during those weeks to clean some contents on-site, and thus save the insurance company a portion of the move-out expense. The adjuster will appreciate the cost savings! (Refer to page 171 for other ideas.)

### Providing the Move-Out Estimate to the Adjuster

The estimator prepares the move-out estimate for the adjuster after completing the initial scope. Ideally, the total amount of the estimate will closely reflect the actual cost of restoration

services. Adjusters use the estimate total to help establish a reserve on the claim, which projects the eventual costs for the claim. If the final restoration charges are much higher or lower than the estimated charges, the adjuster's reserve is inaccurate. Frequently, an adjuster who has under-reserved a claim will fight to reduce costs, rather than overrun his or her estimate. An experienced estimator provides an initial estimate that closely reflects actual costs.



Estimating the moving and cleaning of contents presents some challenges. Until the inventorying and packing phase is done, the actual total of boxes and claim items is unknown. Estimators can use one of three possible approaches on unknown items.

- Partial estimate
- Ballpark estimate
- Verbal estimate before written estimate

Under-Promise and  
Over-Deliver

**A partial estimate** includes open items. After contents are inventoried and moved out, the estimator updates the estimate. Ensure the final estimate is completed in a timely manner. Be careful about having too many open items on an estimate. When the open items are priced, the final bill is much higher than the original estimate, possibly causing an adjuster to miss the reserve (cost estimate) for the claim.

**Ballpark estimate.** Provide the adjuster an initial estimate with ballpark charges for unknown items. To avoid having open items, calculate averages on charges from previous move-outs. Use the average charges to establish pricing for unknown items on the current estimate. Make the ballpark charges for unknown items *slightly* high (better to have actual charges come in lower than the estimate, rather than higher). Make sure the adjuster knows you are covering yourself for unknown items and that the final estimate may be lower.

**Verbal estimate.** Provide the adjuster an initial verbal estimate with enough information to establish the reserve for the claim. Report on what is cleanable and what is not. After contents are inventoried and moved out, provide a detailed, written estimate.

## DOCUMENTING THE JOBSITE VISUALLY

Video footage or pictures of the jobsite and contents are excellent sources of documentation. Visual documentation can support the restoration vendor during the move-out process.

Videos and photographs help in the following ways:

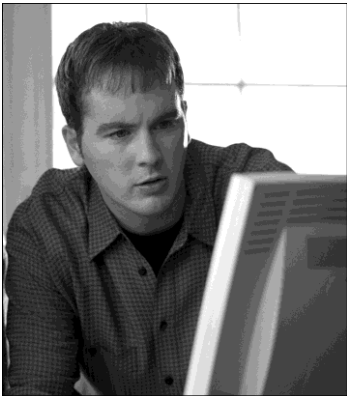
- Justify the charges in the estimate.
- Defend against accusations of missing items.
- Discourage customers from disputing the preexisting condition of items before you cleaned them.

Estimators can carry digital cameras, tablets, or smartphones and take pictures at the time of the estimate. Later, video is taken at the start of the pack-out. This video will show what has changed with the contents since the scope and documents the condition of materials prior to the pack-out.



### Justifying the Estimate

Visual documentation helps justify the estimate. Sometimes an adjuster does not inspect the loss site until after your crew has packed and moved everything out. If a move-out involved a large number of contents, the adjuster may wonder why the restoration vendor's estimate is so high. Send the adjuster a copy of the video showing the contents before they were packed out, and he or she will better understand the work involved.



The video may also help establish a value for items. By the time the adjuster receives the Claim List from the customer, the restorer may have already disposed of claim items. If the customer values a certain claim item as extremely expensive, the adjuster may choose to review the video of that item with a furniture company or interior decorator to verify or dispute the customer's valuation of the item. For these same reasons, video footage can be of help to the homeowner, as well.

### Verifying Missing Items

Videos sometimes are useful during disputes over missing items. Some customers may sincerely believe a certain item was present before the move-out, while a small percentage of customers may attempt to take advantage of the loss situation to replace items that were missing before the loss. In either case, the Franchise could be accused of throwing out items before they could be listed on the Claim List. Customers are less likely to dispute items when a video is available to show what contents were moved from the structure.



## **Documenting Preexisting Damages**

Take pictures of preexisting damage to contents. Damages are noted on the Inventory Sheets, but extensive damages are difficult to describe and note accurately on an inventory. A picture is worth a thousand words in these situations. Record items with preexisting damage, such as nicks, scratches, water rings, or gouges, on the Inventory Sheet, and take a picture or video of the item(s).

Documenting preexisting conditions will reduce the chances of paying for refinishing of items not damaged by the restoration vendor's crews. Do not quickly fault customers who insist that a certain item was in *perfect condition* before the move-out. They actually may have not noticed the damage prior to the loss. Document damages with video and pictures to refresh everyone's memory.

## **Presenting the Visual Documentation**

Organize the pictures of the structure and contents. Several SERVPRO® Franchises have found that digital cameras and digital video cameras are extremely helpful for this form of documentation. The digital images produce a "scrapbook" of the entire move-out and can be stored on a disk in the customer's file.

One method of visually documenting a pack-out is to create a video. The video should contain pictures of all boxed items, if possible. Take tables and lights to the jobsite. Stage all items being packed in a box so the picture shows the items and the number on the box. Every piece of furniture is numbered and a picture taken before it is loaded. Finally, the pictures are burned to a CD and presented to the customer and adjuster. SERVPRO® Franchises have found that adjusters like the CDs, because the documentation has provided evidence to resolve disputes over missing items.

## SORT CLEAN AND CLAIM ITEMS

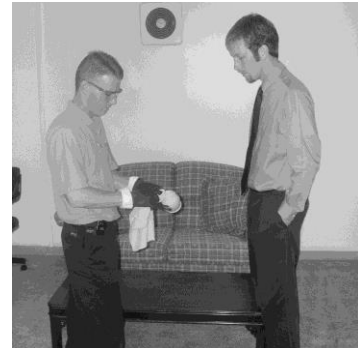
One of the most important matters to communicate to the insured is instructions regarding the Claim List. The Claim List shows the name of all claim items. The estimator should explain to the customer the difference between **clean items** and **claim items**.

- **Clean items** are contents items that can be cleaned and returned to the insured.
- **Claim items** are damaged contents items that cannot be restored and must be replaced.

### Determining Clean Items

Test all items for cleanability in the presence of the customer. If an item looks like it will clean, get the customer's agreement on the decision to restore it rather than replacing it. Pretesting assures the customer that restoration cleaning will effectively restore damaged items. Restoring contents reduces the cost of the claim by reducing replacement costs for the insurance company.

*Note:* Some contents items may be questionable as to whether they can be restored. Communicate the results of your pretesting to the insurance adjuster, advising him or her of the probability of restoring the item (expressed as a percentage; for example, "a 70 percent chance of restoring the item"). Always allow the adjuster to determine whether to attempt to restore a questionable item or add it to the Claim List.



### Assisting the Insured with the Claim List

Helping the insured compile the Claim List is a valuable service for a restoration company to provide. SERVPRO® offers the *Contents Claim Inventory Service* to produce detailed, timely, and accurate Claim Lists. Communicate the following basic guidelines to the insured about developing a Claim List:

- Do not start until the Franchise completes the move-out. The packing process will be interrupted frequently if the insured is in the house making a Claim List while technicians are inventorying and packing. Tell the customer the date when you will move out contents from the house or property and that any items left in the house will be claim items. Creating the Claim List will be easier for the customer after contents are removed.
- SERVPRO® Franchise employees will separate cleanable and damaged items into designated areas. Technicians will stack boxes of claim items neatly, so the customer can make the Claim List.
- Suggest that the customer use a recorder when sorting through damaged items to make the task faster, less fatiguing, more accurate, and less stressful. The recorded Claim List can then be transcribed into a typed list.

Several benefits result when the customer understands the process for claim listing.

- The listing of items to be claimed is more accurate.

- The Claim List is completed in a timely manner, so claims are closed faster. (Some insurance policies will not pay for restoration services until the Claim List is submitted.)
- The insured makes fewer phone calls to adjusters asking how to fill out the Claim List.
- The Claim List is easier for adjusters to decipher, thus reducing workload.
- The restoration company and adjuster face fewer problems at the completion of the job.

## Salvage Items

Salvage items are *claim items*—the insurance company replaces the items for the insured. They differ from other claim items, however, since the insurance company does not deduct them from the insurance payout. Instead, the insurance company attempts to recoup some money by selling the item or putting it out for bid. The restoration vendor is still paid to clean salvage items so they can be sold as used pieces.

An adjuster may ask a Franchise to store items intended for salvage. Sometimes the insurance company offers the restorer the option to keep salvage items by paying 10 percent of their value (e.g., \$100 for a \$1,000 refrigerator). Be cautious about taking possession of items for salvage. Rental furniture companies have taken away much of the market for salvage items, and salvage companies are now having trouble selling items. If an adjuster is asking you only to store salvage items, odds are good the items will sit in your warehouse, so you might want to quote the adjuster a fee for storage of these items.



## Updating the Claim List

While contents are being cleaned at the warehouse, technicians may discover additional items to be claimed. Ensure additional claim items are communicated to the customer and adjuster as they are identified. Do not collect all additional claim items in boxes and deliver them to the customer at the time of the move-back! Customers will be unhappy completing additional Claim Lists, and adjusters may have to reopen the Claim List on claims for which the customer was already paid. To avoid this situation, always keep customers and adjusters updated on claim items found during cleaning. Also, do not procrastinate on cleaning contents in the warehouse. The sooner you clean the contents, the sooner you can communicate additional claim items.

## PACK, TAG, AND INVENTORY

The success of a move-out depends on how well you pack, tag, and inventory contents. This step is one of the most important phases of a move-out, and accuracy is a must! A Franchise should never sacrifice details to complete the work more quickly.

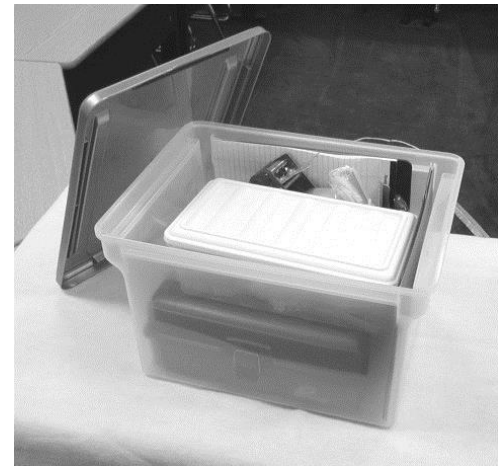
Being organized is crucial to this phase of a move-out. If the crew is not organized during packing and tagging, the work site will soon look disorganized, giving a negative impression to both the insured and the adjuster. In addition, disorganized packing can result in damage to contents.

### Setup for Packing and Inventory

Preparation helps the inventory and packing process move efficiently and effectively. Setup for a move-out should involve the following:

- Supply list for the crew
- Move-out supply box
- Special equipment

Before leaving for the pack-out, you should develop a supply list of what items will be needed and what quantities of forms, boxes, packing paper, and moving blankets will be required to complete the job. Use the SERVPRO® [Move-Out Checklist \(#28512\)](#) (see pages 219-220) to help determine needs.



### Move-Out Supply Box

Crews should not have to run from room to room through the work site trying to locate supplies during the packing process. Each two-person crew should have their own supply box. The supply box contains everything needed to pack, tag, and inventory, so crew members do not waste time walking to a supply area searching for supplies.

A good choice for a supply box is a 2' by 3' plastic container with its own lid. Inside the supply box is a small toolbox. Tools will be needed for taking apart beds, furniture, and so forth.

#### Small Toolbox of Tools

- |                     |                                |               |
|---------------------|--------------------------------|---------------|
| ✓ Hammer            | ✓ Pliers                       | ✓ Ratchet set |
| ✓ Wrench            | ✓ Large screwdriver            |               |
| ✓ Small razor blade | ✓ Screwdriver with multi-heads |               |



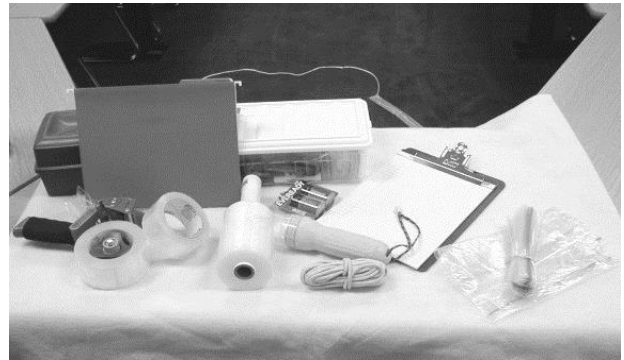
Also inside the plastic container are hanging folders for the move-out paperwork. Completed Inventory Sheets can be stored in a folder and a new, blank sheet retrieved. Inventory Sheets are kept organized and not lost by using hanging folders.

#### Hanging Folders

- ✓ Blank inventory sheets
- ✓ Completed inventory sheets
- ✓ Employee time logs
- ✓ Forms

**Other Supplies**

Other items in the Supply Box provide crews with everything they need for a successful pack-out. Packers are able to use their time efficiently for packing and tagging contents, rather than for locating tools to perform the job.

**Supply Box Items**

- |                             |   |                              |
|-----------------------------|---|------------------------------|
| ✓ Hanging folders           | ✓ Small toolbox of tools                  | ✓ Clipboards and paper       |
| ✓ Tags                      | ✓ Markers and pens                        | ✓ Screwdriver                |
| ✓ <i>Rush!</i> Stickers     | ✓ White stickers (labels)                 | ✓ Orange labels              |
| ✓ Scissors                  | ✓ Small bundle of rope                    | ✓ Flashlight                 |
| ✓ Bag of rubber bands       | ✓ Bag of safety pins                      | ✓ Extra rolls of tape        |
| ✓ Camera                    | ✓ Razor knife (extra blade)               | ✓ Tape measure               |
| ✓ Tape gun                  | ✓ Sandwich bags (zip seals)               | ✓ Extra batteries for camera |
| ✓ Handheld shrink-wrap tool | ✓ Large plastic storage bags (zip seals). |                              |



## SPECIAL EQUIPMENT FOR EFFICIENT PACKING

Other special equipment may be required to complete the inventory and pack-out. The severity of damage to the structure partly determines what special equipment is needed at a particular jobsite. The estimator should note special equipment needs on the SERVPRO® [Move Out Checklist \(#28512\)](#) while preparing the initial scope and estimate. Consider the following items:

### Special Equipment

√ Generators	√ Auxiliary lighting	√ Ladders
√ Air sleds	√ Auxiliary heating	√ Step stools
√ Dollies	√ Tables	√ Appliance dollies
√ Air scrubbers	√ Rechargeable drill	√ Extension cords
√ Packing materials	√ Furniture pads	√ Boxes

### Tips on Special Equipment and Supplies

**Generators.** In some situations, the crew cannot wait for emergency power to be turned on. Generators provide power for auxiliary light and heat.

**Auxiliary heating.** Heat can be produced through propane heaters or electric heaters.

**Ladders and step stools.** Ladders are needed for packers to reach upper cabinets and draperies or into closets. Standing on a customer's furniture to reach something is unacceptable.

**Air scrubbers.** Air scrubbers equipped with a charcoal absorbent filter will help deodorize areas where paints or varnishes have burned, giving off an acidic smell.

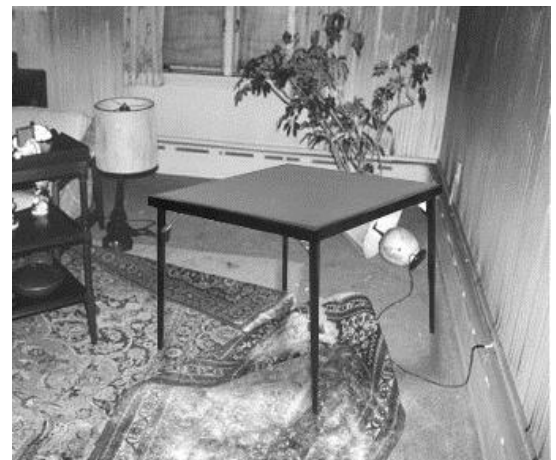
**Packing tables.** Do not use the customer's tables for packing. Even if you place padding on the table, packing boxes on a customer's dining or kitchen table is not professional and creates the possibility for damage. Use card tables as an inexpensive and portable work surface. Card tables are more professional looking than packing on the floor and are easy to store in the warehouse between move-outs.

**Furniture pads.** Use pads for stacking furniture at the jobsite to prevent damage.

**Appliance dollies and moving pads.** When moving large, heavy, or awkward contents, dollies and pads are important for preventing damage.

**Rechargeable drill.** The drill and attachments allow packers to take apart beds and furniture quickly.

**Rubber bands and safety pins.** Do not stick labels or tape inventory tags onto furniture, as tape can damage the finish and



tags can fall off. Use a tag and a rubber band. Write the customer's name and item number on the tag and attach it to a handle. For upholstery, use a tag and a safety pin or a dry cleaner's labeling gun (that fastens a plastic pin to the item). Tag upholstery arm covers and attach them to the furniture item so you do not lose them.

**Plastic storage bags.** Place small contents items into sandwich bags. Put larger items like silverware, jewelry, and blank checks into plastic storage bags to leave the perception that you are taking care of the customer's possessions. Also put screws, bolts, and other hardware from disassembled furniture into sandwich bags. If you leave anything in a drawer, it gives the impression you did not clean the drawer.

**Boxes.** Use primarily two sizes of boxes for packing (1.5 cubic feet and 4.5 cubic feet). Consistent sizes are easier to stack in the warehouse. Specialty boxes are needed for uniquely shaped items. Wardrobe boxes, picture boxes, and dish pack boxes for fragile items (such as expensive glasses) can be invaluable.



**Laundry bags.** Do not use garbage bags for dry cleaning and laundry. Placing a \$3,000 gown or other fine clothing in plastic garbage bags will leave a bad impression with the customer. For a professional image, place clothing in reusable nylon laundry bags marked with the SERVPRO® logo, then tag the bags. Dry cleaners should also be instructed to use garment bags for dry cleaning.

**Packing materials.** Using newspaper as packing material is **not** recommended. Packing with newspaper does not present a professional image. Damage to some contents might occur through the transfer of ink from printed newspaper to the surface of items. In addition, some packers may tend to read and talk about old newspaper articles, slowing down the packing process. Refer to "Tips for Successful Packing" on page 189.

## THE PACKING AND INVENTORY PROCESS

The actual work of packing a customer's contents involves several phases.

### Jobsite Walk-Through with the Customer

The crew chief or supervisor should walk through the jobsite with the customer before beginning to pack. Review with the customer the process for packing and moving. Many customers will not comprehend everything the first time you explain it. Be sure to inform the customer of the location where contents will be moved. Listen to the customer's concerns. Sometimes they have preferences on what rooms should be packed first.

### Housecleaning

A professional cleaning company should always give the appearance of *Clean*. The crew should make the work site look presentable by picking up debris and excess garbage room by room before the packing begins.

Another benefit of initial housecleaning is safety. Do not walk over or through debris while entering and exiting the work area. Stepping over debris while carrying boxes is not safe.

### Survey the Rooms to Pack

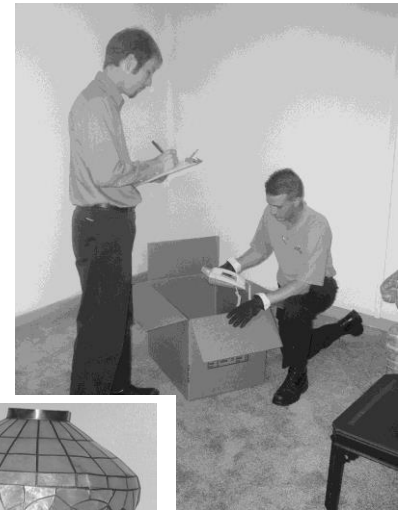
The crew should survey all rooms to be packed before filling the first box. As they survey, they should decide which room to pack first, how many boxes will be needed for the room, and how the boxes will be numbered and inventoried.

### Work in Teams

Packing and inventory is best completed with two-person teams. While one person packs boxes, the other documents the inventory. A two-person team finishes a job more quickly and more accurately than two crew members working individually, each one packing and inventorying alone.

Tag items as you pack, and pack one room at a time. Pack the small contents and boxed items first, then tag and inventory the large items. Finish a section of a room before taking a break so no items are missed.

Be watchful for damaged items, and take detailed notes, documenting scratches, dents, and so forth. Some SERVPRO® Franchises take pictures of all damages. Other Franchises consider the value of the piece as a factor in determining whether to take a picture of an item. The customer's comments or concerns about an item may be another factor in deciding to take a picture.



Arrows indicate damaged areas.

## Communicate During the Pack-Out

Crew members should communicate with the insured during the packing and inventorying phase. Try to interact with the customer, especially on the first day of packing. Several questions will arise since estimators cannot instruct customers on every single matter and customers will not remember everything they were told during the estimating process.

Build trust in your customers for SERVPRO® Franchise professionalism. You will begin to build your customers' trust in the SERVPRO® brand by being especially helpful the first day. Once they see the organized work process and competent workers, they will usually go back to their jobs after the first day because they trust you to do a professional job.

Some small actions on a crew member's part can pay big dividends with a customer. When packers find coins or money during the inventory process, they should place it in a baggie and present it to the customer. Such actions demonstrate your honesty. Leaving extra inventory sheets with the customer to help with their Claim List can also be a small gesture that means a lot to the customer.

## Stage Boxes and Contents for Movers

Stage boxes and contents so they are convenient for movers to remove from the house onto the truck.

- Stage items as close as possible to the door the moving crew will be using. This prevents additional damages, dents, or scratches on doors and walls.
- Move boxes that are inventoried and packed to a specified area. Crews should not pack one box, shove it one direction, then pack another box and shove it a different direction.
- Movers usually load boxes first, so stage the boxes together where they can be reached before dealing with tagged items. Movers should not have to step around big furniture items in order to get to the boxes.
- Organize claim items so they can be inventoried easily and are out of the movers' way.
- Movers need access only to boxed and tagged items; keep claim items out of the way.



## TAKING THE INVENTORY

A disorganized move-out is an invitation for problems. The key to staying organized during a pack-out is for the crew to inventory each item being moved by documenting it on paper. The inventory should be extremely accurate and detailed. Never remove an item from the house without listing the item on the Inventory Sheets.

<b>SERVPRO®</b>			Content Inventory Worksheet: Boxed Items _____		Page ____ of ____	
Customer Name: _____			Date of Loss: _____			
Claim Number: _____			Packed By: _____			
Room Name: _____			Unpacked By: _____			
Cleaned By: _____			Repacked By: _____			

Box #	Box Size	Box Density (low/high)	Light Clean	Heavy Clean	Item	Notes	Date Cleaned	Date Returned
			<input type="radio"/>	<input type="radio"/>				
			<input type="radio"/>	<input type="radio"/>				
			<input type="radio"/>	<input type="radio"/>				
			<input type="radio"/>	<input type="radio"/>				
			<input type="radio"/>	<input type="radio"/>				
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			<input type="radio"/>	<input type="radio"/>				
			<input type="radio"/>	<input type="radio"/>				
			<input type="radio"/>	<input type="radio"/>				

Customer agrees that the Boxed Items listed above were inventoried and moved from the loss site by SERVPRO® of \_\_\_\_\_.

Customer Initials: \_\_\_\_\_

G/SERVPRO® INTELLECTUAL PROPERTY, INC.
ALL RIGHTS RESERVED FE-051707 1.0
28550 5/11

Each SERVPRO® Franchise is Independently Owned and Operated.

## Inventory Sheets

Documenting is done on Inventory Sheets. The sheet should describe each item and include notes regarding condition and preexisting damage. Have the insured verify and initial each Inventory Sheet prior to removing the contents from the house. Leave a copy of the Inventory Sheets with the customer.

A detailed inventory initialed by the customer can eliminate disagreements concerning lost items. The inventory indicates what items the Franchise removed from the structure, lessening the chance the Franchise will have to make unnecessary payments for lost items that actually were never moved. The inventory needs to be updated any time the insured removes items from storage.

Send a copy of the Inventory Sheets to the adjuster. Your adjuster may not take the time to read the inventory list, but by providing the list you convey the impression of honesty. Some restorers will “airpack,” using a large box to pack contents that would actually fit in a small box.

By providing an inventory, you demonstrate that your Franchise will not charge for a large box if a small box is sufficient.

List different categories of items on separate Inventory Sheets. List boxes on a **Boxed Items Inventory Sheet** and tagged items (like furniture, upholstery, electronics) on **Large Items Inventory Sheets**. List upholstered furniture separate from non-upholstered furniture. The separation makes it easier to find particular items on the Inventory Sheets, and when a customer requests a boxed item from storage, you can locate the appropriate box more easily. The Inventory Sheet clearly shows what room each box was from and what is in each box.

List electronics on a separate **Electronics Inventory Sheet**. The electronics inventory should list model numbers and serial numbers. Always pack the remote control with the matching electronic device. Otherwise, later you will not know which remote goes with which device, or you may simply lose a remote control. Put the remote in a baggie, puncture a hole in the baggie, and use a rubber band to attach the baggie to the electrical cord of the device.



*Place remote controls in baggies and attach to the electronic device.*

## Accuracy and Readability

Record the inventory in easy-to-read handwriting. Describe the contents items accurately.

- **List of condition codes.** Using codes makes it easier for the crew member to record scratches, tears, nicks, and other types of preexisting damages. Consider using the following location and condition codes:

LOCATION OF CONDITION		CONDITION CODE		
T – TOP	L – LEFT	BE – BENT	DE – DENTED	SC – SCRATCHED
B – BOTTOM	R – RIGHT	BR – BROKEN	FA – FADED	TA – TARNISHED
F – FRONT	S – SIDE	CH – CHIPPED	LO – LOOSE	TO – TORN
V – VARIOUS		CR – CRACKED	RU – RUSTED	WO – WORN

- **Page #:** Each separate sheet of the inventory should be assigned a unique number. Numbering the Inventory Sheets helps keep the sheets organized, allows you to reference tagged items, and alerts you should a sheet become missing.

**Boxed Items** \_\_\_\_\_ Page \_\_\_\_ of \_\_\_\_

- **SERVPRO® Representative lines.** These lines are for recording the names or initials of the crew members who cleaned, packed, unpacked, and repacked the items on the sheet. The initials show you who to ask if a question arises concerning an item in a particular box.

Claim Number: _____	Packed By: _____
Room Name: _____	Unpacked By: _____
Cleaned By: _____	Repacked By: _____

## TIPS FOR CODING AND TAGGING

The inventory is documented on the Inventory Sheets. Every box must be marked with a specific code and every unboxed item must be tagged with a specific tag number for the Inventory Sheets to reflect an accurate listing of the customer's contents.

### Coding Boxes

A box code should consist of the following:

- Customer's name
- Room abbreviation
- Box number

One format is to write the customer's first initial and last name as the first part of a box code. For example, box codes for the customer Mary Smith would begin with **M.Smith**.

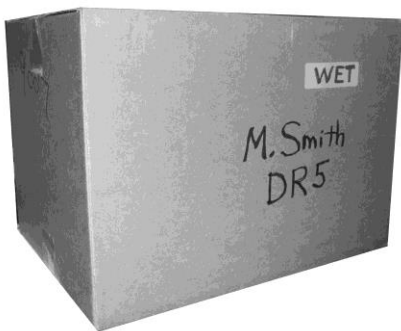
The inventory should be recorded room by room; therefore, the rest of the box code is a *room abbreviation* and a *box number*. Once a box is packed, a code including the room abbreviation and box number is assigned to the box and recorded on the inventory form. For example, the abbreviation for the dining room is **DR**, so the third box packed in Mary Smith's dining room is coded **M.Smith DR3** (DR3 = Dining Room, Box 3).

The box code should be written on at least three sides of a box to make finding a particular box easier, no matter how the boxes are stacked in the warehouse. Box coding allows future access without having to open boxes and rummage through contents to locate items the insured may request before the move back occurs.



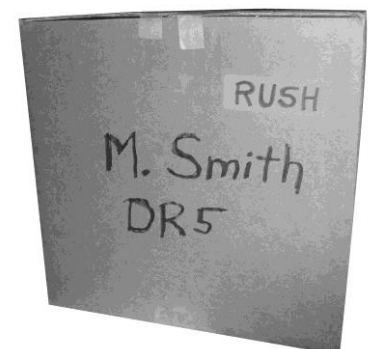
### Wet and Rush Boxes

Never pack wet items in the same box with dry items. If you pack wet and dry items together, you will likely find moldy contents or at least musty smells when you open the boxes later in the warehouse. Pack wet items together and tag the box as *Wet*. As boxes are unloaded at the warehouse, those boxes tagged as *Wet* are not shelved, but placed separately. *Wet* boxes must be opened and cleaned immediately to prevent moisture damage to contents.



Sometimes, before packing begins, the customer may inform you of items they need back quickly. These are items they may be using in their temporary residence. Making a list of the items is a good first step, but a better procedure is to pack the items together and tag the box *Rush*. If customers do not volunteer information, ask if they will need any particular items soon at their temporary residence.

As movers unload boxes at the warehouse, the *Rush* boxes are placed separately. Train movers to be aware of *Rush* and *Wet* tags. Station a SERVPRO® Franchise employee to watch for tagged boxes as the movers



unload. An organized move will prevent you from having to move 25 boxes to find the *Rush* boxes.

## Tagging Items

Any items not packed into boxes are **tag items**. They are inventoried and tagged with the **customer name** and **Inventory Sheet page number**. While boxes are marked by rooms, furniture and other tag items may not indicate a room since they are not often in the correct room at the time of the move-out. The Inventory Sheet page number serves as a reference to ensure all large items removed have been included in the inventory.



Secure the tag onto an item so it will not fall off. Use rubber bands with tags (strings will slide off furniture during the move). Never use tape, as tape will remove finishes from furniture. For upholstery, use safety pins to fasten tags or use a dry cleaner's labeling gun to attach plastic pins. Pin an inconspicuous area where the upholstery will not tear. Arm covers should be tagged separately.

Ensure every item is tagged before it leaves the house. The crew chief or supervisor should make a final check at the end of the day that all items are tagged.

## Accuracy Is a Must!

One point worth repeating is the need for **accuracy**. The inventory must be detailed to represent all of the customer's contents, but it must also be extremely accurate. If during the move-back a homeowner receives an item back that is not on the inventory list, then the crew's inventory is worthless. From that point forward the Franchise's inventory will have lost credibility with the homeowner, who will wonder what other items may have been overlooked. Take time for accuracy during the packing and inventory step, then the move-back step will have better odds of being successful.



## Tips for Successful Packing

The more *Tips and Tricks* you know about packing, the better your chances will be of having a positive pack-out experience. Remember the following tips, and you will be off to a good start.



### Lamps and Shades

Lampshades are fragile and require careful handling. Never pack lampshades with other contents or pack two or three lampshades together. The fragile exterior will become dented. Pack lampshades individually, each in a box.

Lamps usually extend outside a box. Do not attempt to custom fit cardboard around the top of a lamp that extends from a box. Instead, use two boxes of the same size to protect the whole lamp. Place the second box upside down on top of the first box and tape the two together. Use plenty of cushioning inside!

### Glass Shelves

Pack only one glass shelf in a box. If you attempt to pack multiple glass shelves in the same box by using bubble wrap or some other packing material, you will likely crack one of the shelves or break a corner. Do not lay glass flat; rather, stand glass shelves on end to prevent cracking.

### Tape

Do not apply tape or stickers to wood furniture. Tapes remove varnish from wood surfaces. The heat present while a fire is underway can soften wood finishes, making them even more susceptible to tape damage. Do not use tape or stickers on anything except boxes.

Amateur movers use tape to keep furniture drawers from opening during a move. An alternative is to apply shrink wrap with a handheld shrink wrap applicator. Shrink wrap does not stick to the furniture surface.

### Bubble Wrap

Items wrapped tightly in bubble wrap may still break if a box is dropped. When using bubble wrap, make sure items are cushioned with crumpled-up packing paper.

### Mattresses

Wrap all mattresses in mattress covers. Plastic mattress covers are made in twin, queen, and king sizes. If mattresses are slid across a sooty floor, soot is embedded into the mattress fabric and usually cannot be removed. Wrap the mattresses before taking them from the bed, and you will be able to clean mattresses instead of buying them.

### New or Used Boxes

Do not pack contents on a new job in used boxes from a previous move-out. Used boxes lack professionalism. The SERVPRO® brand claims to be the premier cleaning and restoration company. SERVPRO® Franchise professionals offer vast experience with move-outs and professionally trained crews. If a Franchise arrives at a jobsite with used boxes and scratches out



the previous customers' names and room numbers, the image does not match our claims. Technicians may also forget to scratch out all of the old names and rename every box, so some boxes will still have old information when they arrive at the warehouse. Be professional and look professional!

### **Pictures and Paintings**

Wall pictures and paintings require care in packing. Packers may be tempted to simply tag a large picture or painting, intending to instruct the movers to stack it on top of other items. Despite the good intentions of the packers, the paintings will become damaged at some point during the move-out, while in storage, or during the move-back. Pack pictures and paintings in the special boxes that are designed for packing these items.

### **Dishware**

Pack dishware properly to avoid breakage during a move. Glasses should be packed standing on their bases. Dishes should be stood on their edge. Do not pack dishware in large-sized boxes. Use sufficient bubble wrap and other packing material to prevent damage within a box.

### **Personal Documents**

During the packing, packers may find personal documents, such as checks, bills, certificates, contracts, or licenses. Place personal documents in a folder and give them to the customer.



## **MOVE CONTENTS TO THE WAREHOUSE OR STORAGE**

Once contents have been packed, boxed, tagged, inventoried, photographed, and staged in a specified area of the work site, they are ready to be moved. Contents are moved from the work site to the warehouse or to a storage facility until scheduled for cleaning.

### **Determine Who Will Move the Contents**

Performing a move-out means moving the customer's contents at least twice. First, the contents are taken from the customer's location to the warehouse, where they are cleaned. After cleaning, the contents are taken back from the warehouse to the customer's restored location. Several alternatives exist for moving contents.

- The Franchise subcontracts a moving company to perform the entire move-out—packing, inventorying, loading, and transporting.
- The Franchise inventories, packs boxes, and tags contents, then subcontracts a moving company to load and transport boxes and tagged items to the warehouse and back.
- The Franchise performs the entire move-out.

### ***Subcontracting the Entire Move-Out***

In a subcontracted move-out, the Franchise is not involved in the move-out process. Typically, Franchise technicians will clean the contents and possibly clean the structure. The loss of income by not performing the move-out should be balanced against the reduction of risk and liability due to not handling the moving of contents.

### ***Subcontracting the Load and Transport Phase***

Some SERVPRO® Franchises train their technicians to produce water and fire damage services, but do not train them as professional movers. Customers and adjusters often respond well to subcontracted movers, which adds to the professional image of the process. The customer is comfortable that SERVPRO® Franchise technicians are professionals at packing and cleaning, while the moving company personnel are professionals at loading and transporting.



### ***Franchise Performing the Entire Move-Out***

To perform entire move-outs, your Franchise operation needs to have the appropriate equipment and skills for the work. Review the information and video from U-Haul® on packing and moving. Another option for learning skills is to hire professional movers for the first couple of move-outs and watch how the professionals carry and move contents.

Take precautions to protect contents during the transport:

- Use an adequate supply of furniture blankets to prevent damage to furniture. Furniture on top of furniture will produce scratches.
- Pad and strap furniture properly as it is being loaded. Secure drawers from opening or remove the drawers.
- Load heavy items in the front of the truck. Put heavy boxes on the floor and light boxes or items on top.
- Pack items tightly to prevent shifting during travel.
- Tie off sections to prevent shifting of items during travel.



### Determine When the Move-Out Will Occur

The date when contents will be moved from the structure should be determined ahead of time. Use the SERVPRO® [Move-Out Checklist \(#28512\)](#) to help coordinate the move date with the insured, the adjuster, the contractor, and the mover (if subcontracting any part of the move).

- **Start date.** This is the date the crew will begin packing and inventorying. Coordinate this date with the insured.
- **Projected move date.** Consider asking the insured for an optional date for the move-out. If a conflict arises with the first choice, the second choice is already cleared with involved parties. Record both dates on the *Move-Out Checklist*.
- **Mover contacted.** The mover must be called to schedule a date when he or she can transport contents and boxes from the loss site to the warehouse or alternate location. When talking to the mover, offer a three-to-five-day range of preferred dates.
- **Actual move date.** This is the date the move-out actually occurs.

The timing of the move-out should be coordinated. Adjusters usually do not care when the actual move happens, but contractors usually care since their reconstruction work is held up until the contents are moved. Sometimes the contractor will want to delay the move-out because he/she is not yet ready to begin work. Homeowners are anxious for the work to begin. Communicate with everyone involved and record the projected and actual move dates on the *Move-Out Checklist*.

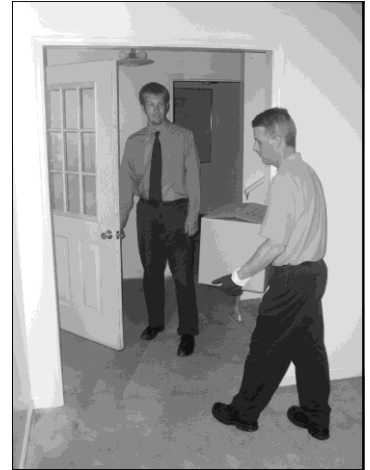
## TIPS FOR A SUCCESSFUL MOVE

The transporting of contents from the work site begins a new phase of the move out process. Here are tips to avoid potential problems during a move.

### Supervision

A supervisor on-site at the premises oversees the packing, inventorying, and loading of contents for transport. Supervision keeps crews moving efficiently. Do crews have all their supplies? Are they using proper padding? Are they careful not to stack large boxes on top of small boxes?

A SERVPRO® Franchise supervisor should observe the move-out even when professional movers are subcontracted. The supervisor immediately documents any damage that occurs. Documented damages or digital photos will reduce disagreements over whether damage occurred while contents were being moved or while being cleaned or stored. After taking a picture, the supervisor takes broken items back to the warehouse. The SERVPRO® Franchise Manager looks at the item and talks with the customer. The supervisor should have extra tags and inventory sheets. Any items that the packers missed should be tagged before being taken out the door.



### Storage of Contents After the Move

Contents must be stored until scheduled for cleaning. After being cleaned, contents must be stored again until the restoration and repair of the customer's structure is completed and the customer is ready for delivery of the cleaned contents. When storing contents before or after cleaning, allow aisles to provide access to items. Other storage tips include the following:

- Store dirty, contaminated boxes in a separate area from cleaned items to avoid resoiling.
- Tag all items stored separately from the boxed contents.
- Even though most storage areas provide limited access, electronics and valuable items should be stored in a separate secure locked area requiring a sign-in sheet to gain access.
- Do not cover furniture with plastic. High humidity can result in condensation under the plastic, which may affect the varnish or finish. In hot temperatures, thin plastic covers can stick to furniture and possibly bond with the varnish.
- Do not use cardboard from boxes to pad furniture. Small pieces of rock or stone can become embedded in the soft cardboard and scratch or dent the furniture surface.

### Set Up Schedules for Specialty Restorers

Specialty restorers include dry cleaners, electronics restorers, furniture refinishers, document restorers, and art restorers. These restorers may pick up contents at the jobsite or at the Franchise's warehouse after the move. An important step in working with subcontractors is to document all items they will be responsible for restoring.

Preferably, specialty restorers will pick up items from the jobsite before the move-out. Make sure they take an inventory of items they remove from the loss site. They should leave a copy of the inventory with the Franchise crew chief or supervisor, as well as with the customer.

If the specialty restorers do not go to the jobsite, notify them as soon as contents have been moved into the warehouse. Schedule a time for them to come to the warehouse to pick up items to be restored. Note on the Inventory Sheet all items removed by specialty restorers, along with the expected date of return.



### ***Note on Dry Cleaning***

Separate clothing into dry cleaning items and laundry. Have the dry cleaning subcontractor inventory the clothes he or she will clean. Make an agreement with dry cleaners that they will not charge for cleaning items that, in the end, have to be replaced.

### **Billing for “Services to Date”**

Handling several move-outs at one time may cause cash flow problems, so consider a charge for “Services to Date.” Adjusters are often unwilling to make an advance payment to the restoration vendor on a move-out, but many will pay a “Services-to-Date” billing as a justifiable bill since they have a firm invoice in hand. Line items you could list might include the following:

- Packing
- Moving contents to the warehouse
- Storage charge (estimate how long contents will be stored)
- Emergency cleaning
- Subcontractor services performed early in the process

## CLEAN, DEODORIZE, AND RESTORE

The cleaning, deodorizing, and restoring of contents follows six general steps:

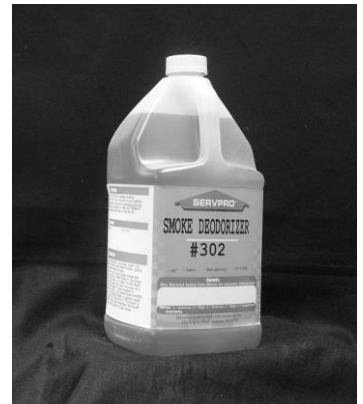
- Move dirty boxes from storage area into the cleaning area.
- Unpack each box while comparing to the inventory list to ensure accuracy.
- Clean items using the production procedures outlined in the [EZ Production Guidelines](#).
- After cleaning, perform additional deodorizing such as ozoning or thermal fogging as required to eliminate odors.
- Once items are cleaned and deodorized, repack with new packing paper and new boxes. Update the Inventory Sheets, as required.
- Move clean items to the “clean” storage warehouse area.

### Unshelving and Unpacking

Move boxes of dirty contents into the cleaning area and unpack. Compare the contents of the box to the Inventory Sheet. Make sure that the Inventory Sheet is accurate according to the contents found in the box. Unpack only what you will clean in one sitting and finish the box before going on break or leaving for the day.

### Cleaning and Repacking

Clean items following the SERVPRO® [EZ Production Guidelines](#). After cleaning, deodorize as necessary by ozoning or thermal fogging. Then repack the cleaned items using new packing paper in a new box (do not use newspaper). Repack dishes in clean newsprint (non-printed) or bubble wrap. You can use the original box if it is not soiled. To reuse a nonsoiled box, spray both the outside and inside of the box with either [Odor Control, Water-Based Cinnamon \(#389\)](#) or [Smoke Deodorizer \(#302\)](#) and make sure the box has no odor.



When all items in the box are cleaned, the technician marks the box on the corner with the word *DONE* and his or her initials. By initialing a box, the technician is pledging that all items in the box have been cleaned. This accountability ensures technicians are more careful about cleaning all items. The customer should not find a box of uncleaned items after the boxes have been moved back to the customer's location.

While cleaning contents, workers may discover additional specialty items requiring refinishing or restoring. Contact specialty restorers to pick up these items, then update the Inventory Sheets.

### Documenting Cleaned Boxes

While cleaning boxed contents, technicians should follow a system that double-checks the customer's inventory. For example, as each box is cleaned the technician should update the Inventory Sheet marking each item in the box as *Clean*. An alternative procedure is to leave all boxes open until the end of the day. As a last step of the day, someone spot-checks the cleaned boxes to make sure everything in each box is clean, and then updates the Inventory Sheets.

**Boxed Cleaning sheet.** Consider using a *Boxed Cleaning* sheet. This sheet indicates which customer's job the boxes belong to and projects a date for when the boxes need to be cleaned and ready for return delivery to the customer. The rest of the sheet is a grid of numbers. Circle the corresponding box number when all items in a box have been cleaned and check against the Inventory Sheet. The number grid can be used to track the following bits of information:

- Which boxes have been cleaned
- Whether a box was split into two boxes (Packers sometimes pack original boxes too tightly)
- Whether all boxes are accounted for
- Whether a stray box has crept into the wrong customer's boxes

If a technician also initials each circled number, the form will track who cleaned each box.

### Boxed Cleaning

Customer \_\_\_\_\_ Date to Go Back \_\_\_\_\_

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	34	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168
169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192
193	194	195	196	197	198	199	200	201	202	203	204
205	206	207	208	209	210	211	212	213	214	215	216
217	218	219	220	221	222	223	224	225	226	227	228
229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252
253	254	255	256	257	258	259	260	261	262	263	264
265	266	267	268	269	270	271	272	273	274	275	276
277	278	279	280	281	282	283	284	285	286	287	288
289	290	291	292	293	294	295	296	297	298	299	300

## Cleaning Totals

Date: \_\_\_\_\_

The following boxes were cleaned today:

Name of Homeowner:	# of Boxes Cleaned Today:	Total # of Boxes Complete:

The following laundry was completed today:

Name of Homeowner:	# of Pounds Completed Today:	Total Pounds Complete:

**Cleaning Totals sheet.** This sheet tracks the quantity of items cleaned daily; a new copy of the sheet is filled in for each cleaning day. The technician records the name of the customer and lists the total number of boxes cleaned that day, as well as the total number of boxes that have been cleaned for that customer. This type of double-checking will help ensure every box being moved back to a customer contains clean items.

Once items have been cleaned and repacked, they are stored in a clean area to prevent recontamination of cleaned items. Always keep cleaned boxes separate from dirty boxes.



## COMMUNICATING DURING THE CLEANING PROCESS

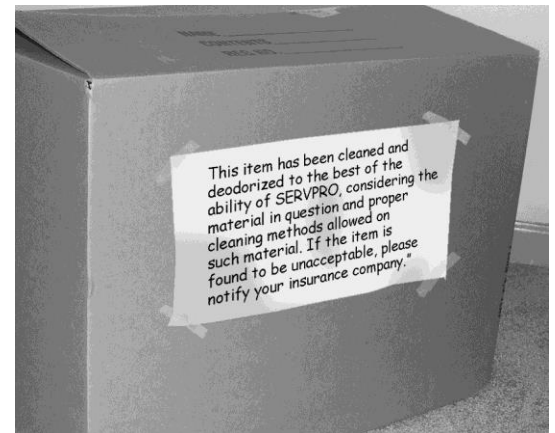
Despite the most detailed effort of checks and double-checks, new situations will come up when cleaning contents. Items that everyone thought would clean up do not turn out as expected. Some items break while a technician is attempting to clean them. Some items that should have been listed as claim items were packed in boxes. When these situations occur, the best approach is to communicate, communicate!

### Communicate About Questionable Items

Customers may ask you to clean an item that is questionable in the hopes that it can be restored. Possibly you informed the customer the item should be a claim item, but it has personal value to the customer. As a service to the customer, you attempt to clean the item. Months later, when you are moving cleaned contents back to the loss site, customers may forget they asked you to clean a questionable item. Remind them by placing the questionable item or items in a separate box. Place a note on the box stating the following:

"This item has been cleaned and deodorized to the best of the ability of SERVPRO®, considering the material in question and proper cleaning methods allowed on such material. If the item is found to be unacceptable, please notify your insurance company."

Customers sometimes form wrong impressions when they see questionable items that did not clean. The notice will prevent customers from thinking that the SERVPRO® Franchise either did not clean the item or did not make a good effort to clean it.



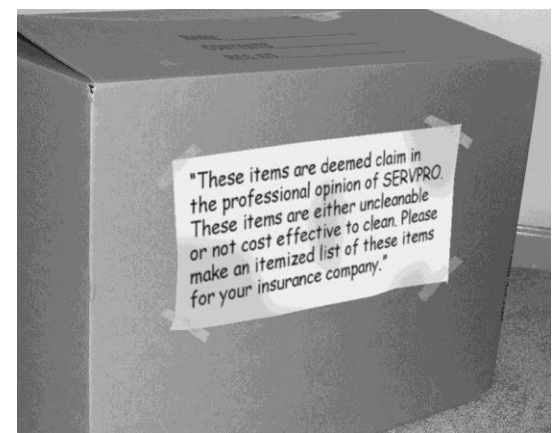
### Communicate About Damaged Items

Heat-damaged items may break during the cleaning process. Excessive heat can cause surface cracks or weaken materials so that they cannot withstand cleaning. Some SERVPRO® Franchises elect to pay for these items if they are few in number. If an expensive item is involved, explain to the adjuster that heat damage broke it. Adjusters usually agree to pay for heat-damaged items.

### Communicate About Claim Items

Technicians may discover additional claim items during the cleaning process. Place all claim items in separate boxes and list them on a Claim Items Sheet, identifying what job they belong to (see sample on page 226). Attach a Claim Items Notice on the outside of boxes containing claim items. The Claim Items Notice reads like this:

"These items are deemed *claim* in the professional opinion of SERVPRO®. These items are either uncleanable or not cost-effective to clean. Please make an itemized list of these items for your insurance company."



By placing this notice on claim boxes, you will avoid confused customers calling to complain that you did not clean a box of items. Notify the customer immediately of additional claim items, so they can update and complete their Claim List.

**Communicate About Stored Contents**

Warehouse space can fill up quickly. Sometimes adjusters leave items that the customer does not want in the SERVPRO® Franchise warehouse. To encourage the adjuster to make a decision on these items, some SERVPRO® Franchises hint that beyond a certain date they might have to charge a storage fee. Other SERVPRO® Franchises do not charge storage fees for the warehouse, but may mention, “Right now my warehouse is full, so I will have to go to outside storage for these items.” Either way, the adjuster will decide what to do with the stored items to avoid additional costs, thus freeing up warehouse space for the next customer’s contents.

## STORED CONTENTS IN THE WAREHOUSE

Once contents are cleaned, they are stored in the warehouse until the scheduled move-back date. During the storage period, customers may come to the warehouse to inspect the success of the cleaning or to retrieve items they need immediately.

### Customer Pickups at the Warehouse

Customers sometimes request to pick up specific items from storage at the warehouse. Maintain a list of all items removed from the warehouse before the delivery back to the jobsite. Have customers sign a form showing which items were picked up, or else months later they may forget they picked up those items. Make sure that forms are signed by the person picking the item(s) up. Sometimes a daughter, son, or friend picks up something instead of the homeowner. Forms should list the item picked up, the name of the person picking it up (as well as the person's signature), and the date the item was picked up.

Warehouse pickups are a customer service. Some restoration vendors will not allow customers to pick up items once boxes are moved into the warehouse. Other vendors may allow pickup at the warehouse, but charge the customer for the service. Allow customers to pick up items without charge, or you will tarnish your relationship with that customer. If the inventory is done correctly, finding items customers want to pick up will be an easy customer service to provide.



### Customer Inspection of Cleaned Items

If at all possible, have the customer inspect all of the cleaned and restored contents before the move-back. The size of the SERVPRO® Franchise warehouse will determine how feasible a customer inspection may be, since an adequate amount of space is required to open boxes. The increased lighting available in the warehouse makes it a better area for an inspection than a residence.

Conduct the customer inspection in a clean area of warehouse. Do not allow customers to have complete access to the warehouse. Some customers may accuse you of cross-contaminating their belongings with another customer's items (for example, a mold job contaminating a smoke job) if you allow them to wander. Do not leave customers alone in the warehouse; a small percentage of people might steal equipment or small contents.

The customers' inspection serves as their acceptance of SERVPRO® Franchise cleaning services. Customers are more likely to accept contents while inspecting them in the warehouse than in their newly restored home. Remember, the move-back is the last step of the restoration process. By the time the Franchise moves back cleaned contents, the house has been restored and possibly remodeled. Customers may have new carpet, newly painted walls, new ceilings, and not be impressed with their cleaned (but *used*) contents. Consider having a furniture refinisher touch up the furniture (even though adjusters will not pay for this service).

Preparing for a customer inspection can be labor-intensive, but may result in more timely payment for the job. Once the customer inspects and accepts cleaned contents at the warehouse,

notify the adjuster. Often an adjuster will issue payment for services based on the customer's inspection at the warehouse. If the customer does not wish to do an inspection of cleaned contents, the estimator should inspect the items personally prior to the move-back.

## Adding to the Insured's Claim List

Items not accepted during the customer inspection are added to the Claim List after the restorer consults with the adjuster. Consider removing cleaning charges for these items from the bill unless you have prior billing arrangements with the adjuster.

## Disposal of Items

The restorer may need to be dispose of items that did not clean or were rejected by the customer. Never dispose of contents from storage without communicating with the insured and adjuster and receiving permission. Avoid situations where an adjuster tells you to dispose of an item, but does not check with the insured first. Also, avoid instances where customers tell you to dispose of an item they are rejecting, but the adjuster has not agreed to replace the item.

Request the insureds and adjusters sign a release to avoid misunderstandings before disposing of claim or salvage items. The SERVPRO® [Release for Disposal of Belongings \(#28514\)](#) releases you from responsibility for any supposed value of these items. This avoids situations where the vendor disposes items without authorization and the customer seeks compensation for items disposed of without their consent. The signed release can prevent the SERVPRO® Franchise from being entangled in disagreements between the adjuster and insured concerning the Claim List items.

SERVPRO® Release for Disposal of Belongings	
Customer Name: _____	Date of Loss: _____
Loss Address: _____	
City: _____	State: _____ Zip: _____
Insurance / Client: _____	Claim Number (if available): _____
<p>The undersigned client, being the building owner, owner's representative, resident, and/or owner of possessions in the attached list, hereby gives the Provider identified below permission to dispose of any and all of possessions (see attached list) from the loss site or from storage at Provider's warehouse in any manner that Provider sees fit.</p>	
<p><b>Provider's Warehouse Location:</b></p>	
Address: _____	
City: _____	State: _____ Zip: _____
<p>I/We have had the opportunity to inspect the aforementioned items and agree that there is nothing of any worth or value among these items.</p>	
<p>I/We hereby agree to hold Provider harmless and release Provider from any and all claims and responsibility in the event that there was something of value among these items, but which has, as a result of my/our instructions to Provider, been disposed of.</p>	
<p><b>Client's Release:</b></p>	
Client's Signature: _____	
Printed Name: _____	
Date: _____	
<p><b>Claims Professional Release:</b></p>	
Claims Professional Signature: _____	
Date: _____	
<p><b>Provider's Signature:</b></p>	
Franchise Legal Name: _____	
d/b/a SERVPRO® of: _____	
Date: _____	
<p>©SERVPRO® INTELLECTUAL PROPERTY, INC. ALL RIGHTS RESERVED PE-051707 1.0 28514 8/10</p> <p>Each SERVPRO® Franchise is Independently Owned and Operated.</p>	

## MOVE CONTENTS BACK TO THE RESTORED PROPERTY

The last step of the move-out process is to move the cleaned and restored contents back to the insured's residence or business. While structural repairs are underway, the SERVPRO® Franchise must stay in regular contact with the contractor in charge of reconstruction to get updates on the completion date of the work.

### Coordination

Follow up with the customer and the general contractor handling the job. Keep contact regularly during the reconstruction work, but especially near the end of the project. The restoration vendor is responsible to coordinate with the customer on the return of contents. Once a projected return date has been established, the date should be changed for only two reasons: (1) the construction will not be completed on time or (2) the customer will not be available for the return of contents.

The customer should be present on the day of the move-back.

### Coordinating with the Customer



Before the move-back, coordinate with customers concerning whether they will unpack the boxes. Adjusters usually will **not** pay you to unpack boxes, yet customers usually expect the boxes to be unpacked. Communicating on this issue ahead of time will avoid misunderstanding later.

When the projected delivery date for move-back approaches, contact the customer. Make sure he/she will be available for you to move back contents on that date. The customer can be asked to assist with the proper placement of large items during the move-back.

### Coordinating with Contractor

Get updates on how the reconstruction work is progressing and when the move-back can realistically take place. Although the contractor may tell you that repairs will take three months, do not wait for the contractor to call and advise you that the work is done. Call the contractor or schedule a site visit. Otherwise the contractor may call you one day to say that work is done and you can move the contents back *tomorrow*!

Lack of communication can result in a disappointed customer. You might hurry to move the contents back only to discover that the contractor has not talked with the insured and the insured does not want the contents moved yet. Worse, if the contractor gives you a one-day notice and you are unable to move the contents back the next day, the contractor may tell the customer, "I called the SERVPRO® Franchise, but they can't accommodate the schedule." If the customer has already taken off work, he or she will blame your Franchise. Proactive communication is the solution to avoiding these problems.

### Supervision

A supervisor should observe and inspect the move-back process. When contents are being loaded at the warehouse, the supervisor should make sure all boxes are marked as *DONE*. Unmarked boxes are pulled from the truck and checked to ensure items in the box were cleaned.

The supervisor also makes sure that tagged contents being loaded are undamaged and still clean. Dust in a warehouse can collect on previously cleaned items. A touch-up dusting just before delivery will ensure the customer receives clean contents.

As contents are being loaded, check off each item against the Inventory Sheet. The supervisor should ensure all of the customer's belongings are returned during the move-back. When arriving at the restored property, the supervisor can check with the customer to make sure items are placed in the proper location.

### **Follow Up with the Customer**

After the move-back is complete, check with the customer to see if everything is satisfactory. This follow-up call should be made by a supervisor, estimator, production manager, or the Franchise owner. The follow-up is an important call to make the day of the move-back or the very next day, depending on what time of day the move-back was completed. Is the customer happy with the way furniture and boxes were placed in the house? Is the customer aware of any problems? If the SERVPRO® Franchise does not call the customer, the customer may report unsatisfactory items to the adjuster.



Send a technician immediately to correct the customer's problems. Suppose that after the move-back a customer opens a box and finds uncleaned, sooty items. This customer's perception of the SERVPRO® Franchise System's professionalism changes if one box of unclean items is discovered. If the soiled box is discovered among the first 10 boxes opened, the customer will closely scrutinize every item from that point on (even if there are 150 boxes)! Some customers may even hold up payment until every last box has been checked. If the unthinkable happens, pick up the box from the customer's home immediately, clean it, and return it promptly.

## PAPERWORK AND FORMS (PART I)

SERVPRO® provides forms to be used in a move-out situation. Using the forms developed for move-outs will ensure proper documentation, as well as facilitate a speedier move-out process. The following SERVPRO® forms may be presented to the customer and completed *before* any contents are moved from the loss site.

### SERVPRO® Customer Information Form—Move-Outs (#28502)

The [Customer Information Form—Move-Outs](#) lists the key steps of the move-out process. The form is a useful tool for helping customers understand what will happen to their contents during the move-out, cleaning, and move-back processes. Use the form to emphasize to customers the importance of the Inventory List, the need to secure their valuable items, and the date when packers will begin the process.

SERVPRO® Customer Information Form – Move Outs	
Customer Name: _____	Date of Loss: _____
Loss Address: _____	
City: _____	State: _____ Zip: _____
Insurance / Client: _____	Claim Number (if available): _____
<p>1. FOR THE PROTECTION OF YOUR BELONGINGS, SERVPRO® of _____ (hereinafter "Provider") will arrange to have affected items packed and moved from the loss site (address identified above) to a selected storage location where they will be professionally cleaned by Provider to pre-loss condition.</p> <p>Your items will be stored at:</p> <p>Address: _____</p> <p>City: _____ State: _____ Zip: _____</p>	
<p>2. PROVIDER DOES NOT TAKE firearms, ammunition, prescription drugs, plants, food, flammable and/or hazardous materials, cleaning materials, toiletries, etc. into storage at location identified above. You must make other arrangements for these items.</p>	
<p>3. PERSONAL ITEMS/ITEMS OF HIGH VALUE (i.e. jewelry, firearms, prescription drugs, heirlooms, sterling silver, banking information, etc.) and confidential personal items should be removed by you prior to crews beginning packing, or brought to our attention for special handling and safe keeping.</p>	
<p>4. ANYTHING THAT YOU WOULD LIKE CLEANED AND RETURNED IMMEDIATELY (clothing and/or other items you may need in temporary quarters) please set aside and label these items as Rush items when the packers arrive. Provider will attempt to have these items cleaned and delivered to your temporary address as soon as possible. Once items are stored, it is difficult, time-consuming, and increases the chance of damage and/or loss, if storage must be opened. For these reasons Provider reserves the right to charge you if items must be removed or otherwise disturbed while in storage.</p>	
<p>5. MAKE A LIST OF ALL ITEMS THAT YOU AND/OR PROVIDER HAVE DEEMED NOT RESTORABLE for your Insurance Company. Do not throw away any of these items without consent of your Adjuster. These items will be marked or set aside and will not be taken to Provider's storage location.</p>	
<p>6. PROVIDER WILL MAKE AN INVENTORY OF ITEMS PACKED IN YOUR RESIDENCE/OFFICE. Provider is not responsible for any item not on the inventory list. A copy of this list will be available to you and your Adjuster.</p>	
<p>7. THE MOVING/PACKING CREW IS SCHEDULED TO BE AT THE LOSS ADDRESS IDENTIFIED ABOVE on _____ to begin the move-out process. It is recommended that you or your legally appointed representative be present during the moving and packing phase of this job so that you or they can inspect the contents and condition of items being inventoried and sign all inventory forms.</p>	
Customer's Signature: _____	Provider's Signature: _____
Printed Name: _____	Franchise Legal Name: _____
Customer Reviewed Customer Information Form: <input type="radio"/> Y <input type="radio"/> N	d/b/a SERVPRO® of: _____
Date: _____	Date: _____
<small>©SERVPRO® INTELLECTUAL PROPERTY, Inc. ALL RIGHTS RESERVED FE-051707 1.0 28502 4/11</small>	

SERVPRO® Terms of Move Out	
Customer Name: _____	Date of Loss: _____
Loss Address: _____	
City: _____	State: _____ Zip: _____
Insurance / Client: _____	Claim Number (if available): _____
<p>Customer orders and authorizes SERVPRO® of _____ (hereinafter "Provider") or other authorized carrier to remove contents, including personal items, from above listed property to Provider's warehouse for cleaning, deodorizing (if needed) and storage.</p> <p>Customer agrees to pay Provider for the services identified below immediately upon receipt of the invoice. If applicable, Customer understands that any money due Provider for these services, or other charges incurred, are to be paid in full to Provider BEFORE any belongings placed in storage with Provider will be released and returned.</p> <ul style="list-style-type: none"> <li><input type="radio"/> Packing Services</li> <li><input type="radio"/> Move-Out Services</li> <li><input type="radio"/> Storage fees</li> <li><input type="radio"/> Move-Back Services</li> <li><input type="radio"/> Unpacking Services</li> </ul>	
<p><input type="radio"/> MOVE OUT RELEASE FORM</p> <p>Provider will make an inventory of items packed in your residence/office/structure. We are not responsible for any item not on the inventory list. A copy of this list will be available to you and your adjuster. Clothing is not normally inventoried by us, and we cannot be responsible for lost or damaged items.</p> <p>Customer understands that we are responsible only for those items listed on the original copy of the inventory list initialized by the customer or his/her representative. Customer releases Provider from any and all liability regarding items missing or lost which are not on the original inventory list.</p>	
<p><input type="radio"/> MOVER / MOVING DAMAGE RELEASE FORM</p> <p>Due to the fact Provider is not moving your contents into the storage location, but in fact they are being moved by either you or another moving source, Provider CANNOT be held responsible for items damaged or broken during the moving process.</p> <p>Provider will treat your belongings with a great deal of care during the cleaning process. Items found to be damaged or broken upon arrival, during unpacking or during preparation for cleaning, will be set aside for your examination.</p> <p>I/We have read the above and agree not to hold Provider responsible for items damaged or broken in the moving process.</p>	
Customer's Signature: _____	Provider's Signature: _____
Printed Name: _____	Franchise Legal Name: _____
Customer Reviewed Customer Information Form: <input type="radio"/> Y <input type="radio"/> N	d/b/a SERVPRO® of: _____
Date: _____	Date: _____
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### SERVPRO® Terms of Move-Out (#28565)

The [Terms of Move-Out](#) provides the customer with a description of the types of services the Franchise provides during a move-out, such as packing, moving contents, storing contents, moving back, and unpacking. The [Terms of Move-Out](#) becomes an important document when customers reach their policy limits and are then responsible for payment of moving and storage bills. The form also helps customers understand why they should closely review and initial the Inventory List and alerts them that the Franchise is not responsible for missing or lost contents items not recorded on the Inventory List.

## SERVPRO® Move-Out Checklist (#28512)

The [Move-Out Checklist](#) is completed during the initial scope and guides the estimator in determining what items will be needed to complete the move-out quickly and efficiently. The [Move-Out Checklist](#) is an excellent tool for prompting the estimator to ask questions of and discuss certain issues with the customer.

SERVPRO® Move Out Checklist		Page 1
Customer Name:	Date of Loss:	
Loss Address:		
City:	State:	Zip:
Insurance / Client:	Claim Number (if available):	
Move-Out Date:	Production Manager:	
<b>Site Preparation</b>		
<input type="checkbox"/> Customer Information Form – Move Outs signed and dated <input type="checkbox"/> Terms of Move Out signed and dated <input type="checkbox"/> Customer notified to be present during the move-out process <input type="checkbox"/> Adjuster/Client been notified of moving date/moving details <input type="checkbox"/> Electricity is available if no: # of Generators needed: # of Portable Lights needed: <input type="checkbox"/> HVAC is operational if no: # of Auxiliary Heaters needed: # of Auxiliary AC Units needed: <input type="checkbox"/> Movers notified of specialty items: <input type="checkbox"/> Piano <input type="checkbox"/> Pool Table <input type="checkbox"/> Large Electronics <input type="checkbox"/> Fine Art <input type="checkbox"/> Dry Cleaners <input type="checkbox"/> Other: Crew Summary/Other Site Preparation Needs:		
<b>Move-Out/Move-Back Preliminary Information</b>		
<b>Storage Space and Supplies Required:</b>		
Estimated Sq. Feet:	# of Vaults:	Truck Size:
Ladders:	# of Furniture Pads:	# of Large Items:
Small Boxes:	Medium Boxes:	Dish Packs:
Mattress Boxes:	Mattress Bags:	Wrap Paper (lbs.):
Tape (Rolls):	Foam Wrap:	Bubble Wrap:
<b>Inventory Tracking:</b>		
<input type="checkbox"/> Boxed Items Inventory Completed <input type="checkbox"/> Personal/High Value Items Inventory Completed <input type="checkbox"/> Electronics Inventory Completed <input type="checkbox"/> Unsalvageable Items Inventory Completed <input type="checkbox"/> Large Items Inventory Completed <input type="checkbox"/> Photos/Video of Room(s) and Contents		
<b>Job Completion:</b>		
<input type="checkbox"/> Content Walkthrough Scheduled: Date: <input type="checkbox"/> Date of Move Back: Date: <input type="checkbox"/> Customer Requests that Provider Unpack Contents During Move-Back.		
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SERVPRO® Processed Wood Release and Waiver	
Customer Name:	Date of Loss:
Loss Address:	
City:	State: Zip:
Insurance / Client:	Claim Number (if available):
<p>We at SERVPRO® of (hereinafter "Provider") strive to return all items to pre-loss condition. However, occasionally we come across a piece of furniture manufactured from processed wood, such as, particle board, "was-wood" and/or press board materials that, due to the structural integrity of the contents, or due to the structural integrity of these processed wood materials being compromised due to fire and/or water damage, and despite our efforts, cannot be restored and/or are damaged during the move-out, transportation and/or cleaning process. As a result, Provider shall not be held responsible for any and all damage to furniture constructed from these materials.</p> <p>The undersigned client acknowledges that they have read this Release and Waiver and understand that by their signature they are agreeing to release, waive all claims and hold Provider harmless for any damage to furniture manufactured from processed wood, including but without limitation, particle board, "was-wood" and/or press board type materials caused by move-out, transportation and/or cleaning services required to attempt to return items of this nature to pre-loss condition.</p>	
Client's Signature: _____ Printed Name: _____ Date: _____	
Provider's Signature: _____ Franchise Legal Name: _____ d/b/a SERVPRO® of: _____ Date: _____	
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## SERVPRO® Processed Wood Release and Waiver (#28567)

Processed wood includes particle board and press board materials. The structural integrity of furniture manufactured from processed wood is often affected by water intrusions or smoke and heat damage. These items can easily suffer further damage during a move-out or cleaning procedure. The [Processed Wood Release and Waiver](#) alerts the customer that the Franchise cannot be responsible should processed wood items incur damage during attempts at cleaning and restoration.



## PAPERWORK AND FORMS (PART II)

The following SERVPRO® forms might be presented to the customer or adjuster after contents have been moved from the loss site.

### SERVPRO® Release for Disposal of Belongings (#28514)

Before any claim or salvage items are disposed, the [Release for Disposal of Belongings](#) should be completed and signed by both the insured and the adjuster. This avoids situations where the vendor disposes of items without authorization and the customer seeks compensation for items disposed of without their consent. Another situation to avoid is an adjuster who tells the Franchise to dispose of an item without checking with the insured first. Having a signed release will usually preclude the Franchise from being entangled in disagreements between the adjuster and insured concerning the Claim List.

SERVPRO® Release for Disposal of Belongings	
Customer Name: _____	Date of Loss: _____
Loss Address: _____	
City: _____	State: _____ Zip: _____
Insurance / Client: _____	Claim Number (if available): _____
<p>The undersigned client, being the building owner, owner's representative, resident, and/or owner of possessions in the attached list, hereby gives the Provider identified below permission to dispose of any and all of possessions (see attached list) from the loss site or from storage at Provider's warehouse in any manner that Provider sees fit.</p>	
<p><b>Provider's Warehouse Location:</b></p> <p>Address: _____</p> <p>City: _____ State: _____ Zip: _____</p>	
<p>I/We have had the opportunity to inspect the aforementioned items and agree that there is nothing of any worth or value among these items.</p>	
<p>I/We hereby agree to hold Provider harmless and release Provider from any and all claims and responsibility in the event that there was something of value among these items, but which has, as a result of my/our instructions to Provider, been disposed of.</p>	
<p><b>Client's Release:</b></p> <p>Client's Signature: _____</p> <p>Printed Name: _____</p> <p>Date: _____</p>	
<p><b>Claims Professional Release:</b></p> <p>Claims Professional Signature: _____</p> <p>Date: _____</p>	
<p>Provider's Signature: _____</p> <p>Franchise Legal Name: _____</p> <p>d/b/a SERVPRO® of: _____</p> <p>Date: _____</p>	
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SERVPRO® Contents Inspection Report			
Customer Name: _____		Date of Loss: _____	
Loss Address: _____			
City: _____	State: _____	Zip: _____	
Insurance / Client: _____		Claim Number (if available): _____	
<p>SERVPRO® of _____ (hereinafter "Provider") is neither an insurance adjuster nor agent, and therefore cannot authorize anything to be replaced, repaired or painted. Provider's job is to preserve and protect, stop further damage from occurring and restore damaged items to pre-loss condition when possible.</p> <p>Customer acknowledges that the contents listed below have been cleaned by Provider. Customer has examined these contents and has noted that he/she is unwilling to accept the contents in their current state. Customer acknowledges that any and all items marked as unacceptable will be provided to the assigned claims representative so that decisions on next steps can be made, and understands that any additional information documented below may also be provided to the assigned claims representative for further review.</p>			
Item Number	Item	Notes	Decline
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
			<input type="radio"/>
Client's Signature: _____		Provider's Signature: _____	
Printed Name: _____		Franchise Legal Name: _____	
Date: _____		d/b/a SERVPRO® of: _____	
		Date: _____	
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### SERVPRO® Contents Inspection Report (#28591)

A customer in some situations may be unwilling to accept a contents item after the item has been cleaned and restored. The [Contents Inspection Report](#) informs the customer that the Franchise cannot authorize items to be replaced or repaired. The form recommends the customer contact their insurance claims representative with questions concerning whether an affected contents item will be replaced under the terms of the customer's insurance policy.

## CONTENTS CLAIM INVENTORY SERVICE (CCIS)

Move-outs are labor-intensive projects involving many tasks, so paperwork and forms are vital to tracking the move-out process. In addition to SERVPRO's standard move-out forms, Servpro Industries, Inc., also offers to Franchises an electronic option for tracking a move-out. The *Contents Claim Inventory Service* is a program designed to make the move-out process easier and efficient.

### How CCIS Works

The *Contents Claim Inventory Service* works through a software application called *POI (Pack-Out Inventory)*. The software allows the restorer to provide a complete inventory, using bar code and scanner technology, and to track an entire move-out project.

### Tag Contents Items

Each inventory contents item or box is tagged and identified. Before traveling to the loss site, click the *Tags* button to print labels with bar codes. The tags show

- Customer's file number. *Example:* 897714356547
- Customer's name. *Example:* Crystal Water
- Tag number. *Example:* Box 022
- Tag control number. *Example:* LX4827CT022



Bar code tags help ensure your inventory numbering scheme is accurate and you have not mistakenly repeated numbers.

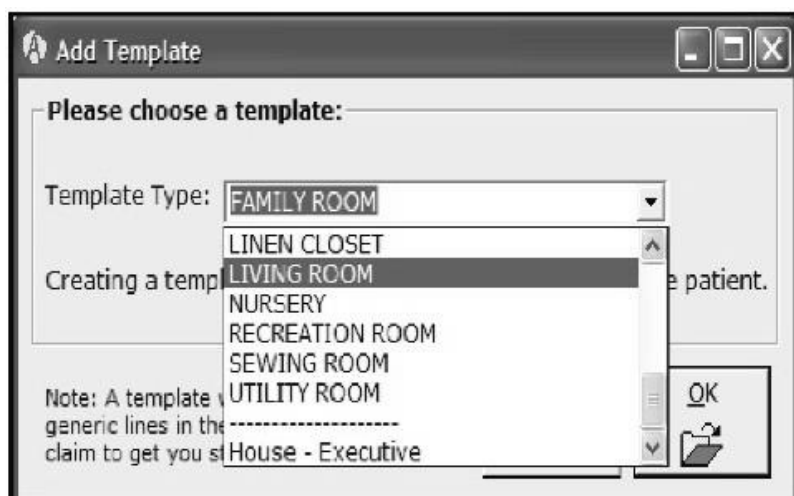
### Scan Your Inventory

Use Palm and Pocket PC scanners to enter the inventory at the jobsite. By scanning bar codes, crew members save time in creating inventory lists. Multiple scanners can enter information at the same job, all into the same electronic job file.



### Custom Room Templates

Save more time creating room-by-room inventories by using Room Templates as a starting point. Templates provide the generic contents items normally found in typical pack-outs.



### Document with Pictures



A picture is worth a thousand words, especially on a pack-out where the customer questions the condition or the quantity of contents items that were moved from the site. Including ample photos will document the original condition of contents, limit your liability, and help solve disputes.

### Classify the Inventory

List contents room-by-room in detail. As you inventory, use CCIS to categorize each contents item into one of three categories:

- Salvageable items.
- Nonsalvageable items.
- Questionable items.

CCIS allows you to capture ample information for each room easily. Customers will not dispute the size, brand, or value of disposed nonsalvageable items. The detailed Total Loss Contents Inventory of claim items and salvage items helps the insured also. Customers no longer need to complete countless Claims List forms during a stressful time in their lives.

Existing Rooms:						
		Room	Unclassified Lines		Total Lines	
▶	X	BASEMENT/CELLAR	0	EDIT	7	CLASSIFY
	X	BATHROOM 1	0	EDIT	15	CLASSIFY
	X	BATHROOM 2	0	EDIT	15	CLASSIFY
	X	BEDROOM 1	0	EDIT	24	CLASSIFY
	X	BEDROOM 2	0	EDIT	23	CLASSIFY
	X	BEDROOM 3	0	EDIT	24	CLASSIFY
	X	BEDROOM, MASTER	0	EDIT	31	CLASSIFY
	X	DEN/OFFICE	0	EDIT	40	CLASSIFY
	X	DINING ROOM	0	EDIT	13	CLASSIFY
	X	EXTERIOR	0	EDIT	7	CLASSIFY
	X	FAMILY ROOM	0	EDIT	25	CLASSIFY

## CONTROLLING PACK-OUT INFORMATION

CCIS produces consistent, professional pack-out inventories in electronic format. The CCIS program helps you maintain control of inventory; you know what you have and where you have it. Using CCIS, the restorer can offer benefits to both insurance adjusters and their homeowners.

### Retrieving Warehouse Items

Customers often ask you to return some of their personal items before the scheduled move-back. When the customer calls, asking for certain contents items, are you able to immediately locate the items among the many boxes in the warehouse? How much time does it take to retrieve the items from storage?

Box	Qty	Description	Tag
001	1	PRODUCT BINDERS PRODUCT GROUP	G-030
	21	SHIRT CLOTHES MEN'S	G-017
	1	SWEAT PANTS CLOTHES WOMEN'S	G-036
	1	SPORT DISCWANS	G-013
	1	CLOCKS	G-015
	1	WOODEN BED BEDS	G-016

CCIS easily lists all contents stored in a particular warehouse location; for example, contents in Vault 1. You know exactly the “what, where, and how many.”

Remove Items from Warehouse

Scan or Type Tag Control Number of Item to be Removed:

Tag B-001 Found

Job Number: 1125

Customer: Mr. Bob Simpson

Item Number: 5

Quantity: 19

Product Group: HEATERS

Product:

CCIS also tracks the transfer of contents items from your warehouse back to the customer. As you remove items from warehouse storage, simply scan the bar-coded tags. CCIS assigns these items to the Item Removal Listing and prepares sign-off forms for your customer and your staff to sign. Avoid disputes with customers who may forget that they sent their nephew to pick up certain items a few months ago.

### Provide Information Sooner

CCIS helps the restorer provide complete information about the customer's contents items. In addition, the information is available in a timely manner, early in the move-out process. The adjuster can manipulate the data as needed, since it is in an Excel™ spreadsheet format. CCIS will help adjusters close move-out claim files faster.

## Replacement Cost Analysis

CCIS is an effective tool for demonstrating the value of restoration services. The software analyzes each line item for the difference between the costs of restoration and replacement. As you enter a contents item into the database, also enter a figure for the replacement cost. CCIS subtracts the cost of cleaning from the replacement cost and calculates the savings for each item.

Pack-out Inventory Cleaning/Repair Costs vs. Estimated Replacement Cost				Sorted By Item Number Where Items are Classified		
Name of Customer Mr. Michael Turner		Reference Number 9988998	Date of Loss 1/22/2003	File Number 23456789-03		
#	1 Qty	2 Description	3 Purch. Date	4 Cleaning/ Repair Cost	5 Replacement Cost	6 Savings
1	2	Days running shoes		\$10.00	\$49.90	\$39.90
2	11	WOMEN'S SUIT		\$264.00	\$769.89	\$505.89
3	5	MEN'S SHIRT		\$30.00	\$124.95	\$94.95

Imagine telling your adjuster that you cleaned \$40,000 worth of contents for a restoration charge of \$8,000. You just saved the adjuster \$32,000 in replacement costs, and CCIS documents the savings. Reports like these confirm to your adjuster the value of your cleaning services.

Move-outs can become nightmares for adjusters. The inventory sheets they receive from restorers are often inconsistent and illegible. Many times the information on the inventory forms does not accurately record the customer's actual contents. Adjusters sometimes lack the detailed paperwork to respond to customers who claim that certain items are missing or that some items are now in worse condition than they were before the loss. By using CCIS bar-coded technology together with digital photos, the restorer can take the nightmare out of the adjuster's job.

Insurance carriers spend about \$26 billion per year on contents cleaning. The *Contents Claim Inventory Service* will potentially lower adjusting and loss expenses and allow claims to be closed more quickly, therefore saving the insurance carriers money. Contact your Distributor or SERVPRO® Corporate for information on how your Franchise can offer this service to insurance customers.



## FIRE INSURANCE JOB FILE FORMS

The Fire Insurance Job File Folder (#46019) is utilized to help manage job notes and information on fire damage projects. The most current versions of these forms are available on *ServproNET*® at the link: *Production > Resources*.

### Fire Insurance Job File Standard Forms

The Fire Insurance Job File Folder contains the following forms:

- [First Notice of Loss \(#28570\)](#)
- [Customer Information Brochure—Fire Damage \(#45561\)](#)
- [Customer Information Form—Fire Damage \(#28500\)](#)
- [Authorization to Perform Services \(#28000/28001\)](#)
- [Release for Disposal of Belongings \(#28514\)](#)
- [Fire Damage Initial Inspection Report \(#28559\)](#)
- [Job Diary \(#28516\)](#)
- [Sketch Pad \(#28536\)](#)
- [Subcontractor Control Form \(#28511\)](#)
- [Certificate of Satisfaction: Emergency Response \(#28529\)](#)
- [Certificate of Satisfaction: Restoration Services \(#28530\)](#)
- [Certificate of Satisfaction: Job Completion \(#28531\)](#)
- [Jobsite Departure Checklist \(#28551\)](#)
- [SERVPRO® Job File Management Checklist \(#28527\)](#)
- [Thank You Card \(#50005\)](#)

**SERVPRO® Forms for Move-Outs**

The following forms will assist in managing the move-out process:

- [Move-Out Checklist \(#28512\)](#)
- [Customer Information Form—Move-Outs \(#28502\)](#)
- [Terms of Move-Out \(#28565\)](#)
- [Contents Inspection Report \(#28591\)](#)
- [Contents Inventory Worksheet: Boxed Items \(#28550\)](#)
- [Contents Inventory Worksheet: Electronics \(#28543\)](#)
- [Contents Inventory Worksheet: Large Items \(#28542\)](#)
- [Contents Inventory Worksheet: Personal/High Value Items \(#28544\)](#)
- [Contents Inventory Worksheet: Unsalvageable Items \(#28541\)](#)
- [Processed Wood Release and Waiver \(#28567\)](#)

**Cleaning Form Examples**

On the use of the following forms for cleaning, see page 198.

- *Boxed Cleaning* form    page 215
- *Cleaning Totals* form    page 216
- *Claim Items Sheet*    page 217

**BOXED CLEANING**

Customer \_\_\_\_\_

Date to Go Back \_\_\_\_\_

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	34	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168
169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192
193	194	195	196	197	198	199	200	201	202	203	204
205	206	207	208	209	210	211	212	213	214	215	216
217	218	219	220	221	222	223	224	225	226	227	228
229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252
253	254	255	256	257	258	259	260	261	262	263	264
265	266	267	268	269	270	271	272	273	274	275	276
277	278	279	280	281	282	283	284	285	286	287	288
289	290	291	292	293	294	295	296	297	298	299	300





**CLEANING TOTALS**

Date: \_\_\_\_\_

The following boxes were cleaned today:

Name of Homeowner:	# of Boxes Cleaned Today:	Total # of Boxes Complete:

The following laundry was completed today:

Name of Homeowner:	# of Pounds Completed Today:	Total Pounds Complete:

Completed By: \_\_\_\_\_ Date: \_\_\_\_\_

## CLAIM ITEMS SHEET

Date: \_\_\_\_\_

The following Claim Items were found during cleaning today:

[illegible]

Documented By: \_\_\_\_\_

## MOVE-OUTS REVIEW

Circle "Do" for each item that should be performed on a move-out.

Circle "Don't" for each item that should *not* be performed.

	<u>Circle Do or Don't</u>	
• Test for cleanability with the customer present on-site.	Do	Don't
• Take time to organize the move-out process in the home.	Do	Don't
• Take an accurate inventory.	Do	Don't
• Take a video or pictures.	Do	Don't
• Use used boxes for new jobs.	Do	Don't
• Use the customer's furniture as tables to pack contents into boxes.	Do	Don't
• Move pictures or paintings without packing properly.	Do	Don't
• Wrap all mattresses for moving.	Do	Don't
• Pack lamp shades with other contents.	Do	Don't
• Put more than one glass shelf in a box.	Do	Don't
• Use any type of tape on wood furniture.	Do	Don't
• Pack wet items with dry items.	Do	Don't
• Specially mark any wet boxes.	Do	Don't
• Use video for claim items and special inventories.	Do	Don't
• Use boxes or cardboard for pads.	Do	Don't
• Stack heavy boxes on light boxes.	Do	Don't
• Place boxes on top of unpadded furniture.	Do	Don't
• Stack furniture on top of each other without pads between.	Do	Don't
• Punish production workers for breakage.	Do	Don't
• Give customer a copy of Inventory Sheets.	Do	Don't
• Complete estimate with detail.	Do	Don't
• Allow special pickup of stored contents by the customer.	Do	Don't
• Mark boxes with tape or paint when finished at warehouse.	Do	Don't
• Perform a final inspection of contents while loading for move-back.	Do	Don't

## WORKING WITH SUBCONTRACTORS

Subcontractors perform work involving technical skills or expertise Franchise professionals as restorers do not possess. Restoring fire-damaged buildings may require cleaning and repairing electronics, drying documents, repairing furniture, fixing plumbing and electrical problems, and rebuilding structure. The Franchise's employees can repair some of these damages, but many require the use of subcontractors. Do not attempt to perform specialized services or major structural repair work unless you or one of your employees has a thorough understanding of the necessary skills and licensing required.

Deciding whether to use subcontractors or Franchise employees depends on the situation. The insurance company may expect the restorer to complete small painting and repair services on a regular basis. You can avoid using a subcontractor for dealing with small jobs by hiring a Franchise employee who has handyman abilities. This option is best when the volume of work justifies the handyman position, since training an employee to produce quality service is easier than managing a subcontractor.

Try to limit the type of subcontract work you perform yourself. You may be successful at repairing some contents items and performing "handyman-type" structural repairs. Many Franchises, however, are not qualified to rebuild structures, refinish furniture, and test electronics for proper functioning. For example, unless either you or your employee has experience in construction, the restoration company should avoid major reconstruction jobs entirely.



### Subcontracting as a Part of Fire Restoration Business

To some degree, subcontracting is a necessary part of the fire restoration process. When handled properly, subcontracting can be profitable and provide a great benefit to your customers. However, subcontracting can also get you into trouble. Be aware that subcontracting requires active management, careful screening of subcontractors, and specific tracking of expenses and income associated with subcontracting.

Insurance adjusters may encourage you to hire subcontractors. Many adjusters and insurance companies want to make a single phone call to one company who can handle all phases of a restoration project, including subcontractor services—a "one call does it all" response to a loss. They look for restorers who can manage subcontractors successfully, and thus complete the restoration with a minimum of coordination on the adjuster's part.

Do not look to subcontracting as your business's major source of income. Profit margins are higher for cleaning services, so cleaning should be at the heart of your business and subcontracting considered an additional service.

Before making subcontract work a large part of your business, consider the impact subcontracting could have on your operation. Can you dedicate someone to supervising subcontractors? Can you afford to increase (maybe double) your accounts receivables? If so, then through subcontracting you may receive jobs that normally would be given to a contractor. You will have more control over the total restoration project, and you will be able to handle all of the adjuster's restoration needs. Remember, though, that providing construction services could be perceived as a conflict of interest: contractors focus on replacing; restorers focus on restoring damage.



Structural subcontract work normally involves large sums of money and could result in a large amount of cash being tied up in accounts receivable for weeks. Before subcontracting a significant amount of structural repairs, make sure you have financial resources to ensure adequate cash flow while awaiting collection of the accounts receivable.

### Know Your Responsibilities

Make sure you understand your responsibilities when utilizing subcontractors. Check local and state requirements for using subcontractors and obtain any required licenses. Some states require you to have a general contractor license to utilize any structural subcontractors. Also review Franchise obligations on subcontractor income:

- The Franchise must pay royalties on all subcontract work.
- Normal royalty rates apply to all work the Franchise performs, even the structural repair work.
- Subcontract royalty rates apply to the dollar amount the Franchise collects for subcontract work, not the discounted amount billed by the subcontractor.

REVENUE	This Month	
Direct Cleaning	\$580.00	
Insurance Cleaning	\$24,418.00	
Retailer Cleaning	\$0.00	
Commercial Cleaning	\$550.00	
Duct Cleaning	\$1,345.00	
Miscellaneous	\$0.00	
<b>Subtotal</b>	<b>\$26,893.00</b>	
Subcontract	\$0.00	
SP Retail Product Sales	\$0.00	
<b>Total</b>	<b>\$26,893.00</b>	

## QUALIFYING SUBCONTRACTORS

Develop a list of reliable subcontractors. Keep in mind that you will be held responsible if any complications arise because of your actions or the actions of your subcontractors.

Subcontractors become a direct reflection of the SERVPRO® Franchise's reputation. For this reason, it is vital to develop relationships with reputable subcontractors and have all subcontractor licensing and insurance information verified and on file.

Remember, your subcontractors represent your company and can influence customers' perceptions of your Franchise, either good or bad. Before establishing a working relationship with a particular subcontractor, qualify the vendor's reliability.

Consider the following areas:

- **The vendor's infrastructure** directly reflects your own company's qualities. Infrastructure factors to consider are the vendor's current contracts or relationships with competitors, geographical coverage, location and number of offices, mobilization times, insurance coverage, licensing and bonding issues, and financial stability.
- **The vendor's public image.** Are the vendor's crews uniformed and neat in appearance? Do the vendor's tools and equipment appear to be in good condition and well taken care of? Are vehicles clean and identified with a logo or decals?
- **The vendor's business reputation.** Check with the local Better Business Bureau, City Council, and local contractor license board to verify the subcontractors you deal with are in good standing.



## Build Your Subcontractor List

Locate subcontractors and create a working relationship in writing **before** you have losses to restore and need subcontractor services. Look for subcontractors you can trust and who will be dependable. They should perform quality work and warranty their work. Preferably, they should have experience with insurance work.

Develop a list of subcontractors who provide services outside your area of expertise. Do not overextend yourself by accepting jobs you are not prepared to perform properly. Customers (and especially adjusters) do not appreciate being used for on-the-job training. Find subcontractors who complement your own business services and cover the various trades and specialties needed for fire restoration. Many subcontractors are in and out of business quickly, so maintaining a list of quality subcontractors is an ongoing process. Ask your trainer or local Franchises for referrals to good subcontractors. The more work subcontractors receive from the SERVPRO® Franchise, the more they value the relationship.



## **Establish a Subcontractor's Agreement**

The restoration company should build and maintain positive working relationships with the vendors on its list. An important step in building the relationship is to establish an agreement regarding marketing, claims handling, referral fees, response times, invoicing and payment, customer complaints and resolution, and the terms of the contracted work. As with any contract or agreement, seek the assistance of legal counsel. Also maintain a current file on subcontractors with a copy of their insurance certificates for workers' compensation and general liability coverage.



### ***Key Points in Agreements with Subcontractors***

Obtain a written agreement with each subcontractor. Use verbal agreements only with businesses you know and trust. The key points to consider for a subcontractor agreement are the following:

- Get references for all subcontractors before entering an agreement.
- Confirm that subcontractors have appropriate licenses, and keep a copy in your files.
- Obtain certificates of insurance from all subcontractors.

Subcontractors should confirm they will

- Not charge for estimates.
- Not charge for repairing an item that must be replaced.
- Not repair preexisting damages.
- Talk to the restoration company first before telling customers an item will be replaced.
- Carry accounts receivable until the restoration company is paid for the job.
- Accept responsibility for breakage and damages.
- Respond quickly to perform estimates.
- Give the restoration company a 15 percent (or more) discount on their work.
- Provide the restoration company an estimate with the subcontractor's prices listed, but bill the restorer at the agreed-upon discounted rate.



## NEGOTIATING SUBCONTRACTOR PAYMENT

When beginning a relationship with a subcontractor, you should negotiate an agreement on discounts prior to utilizing the vendor's subcontracting services on a project. A negotiated discount involves asking subcontractors to submit an invoice for their services at the fair and reasonable cost for the service provided, while accepting an agreed-upon discounted percentage as payment.

When negotiating discounts with subcontractors, explain the reasons that justify you asking for a discount. When you use subcontractors on a project, you are assuming the liability for the timeliness and quality of their work. Subcontractors do not have to advertise to acquire the amount of work you direct to them. Also, your office staff handles invoicing and collection of subcontractor charges, and you schedule and manage their work activities. The discount is actually a commission for sales, collection, and management services.



### Encouraging Discounts

Various methods can be used to encourage a subcontractor to offer a discount. While your



relationship with a subcontractor is still developing, obtain two different quotes for a job. After you have established a strong relationship with a subcontractor, you can still set a policy of requiring two quotes whenever costs exceed a certain dollar amount, for example \$500.00.

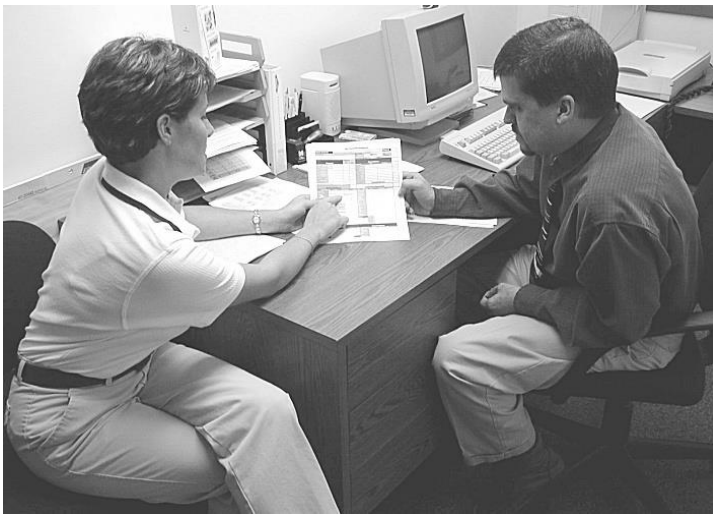
Subcontractors may readily accept discounts if they are assured of receiving payment for services quickly. One Franchise follows a graduated discount schedule based on timeliness of payment:

- Subcontractor accepts a 20 percent discount if the subcontract invoice is paid with 10 days.
- Subcontractor accepts a 10 percent discount if the subcontract invoice is paid with 11–30 days.
- Subcontractor receives full amount of invoice if paid after 30 days.

Always ask for delayed payments when negotiating discounts. Many subcontractors want their payment when they finish their particular job, not later when you are paid for restoration services. A good general guideline is to pay the subcontractor as soon as the customer is satisfied and you yourself are paid.

## Billing Subcontract Services

Franchisees commonly ask how to bill for subcontractor services when discounts are involved. Always use the term *discounts*, and never use language such as *rebates* or *kickbacks*. Neither Servpro Industries, Inc., nor any Franchise wants to be perceived as a company that accepts kickbacks from anyone. The proper terminology for price reductions in a working relationship is *volume discount*. Some of the more common methods of arranging discounts include threshold volume, term discounts, and quick payment. You might describe the agreement as a discount based on terms of your pricing structure, such as 15-5 Net 30 (meaning a 15 percent discount if paid within 5 days of billing; net due if paid within 30 days). Every business incurs sales and advertising expense, and discounts are designed to be paid when no sales and advertising expenses are incurred to obtain the work.



Be prepared for a situation where an insurance representative asks you to supply an invoice from one of your subcontractors. This situation is why you should **discuss and negotiate all pricing and discounts prior to the start of services from a subcontractor**. You should *never* create an invoice for a subcontractor; that could be considered a suspicious activity. You should *never* alter an invoice or bill. Tampering with and submitting altered invoices from subcontractors can be construed as possible insurance fraud. If an adjuster asks for a subcontractor invoice, produce the bill with confidence and explain the discount

structure without hesitation. Arranging discounts is acceptable and commonplace. Do not get in a situation where you could possibly sacrifice your credibility to justify your billing.

## MANAGING SUBCONTRACTORS

To obtain the best results with subcontractors, you must actively manage their services.

### Learn about Subcontractor Trades

Learn all you can about the subcontractor's profession. As you become knowledgeable about what subcontractors do, you reduce the risk of someone taking advantage of you. In addition, experience in the trades helps you evaluate job costs and the quality of the subcontractor's work. Gain enough technical knowledge to bid a job so the subcontractor makes a profit and the insurance company is satisfied. For instance, SERVPRO® recommends you obtain a contractor's license for educational purposes, yet does not encourage making construction a large portion of your business.

### Scheduling

Scheduling subcontractors is a big challenge. Use a scheduling board to keep track of the individual subcontractor schedules. Also use the SERVPRO® [Subcontractor Control Form \(#28511\)](#) to track the date you contacted each subcontractor, and the start dates and completion dates for each subcontractor's work.

### Monitoring the Work

You are accountable to your customer and adjuster for the performance of subcontractors, so monitoring their work is crucial. Never rely on a subcontractor to perform properly. Good advice is to **follow up, follow up, follow up!** You must follow up on every detail of the job to ensure the customer is being treated properly by subcontractors and work quality is good.

Inspect what you expect! Check every job closely. Each estimator should check his or her own jobs. The production manager who schedules subcontractors should perform follow-up checks. Have subcontractors report daily on job progress.

Monitoring involves communication with the customer. Some SERVPRO® Franchise offices have a project coordinator with an assistant who calls on customers a minimum of every two days. You might conduct customer surveys to ensure quality subcontract work is being performed. When problems arise, resolve them quickly. Keep the customer and adjuster informed of subcontractor issues. Walk through the job with the customer when the job is complete, and do not pay the subcontractor until the customer is satisfied. Remember, one subcontractor can ruin the good relationship you have built with the insured.

**SERVPRO® Subcontractor Control Form** Page 1

Customer Name: \_\_\_\_\_ Date of Loss: \_\_\_\_\_  
 Loss Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Insurance / Client: \_\_\_\_\_ Claim Number (if available): \_\_\_\_\_

☐ Dry Cleaning (or Laundry) Services Name/Company: \_\_\_\_\_  
 Rush Items: ☐ Y ☐ N # of Bags: \_\_\_\_\_ Deodorize: ☐ Y ☐ N  
 Date Out: \_\_\_\_\_ Return Date: \_\_\_\_\_  
 Service included in Estimate: ☐ Y ☐ N Date Invoice Received: \_\_\_\_\_ Invoice #: \_\_\_\_\_  
 Notes: \_\_\_\_\_

☐ Carpet Installation (or Reinstallation) Services Name/Company: \_\_\_\_\_  
 Start Date: \_\_\_\_\_ Date Completed: \_\_\_\_\_ Square Yards: \_\_\_\_\_  
 Service included in Estimate: ☐ Y ☐ N Date Invoice Received: \_\_\_\_\_ Invoice #: \_\_\_\_\_  
 Notes: \_\_\_\_\_

☐ Painting Services Name/Company: \_\_\_\_\_  
 Areas to Paint: \_\_\_\_\_  
 Start Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_  
 Service included in Estimate: ☐ Y ☐ N Date Invoice Received: \_\_\_\_\_ Invoice #: \_\_\_\_\_  
 Notes: \_\_\_\_\_

☐ Electronics Inspection Services Name / Company: \_\_\_\_\_  
 Date Out: \_\_\_\_\_ Return Date: \_\_\_\_\_ Items List in Job File: ☐ Y ☐ N  
 Service included in Estimate: ☐ Y ☐ N Date Invoice Received: \_\_\_\_\_ Invoice #: \_\_\_\_\_  
 Notes: \_\_\_\_\_

☐ Subcontractor Name / Company: \_\_\_\_\_  
 Description of Services: \_\_\_\_\_  
 Start Date/Date Out: \_\_\_\_\_ Return Date: \_\_\_\_\_ or Completion Date: \_\_\_\_\_  
 Service included in Estimate: ☐ Y ☐ N Date Invoice Received: \_\_\_\_\_ Invoice #: \_\_\_\_\_  
 Notes: \_\_\_\_\_

☐ Additional Subcontract Services Listed on Page 2/Back of Subcontractor Control Form

28511 07/11 Each SERVPRO® Franchise is Independently Owned and Operated.

**Keep Customer Service First**

Customer service should be a priority for your subcontractors, as it is for your own employees. Teach your subcontractors how to provide quality customer service through professional appearance, quality of work, timeliness of work, and communication. In fire damage restoration situations, train subcontractors to show compassion and sympathy when interacting with distraught customers. Encourage customer service by requiring subcontractors to obtain a signed customer satisfaction form before they receive payment.

Many problems are avoided if you have an understanding upfront with a subcontractor about your Franchise's expectations for quality work. Require subcontractors to call and set times with the customer, to be on time, and to follow up on customer complaints. Let them know that a job is complete only when the customer is happy.

**Only Work with the Best**

Do not continue using subcontractors who fail to produce work meeting your standards. The reputation of your business is at stake! Build a list of two or three subcontractors for each type of subcontract service, and communicate to all that those who do not deliver quality work will no longer be utilized. Do not continue relationships with subcontractors who fail to set the same high standards you have for your own company.

**Handling Large-Volume Subcontracting**

Gain the licensing and experience with subcontracting on smaller jobs before attempting large volumes of subcontract work. If you do not stay on top of coordination and cash flow, the system falls apart, the work does not get done, your subcontractors are not profitable (and neither are you). Prepare your staff for the increased paperwork and phone calls generated by large volumes of subcontract work. Watch your cash flow and keep track of payments made to subcontractors.

**SAMPLE SUBCONTRACTOR AGREEMENTS**

NOTE: Refer to the sample contracts below. Before adopting these contracts, have your attorney review them to ensure they are appropriate for your state and local area.

**AGREEMENT BETWEEN  
INDEPENDENT CONTRACTOR AND CLIENT**

This AGREEMENT is entered into by and between \_\_\_\_\_ ("CLIENT") having a principal place of business at \_\_\_\_\_ and \_\_\_\_\_ ("IC") having a principal place of business at \_\_\_\_\_ for the performance of certain tasks by IC as an independent contractor.

WHEREAS, IC is engaged in an independent business and has complied with all federal, state, and local laws regarding business permits and licenses of any kind that may be required to carry out the said business and the tasks to be performed under this agreement and CLIENT is not IC's sole and only client or customer and IC is engaged in the same or similar activities for other clients.

NOW, THEREFORE, in consideration of the foregoing representations and the following terms and conditions, CLIENT and IC agree as follows:

1. TASKS OR SERVICES TO BE PERFORMED. CLIENT engages IC to perform the following tasks or services:  
\_\_\_\_\_  
\_\_\_\_\_
2. TERMS OF PAYMENT. IC shall submit invoices to CLIENT for the tasks or services performed. [set forth the timing] CLIENT shall pay IC as follows: [set forth the commission or other fee arrangement, time for payment, and any other terms of conditions of payment]  
\_\_\_\_\_
3. INSTRUMENTALITIES. IC shall supply all equipment, tools, materials, and supplies to accomplish the designated tasks except as follows:  
\_\_\_\_\_
4. GENERAL SUPERVISION. IC has the sole right to control or direct the manner in which the tasks or services described in Section 1 are to be performed provided, however, CLIENT may periodically inspect, prescribe alterations, or otherwise take steps to ensure the final work product meets CLIENT'S specifications.
5. NO PAYROLL OR EMPLOYMENT TAXES. No payroll or employment taxes of any kind, including but not limited to FICA, FUTA, federal personal income tax, state personal income tax, state disability insurance tax, and state unemployment insurance tax, shall be withheld or paid with respect to payments to IC by CLIENT.

6. NO WORKER'S COMPENSATION. No worker's compensation insurance has been or will be obtained by the CLIENT on account of IC or IC's employees.
7. TERMINATION. This Agreement shall end on \_\_\_\_\_ (or the date work completed.) Either party may terminate this Agreement by giving \_\_\_\_\_ days prior written notice to the other party.

Agreed to this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, at \_\_\_\_\_, State of \_\_\_\_\_.

CLIENT:

By: \_\_\_\_\_

Name and Title

INDEPENDENT CONTRACTOR:

By: \_\_\_\_\_

Name and Title

*Note: This simple form is for illustration purposes only. It has not been prepared with any specific factual situation in mind. It may not be suitable for your particular use. No warranty is made as to it.*

**INDEPENDENT CONTRACTOR AGREEMENT**

I, \_\_\_\_\_, do hereby agree to perform services for \_\_\_\_\_ as an independent contractor, and agree to be compensated as such.

I acknowledge that as an independent contractor that I have the sole responsibility for the payment of my own income taxes, and am subject to the self-employment tax. I further acknowledge that it is my responsibility to provide my own insurance for injuries and/or coverage, since I am not engaged as an employee of \_\_\_\_\_. I attest to the fact that I hold myself open to engagement by anyone, that I am solely responsible for the results of my labors, and for the means and methods of accomplishing said labor. As an independent contractor, it is my responsibility to provide all tools and equipment necessary to accomplish the engagement. I agree to furnish \_\_\_\_\_ my social security or federal employer identification number, and my address so that \_\_\_\_\_ can provide me with the necessary Form 1099 (NEC) at the end of the year. I understand that my failure to provide my taxpayer identification number may result in having \_\_\_% of my compensation withheld and paid over to the Internal Revenue Service, under the "backup withholding" rules.

\_\_\_\_\_  
Signature of Independent Contractor

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Company Name by \_\_\_\_\_)

\_\_\_\_\_  
Date

*Note: This simple form is an illustration only. It has not been prepared with any specific factual situation in mind. It may not be suitable for your particular use. No warranty is made as to its fitness for any particular purpose or use. No other warranty is given.*