



Photo courtesy of Craig Christensen, Sparklewash Construction Services

Three Keys to Successful Masonry Cleaning



Photo courtesy of Mike Trotta/PROSOCCO



Photo courtesy of Craig Christensen, Sparklewash Construction Services

BY GARY HENRY

Sioux Dakota II Series

CLEANSING IN YOUR HOUSE OR CAR WITHOUT THE KEYS CAN BE TOUGH. Cleaning masonry architecture, new or old, without one or more of the three, simple keys to successful masonry cleaning can be devastating.

The keys are:

- The correct cleaner
- The proper personnel
- The right equipment.

Here are three cases where contractors, all of whom knew better, tried to get the job done without one or more of the keys.

Incorrect cleaner

IT WAS A MULTI-MILLION-DOLLAR luxury home on the north side of Chicago. The exterior was red brick and gray mortar – except that the mortar joints weren't gray. They'd turned to an ugly yellow after new-construction cleaning in 2008 with muriatic acid. The raw acid had eaten away the cement paste, exposing yellow sand.

To cut costs, the mason contractor had forced the cleaning contractor – over the cleaning contractor's objections – to use muriatic acid to remove excess mortar and common jobsite soiling.

The problem wasn't mere unsightliness, explains Jim Lucas, architectural consultant, J.N. Lucas and Associates, Hammond, Ind. The muriatic acid had eaten the joints to such an extent that they were no longer weather resistant.

Wrong equipment

AN ELEMENTARY SCHOOL in Akron, Ohio, with a concrete brick exterior, looked fine after its new-construction cleaning in 2007 – for about three weeks.

That's when the rich, deep red of the concrete brick faded to a dull, listless pink. To save time, the contractor had applied the cleaner at pressures six- to eight-times the manufacturer's recommended maximum.

The high pressure jammed the cleaner into the concrete brick pores to a depth of 1/8- to 1/4-inch, says Mike Trotta, contractor training specialist for PROSOCO in Lawrence, Kan. That was too deep for rinse water to flush out. Later, as the embedded cleaner effloresced out of the brick, it faded the color. Though the concrete brick, a good product, was not to blame, it's now banned from the Akron school system, Trotta says.

OPPOSITE PAGE CLOCKWISE FROM TOP:

Project Foreman Eduardo Erazo, Sparklewash Construction Services, Omaha, Neb., uses the correct equipment to apply an appropriate masonry cleaner to clay brick and precast concrete at the Bank of West Omaha.

This photo shows why you should always test before overall cleaning. Here, a contractor tested a cleaner made for clay brick on concrete brick.

Project Foreman Eduardo Erazo, Sparklewash Construction Services, Omaha, Neb., thoroughly flushes spent cleaner and dissolved contaminants from limestone after new-construction cleaning at the Bank of West Omaha.

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Personnel problem

A STRIP MALL in Wausau, Wis., looked great, on three sides.

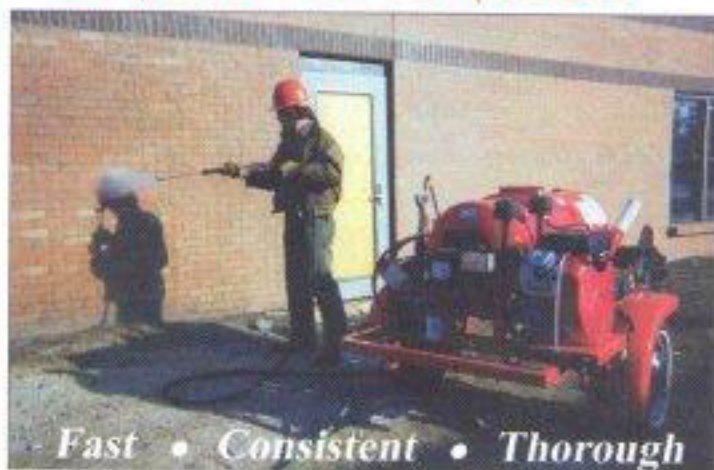
The clay brick front and split-face block sides all looked terrific after post-construction cleaning in 2008. But the rear of the building, also split-face block, was scarred with wand marks.

The project superintendent explained what happened, Lucas says. Though the super had cleaned the building's sides personally, he'd let an inexperienced apprentice clean the back without proper supervision. Wand marks resulted.

In this case, and the other two, the damage was at least partly reversed. But the cost in time, money, reputation and aggravation could have – and should have – been avoided altogether.

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By Randy Weil and Rick Swanson

Swanson Masonry Inc. is a well-established, award-winning masonry company in St. Louis, Mo. Six years ago, the company faced a tough decision when issues with a particular cleaning subcontractor they were using arose. A customer and personal friend of Rick Swanson wondered why the cleaning took so long. When the customer observed the cleaning of a job, he noticed the methods used were time consuming, the cleaner caused some disruption on the jobsite, and he showed little respect for the customer. Perhaps worst of all, there were burns on concrete, etched windows, and a variety of other damages caused by the cleaning.

Swanson's customer commented that everything else in his the operation was excellent, with the exception of the cleaning. From Swanson's perspective, "We had invested so much time and forethought into every process that we had almost zero flaws and felt we were at the top of our game. I told my customer that I thought our cleaner was the norm, and I did not know of anything or anyone else to turn to. He wasn't impressed with that answer."

Swanson searched for alternatives and found the Kem-O-Kleen Masonry Cleaning System. "No one was currently using anything like this in my area," Swanson says. "It seemed to be what we needed, but there was no way I was spending that kind of money when I could buy brushes for \$6 each. I grew up in this business and washed every weekend for my dad, which is one of the reasons I decided to sub out our cleaning. My call to the manufacturer, Unique Industries, was enlightening. They told me things about cleaning masonry that I hadn't thought of. We ended up driving several hours to rent a machine, so we could try one out before making this major decision."

Challenge:

Improving Efficiency and Quality in Masonry Cleaning

Masonry Company:

Swanson Masonry Inc. in St. Louis, Mo.; Rick Swanson, President

Equipment:

Kem-O-Kleen K-3003/12 Masonry Cleaning System

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Correct cleaner

WHAT'S THE RIGHT CLEANER for any given masonry? On a new-construction project, the masonry manufacturer will be glad to tell you. It's an increasingly common practice for manufacturers to have their products tested by an independent lab to see which cleaners work best.

That crucial info is often supplied on a pallet tag on every masonry cube. If not, manufacturers will usually be glad to give you their recommendations on request. It's in their interests, as well as yours, to have projects look as beautiful as you can make them.

Choosing the right restoration cleaner is harder. The staining and soiling probably started before you were born. It's hard, and it's thick. It's often made of multiple contaminants. The surface in the grip of these stains may be sensitive, damaged or decayed. A cleaner that's right for the soiling but wrong for the substrate could give you clean, but damaged masonry.

Craig Christensen, a project manager with Sparklewash Construction Services, an Omaha, Neb., masonry cleaning contractor, has a simple answer for that problem.

"I get a rep from the manufacturer of the cleaning products I'm interested in to come to the site for no-cost tests," Christensen says. "That way, I always know right from the beginning that I've got the right cleaner – and procedure. If the manufacturer can't send a rep, I find one who can. It's not worth it to take a chance."

The proper personnel

IT'S NO SECRET that masonry professionals would rather lay masonry than clean it. That doesn't make cleaning any less crucial. If you don't want to clean the brick yourself, consider hiring a professional, and then following that professional's recommendations.

Though the job might not be fun, it's far too important to the building's final appearance – and price tag – to trust it to anyone without the proper training and qualifications.

"Our apprentices work on simple cleaning jobs under supervision," Christensen says. "It's part of their training. But complicated jobs like restoration cleaning, and mixed and sensitive masonry jobs, are only for our most skilled foremen."

"We started washing our first job the following morning," he continues. "This job had about 20,000 to 22,000 bricks. My laborers, who had never washed brick before, had the entire job done in less than a day and wanted to know where they should go the next day. They told me that the cleaning had been easy, and they were proud of how much better this job looked than previous jobs.

"I sent them to a colored, split-faced job the very next day," says Swanson. "It had two light bands, and the rest was a deep red. This was where I felt we would lose it. The job was cleaned and looked better than any block job in town. We had just saved half our cleaning cost on one block job. That one week of use saved us half of the machine's cost. We also had several great-looking projects.

"My customer called me because one of those jobs was his," he says. "His newest project looked better than any we had done in the past. This job was a blond clay brick with a slightly darker banding. The only product used was muriatic acid. We did not burn or etch any pre-installed windows. The mortar joints were still as nicely tooled as to prior to washing. We had no sand falling out of the joints. It all blended together better than any brick job I had seen before. He liked the way my in-house laborers had jumped right on the washing as soon as we were done."

Swanson Masonry Inc. now owns two Kem-O-Kleen machines. One is set up to handle the clay brick and smooth faced colored CMU. The other is for split-faced CMU and "glassy" clay brick. Rick says, "We clean about 3,500 to 4,000 square feet of masonry on any given day. Our laborers love the way the machine operates and how efficient we have become."



In addition to cleaning masonry, Swanson Masonry Inc. uses their Kem-O-Kleen machines for a variety of other tasks. "We have acid etched newly poured exposed aggregate concrete slabs," Swanson says. "We have waterproofed several buildings with huge success. The materials are added into the holding tank and then pressurized. We use the machine as a low-pressure sprayer capable of spraying faster and more evenly than any machine we have ever used. The constant flow of material really makes for good coverage and a quality project. We even use the machine to clean our equipment."

The change six years ago led to a dramatic increase in productivity and quality. The result was lower cost, higher employee satisfaction and higher customer satisfaction. **IMAS**

About the authors: Randy Well is president of Unique Industries, and Rick Swanson is president of Swanson Masonry Inc.

"They know the details that make jobs turn out right, like using plenty of water to pre-wet and rinse," he says. "They know not to get in too tight with the wand."

The right equipment

THIS IS NOTHING MORE than the old common-sense adage "the right tool for the right job." As the contractor at the Akron elementary school found out, using high-pressure spray equipment to apply a cleaner that should go on at low pressure was not "using the right tool for the right job."

"He'd gotten away with that before," Trotta explains. "Even though the cleaner instructions warn specifically not to apply at high pressure, the contractor thought he could save time. And, he did, on a few jobs where the walls were dense clay brick and tooled mortar joints. He took an awful chance, but was lucky. His luck ran out when he encountered the porous concrete brick."

Instructions on reputable masonry cleaning products tell you specifically what kind of equipment to use, right down to the nozzle size, Trotta says. Successful masonry cleaners follow the instructions.

Two out of three

THE CLEANING SUB-CONTRACTOR on the Chicago luxury home was a good man, with good equipment. But two out of three keys wasn't enough.

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The cleaning sub-contractor on the Akron elementary school was an experienced professional with an effective cleaner. But the wrong application equipment sank him.

The kid who left the wand marks had good equipment and a good cleaner. But without experience or supervision, he was in a position to do some damage, and he did.

While two out of three may be okay for coin flips, you need all three keys to succeed in masonry cleaning.

When you have them, there's not much that can stop you. **IMAS**

Gary Henry is Business Communication Specialist for PROSOCO.