Eight-Penny Nail

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New Ways to Deal with Old Paint Solvents

Like it or not, if painting is a part of your business, the government considers you a "toxic waste generator." And this means that the solvents used to clean brushes, rollers, and paint guns are subject to the same strict disposal requirements as other toxic materials. The legal disposal methods are expensive and require considerable paperwork. As a result, both large and small contractors have been looking for ways to reduce this waste or their handling of it.

Land Disposal Outlawed

At the federal level, the key restrictive legislation is the Resource Conservation and Recovery Act (RECRA).

When Congress reauthorized RECRA in 1984, it tightened the law to prohibit any land disposal of solvents. According to officials of the federal Environmental Protection Agency (EPA), disposal of solvent sludge in landfills is no longer legal anywhere in the U.S. State laws must be at least as strict as RECRA, and many are considerably stricter.

Flushing solvents down the drain is not a legal alternative. It violates other laws, including the Clean Water Act, state pollution laws, and sewer-use ordinances. That leaves only two choices: recycling and incineration. Both are costly.

RECRA itself is enforced only for "large generators" who produce more than 100 kilograms (about 220 pounds) of waste per month. State laws often extend the restrictions to smaller generators, with different cutoffs in each state. Massachusetts, for example, requires compliance by contractors who produce only a few gallons of waste solvents per month.

Cradle-to-Grave Liability

Under the rules, the contractor assumes "cradle-to-grave" responsibility for what happens to the solvents. At least in theory, even if you pay a toxic waste hauler to take your solvents in good faith, you remain liable forever for any future problems caused.

If your waste can be traced to a landfill that later leaks, you can be held responsible "even if the problem hasn't been traced to your specific waste" according to John Zipeto, environmental engineer for EPA's Region I office in Boston.

Contractors and other toxic waste generators covered by the laws must obtain ID numbers from EPA or the appropriate state agency. When waste is picked up, they must fill out a manifest form, which follows the waste to its final destination. At that point, a copy of the form goes back to the contractor as evidence that the hauler followed proper disposal procedures. "If you don't get a return copy, you know that something has gone wrong," says Joel Balmat, chief of the EPA Waste Disposal Section for Maine and Vermont.

Besides the paperwork, contracting for disposal of contaminated solvents costs $200 to $500 for each 55-gallon drum, depending on the location.

Solvent Stills

The cost and paperwork have led some larger contractors to install distillation equipment to recycle most of their solvents in-house.

Several U.S. companies manufacture stills. Pete Scantlebury, sales engineer for Finish Engineering Co. of Erie, Pa., says his firm has sold thousands of solvent stills since the tightening of RECRA in 1984. Scantlebury admits, however, that stills are not inexpensive.

The smallest solvent still made by his firm has a five-gallon capacity and costs about $3,000. Because mineral spirits have a higher boiling point than many other solvents, an additional vacuum attachment must be purchased for about $1,800. Because the liquids and gasses are flammable, they must be installed in rooms that meet strict code requirements.

Richard Molyneaux, president of Dickson Painting in Endicott, N.Y., bought a 15-gallon still for his shop two years ago. He paid $10,000 for the system, but had to shut it down shortly thereafter to construct an environment for safe efficient operation. He built a closed-loop cooling water system (about $500), and a "fireproof, shock-proof, explosion-proof room" in a warehouse (about $1,000 plus labor).

"I bought a Cadillac in a Pinto body," he comments. "But it's a good investment. It hasn't paid for itself yet, but it will." Molyneaux, who has about 25 employees, says keeping the operation in-house removes the danger of the big fines he would face if a hauler were to mishandle his waste.

In a seven- or eight-hour shift, he says the still recycles 15 gallons of mineral spirits or other solvents, pure enough to re-use. All that remains for disposal is a layer of gooey sludge, ranging in thickness from 1/2 to 1 1/2 inches. The sludge is in a plastic bag for easy removal. The bags, which cost $4 each, are the largest single operating expense, Molyneaux says.

It takes an employee only an hour each morning to remove the solvents and sludge from the day before and set up for the next 15 gallons, he says. "That's all there is to it."

To make the operation more cost effective, Molyneaux also recycles solvents brought in by other contractors. That works out well, he says, because processing five gallons requires as much effort and cost as processing the full 15-gallon capacity of the equipment.

Other Solutions

Expensive distillation equipment is less feasible for smaller users of solvents, who are struggling with a range of ways to reduce their waste. Many contractors were interviewed about the problem for a recent article in *Painting and Wallpaper Contractor,* a magazine published by the Painting and Decorating Contractors of America.

Besides distillation, some of the methods of reducing toxic wastes discussed in the article include:

- Allowing sludge to settle in holding drums, then skimming relatively clean solvents from the top for re-use.
- Reducing the use of solvent-based paints.
- Using cheaper roller covers, which can be thrown out rather than cleaned.
- Shipping solvents for use as fuel in high-temperature furnaces, such as those used in the manufacture of concrete blocks. This reduces disposal costs, but only the relatively clean solvent, siphoned from the top, can be used as fuel.
- Allowing solvents to evaporate to reduce the volume of sludge.

"Mom and Pop" Alternatives

Meanwhile, even the regulators concede that some contractors, particularly smaller ones, are undoubtedly disposing of solvents in prohibited ways. They encourage those who generate small amounts of solvents to use environmentally-sound methods, even though chances of getting caught may be slight.

Balmar, of EPA, encourages small operators to recycle paint thinner by letting the sludge settle and scooping the thinner off the top. Small users can save their remaining wastes for household collection programs that exist in many communities for recycling and disposal of small quantities of toxic wastes.

Zipeto says the best solution for most small operators is to contract with commercial recycling companies that collect waste solvents and replace them with recycled solvents.

Bob Nelson, a spokesman for the National Paint and Coatings Association, says pick-up services known as "milk runs" are available for even tiny quantities of waste solvents in most locations throughout the country.

However, Balmat acknowledges, "No state or local government is going to get every last bit [from] the mom-and-pop operations or the do-it-yourselfer who occasionally cleans a brush in the sink."

"Painting contractors move around," he notes. "The most active enforcement is [directed toward] larger generators who operate in a single location."

—Steve Carlson

"Old House" Host Not Home

If one of your favorite weekly activities is to tune into "This Old House," you may be surprised next time you do. Bob Vila, long-term host of the Boston-based public TV show is being shown the door. According to an AP report carried in the Burlington Free Press (Burlington, Vt.), Vila's "numerous commercial endorsements don't fit the image of public television."

Apparently, Vila refused to let go of his commercial commitments in recent negotiations with the show's producers. Vila has appeared in advertisements for Time-Life home repair books, Rickel Home Centers in the Mid-Atlantic region, Amerock Corp., a cabinet and storage hardware manufacturer, and other home improvement related products. ■

From What We Gather

The overall price of construction materials rose by 5.6 percent in 1988, compared to a 2-percent rise in 1987. Leading the rise in '88 were plumbing fixtures (7.5 percent), brass fittings (10 percent), and fabricated structural material (7.2 percent). Gypsum products declined almost 10 percent over that period.

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Homebuyers looking for affordable housing should move to the Midwest, where the average family can afford the average home in the $85,000 to $95,000 range. In Boston, by contrast, fewer than a third of families can afford the average home at $166,000. San Francisco is a bit worse with the median home price at $179,000.

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A gas furnace will outlast a heat pump, on average, according to a recent survey of 492 heating dealers and service contractors. Average life is 10.9 years for heat pumps and 16.3 years for gas units. Source: Easton Management Consultants, Inc., Stamford, Conn.

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Most entrants to the workforce between now and the year 2000 will be women and minorities, according to a new publication from the U.S. Labor Dept., called Opportunity 2000. Yet deficiencies in basic skills are growing among minorities even as the level of skill necessary to fulfill the most basic jobs is increasing.

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Of all remodeling jobs, 75 percent are done by professional remodelers, the rest by do-it-yourselfers. The top jobs are room additions (25 percent of total activity), kitchens (20 percent), and light-commercial remodeling (11 percent).

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Albany Rehabs: A Model For Other Cities

Pasture's Project, one block of recently renovated buildings in Albany, boasts trees with iron protection, bricked sidewalks, and all new faces in an effort by the city to spruce up the neighborhood.

Big city housing renovations have become a staple for a number of Albany area contractors. The New York state capital has large tracts of ghetto housing condemned for back taxes and then sold at public auction for rehabilitation. All this adds up to opportunity for the willing and qualified contractor.

Ron Roland, a general contractor in the upstate N.Y. area has "moved [his] entire operation from Schenectady because of it." Roland, who's worked in the city for eight years, has found Albany's code enforcement uniform, fair, and prompt and the city's payments for work timely. But he cautions that this is not the case in other cities, and wishes that surrounding communities would take Albany as a model of efficiency.

In Albany, contractors can purchase housing tagged for rehabilitation at public auction from the county and resold for profit after rehabilitation. Or, they can choose to work for one of the four neighborhood improvement corporations, called sub-recipients, who also buy the properties for use as low income housing units.

The Albany Community Development Agency (ACDA), administers numerous state and federal programs using funding from the U.S. Department of Housing and Urban Development (HUD). Companies wanting to rehab in the city using HUD money must apply to the ACDA for qualification as rehabilitation contractors. This involves filing A.I.A.'s, credit reports, and certificates of insurance. The agency does a thorough background check. It recommends contractors who satisfy their requirements for small projects and adds their names to a bid list, notifying them of upcoming jobs. Larger projects may be made available after the contractors prove themselves. Properties in the city have sold for as low as $4,000 to as much as $25,000 before reconstruction, depending on location and the extent of renovation needed. Some units that would have sold for as little as $4,000 just five to seven years ago are now selling at twice that price, because the surrounding area has already been improved through these programs. For example, the ACDA has spent as much as $1 million on street improvements, brick walkways, curbs, lighting, and landscaping in an effort to spur unit sales for rehabilitation in a particular neighborhood.

According to Roland the average cost of rehabilitating one of these units ranges between $90,000 to $125,000.

—E. A. Clegg

R.S. MEANS REPORT

MULTI-FAMILY CONSTRUCTION COSTS

Four-Unit, Custom-Grade Townhouse

Base cost: $62.53/sq. ft. living area
Total cost per unit: $87,542.00
Total cost of complex: $350,168.00

Location Multipliers
(Multiply base cost by the correct factor for the city nearest you.)

Boston, Mass.	1.12	Concord, N.H.	.93
Albany, N.Y.	.96	Hartford, Conn.	1.02
Portland, Maine	.89	Burlington, Vt.	.90

Cost Breakdown

Building Component	Description	Base Cost/Square Foot of Living Area			
		Man-Hours	Materials	Labor	Total
Site Work	Site preparation for slab; trench 4' deep for foundation wall.	.034	$ .00	$ .62	$ .62
Foundations	Continuous 8" x 18" concrete foot; cast-in-place concrete wall, 8" thick, 4' deep; 4" concrete slab on 4" crushed stone base, trowel finish.	.078	2.82	2.47	5.29
Framing	2" x 6" wood studs, 16" o.c.; 1/2" plywood sheathing; 2" x 8" rafters, 16" o.c. with 1/2" plywood sheathing, 8:12 pitch; 2" x 10" floor joists, 16" o.c. with bridging and 5/8" plywood subfloor on 1" x 3" wood sleepers, 16" o.c.	.230	3.64	3.44	7.08
Exterior Walls	Horizontal beveled wood siding, 15# felt building paper; 6" batt insulation; wood double-hung windows, 3 solid-core wood exterior doors; storms & screens.	.077	7.52	2.51	10.03
Roofing	300# asphalt shingles; 15# felt building paper; 6" batt insulation, copper flashing; Aluminum gutters & downspouts.	.058	1.49	1.19	2.68
Interior	5/8" drywall, skim-coat plaster finished painted with primer and one coat; hardwood baseboard and trim, sanded and finished; finished hardwood floor (70%), ceramic tile with underlayment (20%), vinyl tile with underlayment (10%), wood-panel interior doors.	.310	13.61	9.23	22.84
Specialties	Kitchen cabinets: 20 L.F. wall and base cabinets with laminated plastic counter tops; 4 L.F. bathroom vanity; medicine cabinet; stairs.	.036	1.89	.41	2.30
Mechanical	1 kitchen sink, cast iron, double; 1 water heater, gas fired, 50 gal.; gas forced-air heat/air conditioning system; 1 full bath including: 1 bathtub, color; 1 corner shower; 1 sink color, built-in; 1 water closet, color; 1 lavatory including: 1 sink, color, built-in; 1 water closet, color; 200 A. service; Romex wiring; fluorescent & incandescent lighting fixtures, switches, receptacles.	.094	3.39	2.54	5.57
Overhead	Contractor's overhead & profit; design cost.	3.48	2.28	5.76	
Total:			$37.23	$24.69	$62.53

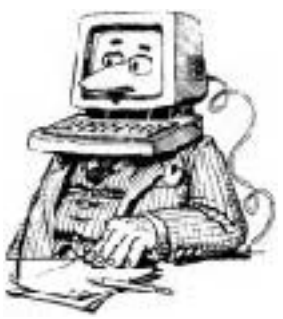
The above estimate makes the following assumptions: Each unit is a 11/2 story, 1,400-square-foot structure with 11/2 baths, one kitchen, and no basement. Base labor costs are an average from major U.S. regions. The average markup used is 65 percent over bare labor costs, which includes Workers Compensation, other insurances, taxes, overhead, and profit. Costs shown are for basic construction only and do not include site clearing and grading, site utilities, paving, landscaping, site improvements, land and development costs, and special finishes and equipment. Costs will vary significantly from project to project due to quality, complexity, and local economics.

This report is adapted from the 1989 edition of *Means Residential Cost Data*, published by the R.S. Means Company. Means publishes a wide range of estimating data and related guides for the construction industry. For more information, contact R.S. Means Company, Inc., 100 Construction Plaza, Kingston, MA 02364; 617/585-7880.

Swedes Set Up U.S. Headquarters for Manufactured Housing

Earlier this year, the Swedish Building Systems and Components Office (SWEBCO) opened their U.S. headquarters in Chicago, Illinois. SWEBCO is jointly sponsored by the Swedish Industry and the Swedish Trade Councils, and will market Swedish factory-built homes and building components in the U.S.

Initially, SWEBCO will concentrate its activities on the East and West coasts, holding conferences and local workshops for U.S. builders, developers, and architects. For information, contact Michael Mononen, SWEBCO, 150 North Michigan Avenue, Suite 1200, Chicago, IL 60601; 312/781-6210. ■



Computer Bits:

PC users get laser-quality lettering tapes… with Kroy LetterCrafter software. Basically desktop publishing on an adhesive strip, ready to peel off and stick on reports, maps, etc. For info contact Kroy, Inc., 14555 N. Hayden Rd., Scottsdale, AZ 85260; 602/948-2222.

Quick planning estimates are promised… with Hyper-estimator, a Mac-based program. Links up to MacNail, another program, for finished bids. Contact Turtle Creek Software, 651 Halsey Valley Rd., Spencer, NY 14883; 607/589-6858.

On-line system promises project leads…Dodge Dataline tracks construction projects nationwide. Introduced recently by the F.W. Dodge group of McGraw-Hill Information Services Company, 1221 Avenue of the Americas, New York, NY 10020; 212/512-3851.

Means database now for PCs…DataSource accesses 20,000 cost lines in the CSI Masterformat. Contact R.S. Means Company, Inc., 100 Construction Plaza, Kingston, MA 02364; 617/585-7880.

More on costing…with Comest, a construction cost estimating database compatible with microcomputers, Spectext, and microComspec. For information, contact Charles Caroll, Jr., 202 Wyndhurst Ave., Baltimore, MD 21210; 301/323-8489.

Building Board from Abroad

A European wallboard called gypsum fiberboard may provide an alternative to drywall. It is denser, stronger, doesn't have to be taped, and resists fire, moisture, and sound better than conventional drywall.

Gypsum fiberboard resembles a type of drywall "particleboard." It is formed from a gypsum and paper-fiber mix that is bound together by heat and pressure (without glue). Because it is a very stable material, the manufacturer claims it does not need to be taped. Instead, joints can be mudded with two light coats of plaster of paris or a setting joint compound. It is rated by a German specification for structural applications and is recommended as a floor underlayment, as well as a substrate for tile and laminate.

Europeans have used gypsum fiberboard for some time. It has been sold in West Germany since 1982 under the trade name Fermacell and now accounts for 25 percent of the German wallboard market. Recently, it has become available in Holland under the name Vaplex. And soon it will be available in the U.S. as Gypsonite. Furman Lumber, Inc. (108 Massachusetts Ave., Boston, MA 02123) plans to open a Gypsonite plant in Providence, R.I. later this summer and hopes to make the board available by the fall.

This European wallboard is extremely dense. It is harder to cut and heavier to handle than drywall. While it can still be scored with a utility knife and snapped apart, it takes at least two scores and a few more sharp blades. If you lose time installing the board, you might make it up by not taping. The upcoming American-made Gypsonite may include perlite to make the board lighter and easier to cut.

The added density of gypsum fiberboard offers some advantages, however. It is more sound resistant. A finished interior is claimed to "feel" more like a plastered interior because of the similar noise deadening qualities of plaster and gypsum fiberboard. It is more fire resistant. Half-inch gypsum fiberboard has the same fire rating overseas as 5/8-inch "firerock." While no specifications have been written up for gypsum fiberboard in the U.S. yet, it is reportedly up for review now by Underwriter's Laboratory and the American Society of Testing and Materials. And it is moisture-resistant. To test this, I soaked a sample of 1/2-inch gypsum fiberboard in water for ten minutes and I still was not able to break the piece with my hands. After an hour I could break it in half but it did not fall apart like ordinary wet drywall. The sample stayed wet for a long time (about two days) but once it had dried out, it was as solid as ever. This may allow it to be stored outside at the lumberyard and the job site with minimal protection. —*Clayton DeKorne*

Tax Talk:

Constructive Receipt Doesn't Reach Over 40 Miles

Many taxpayers might think they can save taxes by holding on to a check and not depositing it until the following year. This is tempting late in the year. But according to the doctrine of "constructive receipt," this check would still be taxable in the year it was received. Certainly the rule has some logic. After all, you probably could have deposited the check this year without much difficulty.

But what if making the deposit is not so easy? This question came up in a recent court case (Baxter, 59 AFTR 2 87-1068). Albert Baxter was called by a customer on December 30 and told that his check for over $13,000 was ready to be picked up. Because it was Saturday and the customer's office was 40 miles away, Albert decided to wait until Monday. Besides, he thought the bank was closed, so he couldn't deposit the check anyway.

But the IRS didn't see it that way. They felt that since the check was ready, Albert could have gotten it, and therefore it was "constructively received" in the earlier year. The court hammered the IRS' logic, saying it was absurd to think that the taxpayer should have to make an 80-mile round trip just to pick up a check that couldn't be deposited anyway for two more days.

Albert won. Constructive receipt may have a long reach, but it just doesn't go beyond 40 miles. Chalk up one for our side. ■

Irving Blackman, CPA, J.D., is with Blackman, Kallick, Bartlestein, Chicago, Ill. He specializes in closely held businesses.

Remodeling To Top $100 Billion

The National Association of Home Builders (NAHB) is among several forecasters that expect the remodeling industry to top $100 billion in expenditures once the 1988 figures are in.

Kitchen and bath remodels are a major part of those numbers. Kitchen and Bath Business reported in their January issue that 1988 totals included nearly 5,000,000 bath and 3,500,000 kitchen remodels. For 1989 they project the number of baths being remodeled rising by 2/3 million (for a total price of $6.8 billion), and the number of kitchens declining slightly (but still billing out at $13.7 billion).

Members of NAHB Remodelors Council polled in their Third Quarter 1988 Economic Survey agreed with the 1988 results—62 percent labeled business as good, and most cited kitchen remodeling and room additions as the top income producers. Labor availability was called out as one of the most serious problems, and getting worse according to the Council members. Other questions in the survey explored remodelers' priorities in selecting products (quality, availability, and back-up service wee much more important than price), and in where and how they buy (15 percent of these remodelers special ordered more than half of their building products). The NAHB Remodelors Council is headquartered at 15th & M Streets, N.W., Washington, DC, 20005.

1988 New Home Profile

New single family units completed in 1988 were larger and contained more amenities than those of the previous year. The 1988 median size of multifamily units was only slightly higher than in 1987. These and other findings on characteristics of new homes completed in 1988 were recently made available by the Census Bureau. A more detailed report will be available from the bureau sometime this summer.

Single Family Characteristics

The median square footage of the 1,083,000 new singles completed in 1988 was up 3.4 percent from 1987 to 1,815 square feet. A larger percentage of completed 1988 units had central air conditioning, 2 1/2 bathrooms or more; 4 bedrooms or more, and at least one fireplace. Gas continued to be the predominant type of heating fuel.

These data parallel information received from NAHB surveys that show a significant increase in the size and amenities offered in new homes. And, they help to confirm the on-going trend toward the construction of luxury housing in the single-family market. The increased share for high-end homes for trade-up buyers is due to, among other things, demographic trends (an aging of the population) and income trends (a greater inequality in the distribution of income).

The proportion of new homes with more than 2 bathrooms has risen every year since 1983, reaching a 42-percent share in 1988. This is nearly double the share achieved in 1982. Twenty-six percent of the 1988 units had 4 bedrooms or more, up from 20 and 23 percent in the two years previous and up from 1982 to 1985.

Central air conditioning was included in 75 percent of the 1988 single family completions. Although the 1988 proportion has not changed significantly from the 1983 findings, it was up some 14 percentage points 10 years ago. The share of homes with one or more fireplaces rose to 65 percent in 1988.

Gas remained the dominant type of heating fuel used, capturing a 54-percent share in 1988 (up from 52 percent in 1987). Electricity's share fell from 40 to 37 percent between 1987 and 1988 while current shares for oil (five percent) and other types (three percent) held firm.

Multifamily Characteristics

The median and average size of the 455,000 new multifamily units completed in 1988 was only slightly higher than 1987. The median size was up about two percent from 920 to 935 square feet. The average rose to 990 from 980 square feet for an increase of only one percent. The rate of growth for the median and average between 1986 and 1987, by comparison, were five and eight percent, respectively. Part of the reason for the slowdown in the rate of growth in 1988 can be attributed to the declining share of condo units (for-sale multis) in the Northeast, where construction of these units was heavily concentrated and where size is the highest among the four census regions.

The percentage of multi completions with three or more bedrooms increased one percentage point to eight percent in 1988. The number of bathrooms per unit also increased somewhat, with the proportion having two full baths or more increasing to 41 percent from 39 percent in 1987 and 36 percent in 1986. Although electricity remained the principal type of heating fuel used in 1988 (53 percent), its share has fallen nearly 20 points from 1984. At the same time, the share using gas rose 18 percentage points to 44 percent during 1988. ■

1988 New Home Profile

Selected Characteristics		1978	1984	1985	1985	1987	1988
Single Family	Median square feet	1,655	1,605	1,605	1,660	1,755	1,815
	Average square feet	1,755	1,708	1,785	1,825	1,905	1,995
Percent with:	Central air	58%	71%	70%	69%	71%	75%
	More than 2 baths	25%	28%	29%	33%	39%	42%
	4 bedrooms or more	24%	18%	18%	20%	23%	26%
	1 fireplace or more	64%	59%	59%	62%	62%	65%
	Gas heating fuel	37%	45%	44%	47%	52%	54%
	Garage: 2 + cars	62%	56%	55%	60%	65%	66%
Multifamily	Median square feet	863	871	882	876	920	935
	Average square feet	902	914	922	911	980	990
Percent with:	Air conditioning	79%	89%	88%	88%	86%	84%
	2 baths or more	20%	35%	37%	36%	39%	41%
	2 bedrooms	49%	54%	54%	53%	54%	55%
	3 or more bedrooms	9%	9%	7%	7%	7%	8%

Source: Bureau of the Census

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Carpenters Can Hone Preservation Skills

For carpenters who want to specialize in preservation work, a new two-year program run by the North Bennet Street School in Boston, Mass. may be of interest. The course, scheduled to begin in September, 1989 is an expansion of a nine-month course offered since 1986.

The first year, the course will include basic carpentry skills modified for a preservation focus. The second year will include an in-depth study of architectural history and building technology, historic structural systems, and exterior and interior details. Layout, repair and replication of period moldings, sash, doors, and other architectural details will be emphasized, using both traditional and "state-of-the-art" practices.

For more information contact the school at 39 North Bennet Street, Boston, MA 02113; 617/227-0155. ■

"Insecticidal Paints"

If a building is having problems with bugs, real problems with bugs, you may get some relief from a range of available insecticidal paints, fungistatic paints, and over-paint finishes designed to send these creatures on a one-way trip to bug heaven. Currently, the largest markets for these products include breweries, large-scale food manufacturers, and farms. But their manufacturers claim they can be put to work around households as well.

There are three classes of product. First, there are insecticidal paints and paint additives. These products use chemical insecticides mixed right into the paint. The paint doesn't actually emit anything into the air. Rather, as the paint dries, the insecticide surfaces as a crystal. Insects that land or crawl on the paint get the insecticide in their nervous system, and they drop, well, like flies.

Next, there are over-coat clear finishes designed to be applied after the paint is dried. Here too, bugs must come in contact with the insecticide for it to be effective.

Finally, there are fungistatic paints. These paints are designed to inhibit bugs' eggs from hatching and to stop mildew and bacteria from forming or reproducing.

Enviro-Chem, from Walla Walla, Wash., markets CPF and CPF 2D, both organophosphates that you can mix in with oil-based or latex paints. Treating a gallon of paint costs about $4.50. Enviro-Chem claims that the insecticide is active as long as the paint is on the wall. Flying or crawling insects that come in contact with the paint expire in short order. CPF and CPF 2D have been available since 1982. They are EPA-registered and intended for exterior use only. Enviro-Chem recommends rinsing the building in the spring to get the dirt off the paint, otherwise bugs won't be able to come in contact with the active phosphates.

Diall Chemical Company of Orlando, Fla. markets Di-all, an insecticidal paint additive that contains Dursban, an organophosphate. For $4 a gallon, you can treat both latex and oil-based paints. It is EPA-registered and intended for exterior use only. Diall Chemical Company recommends that you wash the surface of the paint, because this activates a releasing agent built into the paint. Insects that come in contact with the paint last about 24 hours.

The Deerfield, Florida-based Insecta Inc., markets Insecta, a clear liquid you can brush or spray over baseboards. They claim it doesn't affect the finish of the paint, and it stays active for 18 months as a fly repellent, and 12 months as a repellent for crawling insects. This same product is available in a premixed white latex-based paint. It is EPA-registered and USDA-approved for non-food-area use. Its major application is in barns to keep flies down.

Pentagon Plastics in West Palm Beach, Fla. markets a protective coating product called Steridex. They claim Steridex will kill mold, mildew, bacteria, and that it will inhibit flies' eggs from hatching on its surface. The product, which costs $162 for a five-gallon container, stays active for ten years.

Whatever product you purchase, be sure to check where the USDA and EPA recommends that it can be used safely. Many of these paints and coatings have restrictions and can only be applied in non-food or exterior areas. Also carefully review mixing and application precautions.

—John Wagner

Contest Highlights Construction

Photographs of workers in the process of constructing a building are now being solicited for a contest sponsored by the National Building Museum. "A Moment in Building" is open to all, with no entry fee.

In a previous competition, photographers from 25 states, the D.C. area, and several Canadian provinces competed for honors. Winning entries from that competition were exhibited at the Museum this past winter, and covered a wide range of style, subjects, and interpretation of the theme. For contest rules, contact the Museum at Pension Building, Judiciary Square, N.W., Washington, DC 20001. Deadline for the contest is August 31, 1989. ■