Don't Cry Over Spilled Chemicals

Preparation can minimize the damage caused by an accident

By Frank H. Andorka Jr., Associate Editor

Bill Spence, superintendent of The Country Club at Brookline, Mass., remembers the day the tractor tipped on the 17th fairway, spilling 700 pounds of granular Turcam insecticide.

Spence was stunned. How was he going to deal with a chemical spill that large? “We got together with all of our workers and tried to figure out how we were going to deal with this,” Spence says. “We wanted to fix the problem while causing the least amount of damage to the environment. It was a tense scene.”

Spence’s story could be a superintendent’s worst nightmare.

With golf courses often perceived by the general public as environmental menaces, a chemical spill can quickly turn into a public relations disaster. But with a well-conceived plan and a well-trained staff, most spills aren’t worth weeping over.

Designing a proper storage facility starts the plan off on the right foot (see sidebar). Nancy Richardson, director for Audubon International’s Signature program, says her organization recommends storing chemicals in a separate building, away from other equipment.

The building should be constructed with concrete and sealed with an impermeable substance. Build a 6-inch berm around the edges to contain any spills. The key is to keep superintendents in control during a spill.

“If you keep all your chemicals in one building, you know where to focus your cleanup plan,” Richardson adds. “It’s imperative to do Continued on page 42
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everything you can to isolate a spill.”

You should also train staff members
in proper pesticide handling, says John
Kopack, superintendent of The Legacy
Club at Alaqua Lakes in Longwood, Fla.
But keep training simple so employees
don’t get confused, he says. “Everyone
has to have the same understanding of
what needs to be done in case of an ac-
cident so they don’t panic in a crisis,”
Kopack says.

Roger Barrett, superintendent at
Stevinson Ranch GC in Stevinson,
Calif., says it also pays to keep close su-
pervision on what
crew members are
doing as they mix chemicals before they
take them on the course.

Barrett says that either he or one of
his assistants ensure the building is clean
so there’s no runoff on that could dam-
age the environment. “Not only do we
put our people through an extensive
training program, we also keep fairly

close watch on what’s going on,” Bar-
rett says.

Getting local authorities involved
in the planning is vital, Barrett says. The
fire department in Stevinson mapped
the course so it knows where the chem-
icals are in case of a spill, he says. Barrett
is also required to report his chemical in-
vventories to the state every month.
Spence says he also works closely with
the fire department and state authorities
so everyone knows what chemicals The
Country Club uses.

To keep track of paperwork, Barrett
and Spence have one employee dedicated
to keep inventories and material safety
data sheets current. If there’s a problem,
that employee becomes the liaison be-
tween any hazardous material crews and
the course. “That’s a full-time job,”
Spence says.

But no matter how involved your
planning is, you need to know what to

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CARING FOR CHEMICALS

Here are some tips on how
to build the best chemical
storage facilities:

■ The foundation should always be
concrete. The subgrade should be
properly prepared to prevent frost
heaving or sinking.

■ Consider building a raised concrete
foundation that is 10 to 12 inches
above ground level to provide more
protection against flooding.

■ The floor should be sealed with
epoxy or another impermeable coat-
ing to prevent materials from being
absorbed into the concrete and to
make cleanup easier.

■ The facility should have a raised, 4-
to 6-inch concrete berm around the
perimeter to contain liquid spills and
direct the spilled material into one or
more floor drains.

■ The floor should slope slightly to-
ward drains to make washdowns
easier and prevent rinsed material
from standing.

■ Vent fans are essential at all facili-
ties. Each room within the building
should be vented separately.

■ Though regulations only call for a
total air exchange six times per
hour, an ideal air exchange should
be more rapid — up to once per
minute. A single, standard 20-, 24-
or 36-inch vent fan should suffice.

■ All electrical fixtures and wiring
should be non-explosive, and a sin-
gle switch should operate both
lights and vent fans. Consider
mounting the switch outside the fa-
cility so the ventilation system can
be operating before a worker enters.

Source: Golf Course Maintenance
Facilities: A Guide to Planning and De-
sign, GCSAA.
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do in case of a spill. First, contain the spill in as small an area as possible. Richardson says myriad products will help a superintendent do that, from kitty litter to "chemical pillows," which absorb the chemicals to keep them from spreading.

Once a spill is contained, a course should call its local fire department to alert it to a spill and coordinate cleanup plans, she says. Richardson suggests a course install a pump in its storage facility that can move chemicals back into a sprayer. A sump pump installed in the floor can help with the process, she says. Barrett says his system is designed to do that.

“Our whole system is predicated on keeping it closed so that nothing can escape,” Barrett says. “We want to make sure that if anything spills, we can stop it from spreading and, when possible, use it again. Fortunately, we’ve never faced that situation.”

So what happened to that 700 pounds of Turcam that spilled at The Country Club? Spence gathered crew members together to brainstorm for a solution. Their first instinct was to water the insecticide into the ground, but Spence thought that would spread the chemical to a wider area instead of containing it.

So instead of making the problem worse, the staff modified a high-power vacuum — turning it into a wet-dry vacuum with separate chambers and filters — to suck the product off the turf. After donning protective clothing — boots, gloves and safety goggles — and rolling a portable generator out to the site to plug in the vacuum, Spence and his crew tried their solution and it worked.

"First, we scooped as much of it off with shovels as we could and put it back into the trailer," Spence says. “Then we brought out our modified vacuum and went to work.”

He's glad his crew knew what it needed to do and was able to execute the cleanup plan with little disruption to the course. “Cool, clear thinking prevails when you plan ahead,” Spence says.