Fishing for Hazards

John W. Herber ▪ Process Hazard Management Services, LLC

If you live near water, you have the opportunity to go fishing just about any time. However, if you impulsively jump into a boat with a container of bait and some gear, what will you catch? Maybe you'll get lucky and catch a few small fish, but what if you want a trophy fish, one that is a lifetime achievement? That takes planning and preparation — the correct gear, the right lure or bait, and some research of where and how to start fishing.

Hazard recognition is like fishing. You can head out to a unit with the intent of finding some hazards, and you will. They may be small things that are less important; those are plentiful and easy to find. However, somewhere out there a monster may lurk — a hazard or condition that dwarfs the others and could potentially result in a serious event. How do you find that one extremely critical issue?

A successful fishing trip starts with preparation and planning. Trying to catch a trophy fish requires the correct fishing equipment. You might read fishing magazines for methods to land larger fish and learn the fish's habitat and preferred swimming depth before you head out. Checking with some local folks who regularly fish that particular lake could yield some valuable clues.

Like the fishing trip, hazard inspections require preparation. Are you looking for any hazard, or a particular class of hazards like ignition sources? Assuming that ignition sources are your target, how will you prepare yourself or your team to identify them? Some ignition sources are obvious, *e.g.,* open or loose electrical fixtures; others are tougher, such as static generation. You and your team may need to determine which area of the plant you are going to inspect and conduct some research on the hazards and the warning signs of static generation. You may want to talk with some of the operators or electricians who frequently work in the area to get their input. A more technical issue like ignition sources may require a review of static sources and control measures. It may also require some specialized equipment, like a static electricity detector or thermal scanner to find hot spots.

Any fishing trip should begin with a plan, but sometimes those plans need to change. While fishing, it is not unusual to switch up the bait or lure, but if you change what you are fishing for, it may require major modifications to tackle and tactics. The same applies in the plant. If partway through your plant tour, something catches your attention of a higher level of concern, it may be necessary to further investigate. However, before you do, make sure you have taken the time to prepare a new plan.

One of the joys of fishing is to take a picture of the lunker you landed to capture the moment. This is also true of larger hazards. It may be beneficial to document the condition or situation, so others better understand your concern.

It can take several inspections to properly investigate an area. The first may be a scouting mission, where you look for areas of concern. Other trips will be required for special situations that create hazards (*e.g.,* hot work).

As you and your team make inspections you may discover other hazards that are noteworthy, but outside the scope of your focus. Should you throw them back, like undesirable fish? No! You must document them and bring them to the attention of the proper personnel in a manner consistent with the risk that the hazard presents. If you uncover something that is truly an imminent hazard, give it immediate attention. Exercise the proper action and issue a stop work authorization if needed. These hazards cannot be left unaddressed.

As a shift supervisor, I learned a hazard identification technique that used a deck of notecards. Each card listed a hazard or safety topic that the crew needed to keep in mind during the inspection, or items to watch out for or inspect. Topics might include housekeeping in unmanned areas, storage of unused hoses, or excessive vibration. The advantage of a physical card was twofold: it could be taken into the field as a constant reminder during rounds and it provided a place to jot down notes. Today, this could be accomplished with an electronic method.

A popular program in the U.S. is "Take a Kid Fishing Day." It encourages more experienced fishermen to link up with young people and introduce them to the sport. You can apply a similar approach to hazard recognition. Take a new person along on your next hazard tour. Prepare them for it by introducing the concepts before heading out to the plant. Like fishing with a young person, it takes some patience and knowledge, as you will need to be ready to answer lots of questions and give plenty of explanation. During the inspection, do not expect to do much, if any, hazard fishing yourself — you may be too busy coaching and guiding to accomplish much else during the tour.

There is a major difference between fishing and catching. Fishing mean you are trying to find the fish; catching means you have them in your grasp. While this article is titled "Fishing for Hazards," I recommend that you focus on catching the hazards, documenting them, and bringing them to the attention of those who can assess and manage them.

CEP

John W. Herber, CCPSC, is the Principal Consultant at Process Hazard Management Services, LLC (Email: john@phms.us.com).