Michael Harrison Jr. operates Harrison Crane Service, Miami, Fla., along with his dad, Mike Sr., and brothers, Paul and David. Established in 1947, the company is a mid-sized taxi-crane provider. He can be reached at michael@harrisoncrane.com.

By Michael Harrison Jr.

Looking to the Past to Improve the Future

Bring back oilers to make crane operations safer

In reviewing OSHA's proposed cranes and derricks rule, I believe that this is a long-overdue step in the right direction, but that, once again, the industry is looking at crane operator certification as a silver bullet—which it most definitely will not be. Unquestionably, we need certification, but this is not going to be the panacea that many think it will be.

Certainly, certification is integral to ensuring best practices are followed, but if we truly want to make our industry safer, we need to look to our past. I think the single greatest contributor to an increase of crane accidents is the extinction of the oiler.

Back in the day, virtually all cranes were run by two people – an operator and an oiler. Because cranes used to be more labor intensive to set up and operate, two people were required to effectively and safely run the cranes. I may get lambasted and labeled a heretic for this, but I earnestly feel that if oilers were mandated on all cranes under a certain size, it would go a long way toward making the industry safer. Here's why.

In the past, oilers gained invaluable experience working under the tutelage of a seasoned operator. These individuals learned basics such as how to drive the crane, set it up, and how to signal. During the course of this "apprenticeship" period, which usually lasted several years, those without the desire or skill for this career were weeded out. By the time they worked their way up to operator, oilers gained a wealth of practical knowledge and experience. At Harrison Crane, we have seen many CCO-certified operators come through our doors who lack this knowledge and experience and who can't effectively run a crane in a real-world environment. The old adage that there is no substitute for experience seems to hold some weight (no pun intended) when it comes to running a crane.

Oilers and operators used to work as a team for the benefit of both the customer and the crane owner. The luxury of a second person with expertise meant positioning the crane was easier (perhaps reducing property damage and ruined tires); that someone was watching over the customer to make sure loads were rigged properly; that a qualified signal person was readily at hand; and that the crane was well-maintained, which the oiler oversaw during downtime. This would seem to be a win-win situation for all involved, but technology changed and made it economically infeasible to keep oilers on most cranes.

ECONOMIC THEORY: PRISONER'S DILEMMA

	Company B Has Oilers	Company B Does Not Have Oilers
Company A Has Oilers	1 Assuming comparable labor rates, market share unchanged. Overall industry safer, but with higher costs.	2 Company B, with lower costs than Company A, should be able to gain market share vis-à-vis Company A.
Company A Does Not Have Oilers	3 Company A, with lower costs than Company B, should be able to gain market share vis-à-vis Company B.	4 Assuming comparable labor rates, market share unchanged. Overall industry less safe, but with lower costs.

Box 1: Even if both companies agree to have oilers, unless they are contractually bound to this or otherwise made to do so by the government, they will not continue to do so in the long run. There would be an incentive, i.e. gain in market share, to cheat, so both would ultimately end up having no oilers (Box 4).

Box 2: Company A seeing a loss in market share to Company B, would likely soon decide to have no oilers in order to compete, pushing the market to Box 4 once again.

Box 3: Converse of Box 2 with end result still being Box 4.

Box 4: Without intervention, this is where the industry would always end up. This is called a Nash Equilibrium (after the guy represented in the movie "A Beautiful Mind"). The industry is no safer, but costs are lower.

A conundrum that owners face is how to have enough trainees headed down the path to become future certified operators, while simultaneously keeping them working in the interim. You can only have so many truck drivers, rigging crew guys, and oilers on the payroll who aspire to be operators one day. The ratio of operator to trainee used to be much closer to 1:1. The problem now is that most of these trainees are rushed prematurely into becoming operators, because there just isn't enough other work to keep them busy and on the payroll. A mandate for oilers on far more cranes than is currently required would resolve this labor issue.

The old method allowed for on-the-job training before individuals attempted to get certified. But with fewer mandatory oiler positions and stricter certification rules taking effect, I would argue that the end result could be fewer trainees in the pipeline, further exacerbating the dearth of qualified people from which to choose.

Considering the economics

The fact that modern cranes are more technologically advanced does not mean that an oiler would have no role today. The reasons for having an oiler are still valid. Rather, the problem is one of economics. The industry has made it financially impossible to man cranes with two people. In economic theory this is called the prisoner's dilemma, which means one agent can gain an advantage by making a certain choice, and that knowing this, all agents will be led to make that same choice. In this case, the choice must be made to have oilers or to run the crane with one person. (See chart.)

The obvious disadvantage of oilers is the increased cost associated with a second worker. It is almost impossible for a company to compete with two workers running a crane when other companies do it with

one. The prisoner's dilemma is that crane companies find they don't really have a choice and they all decide to run cranes with one worker – the operator. This solution drives prices down but does not engender a safer crane industry. By comparison, most of us are happy to know that a co-pilot is in the cockpit on commercial airline flights even though the plane could be flown by one person. The same thinking should apply in the crane industry. The only way to fix this would be to mandate the use of oilers on all cranes under a certain predetermined size. Because this would substantially raise the cost of crane rental, contractors would likely find this position untenable.

All of this ties to the discussion of qualified signal persons, which OSHA's proposed rule also calls for. If the rule goes into effect as written, contractors will need to qualify those employees who will be signaling. Because you can't teach all the nuances of signaling in a five-minute crash course, there will be costs associated with training and testing. Yet if oilers were still used, the problem would not exist. Having an oiler on site puts everyone on a level playing field while ensuring that a qualified signal person is signaling the loads.

Considering OSHA's proposed rule, I think it is unrealistic to expect that every employee on a jobsite will have been trained to become a qualified signal person. Even if a select few become trained and qualified, what happens when the crane shows up on site and none of those individuals can be located? Having an oiler would ensure that a qualified signal person is always there.

Likewise, the proposed rule discusses the very real hazard of electrical power lines. One provision relates to having a qualified spotter watch lifts that are close to the lines. Your average construction worker is not aware of factors such as boom deflection or wind loading that could easily and quickly take a load into a power line. Again, I would argue that an oiler, who faces these situations daily, would be a better solution.

Most of what I have discussed here pertains to oilers on smaller cranes. For instance our local union stipulates that all cranes over 80 tons must have two workers. However, oilers have been all but eliminated on larger cranes as well. Many union contracts allow for cranes to be run by only one person when the crane is out on a weekly or monthly rental. This assumes the contractor can supply someone capable of both signaling and helping the operator move the crane when needed. Obviously this is not the same as having someone on site who is committed to a career in the crane industry and who already has a far greater breadth of knowledge about cranes than the average worker on a construction site. I personally spent time as an oiler on a long-term job and there were times when it was tedious, but I also gained valuable experience from seeing how the site worked day in and day out.

While on the surface, the elimination of oilers has reduced costs. The reality is the tasks once skillfully handled by an oiler now must be attempted by others. There are costs associated with this both in terms of lost productivity and in crane-related accidents. While bringing oilers back to work on most cranes may be a pipe dream, it really should be considered as a way to improve upon our industry's overall safety. In conjunction with the certification initiative, the end result would be a far safer industry.