CONTRACTOR PREQUALIFICATION is a “pre-tender process used to investigate and assess the capabilities of contractors to carry out a contract satisfactorily if it is awarded to them” (Hatush & Skitmore, 1997; Truitt, 2012). Written safety program submission is frequently required of contractors for review by hiring organizations or their third-party service providers as a condition of contractor prequalification. Consider a recent study of safety professionals in which more than 57% of respondents rated the evaluation of contractor written safety programs as being very or extremely important during contractor safety prequalification (Figure 1; Wilbanks, 2017). Programs required by hiring organizations regularly include evidence of contractor employee orientation, training and prejob task and risk assessment (Inouye, 2015). Petersen (2001) might have ascribed the affinity for program submission as stemming from the “OSHA Era” of 20th century safety management evolution. He complained that overemphasis to programs with inadequate emphasis given to the humans who are subject to them inevitably results in workers not caring about safety. “And we wonder why our programs don’t fly! (p. 120).” Programs are not safety, Petersen (2000) retorts, they are “islands of safety,” normally in answer to the dictates of OSHA but not integrated into the overall management system. Petersen (2001) challenges the effectiveness of programs, asking: “Are they effective? Do they change attitudes or behavior? Do they motivate or even communicate?” (p. 117).

A present-day answering of Petersen’s questions in the context of contractor prequalification is aided by the observations of Philips and Waitzman (2013), who offer that requiring program submission may have some value (Table 1). Safety programs correlated with lower injury rates are not without precedence. Arocena and Núñez (2010) published similar findings when researching the effectiveness of occupational health and safety management systems in small- (fewer than 50 employees) and medium-sized (50 to 250 employees) enterprises. The former is a demographic characteristic of most contractor organizations (BLS, 2015a; 2015b). Small sized enterprises were confirmed to demonstrate lower health and safety management system effectiveness when compared to medium sized enterprises. Firms with the weakest safety and health management systems were found to have the worst reported injury rates. Despite these few examples, safety and health professionals should grow circumspect about their devotion to written safety programs for the purposes of contractor safety prequalification. Following is a discussion of the several reasons.

Causal vs. Association Relationship

Correlation studies do not reflect a causal relationship and, so, are not predictive. Observe a high correlation exists between carrying matches and lung cancer (i.e., the presence of one has not been proven to cause the other) and so it is with written safety programs and lower contractor incident experience.

KEY TAKEAWAYS

• Hiring companies value written safety programs and frequently demand their contractors submit to be eligible to perform work.
• Desktop audits are the common means to verify written programs; field verification audits are rare.
• Consultant services to author written programs for contractors are ubiquitous. Hiring companies should reconsider the emphasis given to written safety program submission given the uncertainty of their actual implementation, the possible absence of practical benefit and the significant burden placed on contractors to produce them.

FIGURE 1

WRITTEN SAFETY PROGRAM IMPORTANCE

Many other variables potentially influence results (e.g., contractor: related work experience; leadership team experience; capacity; financial health of the organization, therefore, resource to invest in safety; availability of safety and health professional expertise). How is it that the submission of possibly randomly demanded documents become so broadly credited given so many competing and complex variables?

Problematic to demonstrating a causal relationship between the demand for contractor written safety programs and lower injury experience is the absence of commonly agreed safety program criteria, that is, the target is in continued motion. What constitutes a program? Philips and Waitzman (2013) admit that safety program criteria broadly differs among hiring organizations, and that some hiring organizations have differing criteria for differing jobs. As such, there is much more individual and company-centric intuition than consensus when deriving written program criteria. This proves challenging to prospective contractors, as shared by one contractor representative:

The main issue we have is duplication. We have over 60 clients. Many asking the same questions in a slightly different way and requesting the same policies and procedures that are uploaded multiple times. Management systems and audits, provincial [certificate of recognition] programs, etc., should be considered by clients. (A. Brady, personal communication, Nov. 28, 2016)

Contractors, therefore, are compelled to answer well-intended but perhaps irrational or irrelevant requirements thought basic by multiple hiring organizations because they want to win work and, moreover, to build relationships that promise more work. It is not empirically clear that demands for written programs actually bring the “cream” to the top as much as those answering the call are likely to rise.

**Desktop Audits**

The data in Table 1 correlating lower injury rates with complete safety program manual submissions was verified through desktop audit by PICS (now d.b.a. Avetta), a third-party contractor prequalification service provider (Philips & Waitzman, 2013); desktop audits are a more relaxed level of review versus the conduct of field verification audits. Thus, it was an assessment of what the contractors said they were doing, and not one of whether the program requirements were, indeed, routinely met. Verifying the actual use or implementation of submitted written policies is a much greater challenge.

Sparer, Murphy, Taylor, et al. (2013), examined the Constructor Safety Assessment Program (CSAP) advocated by a group of construction safety professionals and found that review of written safety policies and procedures via CSAP could not attest to the program’s actual dissemination to workers, thus speaking to the limitation of desktop audits. Similarly, Truitt (2012) found that while written program review ensures that programs relevant to the contractor’s work are in evidence, an implementation review facilitated via field audit to ensure that the programs are implemented may be indicated. Program verification, therefore, requires more than review of the writ-

### Table 1

**Comparison of Injury Rates & Contractor Safety Program Manual Submission**

<table>
<thead>
<tr>
<th>Safety manual for desktop audit</th>
<th>No. of contractors</th>
<th>Total injury and illness rate</th>
<th>Restricted cases rate</th>
<th>Lost workday cases rate</th>
<th>Fatality rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomplete submission</td>
<td>751</td>
<td>3.07E-02</td>
<td>3.75E-07</td>
<td>3.11E-05</td>
<td>5.81E-09</td>
</tr>
<tr>
<td>Complete submission</td>
<td>1,031</td>
<td>1.33E-05</td>
<td>2.83E-07</td>
<td>8.87E-07</td>
<td>3.05E-10</td>
</tr>
</tbody>
</table>

ten program, but a test of its actual performance beyond the desktop (Kochan, Smith, Wells, et al., 1992; Weaklend, 2009). Else the submitted programs may merely be, as Petersen (2000) warned, “islands of safety or, worse, paper tigers. One contractor safety professional observes:

I have to update three different “pre-qual” companies and I have yet to see a formal audit. What I find interesting is that a person somewhere picks through my submission and rejects it because of a phrase, sentence or paragraph and will tell me how to fix it. But it’s all words. I’m like, really? That’s it? (C. Crisonino, personal communications, Sept. 15, 2017)

To address such challenges, ISN (2016), a third-party contractor safety management services provider, developed its Review and Verification Plus services in which submitted written programs are first evaluated through a traditional desktop review, then selectively subjected to field audits at a contractor’s place of business. ISN’s goal for completed field audits in 2016 was about 500 (J. Velasquez, presentation communication, Oct. 28, 2015). This equates to 0.83% of ISN’s then 60,000 contractor subscribers receiving an implementation audit per annum, or a more than 100-year audit cycle were all subscribers to receive field audits. No data are available to the author to suggest this vendor’s competitors accomplish a greater (or lesser) field audit saturation rate.

Field verification audits may be argued as important, but such audits are possibly infrequently performed during contractor safety prequalification, regardless of the party performing the prequalification tasks. This is witnessed by this author’s recent research of one industry (Table 2) in which more than 70% of survey respondents reported verification audits conducted at the contractor’s physical workplace were never, rarely or occasionally conducted, whether by them or by others on their behalf (Wilbanks, 2017). Another telling data point: 10% of the respondents had no basis to form an opinion.

The relative absence of field audits may be attributable to how Waara and Bröchner (2006) describe as transaction costs, that is, costs that “arise through efforts to specify the project, to conduct the procurement process, to monitor the chosen contractor and to resolve any conflicts related to the contract” (p. 798). Field audits increase transaction costs and, so, may be unattractive even though their conduct might ultimately lower production costs (i.e., the direct payments to contractors and the vendor’s competitors accomplish a greater (or lesser) field audit saturation rate.

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Janicak (2010) believes the presence of a safety program is predicated upon multiple factors, including “program development, benchmarking, auditing, measuring performance, evaluating outcomes and managing the program based upon outcomes” (p. 5). To the extent that desktop audits are illuminating, they are judged by the author to be limited to but one of Janicak’s criteria: program development. A distinction, therefore, should be made between the use of safety and health programs and safety systems. The latter is commonly accepted as being predicated on Shewhart’s plan-do-check-act (PDCA) cycle (ASQ, 2004; ANSI/ASSP, 2012; Bird, Germain & Clark, 2003; BSI, 2007; E&P Forum, 1994; Manuele, 2008; 2013). As noted, verification of submitted written documentation, whether facilitated by hiring organizations or their third-party service providers, normally constitutes but a confirmation of the plan, without commentary on the extent to which it is done, checked or acted upon.

### Liability Benefit

A literature review yields no evidence demonstrating contractor written safety programs to be compelling for mitigating legal claims against hiring organizations in the example of a contractor injury or contractor organization related incident (Silver, 2015). OSHA’s multiemployer work site policy (OSHA, 1999) does not regard written programs when determining citation assignment. Instead, OSHA determines which employer, contractor or hiring organization was responsible for creating, exposing, correcting and controlling the related hazard(s).

Both employers can have multiple roles. It is only after role assignment is determined by OSHA that a written program may become relevant. However, relatively few OSHA mandated requirements exist for written programs (BLR, 2018; OSHA, 2018; Texas Aggregates & Concrete Association, 2011) when compared to the body of all OSHA requirements, thus hiring organizations may be imposing written program demands absent significant legal basis or practical benefit.

### Consultant Participation

The ubiquitous demand for written safety programs by hiring organizations has given rise to a growing list of vendors marketing to prospective contractors their ability to facilitate successful prequalification, including the production of requisite programs (1 Stop Compliance, 2018; Blakeman & Associates, 2017; Industrial Compliance & Safety, 2018; Safety Service Co., 2018). Consider the promotion of one vendor:

We write all the programs that [name deleted] requires, email you the copies and upload them to [name deleted]. Rather than going through the time-consuming process of rewriting your existing safety program or creating one from scratch, we have over 250 preapproved [name deleted] programs that we can brand with your company information and provide to your client and [name deleted] for immediate approval. (1 Stop Compliance, 2018)

It is possible that vendors act on contractors’ behalf without contractors actually participating in program definition, scope and more, or observed to carry out the final product’s implementation. The degree of actual contractor participation and implementation is not readily knowable. Objectively verifying

### Table 2

**Writtlen Program Verification Conducted at Contractors’ Physical Workplace**

<table>
<thead>
<tr>
<th>Likert scale distribution</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>22</td>
<td>30.6</td>
</tr>
<tr>
<td>Rarely (&lt; 10% of the time)</td>
<td>18</td>
<td>25.0</td>
</tr>
<tr>
<td>Occasionally (10% to 25% of the time)</td>
<td>11</td>
<td>15.3</td>
</tr>
<tr>
<td>Frequently (26% to 50% of the time)</td>
<td>9</td>
<td>12.5</td>
</tr>
<tr>
<td>Majority (51% to 75% of the time)</td>
<td>3</td>
<td>4.2</td>
</tr>
<tr>
<td>Expected (&gt; 75% of the time)</td>
<td>9</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. Adapted from “Safety Prequalification Factors for the Selection of Contractors Within the Steel Industry” (Doctoral dissertation, Indiana University of Pennsylvania), by D. Wilbanks, 2017, p. 82.
submitted written programs, regardless of authorship, via adequate field verification is the only available remedy to alleviate the concern raised.

**Higher Leverage Activities**

While written safety programs are considered important by recently surveyed safety professionals, such artifacts are rated sixth in importance by them when compared to the other criteria studied. A Kendall’s $W$ test was performed to determine whether significant agreement existed among steel industry safety professionals on the importance of eight identified contractor prequalification items. Respondents were required to rank eight contractor prequalification factors from one (most important) to eight (least important) (Table 3). The results indicate significant agreement existed among respondents on the importance of the eight factors (Kendall’s $W = .224$, $p < .05$). The most important factor was contractor company injury history while the least important factor was its financial stability. Thus, survey respondents identify other, more important and infrequently considered factors for safety prequalification than written programs in addition to employee training and liability history (i.e., contractor: related work experience, capacity to complete the work safely).

**An Important Distinction**

All the preceding begs the question, What is actually accomplished by contractor written program submissions? To answer, it is critical to recognize the distinction between the use of contractors for service, repair and maintenance activities versus the example of general contractors (frequently construction general contractors) that bring one or more subcontractors for work completion. The former is commonly required to adhere to the hiring organization’s programs (e.g., its emergency procedures; lockout and confined space entry procedures; PPE demands; hazard communication program, etc.). The contractor’s written programs thereby are subordinate, if not irrelevant in a practical sense. In the latter example, the general contractor’s written programs are frequently superordinate because it, not the hiring organization, directs the work activities. Note that such specialty work represents a small percentage of all contract work demanded by hiring organizations (BLS, 2015a; 2015b).

Service, maintenance and repair versus general (construction) contractors are separate universes requiring unique management paradigms. What is paramount in both? It is the demonstration of contractor employee training and certification (Table 3). Survey respondents consider this factor virtually equal in importance to contractor injury and loss history (i.e., contractor: related work experience, capacity to complete the work safely).

**Provocation**

Should not the ubiquitous demand for contractor written safety program documentation be a two-way street? Clearly, contractors bring risk to the hiring organization, but the hiring organization, too, brings risk to the contractor (Enshassi, Choudhry, Mayer, et al., 2008; Nunes, 2012). Alignment and coordination between the two parties is needed (Abbaspour, Toutounchian, Roayaei, et al., 2012). Such alignment could include the demand for evidence of a hiring organization’s written:

- provision of on-site safety orientation, training;
- demonstration of an adequate emergency response capability;
- internal controls and resources for addressing hazards impacting the contractor but not under the contractor’s direct control;
- means available to contractors for stopping work due to safety concerns, and procedures for evaluating hazards and agreeing on needed actions before resuming work;
- process for affecting change orders demanded by the hiring organization but that can have safety implications (Rashvand, Majid & Pinto, 2015);
- demonstration of adequacy of hiring organization’s safe work systems that contractors are required to adhere to (e.g., confined space entry, lockout, PPE, work at heights) (Inouye, 2015).

Should such tests be in evidence before contractors bid for work? If not, should the contractor be able to demand a higher price given the higher risk and assumed costs associated with delivering the work safely? Known is whether the contractor incurs an incident due to a hiring organization’s acts or omissions, its ability to win future work both for the hiring organization involved and among all hiring organizations is harmed. Is that which is “good for the goose” indeed “good for the gander”?

A thoughtful response must include that all challenges given to contractor written safety programs can equally be directed at the programs claimed by hiring organizations. Rather than increasing the bet, perhaps it is wise for all parties to challenge the current and popular paradigm.

**TABLE 3**

<table>
<thead>
<tr>
<th></th>
<th>Injury history data</th>
<th>Employee training and certification</th>
<th>Capacity to complete the work safely</th>
<th>Liability and regulatory history</th>
<th>Related work experience</th>
<th>Written safety programs</th>
<th>Reputation</th>
<th>Financial stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranked mean</td>
<td>3.29</td>
<td>3.30</td>
<td>3.57</td>
<td>4.38</td>
<td>4.41</td>
<td>4.94</td>
<td>5.52</td>
<td>6.59</td>
</tr>
</tbody>
</table>

Note. Most important = 1; least important = 8. Adapted from “Safety Prequalification Factors for the Selection of Contractors Within the Steel Industry” (Doctoral dissertation, Indiana University of Pennsylvania), by D. Wilbanks, 2017, p. 76.
References


Inouye, J. (2015). Best practices in contractor management. Itasca, IL: Campbell Institute, NSC.


Conclusion
The demand by hiring organizations for written safety programs absent verification does not equate to the likelihood of contractors working safely. It does make especially busy hiring organization internal and third-party prequalification program administrators. That work pales when compared to the effort demanded of critically resource-constrained contractors that must supply; and so their consultants feast. The practice is a well-intended remedy for resolving the anxiety that hiring organizations naturally experience when contracting work in which failure must be accounted. Yet it proves a costly and burdensome pacifier: comforting to the holder but, absent practical utility, ironically distracting to the desired goals. Petersen would complain.

Current research described in this article raises the specter that higher order measures are available to hiring organizations and their contractors. Resources should first be allocated to verifying contractor (employee) training, related work experience, capacity, liability and regulatory history when qualification decisions are made. Only then should written programs be required of service maintenance and repair contractors, and only when accompanied by adequate field verification of the submitted plan.