

**Explanation of Rulemaking, Final Action**  
**Fixed Site Enforcement Scheduling and Related Topics**  
Oregon OSHA  
October 2, 2009

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## **Executive Summary**

In recent years, representatives of Oregon OSHA have periodically heard concerns about the operation of the current scheduling system. As a result of those concerns, and based on an internal analysis of the issues, Oregon OSHA began a process of rule development in the first part of 2008. That process resulted in the rule that has now been adopted.

At its most basic level, the new fixed site safety enforcement scheduling rule eliminates the previous rule's reliance on whether a disabling claim has occurred at the worksite as the trigger for a worksite's presence on the list and shifts the focus (for the most part) away from employer-specific and location-specific claims data. Oregon OSHA has concluded that such data is not sufficiently reliable from a statistical standpoint as an indicator for the vast majority of worksites in the state, and is largely unavailable in any case for places of employment operated by employers who have multiple locations. In its place, the rule identifies places of employment based on industry, and then bases the likelihood of inspection largely, but not entirely, on the nature of the industry's risk of injury or death.

The new fixed site health scheduling rule functions in a similar fashion. However, in contrast to the safety rule's reliance upon industry-wide fatality and injury history that are not readily available nor particularly useful in relation to health risks, the health rule relies upon a variety of analyses to identify those industries – and therefore places of employment – where the most severe health hazards are likely to be found.

In fulfilling its statutory obligation to focus resources on unsafe places of employment, Oregon OSHA has wide latitude in making a reasonable determination of which workplaces are likely to be the most unsafe, and Oregon OSHA has concluded that focusing on the type of work at the particular place of employment as the primary determinant is the best available method to make such a reasonable determination. Other methods were considered but were found to be either inferior, unworkable, or both. However, some other pieces of information were incorporated into the rule as “exclusion factors” that modify what would otherwise be a selection by industry risk alone. While such industry risk represents the primary focus of the rule, the rule also includes certain worksite-specific information when it is available and when Oregon OSHA considers it to be relevant to an assessment of the worksite's relative safety.

In shifting away from the current rule, Oregon OSHA has shifted from an approach that was not itself based primarily on an application of worksite specific rates (such rates are not available, and in any case are unlikely to be particularly meaningful from a statistical standpoint for all but the largest worksites), but was based primarily on the occurrence of a single disabling claim at the worksite. In adopting the current rule, Oregon OSHA has concluded that it represents a clear improvement over the rule that had been in place for the better part of the previous decade. The balance of the record supports such a finding.

## **I. History of Current Rulemaking**

In recent years, representatives of Oregon OSHA have periodically heard concerns about the operation of the current scheduling system. As a result of those concerns, and based on an internal analysis of the issues, Oregon OSHA decided to empanel an Advisory Group on Fixed Site Enforcement Scheduling. The group included interested parties from the standing Oregon OSHA Partnership Committee, as well as others with a particular interest in the issues.

The group first met on July 7, 2008, and again on July 14, 2008. At those meetings, Oregon OSHA shared and invited discussion on a “tentative safety proposal” and a “tentative health proposal” to be used as discussion starters. Both approaches relied upon developing a list of industries and targeting places of employment within those industries based on the relative industry risk. The safety proposal, which was to be based on a ranking using injury data from multiple sources, would have involved four tiers. The health proposal involved only two tiers and was to be based upon “risk factors identified through claims data, literature, enforcement/exposure history and expert opinion of technical advisory group.”

It was in these meetings that the group reached ready consensus around ranking by industries and how best to do so, including the proposal to assign greater weight to Bureau of Labor Statistics data specific to the state than to federal data. The group also agreed that no tier should be completely free from inspection. And the group agreed that there should be some effect on scheduling based on past inspection results (although the details were not finalized until a later meeting, the July 7 minutes already include the suggestion to “back out a place of employment if it demonstrates low risk after 2 or more inspections”). The same meetings also brought to light the area of greatest concern – many members of the advisory group, although comfortable with industry ranking, also wanted some sort of statistical ranking within each industry tier, rather than relying upon a random selection process. Following these early meetings, and in contrast to its original stated plans to have a new system in place by the beginning of October, or perhaps the beginning of 2009, Oregon OSHA decided to extend the process of developing a proposed rule in order to allow further discussion about possible alternatives.

During the meetings in the remainder of 2008 and the first half of 2009, discussions continued regarding possible options. Although the group never reached complete consensus, particularly in relation to the use of random selection processes, a number of suggestions were considered and either incorporated in some fashion or discarded. The reasoning behind these decisions is reflected elsewhere in this Explanation of Rulemaking. Generally, the rule as proposed in June of 2009 was able to incorporate a number of exemptions. It also provided for the use of a weighted selection process based on the employer’s workers compensation MOD factor. Finally, the discussions of the rule had resulted in the use of 10 tiers for safety enforcement, rather than the four originally envisioned.

The rule as adopted is discussed in more detail in Section II below.<sup>1</sup>

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<sup>1</sup>A summary description of the “Development of Industry Hazard Ranking” has been included as a separate appendix to this document. One comment suggested that the rule would be easier to understand if the information was included in it. Although Oregon OSHA does not consider it appropriate to include the reasoning behind portions of the rule as part of the regulatory text itself, Oregon OSHA has agreed that the information is useful and therefore references the appendix in a note included in both Appendix A and Appendix B of the rule.

Generally, the rule incorporates even more exclusion factors than originally proposed, including one based on the MOD factor. All of these represent a selection process within each industry tier. However, the weighted selection process based on the MOD factor was discarded, primarily because of difficulties of obtaining MOD factors from the National Council of Compensation Insurers. The health portion of the rule as adopted relies upon three tiers, rather than the two tiers in the original concept and the rule proposal.

## **II. Description of the rule as adopted**

The rule adopted by Oregon OSHA replaces the existing systems for scheduling of health and safety enforcement visits at sites not covered by the separate scheduling systems for logging and construction. Although the vast majority of such sites involve fixed locations, the “fixed site” scheduling system addressed by the rule also addresses such mobile work activities as custodial operations, maintenance activities, food delivery, etc.

### **Summary of Previous Safety Enforcement Scheduling Rule.**

The previous rule included four separate lists for safety inspections – two each in general industry and in agriculture. In both cases, one list addressed places of employment with 10 or fewer employees, while the other list dealt with places of employment with more than 10 employees. The lists identified all places of employment that had experienced an accepted disabling claim in the first 12 of the previous 18 months, using records available to the department through reports from the workers compensation carriers in the state. Those places of employment that had experienced a comprehensive safety inspection in the previous 24 months were then excluded from the lists. The remaining places of employment on each of the lists were then ranked by the following factors (in descending order of priority, with the first two being equal in weight):

- the weighted claims count of the particular place of employment, using workers compensation information about accepted disabling claims,
- the weighted claims rate for the employer, using the weighted claims count and the employer’s average employment for the year.
- the violation history of the particular place of employment over the previous 36 months, using Oregon OSHA enforcement records (places of employment with no inspections during the previous 36 months were assigned priority over all other places of employment)
- The place of employment’s level of industrial risk (based on Standard Industrial Classification, or SIC, Code), using rankings provided by the federal Bureau of Labor Statistics (BLS).

### **Summary of New Safety Enforcement Scheduling Rule.**

The rule being adopted for scheduling fixed site safety enforcement activity changes the previous approach in several ways. First, it eliminates the separate lists based on size, as well as the separate agriculture lists, replacing them with a single targeting scheme that divides all places of employment in the state into 10 tiers, distinguished by the risk of particular industries in recent years. Using a variety of data about injury and fatality rates on both the state and national level, Oregon OSHA has (in consultation with an *ad hoc* advisory group formed for the purpose of the scheduling rule) developed a ranked list of industries (using the North American Industrial Classification System, or NAICS, Code) and then subdivided that list into 10 separate layers, or tiers.

The highest hazard tier will receive the greatest enforcement presence, while the lowest hazard tiers will receive a minimal enforcement presence.

The targeted enforcement presence in each tier is specified in the rule as described in Table 1.

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**Table 1: Safety Enforcement Distribution**

- Tier A: 30 percent
  - Tier B: 25 percent
  - Tier C: 20 percent
  - Tier D: 15 percent
  - Tier E: 12.5 percent
  - Tier F: 10 percent
  - Tier G: 7.5 percent
  - Tier H: 5 percent
  - Tier I: 2.5 percent
  - Tier J: No more than .05 percent (and likely in practice to be significantly less)
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In this way, Oregon OSHA will focus its safety enforcement resources in those fixed places of employment that have been determined to be the most unsafe. Within each tier, Oregon OSHA's focus will be further sharpened by completely excluding certain places of employment from scheduled safety inspections based on their demonstration by one or more of several specified methods that they are likely to be significantly safer than the norm within their industry. In selecting places of employment *within each industry tier* after such exclusions have been made, the new rule dictates a random selection process.

At its most basic level, the new fixed site safety enforcement scheduling rule eliminates the previous rule's reliance on whether a disabling claim has occurred at the worksite as the trigger for a worksite's presence on the list and shifts the focus (for the most part) away from employer-specific and location-specific claims data. Oregon OSHA has concluded that such data is not sufficiently reliable from a statistical standpoint as an indicator for the vast majority of worksites in the state, and is largely unavailable in any case for places of employment operated by employers who have multiple locations. In its place, the rule identifies places of employment based on industry, and then bases the likelihood of inspection largely, but not entirely, on the nature of the industry's risk of injury or death.

Summary of Previous Health Enforcement Scheduling Rule.

The previous health enforcement scheduling rule for fixed sites relied on four lists, similar to the safety rule. Places of employment were identified as eligible for inspection if they had experienced a "disabling health claim" in the previous 36 months. In addition (and in contrast to the safety list), places of employment were eligible for inspection if they had received a health inspection with one or more violations in the previous 36 months. Places of employment were excluded if they had received a comprehensive health inspection in the previous 24 months. The remaining places of employment were then ranked according to a combined score using the following indicators (all given an equal weight):

- the health violation history of the particular place of employment, using Oregon OSHA enforcement records (places of employment with no health inspections during the previous 36 months were assigned priority over all other places of employment),

- the employer violation history over the previous 36 months at all locations,
- the weighted health claims count of the particular place of employment, using workers compensation information about accepted disabling claims,
- the employer weighted health claims count at all locations,
- the number of health claims in the place of employment's SIC Code statewide,
- the number of health violations in the place of employment's SIC Code statewide,
- the place of employment's level of industrial risk (based on Standard Industrial Classification, or SIC, Code), using rankings provided by the federal Bureau of Labor Statistics (BLS).

Summary of New Health Enforcement Scheduling Rule.

The new fixed site health scheduling system replaces this system with a system based on industry risk. Beginning with the work of an expert panel of industrial hygienists and other occupational health professionals, and following an analysis of claims history and violation history within various NAICS codes, Oregon OSHA identified a group of industries where the risk of serious illness or of a health hazard-related death has been determined to be the greatest. In further evaluating both risk and the distribution of inspections following the original proposal, Oregon OSHA decided to divide the industries into three tiers, rather than the two proposed in the original filing. The target percentage of locations identified in each industry tier is found in Table 2 below.

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**Table 2: Health Enforcement Distribution**

- Tier A: 7.5 percent
  - Tier B: 2.5 percent
  - Tier C: No more than .05 percent (and likely in practice to be significantly less)
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After the same exclusion criteria as described in the safety rule have been applied, places of employment will be selected and ranked using a random selection process.

Other Rulemaking Changes.

In addition to the previously described changes in the fixed site scheduling systems for health and safety enforcement visits, the rule includes several clarifications and technical adjustments to definitions and selected other provisions. However, none of these changes represent a substantive change in Oregon OSHA's application of these terms or business practices.

### **III. Satisfaction of Specific Statutory Requirements**

#### **Summary of Specific Statutory Requirements**

The purpose of the Oregon Safe Employment Act and of all rules adopted under that law is found in ORS 654.003, which describes the law's general purpose as

*...to assure as far as possible safe and healthful working conditions for every working man and woman in Oregon, to preserve our human resources and to reduce the substantial burden, in terms of lost production, wage loss, medical expenses, disability compensation payments and human suffering, that is created by occupational injury and disease.*

In discussing that purpose, ORS 654.003(4) states that one of the Legislative Assembly's intents is to provide a program

*...to enforce all laws, regulations, rules and standards adopted for the protection of the life, safety and health of employees, and in so doing, predominantly prioritize inspections of places of employment to first focus enforcement activities upon places of employment that the director reasonably believes to be the most unsafe.[emphasis added]*

This general statement about the focus of inspections is amplified by ORS 654.035(1)(d). This language, which provides the specific set of requirements that must be satisfied by the department in relation to inspection scheduling, reads as follows:

*Fix standards for routine, periodic or area inspections of places of employment that are reasonably necessary in order to determine compliance with all occupational safety and health laws and the regulations, rules and standards adopted under occupational safety and health laws. Except for complaint inspections, follow-up inspections, imminent danger inspections, referral inspections and inspections to determine the cause of an occupational death, injury or illness, all inspections shall be based on written neutral administrative standards. The standards shall include a prioritized scheduling system for inspections that predominantly focuses enforcement activities upon places of employment that the director reasonably believes to be the most unsafe. The standards shall be accessible to employers under ORS 192.410 to 192.505 for at least 36 months from the last date the standards are in effect. The director shall notify in writing each employer whose place of employment is rated by the director as one of the most unsafe places of employment in the state of the increased likelihood of inspection of the employer's place of employment and of the availability of consultative services. The director may by rule offer incentives to employers that elect consultative services before an inspection is conducted. Nothing in this paragraph prevents the director from conducting a random inspection of a place of employment as long as the inspection is scheduled and conducted pursuant to written neutral administrative standards.[emphasis added]*

Oregon OSHA enforcement activity can be broken down into several different categories. However, the simplest division is between "programmed" and "non-programmed" inspections.<sup>2</sup>

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<sup>2</sup> "Scheduled" and "non-scheduled" can be substituted for "programmed" and "non-programmed." The two sets of terms are essentially synonymous and in either case distinguish between those inspections prompted by a specific obligation or circumstance (non-programmed) and those resulting from Oregon OSHA's own initiative (programmed).

The list of inspections found in the statute's exception to the "written neutral administrative standards" requirement ("complaint inspections, follow-up inspections, imminent danger inspections, referral inspections and inspections to determine the cause of an occupational death, injury or illness") is the list of "non-programmed" inspections. All programmed inspections are subject to the requirement, including the need for "a prioritized scheduling system for inspections that predominantly focuses enforcement activities upon places of employment that the director reasonably believes to be the most unsafe." At the same time, it is worth noting that the statute explicitly preserves the ability to conduct random inspections (providing that written neutral administrative standards are used).

Written and oral comments submitted on behalf of one employer<sup>3,4</sup> assert that the proposed rule does not comply with the applicable statutes. The comments suggest that the law requires the use of data specific and somehow unique to the worksites being evaluated. One separate set of written comments indicates that the earlier letter "raises some valid points" that should be resolved before Oregon OSHA completes the rulemaking.<sup>5</sup>

Oregon OSHA has carefully evaluated the statutory requirements and the arguments made in the public record. Following that evaluation, Oregon OSHA has reaffirmed its conclusion prior to proposing the rule that the rule as proposed and the rule as adopted fulfill the applicable statutory mandates.

In considering the statutory mandate, Oregon OSHA has analyzed the statutory requirement, particularly with regard to the question (raised during discussions of the advisory group and again during the hearings on the proposed rule) of whether the statute requires the department to consider data unique to each worksite in establishing its reasonable belief of which worksites are most unsafe.

#### Analyzing the Text of the Statutory Provision.

Oregon OSHA looked first to the text of the statute to determine what must be done "to predominantly focus enforcement activities upon places of employment that the director reasonably believes to be the most unsafe."

The common meaning of "predominantly" is "having superior strength, influence, authority or position: controlling: prevailing."<sup>6</sup> The word "focus" means "to cause to be concentrated."<sup>7</sup> Taken together, the phrase requires Oregon OSHA to use a scheduling system that concentrates inspection activity on a higher number of the places of employment that the director reasonably believes to be the most unsafe, compared to other places of employment. As discussed in Section IV below, the rule adopted by Oregon OSHA satisfies that requirement, in relation to all programmed inspections, in relation to all fixed site inspections from these lists, and in relation to the health and safety scheduling systems individually.

In addition to the raw numbers, the rule's focus within the highest hazard industries is further borne out by the enforcement presence within those industries relative to the number of places of employment. This can be seen not only in the annual enforcement presence, but especially in the

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<sup>3</sup>Letter on behalf of Teledyne Wah Chang, dated August 12, 2009.

<sup>4</sup>Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA's public hearing in Bend on August 14, 2009.

<sup>5</sup>Letter on behalf of TOC Management Services, not dated but received by e-mail August 22, 2009.

<sup>6</sup>Webster's Third New International Dictionary, Unabridged, 2002.

<sup>7</sup>*Ibid.*

relative “saturation” of the targeted community over time, which is described in the discussion of the issue and Table 5 in Section IV below.

The next question in assessing Oregon OSHA’s compliance with the statute arises out of the meaning of the phrase “places of employment that the director reasonably believes to be the most unsafe.” The word “unsafe” commonly means “not safe: exposed or exposing to danger.”<sup>8</sup> “Safe” is defined as “freed from harm, injury, or risk: no longer threatened by danger or injury.”<sup>9</sup> The adjective “most” is ordinarily defined as “greatest in quantity, extent, or degree.”<sup>10</sup> Read together, these definitions indicate that the legislative assembly intended the department to predominantly focus on those places that pose the greatest risk of injury or harm.

The exact method of identifying that risk is not limited by the text of ORS 654.035(1)(d). In assessing risk, the department may look to risks inherent in the nature of the industry in which workers are engaged at the place of employment, or to particular results, processes, chemicals or conditions at the place of employment, or to other factors, or to a combination of factors. The statute does not specify a particular method by which a reasonable belief of risk is to be determined. Instead, the legislative assembly explicitly delegated this task of determining the most unsafe conditions of employment to the director of the Department of Consumer and Business Services.<sup>11</sup> Under the statute, enforcement activities must focus on those places of employment “the director *reasonably believes* to be the most unsafe.” [emphasis added]

The reliance on a reasonable action is a commonly used criterion in the law. A reasonable belief is a belief “under circumstances which a reasonable person would believe.”<sup>12</sup> A “reasonable person” is in turn defined as “a person who exercises the degree of attention, knowledge, intelligence and judgment that society requires of its members for the protection of their own and others’ interests.”<sup>13</sup> Oregon courts have, in the past, provided a somewhat more straightforward explanation of the “reasonable person,” indicating that a reasonable person is a person who subjectively holds a belief when that belief is objectively reasonable.<sup>14</sup> Fundamentally, Oregon OSHA’s belief is a reasonable one if it is supported by some objective evidence. Objective evidence is not limited to location-specific, or employer-specific, historical data.

#### Evaluating the Context of the Statutory Requirement.

This plain reading of ORS 654.035(1)(d) is supported by its context. ORS 654.035(1)(d) is part of the Oregon Safe Employment Act (ORS 654.001). As noted above, one of the stated expectations of the act is that the director will “predominantly prioritize inspections of places of employment to first focus enforcement activities upon places of employment that the director

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<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*

<sup>11</sup> The Director has, in turn, used the authority of ORS 654.025(2) and (5) to delegate the authority to implement and enforce the Oregon Safe Employment Act to the Administrator of the Occupational Safety and Health Division (Oregon OSHA) and has explicitly delegated her rulemaking authority under the OSEA to the Oregon OSHA Administrator (see memo entitled “Delegation of Authority,” signed by Cory Streisinger, DCBS Director, dated September 29, 2006, form entitled “Delegation of Rulemaking Authority,” signed by Director Streisinger, dated September 19, 2005, and OAR 437-001-0010 and 0020)). The reality and likelihood of such delegation was clearly acknowledged in discussions during the 1999 legislative hearings, where comments by the agency and by both supporters and opponents of various versions of the bill repeatedly referred to the head of Oregon OSHA (either by the name of the administrator at the time, or by title, or by the technically incorrect title of “director of Oregon OSHA”) as the person who would be implementing the statute’s provisions.

<sup>12</sup> Black’s Law Dictionary (8<sup>th</sup> edition, 2004).

<sup>13</sup> *Ibid.*

<sup>14</sup> *Roop v. Parker Northwest Paving Co.*, 194 Or App 219, 238 (2004), citing *Perry v. Rein*, 187 Or App 572, 578 (2003).

reasonably believes to be the most unsafe.” This statement of purpose does not limit the director’s exercise of judgment by identifying particular criteria that must be used to identify the most unsafe places of employment.

In addition, when the act was amended in 1999 to include the language now found in ORS 654.035(1)(d) requiring the identification of the most unsafe places of employment, the legislative assembly added a new notice requirement related to the risk of inspection. The original language read as follows:

*The director shall notify in writing each employer whose accepted disabling claims rate is above the state average for its standard industrial classification and each employer whose industry is rated by the director as one of the most unsafe industries in the state of the increased likelihood of inspection of their place of employment and of the availability of consultative services.*<sup>15</sup> [emphasis added]

The highlighted language in this provision makes it clear that the legislative assembly anticipated that the director might use industry classifications by themselves to identify the most unsafe place of employment. Certainly, it also required notice to employers with an above-average accepted disabling claims rate to receive notice that they were more likely to receive an inspection. But that notice does not represent a requirement that Oregon OSHA use accepted disabling claims rate data in determining which places of employment are most likely to be unsafe (and, in any case, the employer’s accepted disabling claims rate does *not* represent data specific to the particular place of employment in the case of employers with more than one location).

The notification language was amended by the legislative assembly in 2005 to eliminate specific requirements about who is to be notified beyond the existing requirement to notify “each employer whose place of employment is rated by the director as one of the most unsafe places of employment in the state.” This change is a further indication that the legislative assembly did not intend to require the director to be limited to any particular type of data for the purposes of determining the most unsafe places of employment in Oregon.

Read in context, the statute does not provide any evidence of legislative intent to compel a reliance on location-specific, or employer-specific, data in identifying the most unsafe places of employment.

#### Review of Legislative History.

This analysis of the text and context of the statute is confirmed by the legislative history that would be considered in the event a court was called upon to review the statute. In contrast to suggestions made by some during advisory committee meetings and in the formal record, the legislative history leading to the adoption of the relevant provisions of ORS 654.035(1)(d) confirms, rather than disputes, Oregon OSHA’s position that the statute provides broad latitude regarding the criteria to be used. The legislative history specifically highlights the use of industry classification as one possible criterion. The original version of 1999’s HB 2830 would have required the director to “prioritize inspections of places of employment to first focus enforcement activities upon places of employment where the director reasonably believes *the most serious violations exist.*”<sup>16</sup> [emphasis added] At least arguably, the need to identify those

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<sup>15</sup> Or Laws 1999 ch.1017 Section 2.

<sup>16</sup> House Bill 2830 (Introduced) (1999)

locations where the most serious violations exist might have required the use of location-specific information (at least to the degree feasible). But, as cited above, the final language adopted by the legislative assembly refers to those “places of employment that the director reasonably believes to be the most unsafe.” Oregon OSHA has concluded that this language requires reasonable identification of those places that pose the greatest risk of injury or harm, which may or may not involve consideration of site-specific information.

The testimony regarding HB 2830 makes clear both that the director has broad latitude and that prioritization by industry type is a possibility. For example, in his testimony, the bill’s sponsor described the bill’s purpose as to codify the concept that Oregon OSHA must “try to visit the most dangerous workplaces that have a history of injuring workers *or industries that also have a history of that type of thing.*”<sup>17</sup> [emphasis added] In discussing the criteria to be used, he further stated “Well it establishes that OSHA will develop their own, and [then Oregon OSHA Administrator] Mr. De Luca will speak to this, their own inspection schedule based on what’s considered a worst-first basis first. This allows random inspections. It simply says that the *Agency will develop some methodology* behind those random inspections and Mr. De Luca can expand on that later.”<sup>18</sup> [emphasis added]

The bill’s sponsor had addressed the same issue at somewhat greater length before the House Business and Labor Committee, resulting in the following exchange during his testimony:

**Rep. Kropf:** ...*And if you look at the language that we have in here, we give the Director, I think, a great deal of flexibility in determining those areas, those industries, those industry groups, that have in fact, an experience of greater injury. My industry is one of those unfortunately. Farming is a very dangerous industry. And I think that it’s certainly appropriate, it makes all the logical sense in the world to me - that if you have an industry by the inherent nature of that industry is dangerous and there are more injuries - that the agency should certainly look at those folks first in my view. Because it seems to me that we should be concentrating our efforts where they are needed the most; more than just dropping in. I’m not saying we do away with drop-ins. What I’m saying is the focus needs to be in those areas where the injuries are occurring first of all.* [emphasis added]

**Rep. Lundquist:** ...*First of all, you are thinking about prioritizing by industries? Is that a correct statement?*

**Rep. Kropf:** *Mr. Chair, Representative Lundquist, not necessarily. The language in the bill actually gives the Director the ability to what he considers to be reasonable areas to look in. There’s fairly broad language in there in that regard. It doesn’t necessarily have to be industry groups. In the case of farming, which you are certainly involved in, we are an industry group, we are a fairly high risk group. It would seem important to me that the agency looks at, again, the groups or the types of businesses that have the highest injury rates and that’s, again, where I think they should focus their activities.* [emphasis added]

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<sup>17</sup> Testimony of Rep. Jeff Kropf regarding HB 2830, Senate Public Affairs Committee, July 13, 1999, tape 196, side A.

<sup>18</sup> *Ibid.*

**Rep. Lundquist:** *So this could, might not necessarily be by industries. It could be by, I suppose, history of the employers and it says in here that “first focus enforcement activities upon places of employment where the Director reasonably believes the most serious violations exist.” The violations exist could be different from an industry, you can have a bad actor in the most safe industry. I mean, I’m just curious how they develop this prioritized list is really what I’m asking?*

**Rep. Kropf:** *Mr. Chair, Representative Lundquist, I don’t have any input on that. That’s going to be an issue for the Director and the agency to decide upon. .... I think you have to look at not only necessarily industry groups but people who have a track record. It seems to me as a farmer, and I’ll use my own business group, continually has a record of injuries, is inspected, has lots of violations, doesn’t take the steps to correct those, that in the current law there is plenty of ability for the agency to sanction that individual and they should sanction the individual, in my view. I think they have to look at a whole host of factors that would seem to be logical in my mind. But again, we are – by the language of this bill—we are making it clear that it is what the Director reasonably believes the most serious violations exist<sup>19</sup>. [emphasis added]*

In addition to emphasizing the agency’s discretion and highlighting the possibility of industry-based targeting, Rep. Kropf’s testimony clearly endorses the general possibility of targeting “groups” and “types” of employers.

Although the record also includes discussions of the potential for targeting employers based on their individual records, the legislative history taken as a whole not only does not contradict the plain reading of the statute; it confirms it: The agency has wide latitude in making a reasonable determination of which workplaces are likely to be the most unsafe, and identification of workplaces by type – specifically including by industry – was clearly contemplated as at least one of the mechanisms that could be used. If the rulemaking record establishes a reasonable basis for the newly adopted rule (the department has concluded that it does), the rule complies with both the language and the legislative history of the applicable statutes.

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<sup>19</sup> Testimony of Rep. Jeff Kropf regarding HB 2830, Senate Public Affairs Committee, April 14, 1999, tape 85, side A.

#### **IV. The Focus of the Rule on Unsafe Places of Employment**

Based on the agency's conclusion (for reasons discussed elsewhere in this document) that places of employment in those industries identified in the high-hazard tiers of the safety and health enforcement scheduling rules can reasonably be considered the most unsafe, the rule, as required by law, predominantly focuses programmed enforcement activities on those places of employment.

The question of how well resources are focused on those unsafe places of employment can be analyzed several different ways, each of which supports the conclusion that the rule will function appropriately.

##### **Distribution of Oregon OSHA's Programmed Enforcement Resources Overall**

In evaluating the "focus" of Oregon OSHA's enforcement resources under the statute, one can first look at the broadest picture regarding the use of enforcement resources for programmed inspections.

During the period from Federal Fiscal Year 2004 through 2008, Oregon OSHA completed an average of 5029 inspections annually. Of those, an average of between 3601 and 3657<sup>20</sup> (72 to 73 percent) were programmed inspections and therefore subject to the requirements of ORS 654.035(1)(d). However, not all of those inspections were scheduled as part of the fixed site enforcement provisions now being modified. An average of 1768 (more than 48 percent) are construction inspections, forest activities inspections, emphasis program inspections, or other inspections scheduled under the provisions of OAR 437-001-0057(5), (7), (8), (9), and (10).<sup>21</sup> In contrast, this rulemaking addresses the scheduling provisions found in OAR 437-001-0057(4) and (6), which currently account for just under 52 percent of the department's programmed inspections.

To meet the most basic meaning of the requirement to "substantially focus" programmed enforcement resources on those places of employment determined to be most unsafe, Oregon OSHA must ensure that its scheduling system completes a majority of its activity within those places of employment. The rule just adopted can clearly be expected to fulfill that purpose.

At the bare minimum, Oregon OSHA must focus more than 50 percent of the expended resources on programmed inspections on those worksites determined to be the most unsafe. With an average of 3657 programmed inspections, that would mean that the entire scheduling system would need to provide an average of at least 1829 inspections in those places of employment determined to be the most unsafe. Assuming that the scheduling systems not being modified by this rulemaking remain valid and continue to operate at their current levels, they

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<sup>20</sup>The total number of inspections is taken from the 2009-2011 budget documents submitted to the legislative assembly. The discussion of programmed inspections is based on a worksheet created by DCBS Information Management Division on September 22, 2009 and updated on September 23, 2009. The first total for programmed inspections is actually the more reliable of the two provided by that document, but the source data does not allow the programmed inspections to be further divided by type. In any case, use of the higher number increases the number of inspections required to meet the "predominantly focus" test and therefore represents a more conservative approach. For these reasons, the figure of 3657 is used for the remainder of the analysis.

<sup>21</sup>Although not reflected in the breakdown provided, the majority of these inspections are conducted within the construction industry, particularly in relation to the fall hazard and trenching emphasis programs; significant portions of the remainder come from forest activities and agriculture.

already provide for 1768 inspections. In one sense, therefore, the fixed site enforcement scheduling system arguably needs to provide only 61 inspections of places of employment determined to be unsafe each year to be minimally sufficient from a legal standpoint. The scheduling system adopted by this rule clearly satisfies that minimal goal.

However, such minimal targeting would be poor public policy and a poor use of resources. The rule as adopted does much better at focusing programmed enforcement resources at those places of employment the department believes to be most unsafe.

The safety tiers adopted in the rule include 10 tiers, but they are not of equal size. Together, they account for an estimate of roughly 108,000 places of employment throughout Oregon.<sup>22</sup> However, Tier J accounts for roughly two-thirds of those locations. In this fashion, the safety scheduling system targets roughly one-third of the places of employment that could be inspected for a heightened risk of inspection.

Similarly, Health Tier A includes an estimated 7373 places of employment, while Tier B includes 9560. Taken together, the two tiers target fewer than one-sixth of the places of employment for a heightened risk of inspection.

Of the 3657 programmed inspections expected each year, the lists being replaced by this rule have historically accounted for an average of 1828. Including only those industry tiers (A through I, but not J) with an elevated risk, the safety lists alone are expected to provide for as many as 1803 inspections, all of which are in industries with a risk determined by Oregon OSHA to be well above the norm and therefore at least arguably among the “most unsafe” in the state. An additional 792 places of employment will be identified by tiers A and B in the health list, expected to account for an additional 264 visits. However, for the purpose of this analysis, Oregon OSHA has chosen the more conservative approach of considering only those places of employment in safety tiers A through G and health tier A as among the most unsafe.

The expected annual distribution of enforcement visits in the 10 safety industry tiers is shown in Table 3.

**Table 3: Distribution of Fixed Site Safety Enforcement Activity**

Tier A (30 percent of locations)	95
Tier B (25 percent of locations)	188
Tier C (20 percent of locations)	22
Tier D (15 percent of locations)	115
Tier E (12.5 percent of locations)	39
Tier F (10 percent of locations)	229
Tier G (7.5 percent of locations)	412
Tier H (5 percent of locations)	115

<sup>22</sup>Extracted from a September 1, 2009 spreadsheet provided by the DCBS Information Management Division and entitled “Counts of Locations by NAICS Code: Safety.” The data in this spreadsheet is based on more accurate and up-to-date data on employment locations, provided by the Employment Department. Documents previously shared by Oregon OSHA before and during the rulemaking process relied exclusively on DCBS records without the more up-to-date information. With regard to Tier A, in particular, the distribution of enforcement activity is likely to shift beginning in the fourth year for reasons discussed below in “Focus of Safety Enforcement Resources Within an Industry Over Time” – the numbers used in this analysis reflect the distribution as long as there is a sufficient number of eligible places of employment to achieve the target percentage for each tier.

Tier I (2.5 percent of locations)	588
Tier J (.05 percent or less of locations)	fewer than 25 <sup>23</sup>

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Taken together, the lists created from Safety Tiers A through G will account for an estimated 1100 inspections.

The expected annual distribution of enforcement visits in the three health industry tiers<sup>24</sup> is shown in Table 4.

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**Table 4: Distribution of Fixed Site Health Enforcement Activity**

Tier A (7.5 percent of locations)	184
Tier B (2.5 percent of locations)	80
Tier C (.05 percent or less of locations)	fewer than 15

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Taken together, the safety lists created from Safety Tiers A through G and the health list created from Health Tier A will account for an estimated 1284 inspections.

When combined with the existing average of 1768 inspections from the scheduling systems not affected by this rule change, this data provides an estimate of 3052 inspections of those workplaces determined by the department to be most unsafe. Compared to an expected total number of programmed inspections of 3657, well over 80 percent of Oregon OSHA's programmed enforcement visits will involve such workplaces, clearly satisfying the requirement of the statute to "predominantly focus" resources on such workplaces.

#### Distribution of Fixed Site Enforcement Activity

It is worth noting that the same numbers demonstrate that Oregon OSHA's new rule meets the "focus" test even when the analysis is limited to fixed site enforcement activity alone.

The safety and health lists described in Tables 3 and 4 above account for an estimated 2107 inspections. Of those, more than 98 percent will come from places of employment whose risk Oregon OSHA has determined to be well above the norm (those above Safety Tier J and Health Tier C). Taking the more conservative approach described above and looking only at Safety Tiers A through G and Health Tier A, Oregon OSHA estimates that 61 percent of the fixed site enforcement activity will come from those lists. Therefore, even when the analysis is made conservatively and limited to fixed site scheduling alone, the rule meets the requirement to "predominantly focus" resources on the places of employment determined to be the most unsafe.

A similar analysis can be completed individually for the separate safety and the health systems.

The safety lists in Table 3 above are expected to account for 1828 inspections. Of those, more than 98 percent will come from places of employment whose risk Oregon OSHA has determined to be well above the norm. Again, taking the more conservative approach and considering only

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<sup>23</sup> *Ibid.*

<sup>24</sup> Extracted from a September 15, 2009 test run provided by the DCBS Information Management Division and included in a document entitled "Health Scheduling Lists Totals, 2003-2009." The totals reported here use an estimate based on one-third of the employers who will be identified in the lists. Historically, health enforcement visits have had a high rate of "no inspection" results, for a variety of reasons. Changes being implemented in the identification of employer locations are expected to reduce, but not eliminate, such "no inspection" results. Taken together, the size of the health scheduling lists created by this rule is comparable to the size of the lists created under the previous rule (Lists E, F, G and H); however, they are expected to generate a slightly larger number of inspections than the historical average (218).

Safety Tiers A through G as among the “most unsafe,” Oregon OSHA expects those tiers to account for more than 60 percent of the fixed site safety enforcement activity.

Similarly, the health lists in Table 4 are expected to account for 279 inspections. Of those, almost 95 percent will come from places of employment whose risk Oregon OSHA has determined to be well above the norm. Again, taking the more conservative approach and considering only Health Tier A as among the “most unsafe,” Oregon OSHA expects that tier to account for more than 65 percent of the fixed site health enforcement activity.

Not only do the new scheduling systems for fixed site locations that have been adopted by this rule satisfy the legal requirement to “predominantly focus” Oregon OSHA resources on those places of employment identified as the most unsafe, they also reflect good business practice. Both within the groups identified as among the most unsafe and outside those groups (using the conservative analysis above), the industry groups are further prioritized by their relative risk, and places of employment that can demonstrate a significantly reduced risk by one of several methods are excluded from the risk of inspection.

#### Focus of Safety Enforcement Resources within an Industry over Time

It would be possible to generate a system that established a much higher priority for each industry tier, with enforcement activity not moving on to other tiers until the highest risk tier had been completely saturated. However, such an approach would create an excessive distinction between the industry tiers and would allow employers in relatively high-risk activities too high a level of certainty that they would not be inspected. The approach adopted by the rule is to focus programmed enforcement activity on each of the tiers, with the degree of that focus higher for the highest levels of industry risk.

In addition, the rule should not be viewed as a single-year scheduling system but as a multi-year system. Viewed in that light, the very high risk industries are largely saturated in a relatively short number of years.

Taking into account the number that are likely to remain “uninspected” in any given year, it is possible to estimate the level of enforcement presence in each tier as time passes. Assuming that lists are created only once each year and that they are created at the same time each year, places of employment that were inspected in the first year will remain exempt when the fourth year list is created (the analysis would change only slightly if it were necessary to create more than one list in a particular year because the first list created had been exhausted).

After three years, 90 percent of the first tier will have received inspection. In the following year, those not yet inspected will represent less than 30 percent of the tier and therefore all will be inspected. In this way, the entirety of eligible places of employment within Tiers A and B will be inspected within 4 years. In the other tiers, the percentage of places of employment not yet inspected will decline steadily, as the random selection process identifies a proportional number of uninspected and previously inspected locations (beginning in Year 5, when those inspected in the first year are returned to the pool of eligible candidates).

For example, in Tier C the eligible population in the fifth year will be made up of 40 percent of the total pool (the other 60 percent having been excluded due to recency of inspection). Of that 40 percent, half will be made up of locations that have not been inspected, while half will be made up of locations inspected in the first year. In order to include 20 percent of the total number of employers, roughly half of each group will be inspected. In this way, the percentage

of employers not yet inspected will be reduced to 10 percent of the total pool. The next year, the number of eligible locations will again be 40 percent of the total pool, with 60 percent excluded due to recency. One quarter of that 40 percent will be locations that have never been inspected (while half will be locations inspection in the second year and one quarter locations inspected in the first year and not inspected in the fifth year). Again, identifying 20 percent of the total will require selecting half of those eligible for inspection, meaning that roughly half of those not yet inspected will be selected in the sixth year (reducing the percentage not yet inspected in any year to 5 percent of the total pool). And the process will continue as the years pass, with half of the remaining uninspected locations inspected each subsequent year.

A similar process will occur at all tiers, steadily reducing the number of uninspected locations, although the impact is progressively smaller as the target percentage decreases. Table 5 summarizes the results:

**Table 5: Safety Presence in Targeted Industries over Time**

	Year 1	Year 3	Year 4	Year 5	Year 10
Tier A	30%	90%	100%	100%	100%
Tier B	25%	75%	100%	100%	100%
Tier C	20%	60%	80%	90%	99.7%
Tier D	15%	45%	60%	71%	94%
Tier E	12.5%	37.5%	50%	60%	87%
Tier F	10%	30%	40%	49%	76%
Tier G	7.5%	22.5%	30%	43%	62%
Tier H	5%	15%	20%	25%	44%
Tier I	2.5%	7.5%	10%	12%	24%
Tier J (max)	.05%	.15%	.2%	.2%	.5%

As the table illustrates, a majority of places of employment in each of the tiers of the high hazard group (Tiers A through G) will be inspected at least once over the course of 10 years. And a majority of very high hazard group (Tiers A through E) will be inspected at least once over the course of five years, with at least 85% of them inspected at least once over the course of 10 years. A majority of the highest hazard group (Tiers A through C) will be inspected within the first three years of the rule's existence, and all or nearly all of the places of employment in each of those three tiers will be inspected at least once over a 10-year period. In contrast, for the lowest risk group, only ½ of one percent are likely to be inspected over 10 years, even if the maximum list size is actually used.

This illustrates another way that the primary focus of Oregon OSHA resources can be evaluated – not only do those places of employment identified as unsafe make up a large portion of Oregon OSHA's workload, but the likelihood that each of those places of employment will be visited is much higher than for less hazardous places of employment.<sup>25</sup>

<sup>25</sup>A similar analysis could be conducted for the health enforcement lists, but the effect would be much less dramatic. At the maximum level possible under the rule, Health Tier A would be comparable to Safety List G in the table above. However, the actual capability of Oregon OSHA to conduct inspections from these lists is likely to be more comparable to the presence described in Safety Tier I. However, even that relatively low level of saturation of target industries will be considerably higher than that experienced in industries that Oregon OSHA considers unlikely to contain the most unsafe places of employment.

## **V. Statistical Limitations of Using Experience to Characterize Risk**

Oregon OSHA has adopted the approach outlined in the new rule because it does not believe that the reliance on individual worksite experience provides the best basis to determine which places of employment in Oregon can fairly be described as “the most unsafe.” In part, this is because of limitations in the available data (the lack of data for other than disabling claims, the lack of employment counts for individual locations, the lack of worker hours even where employment counts are available, etc.). However, to an even greater extent, Oregon OSHA’s concern with the use of such worksite-specific experience to rate risk is that it is not statistically reliable, even if the data can be obtained. In this sense, the contention by at least one commenter that the rule sacrifices effectiveness for efficiency<sup>26</sup> is in error, as is the suggestion that Oregon OSHA refuses to use individual worksite data because it is “difficult.”<sup>27</sup>

### **The Limited Meaning of Statistical Variation**

Professional practitioners in workplace health and safety have recognized the limitations of the use of injury statistics as an assessment of the performance of individual workplaces. In a book clearly targeted at reasonably large manufacturing and other operations, one author includes the following discussion of injury rates as performance indicators:

*Frequency rates are statistical numbers, and underlie fluctuations. A drop in the frequency rate from, say, 5.0 to 4.5 in one year is within the range of normal variations and no reason for celebrating. Unless there is a drop of over 50%, and this is sustained for at least three years, you cannot claim to have improved your safety performance substantially.*<sup>28</sup>

If employers cannot reliably use any but the most dramatic differences in rates to assess their success, it is certainly reasonable for an entity such as Oregon OSHA to view such data (almost certainly available to a lesser degree to Oregon OSHA than to employers themselves) with skepticism.

### **Statistical Variation and the Problem of “Small Numbers”**

One commenter suggested that the proposed rule indicated a lack of understanding of statistics.<sup>29</sup> Oregon OSHA disagrees. The strength of the rule’s shift away from using worksite-specific injury experience is instead based on an understanding of statistics. It is a basic principle of statistics that it is impossible to draw inferences based on statistical variation without an understanding of the effect of random variation (or chance) on the distribution. And identifying variations between what are otherwise small numbers faces a considerable set of limitations.

The simplest example of the problem of “small numbers” that will confound any effort to determine the risk of individual small workplaces using injury experience can be illustrated by the toss of a coin. Clearly, given enough tosses of a balanced coin, the results will be very close to half heads and half tails. But if the coin is tossed only twice, there is only a 50 percent chance

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<sup>26</sup> Letter on behalf of Teledyne Wah Chang, dated August 12, 2009

<sup>27</sup> Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s public hearing in Bend on August 14, 2009.

<sup>28</sup> Kishor Bhagwati, *Managing Safety: A Guide for Executives*, (Weinheim, Germany: Wiley-VCH, 2006) p. 200.

<sup>29</sup> E-mail on behalf of Rucker Farming.

that one result will be heads and the other tails.<sup>30</sup> There is an equal chance that the results of both coin tosses will be the same. For many, the surprising result is that what would be effectively impossible given a large enough pool of data is in fact reasonably likely given a minimum of data. The same problem affects any real analysis of actual experience in the workplace, particularly when one considers the distribution of employers within the state.

### The Small Size of Most Oregon Workplaces

For those workplaces where size data is routinely tracked by the Oregon Employment Department, the rough distribution is shown by Table 6.

**Table 6: Distribution of Oregon Employers by Size<sup>31</sup>**

<u>Number of Employees</u>	<u>Percentage of Employers</u>	<u>Percentage of Employees</u>
Fewer than 10	77 percent	19 percent
Fewer than 20	89 percent	33 percent
Fewer than 50	96 percent	52 percent
Fewer than 100	98.5 percent	66 percent
Fewer than 250	99.6 percent	81 percent
Fewer than 500	99.8 percent	89 percent

It is worth noting that the distribution above relates to employers (specifically to businesses with employees), not to places of employment. Many otherwise large employers (supermarket chains, gasoline service station chains, retail clothing store chains, restaurant chains, an increasing number of forest products manufacturers, etc.) are broken into a number of much smaller individual workplaces. To that degree, the extent of the unreliability is likely to be even greater than this table suggests.

### Applying Statistics to Workplace Injury Rates

For employers (and places of employment) with fewer than 10 (and even fewer than 20) employees, it is difficult to imagine any likely circumstance where the injury rate would provide any predictive value, given the small size of most places of employment and the relatively small number (from a statistical standpoint) of workers affected in any particular workplace. The Bureau of Labor Statistics reports that an “average” employer in Oregon, cutting across all industries, faces an annual injury rate of just over five injuries per 100 workers.<sup>32</sup>

For any group of places of employment with 10 employees each, an underlying injury risk of five per 100 would guarantee that at least half of the employees would experience a rate of zero injuries. The “expected” rate based on the average would be one-half of an injury per worksite – obviously, injuries can occur only in whole numbers. Therefore, any worksites that did not experience zero injuries would experience a rate at least twice the “expected” rate. These problems are an effect of the injury rate and the size of the employer, and they remain no matter

<sup>30</sup>The first coin can be either heads or tails, as can the second, so there are four possible combinations in two tosses of a coin with an equal likelihood of occurrence (H-H, H-T, T-H, and T-T). Of the four, two (H-T and T-H) include one heads and one tails, the only difference being the order of occurrence. The other two combinations (H-H and T-T) do not. So the likelihood of getting one heads and one tails is 2 out of 4, or 50 percent. This example assumes a truly equal chance of head or tails and does not take into account the balance of the coin, the method of tossing it, or other potentially confounding variables.

<sup>31</sup>Size Class Reports found in 2007 Oregon Covered Employment & Wages, published by the Oregon Employment Department. Although this report does not include all Oregon employers covered by the Oregon Safe Employment Act, it provides a basis for estimating the size distribution of all such employers.

<sup>32</sup>United States Department of Labor, Bureau of Labor Statistics, Oregon Total Case Incidence Rate, reported for 2007.

how many such worksites are involved. Whether one is considering 10 such worksites with a total of five injuries or 500 worksites with a total of 250 injuries, it is mathematically impossible for any of the sites to experience their “expected” injury rate if the overall average is 5 per 100, and it is mathematically certain that at least half of them will experience a rate (0 per 100) well below the average.

Distribution of Injuries Among Employers with Similar Risk

An analysis of the likely distribution of such events (shown in Chart 1 below based on a Poisson distribution) indicates that the problem is even bigger. The chart provides a distribution based on the percentage of workplaces that would experience injuries of zero, one, two, three, etc., per year. In all cases, the workplaces in this model have 10 employees and an injury risk of 5 injuries per 100 per year. If we looked at 1000 such workplaces, none of them would have the expected injury rate, because none would experience one-half of an injury. Less than a third (303) would be likely to have a single injury, while twice as many (607) would experience no injuries at all. And more than 9 percent (76) would have two or more injuries (therefore creating a “rate” at least four times the norm). This wide distribution would occur even though the actual probability of each of these workplaces experiencing an injury would be identical.

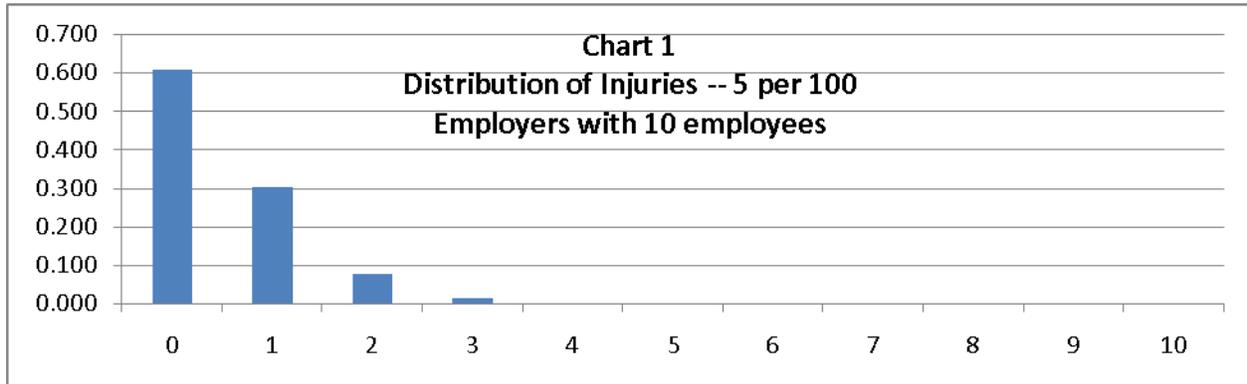
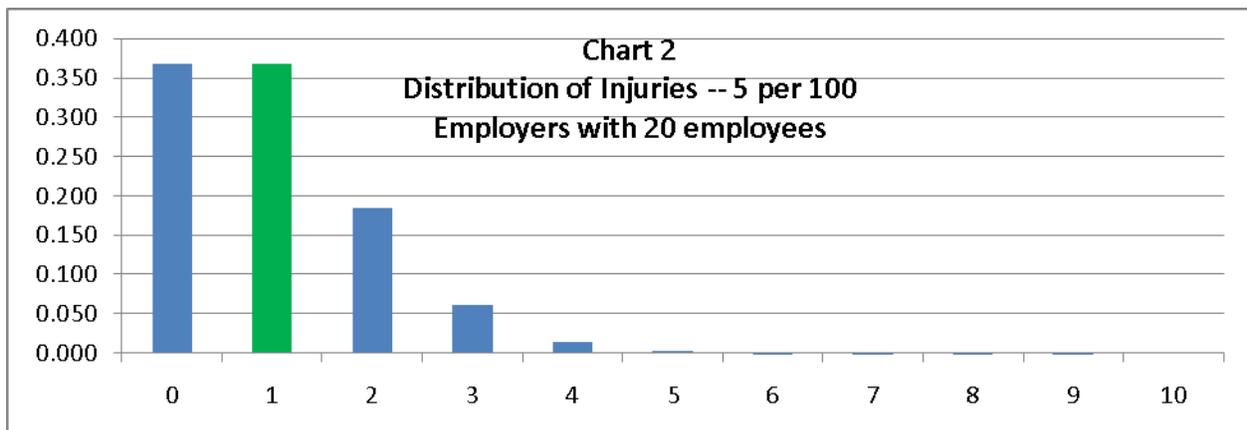


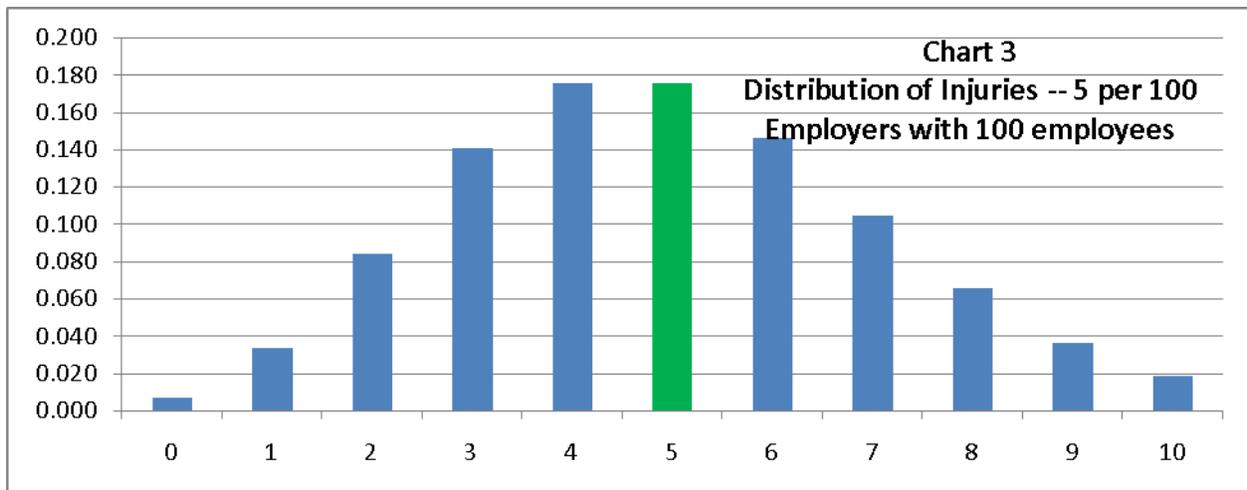
Chart 2 shows a similar distribution that shows the likelihood of various injury rates among a population of somewhat larger workplaces whose employees face a similar risk of injury (5 percent in any given year). In this group, we are looking at worksites with 20 employees and an “expected” number of injuries of 1 per worksite. Any variation from 1 reflects a likely random distribution *with no change in the risk of injury*. Although it is now mathematically *possible* to achieve the “expected” rate, the likely statistical distribution remains wide.



Among a population of 1000 such workplaces, we would actually expect to see roughly 37 percent (368) with the “expected” one injury based on the risk. The same rough number would experience no injuries at all. Half as many workplaces (184) would experience twice the “expected” injury rate. A relatively small number (61) would experience three times the expected rate, while less than two percent (15) would experience a rate of four or more times the expected rate. As a practical matter, even with large differences there is a significant amount of uncertainty. If one identified 30 worksites with a rate of 20 per 100 or more in a group of 1000 where the group averaged 5 injuries per 100, it is likely that 19 of those worksites would be there purely due to chance. And, looking at the injury data, there would be no way to identify which of the 30 experienced the injury as a result of increased risk, rather than random variation.

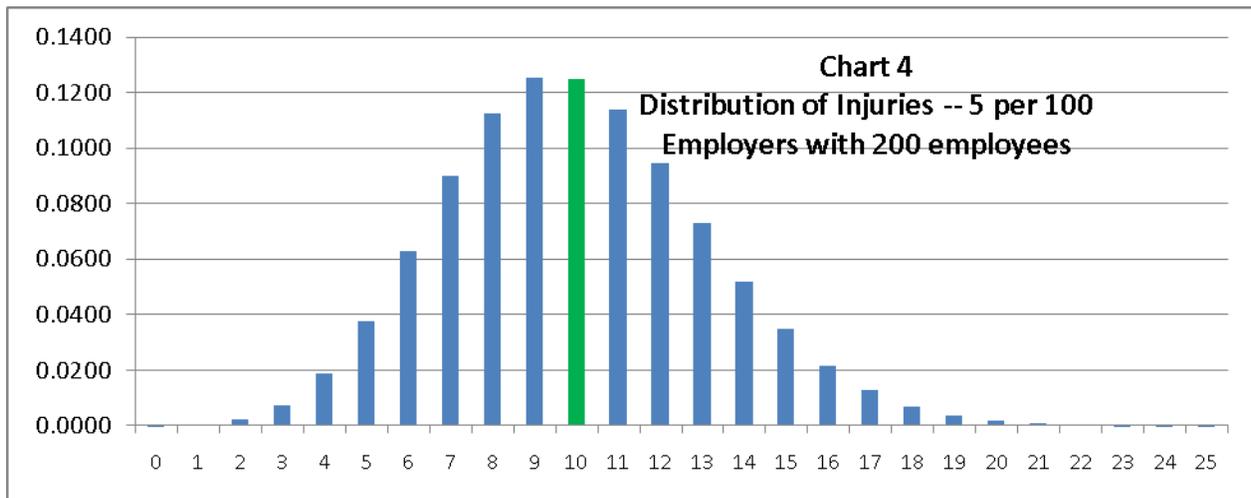
It is very unlikely that a workplace with 20 employees and a 5 percent risk of injury would experience more than five injuries – such an extreme result would certainly suggest problems that were well beyond the typical. But, taken together, roughly 26 percent of workplaces would have a rate at least twice the expected rate based on risk. This analysis suggests that – for an average of 5 per 100 at least, there is little value in identifying increased rates on worksites with 20 or fewer employees, while there is essentially no value in identifying low-injury rate worksites of such size. One would certainly (based on this distribution) have no meaningful basis to conclude with any confidence that a 20-employee workplace with no injuries was likely to be safer than a workplace with one injury. And a workplace with two injuries is reasonably likely to be equal in risk to a workplace with only one injury.

With larger workplaces, the problems diminish, but they do not go away. Chart 3 below describes a population of employers with 100 employees and an “expected” number of injuries (again based on the probability of 5 per 100) of 5. Again, any variation from 5 reflects the likely random distribution with no change in the risk of injury. Only 17.5 (175) percent of workplaces would experience the “expected” rate, with just as many experiencing a rate exactly 20 percent better than expected. A total of 44 percent would experience a rate 20 or more percent better than expected and just under 40 percent (385) would experience a rate at least 20 percent worse than expected.



In the next group, described in Chart 4 on the next page, we are looking at employers with 200 employees and an “expected” number of injuries (again based on the probability of 5 per 100) of 10. Again, any variation from 10 reflects the likely random distribution with no change in the

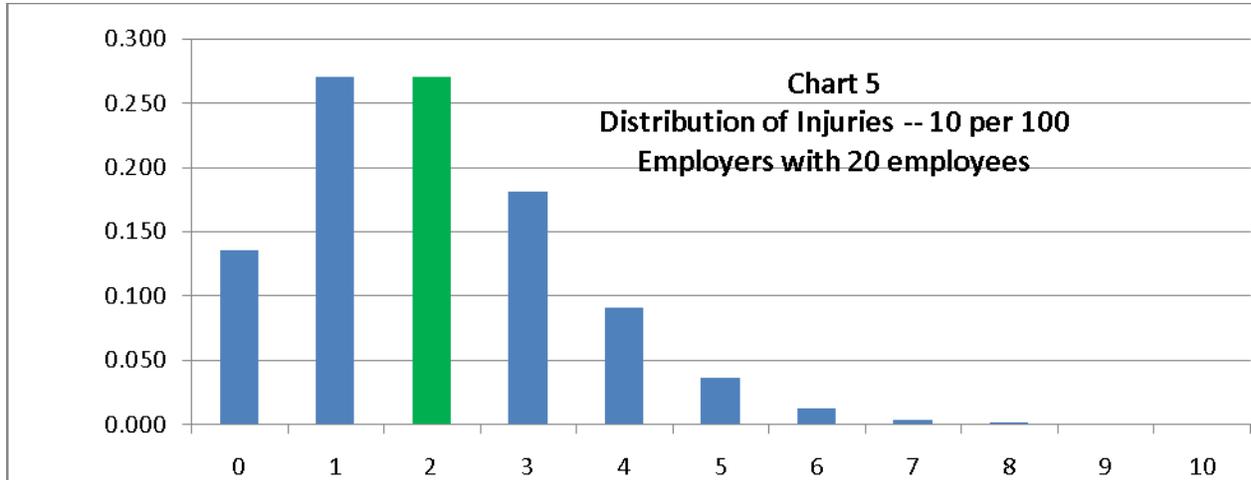
risk of injury. Roughly one-eighth (125) workplaces would experience the “expected” rate, while an equal number would experience a rate exactly 10 percent better than “expected.” Slightly fewer (114) would experience a rate exactly 10 percent worse than “expected.” In addition, almost 46 percent (458) would experience a rate at least 10 percent “better” than expected and almost 42 percent (417) would experience a rate at least 10 percent “worse” than expected. Roughly a third (333) would experience a rate 20 percent “better” than expected and more than 3 in 10 (303) would experience a rate 20 percent “worse” than expected. Nearly 7 percent (67) of worksites would experience a rate that was half the expected rate or lower, and more than 8 percent (84) would experience a rate that was at least 50 percent worse than the expected rate. If we looked at a large enough group of workplaces, we would expect to find at least some employers with a rate more than twice the expected rate, without any change in actual risk.



Based on this distribution, comparing even a 200-employee worksite with the “expected” rate of 5 per 100 to another worksite with a rate 10 or even 20 percent better would tell us relatively little about the likely actual risk, nor would comparing an employer with the “expected” rate to an employer with an actual rate 10 or even 20 percent worse. Comparing that 200-employee worksite to another worksite of 100 employees and another four worksites of 20 employees each and yet another four worksites of 10 employees each creates a considerable challenge in terms of assessing the actual meaning of any variations in the recorded experience.

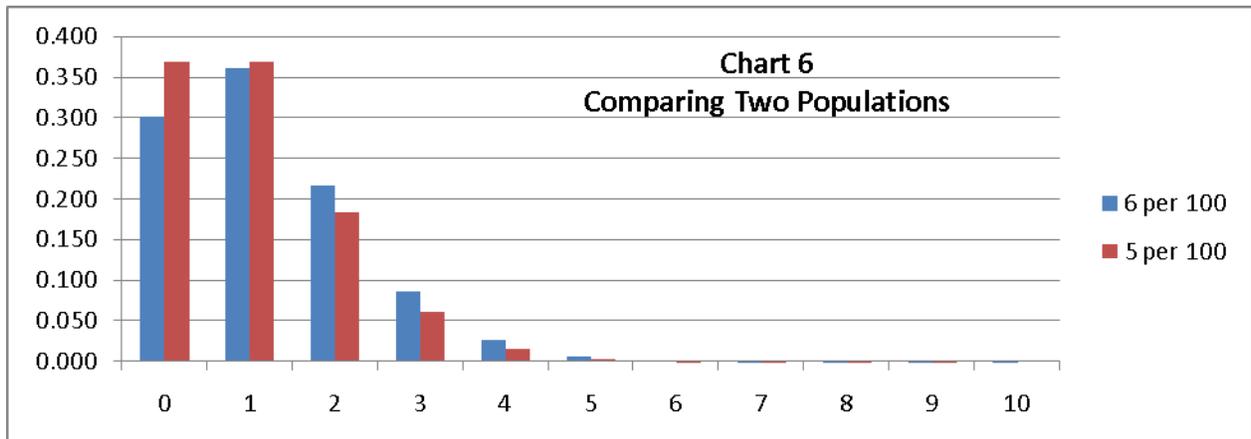
Even presuming that complete and accurate injury records were available for each place of employment, most places of employment are too small for their success in controlling the risks of workplace injury, illness and death to be characterized based on the injury and illness experience.

The extent of the problem with characterizing small workplaces varies based on the underlying risks. Even for workplaces with 200 employees, it is difficult to draw reliable conclusions based on experience when the underlying risk is at or below 5 injuries per 100 workers per year. But similar analyses of experience at a higher rate show that the challenge is still present. For example, Chart 5 on the next page analyzes a group of workplaces with 20 employees but where the risk of injury has increased to 10 per 100 per year. Although the distribution varies somewhat from the chart reviewed previously, it still remains very unstable, and it is difficult to assess how relative risks would be compared.



Comparing Groups of Employers with Somewhat Different Risks

A somewhat more “real world” example can be found in Chart 6. It combines two sets of 1000 employer worksites, with 20 employers each.<sup>33</sup> One group has a risk of 5 injuries per 100 workers per year, while the other group has a risk of 6 injuries per 100. The higher risk group is, as a group, 20 percent more likely to experience an injury. But, as we have seen, the actual experience around such a risk of injury can be expected to vary widely.



While there is a real increase in the likelihood that a more hazardous workplace will experience an injury, the ability to draw a conclusion about relative hazards based upon a reported injury is completely overshadowed by the random effects. Of the 669 worksites that will experience no injuries, almost 45 percent (301) will be in the higher risk cohort. That suggests that they will have actual experience equal to or better than the other 1699 worksites, in spite of having a risk that is worse than 1000 of them and equal to the remaining 699. They will have better experience than 1301 worksites, in spite of actually being no less unsafe than any of them, and more unsafe than 632 of the worksites with poorer actual experience. For workplaces in this population with 5 injuries, there is a two in three chance (6 out of 9 total) that the workplace falls in the higher risk group. But in workplaces with two injuries (four times the average rate for the lower risk group), the odds are only 46 in 100 that (217 out of a total of 401) that the workplace is a higher risk workplace. And for a workplace with one injury (a rate twice the overall average

<sup>33</sup>As noted above, nearly 9 in 10 Oregon employers have fewer than the 20 employees assumed here.

for the lower risk group), the odds are actually slightly *greater* (368 out of 729, or 50.5 percent) that it will be a lower risk workplace than that it will be a higher risk workplace. Clearly, variations in actual injury rates have little meaning for the vast majority of Oregon employers and places of employment.

### Small Numbers and Higher Severity Events

For higher severity events (severe injuries and fatalities), the problems created by “small numbers” are even more extreme. While it would be possible to consider charts similar to those above looking at a fatality rate of 1 per 100,000 workers, the conclusion such a review would reach should be obvious: There is no value in trying to use fatality data to predict future fatalities on all but the very largest worksites, and little practical value even on those sites. Oregon OSHA believes that the risk of fatalities can be influenced, and even predicted – but not by the use of injury and illness data without even visiting or otherwise assessing the site itself.

Oregon OSHA’s concern over the use of injury rates to distinguish between relatively small units is a concern shared by others within the workplace health and safety profession. One of the most thorough discussions of these issues was written by the late safety professional Dan Petersen, in a 2005 text specifically addressing performance measures for workplace safety. The text includes the following discussion of two readily available measures of the “results” of workplace safety efforts:

*One level of failure to measure is fatalities. These are used to rate national highway traffic safety endeavors. Is the measure of fatalities, then, a “good” measure? Obviously we cannot answer this question until we examine the size of the unit being measured. Fatalities could be a good measure for assessing the national traffic safety picture, but would be ridiculous to use in rating a supervisor of ten factory workers. Such a supervisor could do absolutely nothing to promote safety and still never experience a fatality in his or her department. Obviously, measuring fatalities would make little sense in this case.<sup>34</sup>*

### Safety and Health Literature on the Use of Frequency Rates

Mr. Petersen continues his discussion of fatality measures by discussing the similar difficulties concerning the use of injury-illness frequency rates:

*Unfortunately, the traditional frequency rate is not much better when it is used to assess supervisory performance in safety. It measures a level of failure somewhat less than a fatality (an injury serious enough to result in a specified amount of time lost from work), but the fact remains that a supervisor of ten workers can do absolutely nothing for a year and attain a zero frequency rate with only a small bit of luck.<sup>35</sup>*

Mr. Petersen says it more explicitly a page later when he describes as the first of several “serious flaws” in using incidence rates that “[T]hey have little statistical validity in smaller units, measuring mostly luck, not performance.”<sup>36</sup> And he specifically singles out as “questionable

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<sup>34</sup>Dan Petersen, *Measurement of Safety Performance*, (Des Plaines, Illinois: American Society of Safety Engineers, 2005) p. 4. The author provides a number of other suggested measures in the text based on the actual practices and conditions in the workplace; those measures provide practical methods for employers and managers to assess the performance of their own organizations, but they do not lend themselves to use by an organization such as Oregon OSHA before a visit to the worksite occurs.

<sup>35</sup>*Ibid.*, p. 4.

<sup>36</sup>*Ibid.*, p. 5.

activities” based on such measures both “deciding who is ‘good’ and ‘bad’ in order to determine who should receive an inspection or audit” and “determining which company is ‘best’ within an industry, or which location is ‘best’ within a company.”<sup>37</sup>

Mr. Petersen acknowledges “that these results measures are ingrained in most safety programs” and “that most executives believe they mean something,” but says other measures should be considered for the following reasons:

1. *Because “results” often measure luck rather than the steps taken to reduce injuries. One supervisor of ten people can do nothing and still have a zero injury record while another concerned supervisor may have injured employees regardless of what he or she has done; this is the “luck” factor. The lower an organization’s results measures are, the more these become an inadequate measure of actual performance of the safety system.*
2. *Because these measures do not really discriminate between poor and good performers.*
3. *Because results measures do not diagnose problems.*
4. *Because they are grossly unfair if used to judge individual managerial or supervisory performance.*<sup>38</sup>

A similar discussion appears in a text by Ron C. McKinnon. He summarizes the problem within the industry very succinctly:

*Even today, safety is measured by the number and severity of injuries. Many people are still convinced that the majority of accidents are caused by unsafe acts. The internationally accepted measure of safety, the disabling or lost-time injury, is unreliable, as it is the end result of numerous luck factors.*<sup>39</sup>

He elaborates on the application of injury data later in the book:

*The misconception that exists internationally is that a high number of injuries indicate “poor safety” and that an absence of injuries indicates “good safety.”*

....

*Having already [up to this point in the book] analyzed the CECAL sequence up to this domino (injury, illness and disease), it is obvious that the injury is a consequence that has already been determined by two luck factors. They determined the outcome of the action or condition as well as the outcome of the exchange of energy. The injury therefore, is largely fortuitous and should not deserve the amount of attention that it gets in the safety management process. Admittedly, the injury is physical bodily harm to a friend, colleague, or fellow worker and one must be sympathetic to the pain and suffering that this person will undergo as a result of the injury. The emotion and feeling for the*

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<sup>37</sup>*Ibid.*, p. 12.

<sup>38</sup>*Ibid.*, pp. 12-13. It is worth noting that his concern about supervisory units is specifically based on their size. Although he is writing to an audience concerned with larger employers, his analysis applies equally well to worksites or entire businesses that are themselves relatively small. And his use of a unit of 10 employees to drive home the point does not suggest that he would consider such measures valid above that level.

<sup>39</sup>Ron C. McKinnon, *Cause, Effect, and Control of Accidental Loss with Accident Investigation Kit*, (Boca Raton: CRC Press LLC, 2000), preface.

*injured person should not cloud our vision and understanding that the injury was merely one of the events in a chain reaction that could have been prevented by proper controls.*<sup>40</sup>

And later still in the text:

*Injuries are still used as a measurement of safety or the lack thereof. Organizations that experience fewer injuries than others are lured into a false sense of security by assuming that they are safer. Good safety controls are often assumed when an organization has low injury rates. Injuries are poor indicators of safety performance and are an even poorer indicator of safety success.*<sup>41</sup>

These authors differ at points in the overall approach to managing safety in the workplace. But each of them recognizes the limited value of using injury rates to assess the effectiveness of an individual operation's health and safety program. Like these safety professionals, Oregon OSHA has concluded that a better method of identifying unsafe places of employment is needed. And that concern was the genesis of the rulemaking that led to the adoption of the new scheduling system.

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<sup>40</sup>*Ibid.*, p. 131.

<sup>41</sup>*Ibid.*, p. 139.

## **VI. Other Approaches Considered as Alternatives or Supplements to New Rule**

Both in developing the rule proposal,<sup>42</sup> and in evaluating public comments on the rule as proposed, the department has considered other approaches either as alternates or as supplements to ranking risk based on industrial classification. Although several such approaches are included to some extent in the rule as adopted, the department concluded that the use of industrial classification as the primary determinant of risk was superior to other available methods, both in terms of the availability of the data and the reliability of the conclusions reached.

### **Occurrence of an Accepted Disabling Claim**

The previous approach relied upon a single event – the occurrence of an accepted disabling claim at the worksite – as the initial determinant of whether a place of employment would be identified for inspection.

#### *Possible reasons to use accepted disabling claims*

This approach had the merit of being specific to the individual place of employment (rather than to the employer as a whole), and the data is readily available through the workers compensation system. In addition, the existence of an accepted disabling claim does provide clear evidence of the presence of a hazard at the time the injury occurred.

#### *Failure to account for the statistical problem of small numbers*

However, the existence of a single accepted disabling claim does not account for the problem of small numbers in distinguishing between worksites where only one – or fewer than one – disabling claim is “expected” based on the probability of injury. As discussed in relation to Chart 2 in Section V above, a worksite with an injury probability of 5 percent per year (5 per 100 workers) and 20 employees is as likely to have no injuries as it is to have one injury. And a worksite with an injury probability of 5 percent and 10 employees is actually less likely to have any injuries than it is to have no injuries at all.

#### *Failure to reflect relative risk*

In addition, the presence of a single claim does not reflect the actual risk in any real sense. A worksite with 200 employees and an injury probability of five percent is very unlikely to experience zero injuries. In effect, a scheduling system that relies upon the presence of a single claim will be likely to identify all or nearly all workplaces with 200 or more employees and will be likely to identify a minority of workplaces with 10 or fewer employees, even when the underlying risk of injury in both cases is actually five percent.

Several comments concurred with the agency’s position in this respect. For example, one comment in opposition to the proposed rule described the agency’s presentation about the problems with the use of an accepted disabling claim as the primary trigger for an inspection as “absolutely right.”<sup>43</sup> A letter in opposition to the proposed rule asserted that many claims in high-hazard industries are unpreventable events, reflecting the “inherent” hazard of the

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<sup>42</sup>The process, which was originally intended to provide a new scheduling system effective October 1, 2008, was extended for a year specifically in order to allow further discussions with the advisory group and others about possible such alternatives.

<sup>43</sup>Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s public hearing in Bend on August 14, 2009.

industry.<sup>44</sup> Although Oregon OSHA does not share the conclusion that workplaces in high-hazard industries have a high number of genuinely unpreventable claims, the belief that many claims are “unpreventable” would appear to suggest a criticism of the previous rule’s reliance on accepted disabling claims. One employer’s letter in overall support of the rule also raise a similar concern about whether specific claims are “‘inspectable’ or relevant to OSHA compliance.”<sup>45</sup> The letter continues with the following observation with regard to the previous rule’s use of claims as a basis for inspection: “Like most employers, we are dissatisfied with the current scheduling system. Workers compensation claims are not reliable indicators for inspection.”<sup>46</sup>

A single comment in the record explicitly supports this provision of the previous rule, observing “that if a company did not have a disabling claim, they had a good chance of not getting inspected for working safely.”<sup>47</sup>

Under the previous system, a worksite that did not have an accepted disabling claim had no chance of being scheduled for a programmed inspection under the fixed site scheduling system (although loggers and other forest activities employers were – and remain – subject to inspection under several different provisions not addressed by the current rulemaking). However, given the difficulties of relying upon small numbers to reach statistically valid assessments of risk, it is a mistake (although a common and understandable one) to conclude that a small or even medium-sized worksite that experienced no claims necessarily achieved that goal by “working safely.” In many cases, it is at least as likely, if not more so, that the result was achieved by chance.

#### *Other factors used do not overcome limitations*

Although the previous system used a weighted claims count for the individual place of employment and a weighted claims rate for the employer as part of its ranking of those places of employment selected for inspection, the reality remains that no worksite could be on the list unless an accepted disabling claim occurred and that, for the most part, the place of employment was likely to be inspected simply because one such claim occurred. The ranking by worksite claims count, by employer claims rate, and by other factors typically affected *when* during the year a place of employment would be inspected, not *whether* it would be inspected within a given year.

#### *The example of a particular employer*

This effect can be illustrated by one particular employer, whose actual experience was examined by Oregon OSHA as part of evaluating the effect of the rule. Although the new rule places this employer in a relatively high hazard tier (Tier F), based on a NAICS code of 3314, the actual effect of the rule on this particular place of employment will be to *reduce* Oregon OSHA’s enforcement presence, compared to past reality.

Historically, the industry’s seven locations (using current data) have been subject to two fixed site scheduled safety inspections during the period from federal fiscal year 2004 through federal fiscal year 2008. Under the rule, Oregon OSHA’s safety enforcement presence in the industry increase will increase from an estimate of less than six percent to 10 percent. However, Oregon

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<sup>44</sup>Letter on behalf of Teledyne Wah Chang, dated August 12, 2009.

<sup>45</sup> Letter on behalf of the City of Portland, dated August 18, 2009.

<sup>46</sup> *Ibid.*

<sup>47</sup> Letter on behalf of Associated Oregon Loggers, Inc., dated August 18, 2009.

OSHA's historic presence at the facility in question is much higher than the historic six percent average for its industry. Under the rule, the likelihood that Oregon OSHA would initiate a programmed safety enforcement visit at the facility is 10 percent, the same as for the rest of that industry (and under the rule, there would be no chance of another such programmed safety enforcement visit for three years, rather than the current two). Under previous scheduling systems, the facility has been subjected to programmed safety inspections four times since 1994: in January, 1994; in April, 2000; in September, 2004; and in November, 2008.

This place of employment, perhaps because the number of employees in its operation made an accepted disabling claim more likely, was identified for inspection much more often than the average for its industry. This location's experience shows an annual likelihood of a scheduled safety inspection of 25 percent if considered over a 16-year period or 20 percent over a 20-year period; its experience under the current statutory framework and the immediate prior scheduling system includes three such inspections over a 10-year period; that 30 percent likelihood of inspection is equal to the highest possible distribution under the new rule. The data also indicates that Oregon OSHA's entire programmed safety enforcement presence in this industry over the five-year period ending with federal fiscal year 2008 was represented by the pair of inspections conducted at the facility in question. In other words, during that period, the facility was inspected 40 percent of the time, while the other places of employment identified as sharing the same industrial classification received no inspections at all.

Oregon OSHA records indicate that the same facility has been subjected to programmed health inspections three times during that period: in December, 2000; in January, 2004; and in November, 2008. In addition to these programmed inspections, in the same time period the facility has been subjected to 11 complaint inspections.<sup>48</sup>

In the case of this particular facility, all of the programmed inspections and most of the non-programmed inspections resulted in a mix of serious and other than serious violations. Oregon OSHA could point to the number of violations cited as an indication that its presence at this worksite has been justified. However, the agency believes – based upon the record as a whole – that these violations justify its consideration of this industry as being relatively high risk and worthy of Oregon OSHA's focused attention.

#### *Failure to Account for High Severity Injury Risks*

Another problem with the reliance upon accepted disabling claims is that it does not in any way address the potential for "high severity" injuries, including fatalities. The risks of such "low probability/high severity" outcomes should be part of any calculation of safety. A fatality risk of 10 per 100,000 workers would be roughly four times the statewide average.<sup>49</sup> Certainly, any worksite facing such a risk can appropriately be considered among the "most unsafe" in the state. However, such a worksite might not have an accepted disabling claim in any given year, and might well be no more likely to have such claims than the average worksite.

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<sup>48</sup>Compiled from Oregon OSHA enforcement records. One of the programmed safety inspections also involved an accident investigation. That inspection is counted in these results under the programmed totals.

<sup>49</sup>The statewide average rate of fatality claims (per 100,000 workers) accepted by the Oregon Workers Compensation system, as reported by the DCBS Information Management Division, was 2.76 per 100,000 workers in 2004, 1.85 in 2005, 2.13 in 2006, 1.99 in 2007, and 2.57 in 2008. As a side note, the relative instability of the state fatality rate over time illustrates that even large samples can experience statistical "small numbers" issues when the rate itself is relatively low.

The late safety professional Dan Petersen including the following discussion of the fallacy of using injury frequency to predict injury severity in his texts on the management of workplace safety:

*Many safety managers have believed there is a predictable relationship between the frequency of accidents and their severity. Numerous studies have been made over the years to determine this relationship, with a variety of results. Common sense dictates totally different relationships in different types of work. For instances, the steel erector would no doubt have a different ratio of severity to frequency than the office worker. This very difference might lead us to a new conclusion. Perhaps circumstances that produce the severe accident are different from those that produce the minor accident.*

*Safety directors for years have been attacking frequency in the belief that severity would be reduced as a byproduct. As a result, our frequency rates generally have been reduced much more than our severity rates.*

*If we study any mass data, we can readily see that the types of accidents that result in temporary total disabilities are different from the types of accidents that result in permanent partial disabilities or in permanent total disabilities or fatalities. The causes are different. There are different sets of circumstances surrounding severity. Therefore, if we want to control serious injuries, we should try to predict where they will happen.<sup>50</sup>*

Similarly, professional engineer and safety professional Fred Manuele – specifically addressing the question of how best to prioritize the use of limited resources – discusses the danger in relying upon identification and characterization of relatively minor injuries as a predictor of severe injury risks:

*My experience has been that many incidents resulting in fatality or severe injury are singular and unique events, that their causal factors are multifaceted and complex, and that descriptions of similar incidents are seldom found in the historical body of incident data.*

*Furthermore, all hazards do not have an equal potential for harm. Similarly, some risks are more significant than others....*

*...[A] frequency of minor injuries from paper cuts will not provide clues with respect to the causal factors for the type of accident categorized as “fall to lower level.” ....*

*When the potential for severe injury is high, prevention of the event should be given high priority even though the event probability is low. In the real world, resources are always limited, and staffing and money are never adequate to attend to all risks. Thus priorities must be set for the application of safety-related resources so that the greatest good derives to employees and to employers from their expenditure. That requires giving special attention to hazards presenting severity potential.<sup>51</sup>*

Using accepted disabling claims as a trigger for fatality risks means that the only programmed inspections triggered by such risks will be those relatively few fatality and very severe injury

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<sup>50</sup> Dan Petersen, *Safety Management: A Human Approach, 3<sup>rd</sup> Edition*, (Des Plaines, Illinois: American Society of Safety Engineers, 2001) p. 11. The author, a noted occupational safety author and consultant, cites training as both an industrial engineer and an industrial psychologist.

<sup>51</sup> Fred A. Manuele, PE, CSP, *On the Practice of Safety, 3<sup>rd</sup> Edition*, (Hoboken, New Jersey: John Wiley & Sons, Inc., 2003) pp. 137-8.

claims. The failure of such an approach to focus on prevention of severe injury and fatality risks, rather than reacting to the events after they occur, is compounded by the reality that fatalities and hospitalizations are in any case reported to Oregon OSHA and prompt “non-programmed” inspections when they occur.

Oregon OSHA also considered the results of a review of Washington fatality claims and investigations, completed in 2005, which reached the conclusion that fatalities cannot be predicted by looking at either the history of specific injuries in a particular workplace or the overall history of injuries within that workplace.<sup>52</sup>

#### Use of Accepted Disabling Claims Rate

Some of the objections to reliance on the simple fact of an accepted disabling claim could be addressed by converting those claims to a rate.

#### *Possible reasons to use accepted disabling claims rate*

Because it would be based on the use of an actual rate, such an approach would eliminate the bias toward inspecting large employers created by the previous system. In addition, the data to calculate an employer’s rate (by the number of workers, rather than by the number of full-time worker equivalents) is available to Oregon OSHA.

However, use of an accepted disabling claims rate would be subject to a number of problems in its own right, as well as to many of the problems associated with the use of a single accepted disabling claim.

#### *Failure to account for the statistical problem of small numbers*

For the reasons discussed in Section V of this Explanation of Rulemaking, use of a claims rate would not provide a reliable basis for comparison between small or moderate-sized places of employment. Only the largest places of employment would be likely to provide enough statistical power to make a comparison between two calculated rates a meaningful one. The reality is that the vast majority of Oregon employees work in workplaces that are considerably smaller than that threshold and the overwhelming quantity of workplaces themselves are too small for such a distinction to be meaningful.

One set of comments opposing the proposed rule suggested that Oregon OSHA calculate a level below which the employer’s experience could not be relied upon and use a random selection for those workplaces, while relying upon actual experience for the employers above that threshold.<sup>53</sup> As discussed above, the exact threshold is dependent upon the level of probability being considered, as well as judgments about how reliable conclusions drawn from the comparison need to be. Oregon OSHA has insufficient confidence in conclusions based on worksites of 200 employees or fewer, and even with larger worksites, Oregon OSHA would not consider the typically small variations in the rate to be meaningful. In evaluating the utility of such a dual

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<sup>52</sup>Although unpublished, the review of Washington data was the basis of a session at “Safety 2005,” the professional development conference of the national American Society of Safety Engineers, in June 2005. It also has been presented at the Region X Voluntary Protection Program Participants Association annual meeting (in May 2006), and the Central Oregon Safety and Health (COSH) Conference (in September 2006), and has been used in lectures given as part of the Mount Hood Community College Environmental and Occupational Safety and Health Program. See as examples, “How Well Does the Injury Pyramid Really Work?” from the COSH Conference, excerpt from “Some Basic Principles in Health & Safety,” and Numbers 10 and 11 of “Focus on Safety,” all by Oregon OSHA Administrator Michael Wood, CSP.

<sup>53</sup>Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s public hearing in Bend on August 14, 2009.

system, Oregon OSHA also is aware of the relatively small number of workplaces that would in fact be large enough to present a meaningful source of data. It does not appear workable to have a separate system for such places of employment, and it is not clear how the relationship between the two systems would appropriately be determined.

As discussed above, Oregon Employment Department data indicates that nearly 90 percent of the employers in Oregon have fewer than or fewer employees. And more than 99 percent have fewer than 250 employees. Of the remaining employers, Oregon OSHA's own experience (confirmed by common knowledge of various industries) illustrates that many large employers are divided into individual work locations with well under 200 and even 100 employees. For example, the larger grocery chains operating in the state employ a large number of people, but those employees are distributed among individual locations that are themselves likely to be too small to provide a meaningful distinction given the level of risk experienced by the industry as a whole. It might be possible to compare two grocery chains to one another in meaningful terms based on their claims history. But it is not possible to compare two supermarkets – two individual places of employment (whether of the same employer or of two different employers) with one another using their individual claims history, even assuming that such a history were available.

*Lack of ability to calculate rate by place of employment, rather than by employer*

The example of grocery stores also highlights one of the biggest immediate barriers to the use of the rate of accepted disabling claims as a means of comparing individual places of employment. Oregon OSHA does not have access to employee counts at the worksite (rather than employer) level. Therefore, no rate could be calculated for individual places of employment when the employer has multiple locations, as do many larger employers. It would be possible, of course, to rate all worksites of a single employer based on the employer's overall rate. Assuming for the sake of argument that the employer itself is large enough to make such a comparison meaningful, it would be poor public policy to set out to inspect every location of one employer before inspecting any locations of its competitors.

As noted, this problem can be illustrated by looking at the grocery industry. Oregon OSHA has calculated a weighted accepted disabling claims rate as part of the previous scheduling system.<sup>54</sup> Using those rates, this analysis considered three actual employers with weighted rates calculated under the previous Oregon OSHA system as 1.10, .85, and .60 respectively.

The first employer, with a rate of 1.10, operates not only grocery supermarkets (a large number) but also distribution centers and other support activities. The second employer, whose calculated rate is 23 percent lower, has fewer such "non-retail" operations, and operates somewhat fewer retail stores. And the third employer, whose rate is 45 percent lower than the first and 31 percent lower than the second, operates several stores and has little, if any, non-retail activity.

Looking at this example, the first concern is that the rates do not necessarily reflect the employer's risk in comparable operations. The rates do not, in the common phrasing, compare "apples to apples." Although Oregon OSHA does not have sufficient data to reach a conclusion, it is at least reasonable to hypothesize that all three employers might have the same (or nearly the same) injury risk in their retail grocery operations, with the difference in rates being the result of

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<sup>54</sup>Although this discussion uses the "weighted" claims rate provided under the previous rule, the same issues would arise with a simple claims rate, or with a claims rate using a different weighting system.

the larger employers' direct operation of what are often higher-hazard activities outside the retail grocery operations. For that reason, it may not make any sense to select particular grocery stores for inspection based on the employer's injury rate. Similar problems would exist throughout a variety of industries (for example, forest products manufacturing companies operate in different subsectors of the industry, with widely varying average risks – would it be appropriate to inspect one consumer paper mill rather than another because the first employer also has a sawmill and the second employer does not?).

Even if the employer's rates are based on comparable data, it distorts any reasonable assessment of risk and the effect of enforcement activity to suggest that every location of one employer should be inspected before any locations of another, somewhat lower risk employer in the same industry.

Setting aside (for the moment) the apparent lack of statistical credibility in distinguishing between multiple sites of an employer such as a retail grocery chain based on recorded experience, the inability to calculate a rate because of the practical impossibility of obtaining data on the number of workers means that the only option available would be to assign all places of employment operated by a given employer the employer's overall injury experience. Such an approach would not be a reasonable way to identify unsafe workplaces for any purpose, and particularly for the purpose of enforcement activity.<sup>55</sup>

#### *Failure to Account for High Severity Injury Risks*

Use of an accepted disabling claims rate would do little, if anything, to address the concerns described in detail above about the need to address hazards that contribute to high severity risks, such as the risk of death.

#### Use of the employer's workers compensation MOD factor

Oregon OSHA seriously considered the use of each employer's MOD factor, which is developed for workers compensation purposes, as part of the fixed site enforcement scheduling systems for both safety and health. The rule as proposed included a delayed provision that would have included the MOD factor as a weighting factor in selecting places of employment beginning in 2010. At the time of proposal, Oregon OSHA specifically advised members of the advisory group (several of whom had advocated the use of the MOD factor, although other advisory group members had questioned its utility) that including it in the proposal would allow further evaluation to determine whether the necessary data could be obtained from the National Council on Compensation Insurers (NCCI), and whether that data could be obtained in a way that would allow it to interface with existing department systems.

Primarily because the data was *not* successfully obtained and tested, and because Oregon OSHA had no confidence it would be available in the future even if it is made available in the near future, the proposed provision has not been included in the rule as adopted. However, an exceptionally low MOD factor has been used as a basis to exclude all of an employer's worksites – provided that the documented MOD factor is presented to Oregon OSHA as described in the rule.

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<sup>55</sup> It seems clear that the reason the previous scheduling system relied upon a single accepted disabling claim, rather than a claims rate, for the initial selection of inspection candidates is precisely because no rate could be calculated at less than the overall employer level. In that respect, Oregon OSHA's current and previous assessments have not changed.

*Possible reasons to use the MOD factor*

The MOD factor has some advantages over other potential methods of identifying workplace risk using an employer's experience. One advantage is that, because MOD factor calculations are limited based on payroll, the smallest employers do not receive adjustments in their MOD factor and somewhat larger employers receive only limited adjustments. This much greater weighting of "expected experience" instead of "actual experience" for smaller employers helps to mitigate (although it does not entirely eliminate) the statistical problems created by small numbers. But it also means that a large employer's MOD will better reflect its own claim experience than will a smaller employer's MOD.<sup>56</sup>

*Public comments on the MOD factor provision in the proposed rule*

Compared to some other issues, the proposed rule provision received relatively little attention during the public comment period. However, one commenter included the following discussion:

*The proposed language under 437-001-0057(4) in relation to using the MOD factor would not be obtainable for most. Small employers (which many Oregon businesses are) never generate enough payroll to get their MOD down to the 0.75 magical number, even with zero claims costs in their 3-year base period. Thus they would never have any hope of getting the 25 percent lower chance of inspection.*<sup>57</sup>

Another commenter also addressed the provision. After questioning the clarity of the provision because the method of weighting was not described and suggesting that the rule provision be adopted immediately rather than in 2010,<sup>58</sup> the commenter noted that in certain situations (when the pool of workplaces remaining available for inspection after the exemptions were applied was smaller than the number required to meet the target percentage for that tier in the rule) the "weighting" would have no effect because all remaining places of employment would be inspected.<sup>59</sup> The comment also suggested "the rule be re-written to simply state: "Employers with a MOD less than 0.75 will be exempt from inspection."<sup>60</sup>

Oregon OSHA's final rule takes the suggestion to replace the language about weighting based on the MOD, although Oregon OSHA disagrees with the assumption that the level justifying an outright exemption should be the same as that proposed for a reduced likelihood of inspection. The final rule sets the "exemption" MOD at .50. This does not address the limitation that makes it impossible for many workplaces from achieving a MOD at that level.

*MOD rates are not well suited for use in enforcement scheduling*

First, and as discussed in more detail in the section on industry risk below, workers compensation premium rates begin with the industry classification and place more weight upon the nature of the industry and its historic experience than they do on the individual experience of even very large employers.

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<sup>56</sup>See "Premium and Rate Overview" of the Employer Guide prepared by SAIF Corporation and printed from the SAIF website on August 24, 2009. See, also generally, discussion in Chapters 2 and 15 of *Basic Ratemaking*, written by Geoff Werner, FCAS, MAAA, and Claudine Modlin, FCAS, MAAA, and published by the Casualty Actuarial Society, 2009.

<sup>57</sup>Letter from Associated Oregon Loggers, Inc., dated August 18, 2009.

<sup>58</sup>Letter from TOC Management Services, not dated but received by e-mail August 21, 2009.

<sup>59</sup>*Ibid.* The hypothesis as described in the letter is correct and had not been identified by previous discussions.

<sup>60</sup>*Ibid.*

Second, since it is not possible to obtain MODs and apply them to the ranking process (either by using them for ranking purposes directly or by using them to “weight” the random selection, as in the proposed rule), the only practical consideration is whether a low MOD provides justification to exclude all of an employer’s worksites from programmed inspections. That decision certainly goes beyond the actuarial issues – although large employers can obtain significant reductions in their premiums based on the MOD, the workers compensation system will never exempt them from the need to pay premiums entirely. Nor will an exceptionally good MOD reduce the effective premium rate of a high-risk industry such as a foundry to that paid by a low-risk industry such as a law office, even if the latter has an exceptionally poor MOD. Any exemption, therefore, would realistically need to apply only to exceptionally low MOD factors, not simply to those that are “better than average.”

*The relationship of the MOD to workplace health and safety*

Put most simply, an employer can appropriately control workers compensation costs using two factors, or a combination of them: the safety and health of the worksite (“primary prevention” of claims costs); the effective management of claims by return-to-work programs and other means (“secondary prevention” of claims costs). A better-than-average MOD factor suggests success in at least one of these areas, but not necessarily in both. Even an exceptionally good MOD factor is only suggestive of success in both areas, and not necessarily a guarantee. Oregon OSHA must make the assessment based on the information available to it, and an employer with an exceptionally good MOD factor is likely to have succeeded in reducing workplace risks well below the industry norm. But it would be dangerous to draw conclusions about the primary prevention efforts of various employers based on incremental differences in their MOD factors.

*Using the MOD factor as a ranking characteristic would not distinguish between multiple worksites of the same employer*

One possibility would be to use the MOD factor to rank places of employment in order (rather than to weight their selection, as provided for in the proposed rule). Because MOD factors are assigned to employers, not individual places of employment, this approach would be subject to the same problems regarding the ranking of worksites of the same employer as would the claims rate.

*Failure to account for High Severity Injury Risks*

Use the MOD factor would not account for high severity risks, including risks likely to result in a fatality, as discussed previously. The experience used in creating the MOD factor does not allow it to reflect such risks, although they are generally reflected through the ratemaking process, but at the industry classification level. If the MOD factor were used independently of industry classification, it would not account for even the level of less severe risks, because it expressly compares historical performance only between employers with similar industrial and occupational activities.

*The NCCI discourages use of the MOD for regulatory purposes*

In response to initial inquiries during the rule’s development, NCCI representatives discouraged use of the MOD as part of inspection scheduling. In addition, a formal article on the use of experience rating (recommended by the Casualty Actuarial Society) includes the following statement:

*The debit mod should not be thought of as a stigma. To decide between contractors bidding on a project, some owners erroneously eliminate those with mods higher than some threshold. The bid itself is far more relevant. Rating bureaus and regulators, who ought to know better, sometimes unfairly attach penalty programs to only those insureds with debits. These insureds have already paid their debt to society, so to speak.<sup>61</sup>*

The same author reinforces the danger of relying upon a system that focuses on the occurrence of a limited number of events:

*Further, even though statistics show that poor prior experience is an indication of poor future experience, any single accident is probably a matter of pure chance.<sup>62</sup>*

In any event, Oregon OSHA (assisted by the Insurance Division of DCBS) explored but was unable to obtain current employer MODs from NCCI for test purposes, making anything other than limited use of the MOD in the context of the rule a practical impossibility.<sup>63</sup>

Oregon OSHA has decided to allow an exemption in the event of a particularly low MOD, for those employers who can obtain it both as a result of their size and their success in controlling injury costs. However, Oregon OSHA also has concluded that a broader exemption or actual ranking by MOD (even if it were possible) does not provide an appropriate way to identify unsafe places of employment.

#### Employer reports of OSHA 300 log data

During advisory group discussions, the suggestion was made that perhaps employers could be asked to report the data from the OSHA 300 log, which could then be used to identify the most unsafe places of employment.

#### *Possible reasons to use OSHA 300 log data*

OSHA 300 log data would (if reported accurately) provide a consistent basis of comparison. It would be specific to places of employment, rather than to employers as a whole. And it would provide rates, rather than raw numbers.

#### *Failure to account for the statistical problem of small numbers*

OSHA 300 log data would provide a different source of data, but it would continue to be subject to the statistical limitations of “small numbers” that have been discussed previously.

#### *Failure to account for High Severity Injury Risks*

Use of either the days away, restricted or transferred (DART) case rate or the total case incidence rate (TCIR), would not account for high severity risks, including risks likely to result in a fatality, as discussed previously.

#### *Incentive to report inaccurately*

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<sup>61</sup>William R. Gillam, “Workers Compensation Experience Rating: What Every Actuary Should Know,” *PCAS LXXIX*, 1992, p.217. Listed in “2009 syllabus of basic education” by the Casualty Actuarial Society.

<sup>62</sup>*Ibid.*, p. 218.

<sup>63</sup>It was suggested during the advisory group meetings that Oregon OSHA could require the provision of the MOD. NCCI is a statistical agent licensed in Oregon by the Insurance Division of DCBS. The data collected by NCCI as part of its assignment of MOD factors remains the property of the member companies. Without the permission of the member insurers, NCCI can release the information only to the insurer, the employer or its agency, and the Insurance Division. Although Oregon OSHA is housed in the same department as the Insurance Division, that does not allow NCCI to release the data to Oregon OSHA, which has a statutory purpose that is separate and distinct from the Insurance Division.

The use of OSHA 300 log data to target employers for inspection discourages accurate reporting (and can therefore affect Oregon's assessment of the overall effectiveness of government, employers and workers in promoting workplace health and safety). In addition, employers could be rewarded for falsely under-reporting injuries and illnesses in one or more of their worksites, while employers who report accurately could be subject to inspection. Such concerns have been expressed repeatedly in relation to federal OSHA's use of the OSHA Data Initiative to develop inspection scheduling using OSHA 300 data.<sup>64</sup>

*Not all places of employment are required to keep the OSHA 300 log*

The rules regarding recordkeeping do not apply to all places of employment in Oregon. First, all employers with 10 or fewer employees (roughly 80 percent of the businesses in Oregon) are exempt from the rule except when specifically requested in a particular year for Bureau of Labor Statistics data collection.<sup>65</sup> In addition, employers in certain industries need not keep the records.<sup>66</sup> Although the rule allows Oregon OSHA to require such employers to keep the records by advising them in writing, requiring *all* such employers to do so outside rulemaking would be inconsistent with good regulatory practice. Imposing a recordkeeping burden on such small and relatively low-risk employers simply to enable an inspection scheduling system to operate, either through rulemaking or otherwise, would create a new regulatory impact and expense that would have to be carefully considered, even if Oregon OSHA believed that it would otherwise provide a reliable system of identifying unsafe places of employment.

*The lack of a system for gathering such reports creates a considerable practical barrier*

In the absence of a very compelling argument in favor of using such a system, the need to develop and staff a process to request and receive reports from an estimated 108,000 workplaces (not to mention to remind those workplaces that do not respond to the initial request) and input it into a system that could then interface with existing employer records in order to make such a process work would be prohibitive.

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<sup>64</sup>It should be noted that federal OSHA's use of this system does not necessarily represent an endorsement of the approach. The approach has been criticized for its effect on injury and illness recordkeeping. And federal OSHA does not deal with as large a proportion of small workplaces as does Oregon OSHA.

<sup>65</sup>OAR 437-001-0700(2) and (3)(a).

<sup>66</sup>OAR 437-001-0700(3)(b).

## **VII. Provisions in Rule Exempting Selected “Lower Risk” Places of Employment**

In this rulemaking, Oregon OSHA has relied substantially, but not exclusively, on identifying the risk of a place of employment in light of its industrial classification. However, it is inaccurate to describe either the rule proposal or the adopted rule as relying *entirely* upon industry risk without the consideration of other factors. Instead, Oregon OSHA has included several provisions that allow certain demonstrably “lower risk” places of employment within otherwise high risk industries to be excluded from scheduled inspections:

- The rule as adopted expands the current exclusion for previous comprehensive inspections from a two-year exclusion to a three-year exclusion. Oregon OSHA believes that its enforcement activity serves to reduce risk, at least temporarily, in those establishments that have been inspected previously. In addition, good enforcement practice suggests that distributing enforcement activity across the high-risk population is superior to focusing exclusively and repeatedly on a subset of that population. Finally, Oregon OSHA notes that to the degree follow-up activity at the same location is appropriate, it can and does conduct such activity outside the scheduling of programmed inspections (and referral, complaint, and accident inspections remain a possibility in any case).<sup>67</sup>
- The rule as adopted excludes places of employment that achieve and maintain Voluntary Protection Program status. The rule codifies existing practice, which recognizes that places of employment that have achieved Voluntary Protection Program status are unlikely to be among the most unsafe places of employment, even if they are in an industry otherwise considered to be unsafe.
- The rule as adopted excludes places of employment that have achieved Safety and Health Achievement Recognition Program (SHARP) status beginning with their second year of program participation. The rule codifies existing practice, which recognizes that places of employment that have achieved SHARP status are unlikely to be among the most unsafe places of employment, even if they are in an industry otherwise considered to be unsafe.
- The rule as adopted excludes places of employment that have graduated from SHARP for three years following their completion of the program. The rule establishes a new exemption for places of employment that have completed SHARP, recognizing that places of employment that have successfully completed the SHARP process are unlikely to be among the most unsafe places of employment, even if they are in an industry otherwise considered to be unsafe.
- The rule as adopted excludes places of employment that achieve and maintain certification under the OHSAS 18001 Health & Safety criteria. The rule establishes a new exemption for places of employment that have been certified as meeting the OHSAS 18001. Because of the rigor and credibility of the OHSAS 18001, Oregon OSHA has concluded that such places of employment are unlikely to be among the most

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<sup>67</sup>OAR 437-001-0055

unsafe places of employment, even if they are in an industry otherwise considered to be unsafe.

- The rule as adopted excludes places of employment that have achieved “clean” records on two comprehensive inspections. The rule establishes a new exemption for places of employment that have been subjected to two comprehensive inspections in the same discipline and have received no serious violations in either of those inspections or in any inspections since the first of the two occurred. Oregon OSHA believes that general compliance with its rules reduce risks and that such places of employment, who have demonstrated compliance over time, are unlikely to be among the most unsafe places of employment, even if they are in an industry otherwise considered to be unsafe.
- The rule as adopted excludes all places of employment of an employer who provides documentation of a MOD lower than .5000. As discussed previously, Oregon OSHA has concluded that a very low MOD, although an imperfect indicator of risk, does suggest that the particular employer and all of its places of employment are unlikely to be among the most unsafe places of employment, even if they are in an industry otherwise considered to be unsafe.

Most, but not all, of these provisions appeared in the proposed rule. They received little mention in the public comments. One set of comments objected to the exemptions in the proposed rule (although the objection was based primarily on what was *not* included, rather than what *was* included):

*It appears that places of employment which perform exceptionally well with regard to health and safety, but who do not participate in a program sponsored by Oregon OSHA, will be afforded no benefit from their excellent performance. Meanwhile, a marginally performing location which does participate in one of the programs sponsored by Oregon OSHA will be exempt from a scheduled inspection during their participation or, in the case of a location that has graduated from SHARP, for several years after its participation. .... If locations that participate in VPP or SHARP are deemed to be safe enough to avoid inspection, then locations with excellent safety performance should also be afforded that privilege despite the fact that they don't participate in one of the programs sponsored by Oregon OSHA.<sup>68</sup>*

The comment then suggested both an exemption based on a MOD of .75, as discussed above, and some other “statistically-derived” or “incidentally-derived” exemption.

Oregon OSHA does not entirely share the concern over singling out programs operated by Oregon OSHA and with whose parameters Oregon OSHA is therefore quite familiar.<sup>69</sup> Oregon OSHA also notes that the proposed rule established or expanded three exemptions based on Oregon OSHA activity. But only one of them, the exemption for SHARP graduates, applies to participation in a program sponsored by Oregon OSHA. The other two (the recency exemption and the “clean history” exemption) relate to enforcement activity and its results. Finally, Oregon OSHA notes that both the SHARP graduate exemption and the “clean history” exemption arose

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<sup>68</sup> Letter on behalf of TOC Management Services, not dated but received by e-mail August 21, 2009.

<sup>69</sup> As noted previously, the statute also gives Oregon OSHA explicit authority to establish incentives regarding participation in consultations. SHARP, at least, is a consultation-based program. However, Oregon OSHA's decision to include the SHARP exemptions is primarily based on a belief in the effectiveness of the program, rather than in order to create an incentive for employers to participate.

from suggestions made by members of the advisory group during the meetings prior to Oregon OSHA proposing the rule.

Oregon OSHA has no objection to using sources from outside the agency that provide an assessment of the quality of the workplace's health and safety activities, if Oregon OSHA has been persuaded that they suggest a genuine reduction of risk at the particular place of employment. The final rule includes a modified version of the specific suggestion regarding a MOD factor exemption, and it also includes an exemption for certification under the OHSAS 18001.<sup>70</sup> It does not include a further unspecified exemption based on specific worksite statistics or incidents due to the concerns about the statistical validity of the available worksite-specific and employer-specific experience. Those concerns are discussed elsewhere in this Explanation of Rulemaking.

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<sup>70</sup> Although not formally adopted by the International Standards Organization (ISO) to date, the OHSAS 18001 functions in much the same way, allowing evaluation and certification of an operation in much the same way that ISO certifications are available related to quality, environmental practices and other issues. It is not an Oregon OSHA program, and Oregon OSHA does not provide OHSAS 18001 certification.

### **VIII. Identifying Risk by Industrial Classification**

A great deal of comment in the record addressed the issue of relying primarily upon industry groups to identify those places of employment most likely to be unsafe. In contrast to some of the comments questioning the approach, Oregon OSHA notes that reliance on industrial classification as a means of identifying workplace risk is a well-established practice within occupational safety and health and related disciplines.

One letter described the approach as based on “sophistry” and as “imagined,” comparing it to the use of an arbitrary distinction such as square footage.<sup>71</sup> Other testimony indicated that “although identifying hazardous industries certainly makes sense to be part of that process [selection of unsafe places of employment], it is the beginning of the process, not the end of the process.”<sup>72</sup>

Oregon OSHA notes that identifying hazard level by industry represents a common and well-accepted approach and is consistent with long workers compensation and worker health and safety practice.

#### **Use of industry risk in existing scheduling systems**

The previous scheduling system used industry risk (as ranked by the Bureau of Labor Statistics) as one of the factors to rank places of employment.<sup>73</sup> The previous and current system select certain high-risk industry sectors (logging and construction) for special handling<sup>74</sup> – it is worth noting that they are not grouped together based on their mobile nature, but instead are addressed separately to ensure that the high-risk activities of logging are not pushed from the enforcement workload by the larger but somewhat lesser risk activities of construction.

Not only did the previous Oregon OSHA scheduling rules give consideration to industry risk, so have various scheduling systems used by other states.<sup>75,76,77</sup> Federal OSHA has long identified industry risk and tracked consultation, as well as enforcement activities, in relation to “high hazard” industries.<sup>78</sup>

#### **Reliance on industry risk in other Oregon OSHA rules**

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<sup>71</sup>Letter on behalf of Teledyne Wah Chang, dated August 12, 2009.

<sup>72</sup>Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s Public Hearing in Bend, August 14, 2009.

<sup>73</sup>See summary of previous scheduling rules in Section II of this Explanation of Rulemaking.

<sup>74</sup>See OAR 437-001-0057(5) and (7).

<sup>75</sup>See, for example, Maryland Occupational Safety and Health (MOSH) Instruction 07-05, dated October 1, 2007, and 08-09, dated October 1, 2008. Both describe programs that “result in a list of High Hazard Industries that indicates where MOSH needs to focus its resources.”

<sup>76</sup>See, for example, California OSHA Memorandum dated November 8, 2004 and entitled “FFY 2205 Annual Cal/OSHA Performance Plan,” which describes a focus on Construction in its Performance Goal 1.1 and a focus on “High Hazard Employer Programs” in Performance Goal 1.2. The latter group “was established by starting with a list of SIC Codes for industries with a Loss Workday Incident Rate of more than twice the average lost-workday incident rate for all industries, or 6.6.”

<sup>77</sup>See, for example, Chapter II of Kentucky Labor Cabinet Occupational Safety and Health Program Field Operations Manual, which states on page II-9 through II-10, “It is KY OSH policy that inspections conducted as programmed inspections be primarily in the “high hazard” sectors of employment.” The instruction further defines a ‘high hazard industry’ for safety based on the industry’s average incidence rate and a “high hazard industry” for health based on previous OSHA citation history for the industry.

<sup>78</sup>For example, federal directive CSP 02-00-002, which establishes the Consultation Procedures Manual, states in both Chapter 1 and Chapter 2 that small employers in high hazard industries receive priority for services.

Oregon OSHA rules commonly include requirements specific to particular industries, based on the particular activities of the industry. However, several rules actually relax or tighten requirements based specifically on the level of risk, even though the requirements could be implemented as easily in either context.

For example (and as already discussed above), not all industries are required to keep records of workplace injuries and illnesses under either the state or the federal recordkeeping rule. The list of exempt industry classifications in Table 1 found in OAR 437-001-0700 reflects in large part an assessment of relative industry risk, at least at the time the rule was originally adopted.

Another example can be found in the recently adopted Oregon OSHA safety committee/safety meeting rules. Under those rules, the required meeting frequency is specifically relaxed for office environments.<sup>79</sup> In addition, the recordkeeping requirements for small employers using safety meetings are relaxed for most industry groups, specifically based on Oregon OSHA's general assessment of the level of risk in the industry groups in question.<sup>80</sup>

### Workers compensation and the assessment of risk by industry

The starting point in any discussion of workers compensation premiums is the classification of risk by industry.<sup>81</sup> The primary determinant of risk for workers compensation is industry classification (especially, but not exclusively, for smaller employers where the effect of experience rating is minimized). Individual experience is applied (in some cases and to some degree), but it is applied based on a comparison to other employers within the same industry classification(s). Employers are never rated based on their experience without regard to industry.

In comparing workers' compensation premium rankings between states as part of a regular report issued every two years, the DCBS Information Management Division routinely sees a need "to control for differences in industry distributions," clearly reflecting an assumption that the nature of the industry reflects the underlying risk of injury.<sup>82</sup>

At least one private service advertises nationally about "Workers' Comp for Hazardous Industries" and about the value of a "Hazardous Industry Focus."<sup>83</sup>

### Industry risk in other government discussions

Discussions of injury and illness rates by the Bureau of Labor Statistics and the various state agencies involved in collecting and reporting the data routinely include a discussion of industry rates. In fact, the abbreviated summary included in a two-page flyer from the DCBS Information Management Division highlights the comparison between Oregon industries as one of the key pieces of information in the rule.<sup>84</sup>

Other states, including some without state occupational safety and health programs, report on the "most hazardous industries" within the state. For example, The Oklahoma Department of Labor

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<sup>79</sup> OAR 437-001-0765.

<sup>80</sup> OAR 437-001-0765(13), which requires safety meeting records only in construction, utility work and manufacturing.

<sup>81</sup> See, for example, "NCCI Experience Rating Plan," undated document downloaded from NCCI website on September 22, 2009. See also Chapter 2 of *Basic Ratemaking*, by Geoff Werner, FCAS, MAAA and Claudine Modlin, FCAS, MAAA, EMB (Casualty Actuarial Society, 2009). And see "Employer Guide: Premium and Rate Overview," published by SAIF Corporation and printed from SAIF website August 24, 2009.

<sup>82</sup> "2008 Oregon Workers Compensation Premium Rate Ranking Summary, October 2008.

<sup>83</sup> Amerisafe, Inc., downloaded from the Amerisafe Website on August 17, 2009.

<sup>84</sup> See, for example, "2007 Oregon Occupational Injury and Illness Survey Summary," December 2008.

publishes such a list, identifying those NAICS Codes identified by the state as “most hazardous.”<sup>85</sup>

Both state and federal minor work regulations are concerned with “occupations particularly hazardous for the employment of minors.”<sup>86</sup>

The National Institute for Occupational Safety and Health (NIOSH) frequently makes observations regarding the relative safety of various industry groups:

*Rates of occupational injury to health care workers have risen over the past decade. By contrast, two of the most hazardous industries, agriculture and construction, are safer today than they were a decade ago.*<sup>87</sup>

Similarly, NIOSH discussed hazards in the fishing industry:

*The commercial fishing industry consistently experiences one of the highest occupational fatality rates in the country. In 2007, commercial fishermen had the most dangerous job in the United States, with an annual fatality rate that was 28 times greater than the rate of all U.S. workers.*<sup>88</sup>

Similarly, NIOSH calls logging “consistently one of the most hazardous industries in the United States”<sup>89</sup> and states that agriculture “ranks among the most hazardous industries.”<sup>90</sup>

#### Industry risk in the safety and health literature

The validity of using industry as a method of assessing risk is so prevalent as to be almost taken for granted in many discussions of workplace health and safety. For example, in making the case for attention to the variability of national risk, one text makes comparisons between like industries in order to ensure that it is meaningful:

*The incidence of workplace fatalities varies enormously between countries. There appears to be a significant difference between developed and developing countries:*

- *a factory worker in Pakistan is eight times more likely to be killed at work than a factory worker in France;*
- *fatalities amongst transport workers in Kenya are ten times those in Denmark;*
- *construction workers in Guatemala are six times more likely to die at work than their counterparts in Switzerland.*<sup>91</sup>

It is worth noting that the author did not find it necessary to “control” for any variable, other than the industry or occupations involved.

In discussing ways to assess risk, the same text goes on to discuss the risk of various “economic sectors” as follows:

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<sup>85</sup>“2008 Most Hazardous Industries, published by the Oklahoma Department of Labor Statistical Research & Analysis Unit in cooperation with the U.S. Department of Labor Bureau of Labor Statistics, December 2007.

<sup>86</sup>26 CFR 570, Subpart E, adopted and enforced by the Wage and Hour Division of the U.S. Department of Labor.

<sup>87</sup>“NIOSH Safety and Health Topic: Health Care Workers,” printed from NIOSH web site August 17, 2009, p. 1.

<sup>88</sup>“NIOSH Safety and Health Topic: Commercial Fishing Safety,” printed from the NIOSH web site August 17, 2009, p. 1.

<sup>89</sup>“NIOSH Safety and Health Topic: Logging Safety,” printed from the NIOSH web site August 17, 2009, p. 1.

<sup>90</sup>“NIOSH Safety and Health Topic: Agriculture,” printed from the NIOSH web site August 17, 2009, p. 1.

<sup>91</sup>Benjamin O. Alli, *Fundamental Principles of Occupational Health and Safety*, (Geneva, Switzerland: International Labour Office, 2001) p. 9.

*Occupational health and safety performance varies significantly between economic sectors within countries. Statistical data show that agriculture, forestry, mining and construction take the lead in incidence of occupational deaths worldwide. The ILO's SafeWork Programme has estimated, for example, that tropical logging accidents cause 300 deaths per 100,000 workers. In other words, three out of every 1,000 workers engaged in tropical logging die annually or, from a lifetime perspective, on average every tenth logger will die of a work-related accident. Similarly, certain occupations and sectors, such as meat packaging and mining, have high rates of work-related diseases, including fatal occupational diseases.*<sup>92</sup>

In discussing the planned SafeWork strategy, the author talks about how to focus *their* resources in the way to get the best results:

*SafeWork will do first things first. It will focus on hazardous work and give primary attention to workers in especially hazardous occupations in sectors where the risks to life and safety are manifestly high, such as agriculture, mining and construction, workers in the informal sector, and those occupationally exposed to abuse and exploitation, such as women, children and migrants.*<sup>93</sup> [emphasis added]

In developing a “typology” for hazardous work environments, a group of authors make the following observation, again characterizing certain industries as hazardous:

*The most hazardous work environments share one feature in common: constant change. Many different, but constantly changing hazards are found in agriculture, construction, mining and transport.*<sup>94</sup>

Another example of the ready categorization of hazards by industry can be found in the editorial in a recent issue of the *Journal of Agricultural Safety and Health*, which opens with the statement that “Preliminary work fatality statistics for 2007 suggests that Agriculture, Forestry, and Fishing continues as the nation’s most hazardous industry, with a work death rate that is eight times higher than the all-industry average (NSC, 2009).<sup>95</sup>

### Comparing two industries

One commenter expressed concern over the loss of focus on an “unsafe” law firm while focusing on a “safe” foundry.<sup>96</sup> But this choice of examples actually serves to highlight the importance of considering industry in assessing risk.

Based on the Advisory Loss Cost Rates for 2009 (provided by the Insurance Division of the Department of Consumer and Business Services), Class 8820 (Attorney: All Employees, Clerical, Messengers) has an advisory loss cost percentage of payroll of .12 (a 20 percent reduction over the previous year). Class 3085 (Nonferrous Foundry) has a loss cost percentage of 3.23 (about the same as the previous year, but significantly lower than that for ferrous foundries and for steel casing foundries).

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<sup>92</sup>*Ibid*, pp. 9-10.

<sup>93</sup>*Ibid*, p. 110.

<sup>94</sup>Ted Scharf, et al, “Toward a Typology of Dynamic and Hazardous Work Environments,” NIOSH 2002, first page.

<sup>95</sup>Dennis Murphy, PhD, and Barbara Lee, PhD, “Critical Issues Facing Agricultural Safety and Health,” *Journal of Agricultural Safety and Health*, 15(3), July 2009, p. 303.

<sup>96</sup>Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s public hearing in Bend on August 14, 2009

Without taking into account the individual insurer's multiplying factor, which would be a constant for each insurer, the "average" law office would pay about 12 cents for every \$100 of payroll, while the "average" nonferrous foundry would pay about \$3.23 for every \$100 of payroll. Although the wages in the two industries would create some variation, this means that (very roughly) the workers compensation system rates the "risk" of losses to the system as being almost 27 times higher in a foundry than in a law firm.

If a very "safe" foundry achieved a MOD of .5000, it would pay significantly less than its competitors. But this extraordinarily safe foundry would still be paying for a risk almost seven times that of an extraordinarily "dangerous" law firm, with a MOD of 2.000.<sup>97</sup> In other words, the workers compensation insurance industry – in spite of its use of experience rating for larger risks – considers the industry and the nature of the workplace to be a more significant indicator of risk than the experience of the individual employer (much less the experience of an individual worksite for an employer with more than one worksite – as noted previously, such worksites are not separately experience rated; but they may be separately classified based on industry risk).

Other comments expressed concern over how the rule would acknowledge an employer with a good safety record that was "part of a hazardous industry" and encouraged incentives for such employers – but did not question the characterization of such industries as hazardous.<sup>98,99</sup> The reasons why other mechanisms have only limited utility are discussed elsewhere in this Explanation of Rulemaking (and certain other mechanisms, where available and reliable, *are* used by the new rule).

#### Inherent industry risk

Some comments referred to the "inherent risk" of certain industries as being higher than others, suggesting that Oregon OSHA should exclude such risks from its calculation.

One comment suggested that employers in industries with greater inherent risks take greater steps to correct those risks, thus ultimately making them safer (and more compliant with Oregon OSHA rules).<sup>100</sup> To the degree that such an analysis is correct, the effect would apparently be to level out the risk between various industries over time, so that they all approached some optimum level of risk. Oregon OSHA notes in looking at the various industry data regarding such industry risks that such a leveling of risk has not yet occurred.

The record also includes the assertion that hazardous industries are more hazardous because they experience more injuries that cannot be prevented. However, literature in the field disputes such an assumption.

One author who emphasizes the possibility of "safe" companies in unsafe industries and of "unsafe" operations in low-hazard industries also emphasizes the key component in achieving that result in the following discussion:

*Conventional thinking holds that it is more difficult, even impossible, to prevent injuries in hazardous workplaces. "It's easy to have a good record in the clean, automated chemical industry, but in the steel industry (or pulp and paper or whatever) there are far*

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<sup>97</sup>The example of such a high MOD factor is, of course, hypothetical. It is not at all certain that most law firms could generate enough base premium to be eligible for such extreme variations based on its individual experience.

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<sup>100</sup>Letter on behalf of Teledyne Wah Chang, dated August 12, 2009.

*greater hazards, so we couldn't be expected to achieve the same level of safety." This thinking is contrary to the belief that all injuries can be prevented. If the nature of the work is accepted as an excuse for injuries, we are on a truly slippery slope. Some companies in hazardous industries have proven that, although it may be more difficult to eliminate injuries in their operations, it can be done. The safest companies reject the hypothesis that safety performance depends on the specific hazard.<sup>101</sup>*

The same approach is discussed in another text that promotes a "safety philosophy" incorporating nine basic principles, the first of which is described in the following passage:

*All injuries are preventable. Managers and employees should forget the idea that "accidents happen." Instead, they should firmly believe that incidents and injuries can be prevented.*

*DuPont's performance record demonstrates that the realization of this principle is possible. Many DuPont plants, including those with more than 2,000 employees, have operated for more than 10 years without a recordable injury. Injuries have been prevented at these and other sites because managers and employees have accepted and internalized the fundamental belief that all injuries are, by their nature, preventable<sup>102</sup>.*

While these discussions, both of which draw upon the experience at DuPont, emphasize the success that can be achieved even in high-hazard industries, they should not be read to suggest that such success is common. But it *is* achievable. In recent years, the Greater Portland Construction Partnership has promoted a similar "Injury Free Movement" within the construction industry.<sup>103</sup>

#### Inherent risk and identifying unsafe places of employment

If certain industries face a larger number of unpreventable injuries, that supposition does not make the workplaces in question less "unsafe." As discussed above in relation to DuPont, the belief in a large number of unpreventable injuries may itself make such injuries more likely, and to the extent employers in an industry hold such a belief it may actually interfere with efforts to make the places of employment within that industry less "unsafe."

In any case, the law does not allow Oregon OSHA to focus only on those places of employment that are "unsafe" *because of preventable occurrences or because of hazards that are addressed by existing Oregon OSHA rules*. It simply requires Oregon OSHA to focus programmed enforcement resources on "unsafe places of employment." The question of whether a place of employment is unsafe because of preventable or unpreventable hazards is, under the statute, not relevant to Oregon OSHA's identification of the most unsafe places of employment.

#### The particular issue of occupational health risks

It is well-documented that injury history does not reflect the risk of occupational disease, even at the industry level. For example, a comprehensive text on occupational health begins with an overview that, among other things, discusses the "myths" that discourage occupational health

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<sup>101</sup>J. M. Stewart, *Managing for World Class Safety*, (New York: John Wiley & Sons, 2002) p. 71. The text draws heavily on DuPont's success in pushing overall injury and illness rates down and sustaining that reduction over time.

<sup>102</sup> Anthony Cantarella, Jr. Esq. and Evelyn Williams, "Safety in the Chemical Industry: The DuPont Story" in *Safety Culture and Effective Safety Management*, edited by George Swartz (Chicago: National Safety Council, 2000) p. 345.

<sup>103</sup>See, for example, September 29, 2009 GPCP meeting announcement describing "The Link Between World Class Innovation and World Class Safety."

reporting and refers to the “difficulty in obtaining accurate estimates of the frequency of work-related diseases,” which it attributes to several factors, all of which limit the presence of occupational health outcomes in the available data systems.<sup>104</sup> It certainly cannot be expected to do so at the workplace level, with the previously discussed problems of small numbers compounded by the problems of diagnosis, latency, unknown exposures, and uncertain causation, among others. In order to assess occupational health risks, it is important to understand the nature of the industry and the risks in question.

The problem was summarized more than 25 years ago in the opening sentences of a 1982 article:

*Incidence rates of occupational disease, published each year by the Bureau of Labor Statistics, understate the total impact of the work environment on workers’ health. This is so because the statistics virtually exclude chronic types of illnesses, as well as illnesses having a long latent period whose relationship to the job often surfaces only after retirement or death.*

*Alternative methods of measurement confirm that an undercount exists, but differ concerning its magnitude.<sup>105</sup>*

Nearly two decades later, an article in the *American Journal of Public Health* included a similar observation:

*While all estimates strongly suggest that many more people die from work-related disease than from work-related injuries, there are no systematic, reliable sources of data on death due to occupational diseases. The difficulty of distinguishing most occupational diseases from nonoccupational diseases makes deaths due to occupational disease hard to track. For example, lung cancer caused by asbestos exposure does not have a unique pathology that differentiates it from lung cancer caused by cigarette smoking. Because of this difficulty and the limited training in occupational medicine that most physicians receive in medical school and during residency, occupational diseases are underdiagnosed.<sup>106</sup>*

In evaluating criticisms of the BLS Survey of Occupational Injuries and Illnesses (SOII) as a whole, representatives of BLS acknowledge without hesitation that the ability of the survey to identify occupational disease is limited:

*Underrecording of illnesses. It is well known and acknowledged by BLS that SOII does not capture all occupational illnesses.*

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<sup>104</sup>Barry S. Levy, M.D., M.P.H., and David H. Wegman, M.D., M.Sc., “Occupational Health: An Overview” in *Occupational Health: Recognizing and Preventing Work-Related Disease and Injury*, 4<sup>th</sup> Edition, edited by Levy and Wegman (Philadelphia: Lippincott, Williams & Wilkins 2000), pp. 10-13.

<sup>105</sup>Harvey J. Hilaski and Chao Ling Wang, “How valid are estimates of occupational illness?” *Monthly Labor Review*, August 1982, p. 27.

<sup>106</sup>Robin Herbert, M.D., and Philip J. Landrigan, M.D., MSc, “Work-Related Death: A Continuing Epidemic,” *American Journal of Public Health*, April 2000, Volume 90, No. 4, p. 541.

*A central problem is that many work-related illnesses take years to develop and may be difficult to attribute to the workplace. Thus, a recording mechanism based on employer records, such as SII, will generally fail to capture these illnesses.*<sup>107</sup>

Dr. John Howard, who is again serving as the Director of the National Institute for Occupational Safety and Health (NIOSH), made the same observation about workplace records in a recent conference in Oregon. He noted that there is simply no way that claims and other incidence data can be relied upon to identify many of the most severe industry health hazards.<sup>108</sup>

Industry classification is suggestive, not absolute

Oregon OSHA has acknowledged throughout the rulemaking and the discussions that preceded it that the use of industry classification is something of a “blunt instrument.” Oregon OSHA must make the required determination using the information available. Although the use of industry classification is not an absolute indicator of risk, other approaches considered by Oregon OSHA are not likely to be any more precise, and appear to be even less precise, if not completely misdirected.

For that reason, Oregon OSHA’s conclusion that it can best use industry classification (modified by the worksite-specific and employer-specific circumstances found in the various exemptions) as the best way to identify unsafe places of employment is a reasonable one. At the same time, Oregon OSHA believes that under the new system (as under the previous system), certain workplaces will be identified and after inspection will be recognized to be both reasonably safe and in compliance with the applicable rules. That is why Oregon OSHA conducts inspections, rather than sending out notices of violation based solely on statistical information about the workplace. It is worth noting that the law itself does not require such a level of certainty in that determination as to make a subsequent inspection to assess actual workplace conditions unnecessary – the provision being applied in this rule is intended to trigger an inspection, not a citation.

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<sup>107</sup>John Ruser, “Examining evidence on whether BLS undercounts workplace injuries and illnesses,” *Monthly Labor Review*, August 2008, p. 20.

<sup>108</sup>Comments as part of a panel on “Occupational Safety and Health in the Future Workplace” at a conference entitled “Oregon’s Workplace Health & Safety: Looking Forward to 2020,” jointly sponsored by the Center for Research in Occupational and Environment Toxicology (CROET) and Oregon OSHA, September 24, 2009.

## **IX. Discussion of Financial Impacts of Rule**

The Fiscal and Economic Statement filed as part of the rulemaking record was a brief one, noting that the only effect of the rule would be to change the locations selected for inspection (and that there would be no meaningful cost to Oregon OSHA beyond the cost of the rulemaking itself, as well as no cost to other state agencies, other public entities or the general public beyond their role as employers. The rule would not change the number of inspections conducted. Therefore, Oregon OSHA concluded, the overall impact to employers as a group would be unchanged by the adoption of the rule. That statement – developed after consultation with the advisory group assembled for the purpose of developing the rule<sup>109</sup> – remains Oregon OSHA’s conclusion; however, two comments<sup>110</sup> raised questions about the financial analysis and why it did not go further.

### **The financial analysis required by the Administrative Procedures Act**

An economic impact statement is required by ORS 183.335(2)(b)(E), which refers to a “statement of fiscal impact identifying state agencies, units of local government and the public which may be economically affected by the adoption, amendment or repeal of the rule and an estimate of that economic impact on state agencies, units of local government and the public.” The statement must also include “a cost of compliance effect on small businesses affected.”

The analysis required by this statement should not be confused with what would be expected from an analysis of the overall costs and benefits of a rulemaking proposal. Put most simply, Oregon OSHA’s legal obligation is to provide an estimate of the fiscal impact that will be imposed on various parties in order to comply with the rule – it does not require an assessment or balancing of the net costs and benefits beyond that fiscal impact. It is not clear that such a fiscal and economic impact statement requires an assessment of the incidental costs of enforcement activity (rather than of compliance with the rule itself), although Oregon OSHA chose to consider such costs in the statement it published.

### **The compliance costs of the rule**

The rule imposes no new requirements on employers, and imposes no unique costs on state agencies, public agencies or the public outside their role as employers or employees. In fact, the scheduling system does not impose any requirements on employers, either new or old; the inspections it generates are intended to assess compliance with existing rules (as well as with any rules that might be adopted in their own right at some point in the future).

Certain suggestions made as the rule was developed and in the record<sup>111</sup> might have involved a cost to employers. For example, the suggestion that OSHA 300 log material be provided to the agency for scheduling purposes would presumably have cost employers money, as would a decision to expand existing recordkeeping requirements to include small and otherwise exempt employers. However, Oregon OSHA rejected such suggestions.

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<sup>109</sup>Minutes of May 22, 2009 meeting of the Fixed Site Enforcement Scheduling Advisory Group.

<sup>110</sup>Letter on behalf of Teledyne Wah Chang, August 12, 2009, and testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s public hearing in Bend on August 14, 2009.

<sup>111</sup> See, for example, testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s public hearing in Bend on August 14, 2009. “There are a variety of things that are out there that could be used. There are self-reporting requirements that you could be using.”

The only costs involved in applying the rule under discussion are the incidental costs resulting from an inspection. And, as discussed previously, Oregon OSHA has concluded that the *net* costs of shifting the focus from one group of employers to another will be zero. The costs will be shifted, with a worksite experiencing a reduction in the incidental costs created by an inspection for each worksite that experiences an increase in such costs. There will be no new costs. The same conclusion was reached in relation to small businesses – some businesses may experience an incidental increase in costs due to the inspections, while other businesses will experience a decrease in such costs.

#### The effects of the rule on injury and illness claims

Some comments suggested that Oregon OSHA's conclusion that there would be no financial impact was in error because they believed the rule would eliminate inspections that would otherwise prevent injury and illness and would replace those inspections with less productive ones. One wrote that the resulting increase in injuries and illnesses "can reasonably be estimated in the millions of dollars on a statewide basis,"<sup>112</sup> although the details behind this estimate were not provided. Another comment contended that the statement was not only wrong because it did not show an increased financial impact, but was also inconsistent with Oregon OSHA's position because it did not show a reduced financial impact:

*First of all, if your rule is working, isn't it going to have a beneficial fiscal impact? If it's not, your rule's not working. Because if your rule's working and you're making place of employment more safe, than you're going to save the employers money. There's going to be less injuries. So what is the agency doing saying there's no impact? Why are you even passing this rule if there's no impact? The agency, I submit, must believe the fiscal impact is beneficial rather than negative.<sup>113</sup>*

Ultimately, the claim that the rule will increase the costs resulting from injuries (while in Oregon OSHA's opinion beyond the scope of the required financial statement and instead argued as part of a cost-benefit analysis that is not required) is simply a rephrasing of the assertion that the previous rule better identified unsafe places of employment than will the new rule. Oregon OSHA disagrees with that assessment, for reasons explained throughout this Explanation of Rulemaking. Oregon OSHA believes, based on the record, that the rule will better focus Oregon OSHA's programmed enforcement resources on unsafe workplaces.

Oregon OSHA believes that the long-term effect, considering both positive and negative impacts, would be a net cost savings precisely because the rule will work the way it is intended, for the reasons discussed elsewhere in this Explanation of Rulemaking. The intent of this change to the method of scheduling OR-OSHA inspections is to better target Oregon OSHA's limited resources places of employment within those industries that are "most unsafe" based on national and state historical data (and to better comply with the statutory requirement to identify the most unsafe places of employment). Although Oregon OSHA considers it outside the scope of the required financial impact statement, it is indeed Oregon OSHA's reasoned belief that these workplaces have the greatest potential for injury and thus can accrue the greatest benefit from an inspection (or from the deterrent effect created by an increased risk of inspection).

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<sup>112</sup>Letter on behalf of Teledyne Wah Chang, dated August 12, 2009.

<sup>113</sup>Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA's public hearing in Bend on August 14, 2009.

The previous scheduling system targeted only those places of employment that had a disabling claim. Unlike the current system, a large number of workplaces could be certain that they would not be subject to a programmed inspection in any given year. Under the new rule, no one (other than those specifically exempted from programmed inspections because their worksite has been evaluated) is guaranteed such freedom from inspection – in this manner, the new rule maintains a certain level of deterrence even in those industries where inspections are unlikely. Put another way, a Tier J workplace is more likely to be subject to a programmed safety inspection under the new system than was any workplace without a disabling claim in the identified 12-month period under the previous system.

The fiscal impact statement in Oregon OSHA's rule filing did not include such an analysis of the costs and benefits. Instead, it focused (as it was intended to do) solely on the cost to Oregon employers based on the projected number of inspections conducted annually.

Although it is impossible to quantify, Oregon OSHA believes that there will likely be a positive economic impact over time in the form of reduced workers' compensation costs paid by employers, as well as reduced indirect costs associated with injuries and illnesses in the workplace. The fiscal impact also did not take into account the positive benefits to workers and their families of reduced injuries and illnesses, considering those issues to beyond the scope of an analysis of the costs of complying with the rule.

The fiscal impact statement in the rulemaking record fulfilled its purpose. It did not, and was not intended, to be a discussion of the reasons why adopting the rule is a better idea than not adopting the rule. That discussion can be found throughout the rulemaking record and particularly in the balance of this Explanation of Rulemaking.

## **X. The Rule is Credible and Superior to the Rule It Replaces**

Much of the criticism of the proposed rule compared it to some hypothetical approach, not the rule that was previously in place. The record includes little in the way of defense of the previous rule, while several comments specifically criticized it, regardless of their position on the rule being proposed.

The strongest defense of the previous rule came in a single sentence near the end of one written submission:

*Inspection criteria before the proposed changes had more reasonable provisions that if a company did not have a disabling claim or injuries, they had a good chance of not getting inspected for working safely.<sup>114</sup>*

As discussed elsewhere in this Explanation of Rulemaking, Oregon OSHA considers the elimination of this focus on accepted disabling claims to be one of the reasons the new rule is superior to the previous rule.

Oregon OSHA does *not* consider the absence of an accepted disabling claim as evidence of “working safely” in the overwhelming majority of Oregon places of employment. Many published practitioners in the field would agree. Representatives of Oregon OSHA are familiar with workplaces that rely upon a similar approach to motivate employees, posting signs declaring “Employees of XYZ Company have worked safely for 64 days.” On the 65<sup>th</sup> day, an injury occurs, and the employer begins counting again. But, in almost every case, the *level of safety in the operation does not change*. Operations and activity on the 64<sup>th</sup> day are very similar to those on the 65<sup>th</sup> day. The difference? What most would call “luck.” The same analysis applies to the use of a disabling claim to compare worksites.

One comment against the proposed rule thanked the department for undertaking “an overdue effort.”<sup>115</sup> The testimony specifically concurred with concerns over the use of the accepted disabling claim as the rule’s trigger:

*While that is an understandable problem and has historically certainly been a problem for the site selection process under the old rules because as [Oregon OSHA Administrator] Mr. Wood very accurately identified, the idea of using your primary identifier -- the occurrence of an accident within the timeframe that you’re looking at could easily skew the worst first concept. He’s absolutely right....<sup>116</sup>*

The same comment expressed concern that, in spite of Oregon OSHA’s stated readiness to evaluate the rule further in the years to come, the rule would not be improved in the future, based on the passage of time between the previous rule’s adoption and the current rulemaking.<sup>117</sup> The comment did not address the rule’s inclusion of specific language describing a process of ongoing evaluation of the rule’s effectiveness.

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<sup>114</sup> Letter from on behalf of Associated Oregon Loggers, dated August 18, 2009.

<sup>115</sup> Testimony on behalf of Teledyne Wah Chang, the Oregon Self Insurers Association, and the Oregon Special Districts Association, Oregon OSHA’s public hearing in Bend on August 14, 2009.

<sup>116</sup> *Ibid.*

<sup>117</sup> *Ibid.*

In supporting the rule, one employer noted that “[L]ike most employers, we are dissatisfied with the current scheduling system.”<sup>118</sup> Other testimony in support of the rule called it “smart government at its best” that was likely to “make our most dangerous workplaces safer and reduce the number of injured workers and those who suffer loss of life on the job.”<sup>119</sup>

One written criticism of the proposed rule described a hypothetical approach that appears to go beyond the confines of the previous rule:

*The relative “safeness” of a particular place of employment should revolve around an analysis of the degree of compliance with safety standards in combination with data evidencing the injury incident rate of an individual place of employment.”*<sup>120</sup>

Accepting this standard would present an insoluble dilemma for Oregon OSHA, which clearly could not have been the intent of the legislative assembly. The same statutory section (ORS 654.035(1)(d)) that refers to focusing enforcement resources on “unsafe places of employment,” opens with a discussion of the purpose of the inspection program itself:

*Fix standards for routine, periodic or area inspections of places of employment that are reasonably necessary in order to determine compliance with all occupational safety and health laws and the regulations, rules and standards adopted under occupational safety and health laws. [emphasis added]*

The purpose of the inspection is, in essence, precisely to provide “an analysis of the degree of compliance with safety standards.” Oregon OSHA cannot conduct such an analysis of every worksite in order to identify unsafe places of employment that can then be inspected in order to conduct such an analysis. As Oregon OSHA representatives observed several times during the advisory group discussions that led up to the rule proposal, the statute cannot reasonably be read to require such a complete understanding of each worksite’s degree of safety that Oregon OSHA would be able to simply send out applicable citations without bothering to conduct an inspection.

The rule as adopted *does* take into account analytic information about the specific worksite when it is available and Oregon OSHA considers it reliable. The exemptions described in Section VII of this document take into account such data from enforcement records, Oregon OSHA voluntary recognition programs, and external third-party certification. Under the rule as proposed, there were several avenues for an employer with a demonstrably safe worksite to not only reduce but eliminate the risk of programmed inspections under. The rule as adopted includes two more. The previous rule included less such data.

It is also worth noting that the previous rule did *not* rely primarily upon injury rates. Rather, it relied upon a single accepted disabling claim, without taking into account any data regarding claims rates, as its primary selection factor. Even its limited reliance on rates did not take into account a rate for the particular place of employment, but instead relied upon a single rate for the entire employer. As discussed elsewhere in this Explanation of Rulemaking, Oregon OSHA does not have data allowing it to calculate worksite rates, such rates are unreliable indicators in relation to all but the largest worksites, and it would be unworkable to use the employer’s injury rate for all of its worksites.

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<sup>118</sup> Letter on behalf of the City of Portland, dated August 18, 2009.

<sup>119</sup> Memo on behalf of the Oregon AFL-CIO, dated August 19, 2009.

<sup>120</sup> Letter on behalf of Teledyne Wah Chang, dated August 12, 2009

Rather than being compared to a hypothetical rule, the new rule can best be evaluated based upon an answer to the question as to whether it is an improvement over the rule that had been in place for the better part of the previous decade. The balance of the record supports such a finding.

In her comments indicating no problems with the rule, one employer representative provided the following observation:

*...even though I have worked in a lot of states, I find that I don't know if there's a perfect way to conduct inspections and rulemaking associated with that.<sup>121</sup>*

The comment is an important reminder of a real world principle: An excessive desire to achieve “the perfect” can become the enemy of achieving “the good.” Even without taking into account the continuing evaluation provisions and the possibility of future improvements to the rule, Oregon OSHA is persuaded that the new rule is a dramatic improvement over the previous rule and that it represents a credible identification of unsafe places of employment.

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<sup>121</sup> Testimony on behalf of Harry & David’s, Oregon OSHA’s public hearing in Medford on August 18, 2009.

## **APPENDIX 1**

### **Fixed Site Scheduling Oregon OSHA Adopted Changes DEVELOPMENT OF INDUSTRY HAZARD RANKING October 2009**

In working with the fixed site enforcement scheduling advisory group assembled for the purpose, Oregon OSHA set out to group the various industry NAICS (North American Industry Classification System) codes by level of relative risk. While this does not suggest that all employment in a “high risk” NAICS is hazardous, or that all employment in a “low risk” NAICS is safe, it is intended to provide a meaningful distinction based on industry characteristics.

#### Selection of Industries for Safety Scheduling

In ranking industries for the proposed safety enforcement scheduling lists, and with the assistance of the advisory group, Oregon OSHA divided them into 10 groups based on the following seven criteria (the original draft envisioned only 4 groups):

- Total Claims Rate in Oregon (using Bureau of Labor Statistics data)
- DART (Days Away or on Restricted Duty) Claims Rate in Oregon (using Bureau of Labor Statistics data)
- Federal Total Claims Rate (using Bureau of Labor Statistics data)
- Federal DART (Days Away or on Restricted Duty) Claims Rate (using Bureau of Labor Statistics data)
- Federal Fatal Case Rate (using data from the Census of Fatal Occupational Injuries)
- Oregon Fatal Case Rate (using data from the Oregon Workers Compensation system)
- Oregon Disabling Claims Rate (using data from the Oregon Workers Compensation system).

Originally, the seven criteria each carried an equal weight in the combined ranking. However, after extensive discussion in the advisory group, the rankings were shifted to place a greater emphasis on Oregon-specific experience. To do this, the Oregon BLS data was given greater weight (1.5 times) and the federal BLS data was given reduced weight (.5 times). Also based on the discussions, the Oregon workers compensation fatality data was included only after it was possible to calculate a rate using workers, rather than locations. The Oregon workers compensation disabling claims data also was calculated using workers, rather than locations as in the earlier drafts. These rankings then provided the basis for separating the industry classifications into the 10 tiers found in Appendix A of the rule.

### Selection of Industries for Health Scheduling

Incident and claims rate data does not provide a meaningful ranking for a health scheduling system, even at the level of an industry or an occupation. Accepted disabling claims do not necessarily reflect risk, because of difficulty of making reliable diagnoses, because of the delay of making diagnoses, and because of the delay of the onset of conditions of symptoms. Therefore fewer claims are entered into the system. In relation to many exposures, there is little confidence that a potential carcinogen or other life threatening chemical will be connected to an illness.

The targeted health industries were selected using a process that began by consulting a technical advisory group made up of industrial hygienists and other occupational health professionals and asking them to identify those areas where the risks are greatest. Further analysis of historic inspection rates, violation rates, non-inspection rates, percent of current inspections and Oregon OSHA Lab overexposures were all considered in relation to that initial list of industries. Based on that discussion and analysis, Oregon OSHA has identified the list of industries in the rule's Appendix B as being those fixed site industries where the greatest likelihood of serious health hazards exists.