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**IN THE COURT OF APPEALS OF THE STATE OF WASHINGTON**

DEPARTMENT OF LABOR AND	)	No. 80685-8-I
INDUSTRIES OF THE STATE OF	)	
WASHINGTON,	)	
	)	
Appellant,	)	
	)	DIVISION ONE
v.	)	
	)	
PHILLIPS 66 COMPANY DBA	)	
PHILLIPS 66 COMPANY REFINERY,	)	
	)	PUBLISHED OPINION
Respondent.	)	
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MANN, C.J. — The Washington Legislature created the Washington Industrial Safety and Health Act (WISHA), ch. 49.17 RCW, “in order to assure, insofar as may reasonably be possible, safe and healthful working conditions for every man and woman working in the state of Washington.” In furtherance of WISHA, the Department of Labor and Industries (Department) promulgated the Process Safety Management of Highly Dangerous Chemicals rules (PSM rules) “for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals [that] may result in toxic, fire, or explosion hazards.” WAC 296-67-001(1).

The PSM rules include the mechanical integrity regulation, WAC 296-67-037, and process hazard analysis regulation, WAC 296-67-017.

The Department cited Phillips 66 for violating both the mechanical integrity and process hazard analysis regulations by failing to inspect and analyze risks to its fire water system at the company's Ferndale refinery. The Department appeals a superior court's decision affirming the Board of Industrial Insurance Appeal's (Board) ruling that the PSM rules do not apply to Phillips 66's fire water system. Because Phillips 66's fire water system is integral to preventing or minimizing the consequences of catastrophic releases at the Ferndale refinery, we hold that the system falls within the plain language and intent of the PSM rules, as well as the overall purpose of WISHA. We reverse the Board's conclusion that the PSM rules do not apply to Phillips 66's fire water system. Because the PSM rules do apply, we remand to the Board to reexamine whether Phillips 66's fire water system complies with the mechanical integrity and process hazard analysis regulations.

## FACTS

### A. Background

Phillips 66 operates a refinery in Ferndale, Washington, where it refines crude oil into gasoline, diesel, and liquefied petroleum gas. The refinery boils the crude oil in a 100-foot-high cylindrical tower, removing impurities and separating the raw material into its component parts. Specialized equipment diverts the separated hydrocarbon products to other areas of the refinery for storage, shipment, or additional processing.

The refinery contains an elaborate fire water system. The system consists of a one-million-gallon primary water tank, freshwater ponds, underground and above

ground piping, hydrants, and water cannons. The system was designed with redundancies, including back-up pumps, back-up water sources, and multi-route piping segments. The piping is laid out in a grid fashion around the refinery; if one section fails, water could be routed in different ways to reach the necessary areas. The fire water system has the capacity to pump over 30,000 gallons per minute. If the primary tank's water were exhausted, the system could switch to freshwater ponds and, if needed, the Pacific Ocean.

Phillips 66 uses the fire water system to fight potential gas and oil fires, suppress acid vapor releases, and protect process piping and equipment. In the event of a catastrophic release, response teams would use the fire water system to put out any fires and cool the surrounding pipes and equipment to prevent further release or damage. Phillips 66 has also used the fire water system to control some of the refinery's operations. In hot summer months, the company used the system to run "Ferndale coolers," which are large sprinklers used to cool condenser units. The fire water system contains no highly hazardous chemicals and is not directly connected to any of the equipment used to refine the crude oil.

Because the refinery's processes involve high volumes of highly hazardous chemicals, it is subject to the Department's PSM rules. WAC 296-67-001.

In April 2014, Department inspector Sally Buckingham began an inspection at Phillips 66's Ferndale refinery. Buckingham observed leaks in the fire water system, with water bubbling from underground piping and water pooling near the fire equipment. Buckingham also found a leaking hydrant. Phillips 66 provided the Department with its Policy E-4 Inspection and Testing of Fire and Safety Equipment. Although the Policy

had standards for inspection of above-ground systems, including fire sprays, fire pumps, and hydrants, it did not have standards for inspecting the underground pipes or tank.

In September 2014, the Department issued Phillips 66 a citation for violating three provisions of the PSM rules.<sup>1</sup> The citation asserted that Phillips 66: (1) failed to conduct inspections and testing on its fire water system in violation of the mechanical integrity rule under WAC 296-67-037(4)(a); (2) failed to follow “recognized and generally accepted good engineering practices” during the inspections and testing of the fire water systems under WAC 296-67-037(4)(b); and (3) failed to perform a process hazard analysis on the fire water system under WAC 296-67-017(3)(g).

#### B. Procedural History

Phillips 66 appealed the citation. The Board’s Industrial Appeals Judge (IAJ) presided over 13 days of hearings in October and November 2016. Thirty-one witnesses testified and 103 exhibits were admitted.<sup>2</sup> Phillips 66’s primary argument was that because the fire water system did not contain highly hazardous chemicals, it was not a “process” covered under the PSM rules.

In May 2018, the IAJ issued a proposed decision and order vacating the citations. The IAJ found that the Department failed to establish that the fire water system was part of a system of vessels, tanks, and piping that hold or carry highly hazardous chemicals and therefore was not a “process” or “process equipment” subject to the PSM rules. As a result, the IAJ found that the Department failed to demonstrate that the inspection requirements in WAC 296-67-037, and process hazard analysis

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<sup>1</sup> The citation at issue in this appeal is Citation and Notice of Assessment in Inspection 317037216.

<sup>2</sup> The appeal hearing addressed two other citations issued to Phillips 66 that are not subject to this appeal.

requirements in WAC 296-67-017, applied to the fire water system at the Phillips 66 refinery. The Department petitioned for review of the IAJ's proposed decision to the Board.

The Board agreed with the IAJ that the Department failed to establish that the fire water system was part of the process or process equipment subject to the PSM rules. Consequently the Board concluded that the inspection requirements in WAC 296-67-037, and process hazard analysis requirements in WAC 296-67-017, did not apply to the fire water system at the Phillips 66 refinery. The Board also found that Phillips 66 regularly inspected the exterior of the fire water tank, and that the inspections followed recognized and generally accepted good engineering practices (RAGAGEP).

The Department appealed the Board's decision to the Whatcom County Superior Court. The superior court affirmed the Board's decision.

The Department appeals.

### ANALYSIS

#### A. Standard of Review

WISHA governs judicial review of decisions issued by the Board. Erection Co., v. Dept. of Labor & Indus., 160 Wn. App. 194, 201, 248 P.3d 1085 (2011). An appellate court reviews "a decision by the Board directly, based on the record before the agency." Erection Co., 160 Wn. App. at 202.

We review challenged Board findings for substantial evidence. Erection Co., 160 Wn. App. at 202. Evidence is substantial if it is enough to convince a fair-minded person of the truth of the asserted fact. Mowat Constr. Co. v. Dep't of Labor & Indus., 148 Wn. App. 920, 925, 201 P.3d 407 (2009). We view the evidence and reasonable

inferences in the light most favorable to the party that prevailed in the administrative proceeding. Frank Coluccio Constr. Co. v. Dep't of Labor & Indus., 181 Wn. App. 25, 35, 329 P.3d 91 (2014).

We review questions of law de novo and interpret agency regulations as if they were statutes. We construe WISHA statutes and regulations “liberally in order to achieve their purpose of providing safe working conditions for every worker in Washington.” Substantial weight is given to the Department’s interpretation of WISHA. In interpreting WISHA we may look to federal decisions that interpret WISHA’s federal analogue, the Occupational Safety and Health Act of 1970 (OSHA), but will not resort to federal case law when Washington law provides controlling precedent.

Schimmick Constr. Co. Inc. v. Dep't of Labor & Indus., 12 Wn. App. 2d 770, 778, 460 P.3d 192 (2020) (internal citations omitted) (quoting Erection Co., 160 Wn. App. at 202).

If a regulation is unambiguous, courts will not look beyond the plain meaning of the words in the regulation. Mader v. Health Care Auth., 149 Wn.2d 458, 473, 70 P.3d 931 (2003). In determining the plain meaning of the regulation, courts may also look to the statutory scheme as a whole. Mader, 149 Wn.2d at 473. In doing so, the court “will not add to or subtract from the clear language of [the] statute, rule, or regulation.” Dep't of Licensing v. Cannon, 147 Wn.2d 41, 57, 50 P.3d 627 (2002).

#### B. Background - WISHA and the PSM Rules

The Department derives its authority to promulgate the PSM rules from WISHA. RCW 49.17.040. The Washington Legislature created WISHA “in the public interest for the welfare of the people of the state of Washington and in order to assure, insofar as may reasonably be possible, safe and healthful working conditions for every man and woman working in the state of Washington.” RCW 49.17.010. The purpose of WISHA is to “create, maintain, continue, and enhance the industrial safety and health program

of the state, which program shall equal or exceed the standards prescribed by the Occupational Safety and Health Act of 1970.” RCW 49.17.010.

The purpose of the PSM rules are “for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. These releases may result in toxic, fire, or explosion hazards.” WAC 296-67-001. The PSM rules apply, in part, to “processes” that involve flammable hydrocarbons “on site in one location, in a quantity of 10,000 pounds.” WAC 296-67-001. A “process” is defined as:

any activity involving a highly hazardous chemical including any use, storage, manufacturing, handling, or the on-site movement of such chemicals, or combination of these activities. For purposes of this definition, any group of vessels which are interconnected and separate vessels which are located such that a highly hazardous chemical could be involved in a potential release shall be considered a single process.

WAC 296-67-005.

WAC 296-67-009 through 061 set forth performance-based requirements for specific activities governed by the PSM rule. Each section has discrete scopes. Relevant to this appeal, WAC 296-67-037 regulates mechanical integrity, and WAC 296-67-017 regulates process hazard analyses.

The mechanical integrity regulation applies specifically to various types of “process equipment.” WAC 296-67-037(1). An employer must develop written procedures that maintain the ongoing integrity of the “process equipment,” and then must perform the inspections and tests necessary consistent with its procedures. WAC 296-67-037(2), (4). The employer must perform the inspections and tests following RAGAGEP. WAC 296-67-037(4)(b).



The process hazard analysis regulation applies to “processes” covered by the PSM rules. WAC 296-67-017(1). The process hazard analysis is required to address information including previous incidents, “[c]onsequences of failure of engineering and administrative controls,” human factors, and include “a qualitative evaluation of a range of the possible safety and health effects of failure of controls on employees in the workplace.” WAC 296-67-017(3)(d), (f), (g).

Appendix C of the PSM rules contains nonmandatory compliance guidelines and recommendations for process safety management. WAC 296-67-291. Included in this appendix are guidelines for both the mechanical integrity regulation and the process hazard analysis regulation. WAC 296-67-291(4), (9).

#### C. Application of the PSM Rules to Phillips 66’s Fire Water System

The Department first argues that because Phillips 66 uses its fire water system for activities involving highly hazardous chemicals, the system is part of its “process,” and thus within the scope of the PSM rules. Phillips 66 concedes that the fire water system falls within the overall scheme of the PSM rules, noting that the system presently complies with the Emergency Planning and Response and Audits portion of the rule. WAC 296-67-053; WAC 296-67-057. Phillips 66 contends however, that the fire water system does not fall within the definition of “process” because it neither contains nor is connected to anything that contains highly hazardous chemicals.

We begin our analysis with the purpose of the PSM rules, which is “preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals.” WAC 296-67-001(1). To meet this purpose, the Department adopted a broad interpretation of the term “process” to include:

Any activity involving a highly hazardous chemical including any use, storage, manufacturing, handling, or the on-site movement of such chemicals, or combination of these activities. For purposes of this definition, any group of vessels which are interconnected and separate vessels which are located such that a highly hazardous chemical could be involved in a potential release shall be considered a single process.

WAC 296-67-005.

The Department asserts that the definition is broad enough to include Phillip 66's fire water system. The Department supports its argument by emphasizing that the phrase "any activity involving" includes the fire water system because the integrity of the system is equally as important to the safety of crude oil refinement as the integrity of the systems that move and refine crude oil. The Department further argues that by using the term "including" the list of activities included as processes is nonexhaustive and, thus, can include the fire water system. See Associated Press v. Wash. State Legislature, 194 Wn.2d 915, 935, 454 P.3d 93 (2019) (Stephens, J., concurring in part/dissenting in part) (quoting ANTONIN SCALIA & BRYAN A. GARNER, READING LAW: THE INTERPRETATION OF LEGAL TEXTS 132 (2012) ("The verb to include introduces examples, not an exhaustive list.")).

The Department also relies in part on the Fifth Circuit decision Delek Ref., Ltd. v. Occupational Safety & Health Rev. Comm'n, 845 F.3d 170, 181 (5th Cir. 2016). In Delek, the court reviewed a U.S. Department of Labor, Occupational Safety and Health Review Commission decision upholding a citation to a refinery owner for failing to inspect a positive pressurization unit (PPU) under the federal equivalent of the mechanical integrity regulation. Delek, 845 F.3d at 179. The PPU was a safety system that draws outside air into a refinery's control room, preventing hazardous vapors from entering after release. Delek, 845 F.3d at 179. The refinery owner argued that because

the PPU contained no hydrocarbons, it should not be considered part of the PSM-covered process. Delek, 845 F.3d at 181.

The Fifth Circuit rejected the refinery owner's arguments. In doing so, it referenced a 1997 OSHA letter explaining that a "process" encompasses equipment "even though that equipment does not contain highly hazardous chemicals, if it 'could . . . interfere with mitigating the consequences of such a release.'" Delek, 845 F.3d at 181-82 (quoting OSHA Std. Interp. 1910.119 (U.S. Dep't of Labor Feb. 28, 1997), 1997 WL 33798325, at \*1). The Department analogizes the PPU in Delek to Phillips 66's fire water system. Like the PPU, the fire water system minimizes the consequences of a release of highly hazardous chemicals.

We agree with the Department's interpretation of "process" to include the fire water system. A fire water system is paramount in preventing and minimizing the consequences of a catastrophic release of potentially dangerous compounds used in Phillips 66's refining processes. Phillips 66 uses its system to fight chemical fires, suppress acid vapor releases, and protect oil and gas piping during emergencies. It cannot be reasoned that such a system exists in isolation from the remaining activities and is unregulated by the PSM rule.

Phillips 66's fire water system falls within the PSM rule's definition of "process." The definition's inclusive phrasing of "any activity involving" and its subsequent non-exhaustive list of examples extend to the fire water system's inclusion. The suppression of fires and Phillips 66's use of the system to cool its condensing units bring the fire water system within the "process" definition.

Inclusion of the fire water system in both the PSM rule and its definition of “process” comports with the purpose of WISHA. Regulation of the system “assure[s], insofar as may be reasonably possible, safe and healthful working conditions.” Both WISHA and OSHA mandate that Washington workplace safety rules equal or exceed federal standards. RCW 49.17.010; 29 U.S.C. § 667(c)(2). Our Washington PSM rule is identical to its federal counterpart. See WAC 296-67 and 29 C.F.R. § 1910.119. The United States Department of Labor has published its interpretation of the federal standard to include utility systems used to mitigate catastrophic releases. OSHA Std. Interp. 1910.119 (U.S. Dep’t of Labor Jan. 31, 2008) 2008 WL 2565070, at \*3. Safe and healthful working conditions, as well as statutory mandate require that the Department be permitted to regulate the fire water system, thus avoiding accidents that threaten the safety and health of workers.

Finally, although we are not bound by federal decisions with respect to OSHA, we may look to them as persuasive authority. Potelco Inc. v. Dep’t of Labor and Indus., 191 Wn. App. 9, 30, 361 P.3d 767 (2015). Here, the Delek decision is persuasive for the reasons expressed by the Department. Phillips 66’s fire water system exists in part to minimize the consequences of a release of highly hazardous chemicals.

We conclude that the fire water system falls within the “process” definition of the PSM rule. The Board erred in concluding otherwise.

#### D. The Mechanical Integrity Regulation

##### 1. Application

The Department argues that Phillips 66’s fire water system is subject to the mechanical integrity regulation, WAC 296-67-037. The Department relies on both the

plain language of the regulation and the language of Appendix C, WAC-296-67-291(9).<sup>3</sup>

We agree.

Based on our conclusion that the fire water system falls within the “process” definition of the PSM rule, the mechanical integrity regulation applies. The regulation applies to “pressure vessels and storage tanks; piping systems (including components such as valves); relief and vent systems and devices; emergency shutdown systems; controls (including monitoring devices and sensors, alarms, and interlocks); and pumps.” WAC 296-67-037(1). Much of the fire water system falls squarely within this list of applicable components.

The Department cites WAC 296-67-291(9) to further support its contention that the mechanical integrity regulation applies to the fire water system. Albeit nonmandatory, Appendix C is informative. The appendix identifies fire protection systems as components of the mechanical integrity regulation:

The first line of defense an employer has available is to operate and maintain the process as designed, and to keep the chemicals contained. This line of defense is backed up by the next line of defense which is the controlled release of chemicals through venting to scrubbers or flares, or to surge or overflow tanks which are designed to receive such chemicals, etc. These lines of defense are the primary lines of defense or means to prevent unwanted releases. The secondary lines of defense would include fixed fire protection systems like sprinklers, water spray, or deluge systems, monitor guns, etc., dikes, designed drainage systems, and other systems which would control or mitigate hazardous chemicals once an unwanted release occurs. These primary and secondary lines of defense are what the mechanical integrity program needs to protect and strengthen these primary and secondary lines of defenses where appropriate. The first step of an effective mechanical integrity program is

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<sup>3</sup> Phillips 66 points to a prior Board decision, where the Board ruled that a water valve that was directly connected to “process equipment” was not itself included, and that the mechanical integrity regulation is restricted to “those pipes and valves that involve highly hazardous chemicals.” In re Equilon Enters., No. 06 W0259, at 5-6 (Wash. Bd. of Indus. Ins. Appeals Oct. 23, 2008), [http://www.biiia.wa.gov/DO/06W0259\\_ORD\\_20081023\\_DO.PDF](http://www.biiia.wa.gov/DO/06W0259_ORD_20081023_DO.PDF). We hold this interpretation by the Board to be incorrect.

to compile and categorize a list of process equipment and instrumentation for inclusion in the program. This list would include pressure vessels, storage tanks process piping, relief and vent systems, fire protection system components.

WAC 296-67-291(9) (emphasis added).

This guidance clearly contemplates that the fire water system should be included as process equipment.

The Board erred in concluding that Phillips 66's fire water system was not subject to the mechanical integrity regulation.

## 2. Compliance

The Department argues that because the fire water system is "process equipment" covered by the mechanical integrity regulation, Phillips 66 did not properly inspect the system or comply with RAGAGEP.

The Department cites fire protection expert Sewell for the premise that the National Fire Protection Association's (NFPA) 25 is the "industry standard" for inspection, testing, and maintenance of fire water systems, and that the U.S. Department of Labor generally accepts NFPA 25 as RAGAGEP. Phillips 66 did not comply with NFPA 25 § 9.2.6.1.2, because it did not inspect the interior of the fire water system's storage tank.

Phillips 66's experts refute this premise. PSM expert Steve Arendt, fire water system expert Duane Rehmeyer, expert Clay White, and Refinery Emergency Response Lead William Rinesmith all testified that NFPA is not a RAGAGEP for fire

water systems. Rather, Phillips 66 had its fire water equipment tested by certified American Petroleum Institute (API) inspectors using a different inspection method.<sup>4</sup>

Both parties offered conflicting testimony regarding Phillips 66's fire water system's conformance with RAGAGEP. Although the Board concluded that Phillips 66 complied with the mechanical integrity regulation, it did not identify the proper RAGAGEP or proper conformance with the regulation's additional requirements.

In light of our conclusion that the Board erred in concluding that the mechanical integrity regulation did not apply to the fire water system, we remand to the Board to determine Phillips 66's compliance with the regulation.

#### E. The Process Hazard Analysis Regulation

##### 1. Application

The Department argues that based on the plain language of both the PSM rule and the process hazard analysis regulation, WAC 296-67-017, the process hazard analysis regulation applies to Phillips 66's fire water system. We agree.

The process hazard analysis regulation requires an employer to perform a "process hazard analysis (hazard evaluation) on processes covered by this standard." WAC 296-67-017(1). As previously discussed, the fire water system is included in Phillips 66's PSM-covered processes because it is used for "activit[ies] involving highly hazardous chemical[s]." WAC 296-67-005. The system "control[s] the hazards involved in [the refinery's] process[es]," thus subjecting the system to evaluation under the process hazard analysis regulation. WAC 296-67-017(1), (3)(g).

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<sup>4</sup> The primary difference at issue between NFPA 25 and the API methods are the way in which the thickness (and thereby the integrity) of the fire water systems components are measured. NFPA 25 calls for visual inspection of the fire water system's primary water tank whereas the API method uses sonic testing. NFPA 25 § 9.2.6.1.2.

We conclude that due to the fire water system being a “process” as defined by the PSM rule, as well as its role in controlling hazards at the refinery, the fire water system is subject to the process hazard analysis regulation.

## 2. Compliance

The Department argues that because the fire water system is a “process” per the PSM rule, Phillips 66 did not properly take into consideration the system’s failure in any of Phillips 66’s process hazard analyses (PHAs).

Each party offers conflicting evidence in respect to Phillips 66’s examination of the fire water system in its PHAs. Each of Phillips 66’s 17 PHAs are before us in the record. Each PHA was performed under an assumption that “fire protection and mitigation equipment is installed, adequately sized, functional, and tested on a suitable frequency.” Due to the PHAs containing this assumption, it does not appear that Phillips 66 considered the failure of the fire water system.<sup>5</sup>

Alternatively, Phillips 66 offered testimony that each PHA performed on its refinery processes considered the potential loss of all process controls and safety systems, including the fire water system. It further explained that the PHAs evaluated if and where the fire water system interacted with the “process” and can cause a deviation or release of highly hazardous chemicals. Two of Phillips 66’s experts, Czak and Arendt, testified that the PHA procedures met or exceeded the tasks listed in the process hazard analysis regulation.

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<sup>5</sup> A lone consideration of the fire water system’s failure exists in Phillips 66’s PHA for “FCC Catalyst and Flue Gas Section.” This consideration, however, is merely a statement of the failure without analysis of any consequence.




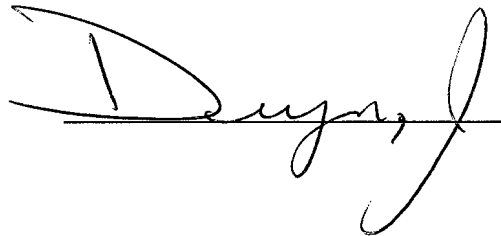
Both parties offered conflicting testimony regarding Phillips 66's examination of the fire water system in its PHAs. Although the Board concluded that Phillips 66 complied with the process hazard analysis regulation, it did not address this conflicting evidence. In light of our conclusion that the process hazard analysis regulation applies, we remand to the Board to determine Phillips 66's compliance.

Reversed and remanded for proceedings consistent with this opinion.

  
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WE CONCUR:

  
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