Appeal No. 19-9533 and 19-9578 (Consolidated)

ORAL ARGUMENT REQUESTED

IN THE UNITED STATES COURT OF
APPEALS FOR THE TENTH CIRCUIT

Eugene Scalia, Secretary of Labor
Petitioner/Cross-Respondent,

v.

Wynnewood Refining Co., LLC, et. al.,

Respondent/Cross-Petitioner,

ON PETITION FOR REVIEW OF FINAL AGENCY ACTION OF
THE U.S. DEPARTMENT OF LABOR – OCCUPATIONAL
SAFETY AND HEALTH REVIEW COMMISSION

OSHRC DOCKET NOS. 13-0644 AND 13-0791

RESPONSE AND REPLY BRIEF FOR WYNNEWOOD REFINING COMPANY, LLC

January 17, 2020

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STATEMENT OF RELATED CASES

Wynnewood Refining Company, LLC ("Wynnewood") filed a Petition for Review of the final order of the Occupational Safety and Health Review Commission ("OSHRC") pursuant to 29 U.S.C. §660(a) (2018) in the United States Court of Appeals for the Fifth Circuit on May 24, 2019. Upon motion of the Secretary of Labor ("Secretary"), the appeal was transferred to the United States Court of Appeals for the Tenth Circuit on September 30, 2019, pursuant to 28 U.S.C. §2112 (2018). *See Wynnewood Ref. Co., v. OSHRC*, 933 F.3d 499 (5th Cir. 2019).

Wynnewood is unaware of any other prior or related appeals of the issues identified below.

GLOSSARY OF TERMS

Alky	Alkylation Unit
APA	Administrative Procedure Act
CVR-Wynnewood	Wynnewood Refining Company, LLC
FCCU	Fluid Catalytic Cracking Unit
GWE-Wynnewood	Wynnewood Refining Company
HHC	Highly Hazardous Chemical under the PSM standard
OSHA	Occupational Safety and Health Administration
OSHRC	Occupational Safety and Health Review Commission
PHA	Process Hazard Analysis
OSH Act	Occupational Safety and Health Act, 29 U.S.C. § 660(a) (2018), *et seq*.
PSM	Process Safety Management of Highly Hazardous Chemicals standard (29 C.F.R. § 1910.119)
RFG	Refinery Fuel Gas
Secretary	The Secretary of Labor
TQ	Threshold Quantity as referenced in the Application criteria of the PSM standard
Wickes boiler	Steam boiler at the Wynnewood refinery involved in the 2012 incident at issue in this case
Wynnewood	Wynnewood Refining Company, LLC

STATEMENT OF THE ISSUES PRESENTED FOR REVIEW

10. Whether there is substantial evidence to support OSHRC's finding that based on the totality of circumstances, Wynnewood Refining Company and Wynnewood Refining Company, LLC are not the "same employer" under the OSH Act for purposes of repeat liability.

STATEMENT OF FACTS

A. CVR's Acquisition of the Wynnewood Refinery

At the time of the 2012 incident at issue in this case, the cited employer, Wynnewood Refining Company, LLC, an indirect subsidiary of CVR Energy, Inc. (CVR), was a Delaware limited liability company that operated an oil refinery in Wynnewood, Oklahoma. Attachment A, ALJ Dec. 3; (C-16 at 2, 11.) (Tr. 1700) (hereafter "CVR-Wynnewood"). CVR became a corporate parent of Wynnewood after a $525 million arm's-length stock transaction involving CVR and Gary-Williams Energy Company (GWE) in December 2011. (Tr. 1700) (Ex. R-128.) Previously, GWE owned the refinery, and it was called Wynnewood Refining Company (hereafter "GWE-Wynnewood"). (Tr. 1700) (Ex. R-128.) Before December 2011, CVR and GWE had no affiliation. (Tr. 1701).

The Secretary presented evidence that "[a]t all times relevant to the [predicate citations], Wynnewood Company was a subsidiary of [GWE]." Brief for the Secretary of Labor 7, Secretary v. Wynnewood Refining Co., LLC, OSHRC Nos. 13-0791 and 13-0644 (June 6, 2016) [hereafter "Sec'y Brief to OSHRC] (citing C-16 at 7, 134; C-63). To establish a Repeat violation against CVR-Wynnewood, the Secretary must prove GWE-Wynnewood and CVR-Wynnewood are the "same employer" under the OSH Act. In attempting to do so, the Secretary presented the following facts about the relationship between GWE-Wynnewood

and CVR-Wynnewood:

> Wynnewood Company and Wynnewood LLC have different legal identities. See 6 Del. C. §18-201(b) ("A limited liability company is formed at the time of the filing of the initial certificate of formation in the office of the Secretary…. A limited liability [company] formed under this chapter shall be a separate legal entity…"); see also id. §18-102 (requiring each limited liability company to include in its name the words "Limited Liability Company" or . . . the designation "LLC," which indicates that Wynnewood Company was not a limited liability); id. §18-101 (definitions showing that corporation can be member of limited liability company); *Elf Atochem North Am., Inc. v. Jaffari*, 727 A.2d 286, 29-96 (Del. Sup. Ct. 1999) (discussing nature of LLCs under Delaware law).

Sec'y Br. to OSHRC at 34.

B. Changes to Safety-Related Working Conditions and Personnel after the CVR Acquisition

The refinery "went through some pretty drastic changes as a result of the purchase by CVR," including to the safety-related personnel, culture, and working conditions. Attachment A, ALJ Dec. at 6; (Tr. 1701-1703, 2133-2134.) One example of the major safety-related changes included directives from CVR corporate representatives to provide the refinery access to substantial previously unavailable capital, leading to improvements in operations and equipment. (Tr. 1706; Ex. C-16). Nine months after the acquisition, the refinery was shut down for forty-five days to ensure proper maintenance and upkeep. (Tr. 1704-1706.) Prior to and during that shutdown, CVR's corporate management directed the investment of roughly $130 million to clean, repair, and upgrade equipment with a

goal of improving safety, and focused on formalizing training, safety policies, and procedures. (Tr. 253-254, 674-676, 749; 1701-1703, 2133-2134.); *see also* Attachment A, ALJ Dec. 6 ("The record establishes that CVR [drove] significant changes to the policies, procedures, and overall culture of the refinery subsequent to the purchase, particularly in the area of employee health and safety.").

As for personnel, there was general overlap across the transition from GWE-Wynnewood to CVR-Wynnewood among employees who push buttons, turn valves, and help execute the refinery's programs and procedures (e.g., operators, maintenance technicians, and trainers), as well as among front-line supervisors who help implement safety programs. Attachment A, ALJ Dec. 43. As the ALJ summarized, "a number of employees and supervisors worked at the Wynnewood refinery prior to and after its purchase by CVR," including:

> (1) Dick Jackson, who served as the refinery's PSM manager starting in 2010; (2) Troy Stephenson, [] a roving shift supervisor in 2006 and was promoted to Zone 2 supervisor in 2012, after the purchase; (3) Mitch Underwood, who served as the Alky Unit supervisor before and after the purchase; and (4) Darin Rains, who served as operations manager prior to and after the purchase….

Attachment A, ALJ Dec. 4 (citing Tr. 571, 618, 1578, 1699–1700). But the ALJ also noted that "[w]ith a few exceptions, such as Rains and Jackson, all of the individuals that testified worked in a particular unit of the refinery," not in senior management roles, and certainly not executive-level, decision-making roles. Attachment A, ALJ Dec. 4.

The most significant post-transaction changes involved safety-related personnel at all levels. (Tr. 1701.) The ALJ found that "[o]nce CVR purchased the refinery, Wynnewood 'substantially increased the number of people working at the facility,' including two new safety technicians and four assistant operations supervisors, whose primary role was to focus on" improvement and formalization of safety programs, procedures, and training. Attachment A, ALJ Dec. 6; (Tr. 253-254, 674-676, 749; 1701-1703, 2133-2134.) Likewise, CVR drove the engagement of as many as 1,500 contractors per shift to assist with the extended shutdown, as well as a third-party contractor to pre-qualify contractors for safety requirements. (Tr. 1704-1706, 2103-2108.) Once the shutdown commenced, CVR directed the organization of safety teams with approximately 20 safety personnel on each shift consisting of CVR-Wynnewood and contractor safety personnel from a consulting company with extensive expertise in turnaround safety.[1] (Tr. 2109-2112, 2116-2117.)

But most importantly, as the ALJ and OSHRC found, the record establishes there were substantial changes among the individuals ultimately responsible for safety-related decisions. Attachment A, ALJ Dec. 6-7; Attachment B, Comm'n Dec. 13-14. Specifically, members of CVR's corporate management, including

[1] Despite the extraordinary investments and efforts to establish a new safety culture, the incident at issue here occurred during this shutdown, even with all the new safety resources.

CVR's VP for Safety, Health, and Environment, Chris Swanberg, and EVP for Operations, Robert Haugen, were effectively seconded to the refinery to overhaul the safety and health program and culture. (Tr. 1703, 2133-2134.) These senior leaders made clear to the refinery supervisors that under CVR's corporate parentage, employee safety must be the highest priority, and CVR would support any efforts to improve safety, whether by capital investment, help with local staffing, or by allocating the time of its corporate safety experts, like Swanberg and Haugen. (Tr. 1701-1703, 2133-2134.) The influence these corporate safety representatives exerted on CVR-Wynnewood was sufficient to transfer ultimate decision-making authority to the corporate representatives from CVR. Attachment A, ALJ Dec. 43 (involvement of Swanberg and Haugen showed that "new corporate manage[rs were] responsible for ultimate decision-making in the areas of operations and safety and health.") And as the ALJ stated, this was a "strong fact." Attachment A, ALJ Dec. 43.

These changes to management of safety and health at CVR-Wynnewood were recognized by the refinery's employees and supervisors. For example, the PSM manager testified that "[t]he new company has raised the level of the safety programs since they've taken over, and their involvement in the safety program included process safety." (Tr. 749, 1612.) Mr. Stephenson testified: "[P]rior to CVR buying us, things were not as formal . . . . We did our best but since CVR has

taken over, we've formalized everything and the expectations are a lot higher in regard to safety, MOCs, procedures. Things are a lot stricter and a lot more disciplined." (Tr. 674–75.) Indeed, nearly all of Wynnewood's current and former employees testified that, upon CVR's acquisition, the new company placed significant emphasis on improving safety and health and proper implementation of PSM. (Tr. 234, 674-75, 749, 1612.)

C. Predicate Citations for the Repeat Characterization

OSHA conducted several inspections at the refinery before the CVR acquisition. In November 2006, OSHA cited GWE-Wynnewood for PSM violations in the Alky (the "2006 Alky Citations"). (Ex. C-27; Tr. 2131-2132.) The 2006 Alky Citations were resolved by settlement in 2007. (Ex. C-28 at 11-12, n 1.) In September 2007, OSHA commenced a PSM National Emphasis Program inspection ("2007 NEP"). (Tr. 2004-2006.)[2] At the conclusion of the NEP inspection, OSHA cited GWE-Wynnewood for several PSM violations in the FCCU. (Ex. C-25.) In 2008, the parties settled the NEP Citations. (Ex. C-26.)

The CVR/GWE transaction was finalized in 2011, and despite extraordinary

[2] This 2007 inspection followed shortly after an incident involving a different boiler at the refinery that resulted in citations related to the process safety of the boiler. (R-45.) Those citations, as discussed in Brief of Respondent Wynnewood Refining Company, LLC at 9-10, Secretary of Labor v. Wynnewood Refining Co., LLC, Nos. 19-9533 & 19-9578 (10th Cir. Nov. 18, 2019) [hereinafter "Wynnewood Brief"], were not cited under the PSM Standard, and so, are not predicate citations for the Repeat citations here.

efforts to overhaul safety at the refinery, only nine months after the acquisition, the incident involving the Wickes boiler occurred. (Tr. 58.) As a result of the inspection of that incident and a related concurrent inspection, in March 2013, OSHA issued to CVR-Wynnewood citations that included five Repeat PSM violations. (Ex. R-1.) The predicate citations for the Repeat characterization are the PSM-related violations from the 2006 Alky Citations and the 2007 PSM NEP inspection, which had been issued and settled with GWE-Wynnewood five and six years before OSHA issued the CVR-Wynnewood citations at issue in this case. (Ex. R-1, C-28 at 11-12, fn.1.)

SUMMARY OF ARGUMENT

The Commission properly affirmed the ALJ's change in characterization of PSM citations issued to CVR-Wynnewood from repeat to serious because, based on the totality of circumstances, there was substantial evidence in the record that CVR-Wynnewood is not the "same employer" as GWE-Wynnewood. OSHA citations are properly classified as "repeat" under the OSH Act if, at the time the repeat violations occurred, there was an OSHRC final order against the "same employer" for a substantially similar violation. After a corporate transition, violations of the prior enterprise may only support a repeat violation against the new one if there is "substantial continuity" between the two across the nature of their business, safety working conditions, and most importantly, personnel who specifically control safety-related decisions.

In this case, following a $525 million arm's-length transaction between previously unaffiliated CVR and GWE, Wynnewood Refining Company emerged under new corporate parentage as Wynnewood Refining Company, LLC, and the record shows that it underwent substantial changes in safety-related personnel, particularly among high-level safety decisionmakers, as well as substantial improvement in safety-related working conditions. The corporate acquisition, therefore, resulted in significant enough changes to break the chain of liability stemming from past citations issued to GWE-Wynnewood years before the CVR

transaction.

OSHRC has established a narrow "substantial continuity" test for successorship applicable to OSHA disputes. OSHRC has only ever found successorship under its substantial continuity test four times, and each time the cited company was a small, closely held business or sole proprietorship that merely changed its name or incorporated anew after receiving OSHA citations, only to emerge with the same individual owner as before. That narrow test makes sense in light of the primary interest OSHRC identified as the purpose for its successorship test—to combat manipulation by employers who would alter their legal identity or corporate status for the specific purpose of evading repeat liability. Further, following the Supreme Court's lead, OSHRC also expressed concern about an expansive successorship jurisprudence that could discourage mobility of capital and efficient functioning of business acquisition markets.

OSHRC's substantial continuity test, therefore, requires much more than simply cross-checking organizational charts of the old and new enterprises for a common mid-level manager. The Commission looks for overlap more akin to an alter ego, and especially for evidence of a sham transition that leaves the same principal in charge of the successor entity. There is simply no evidence in the record in this case of any sham conduct with respect to CVR's acquisition of the Wynnewood refinery, or anything close to the commonality in ownership interest

that would support a finding that CVR-Wynnewood and GWE-Wynnewood are the same employer. To the contrary, the evidence demonstrates that the transition to CVR-Wynnewood was the result of a massive corporate transaction between two unrelated entities for entirely legitimate business reasons. That is why the ALJ and the Commission found no rationale for imposing the OSHA violation history of GWE-Wynnewood on CVR-Wynnewood. That factual determination of the Commission should be affirmed.

With respect to PSM applicability to the Wickes boiler, contrary to the Secretary's arguments, the plain meaning of the PSM standard supports Wynnewood's position that the Wickes boiler is not part of a covered process. OSHRC's analysis of the coverage issue was woefully inadequate, ignoring context that is essential to interpret the intended plain meaning of the PSM standard's text. The correct reading of the definition of "process" cannot be gleaned by only a reference to a general-purpose dictionary; the thorough review demanded by the Supreme Court requires a court to consider all of the traditional tools of construction. In this case, vital context to understand the plain meaning of the text is the standard's Application clause, its Purpose clause, the structure of the standard, and the rule's history found in the Preamble that OSHA published contemporaneously with the standard.

Although the Secretary argues for multiple theories to establish PSM

coverage, those theories would require this Court to adopt readings of the terms "process," "interconnected," and "could be involved," that the plain meaning of the PSM standard cannot bear. The correct, intended plain meaning of the PSM standard requires the conclusion that the Wickes boiler is not part of a PSM-covered process.

ARGUMENT FOR NO. 19-9533

I. Standard of Review

The Secretary's argument regarding the Standard of Review on the successorship determination is misleading. He argues this Court should conduct *de novo* review, Sec'y Br. 56-57, but the determination whether the citations issued to CVR-Wynnewood may be characterized as Repeat based on past citations issued to GWE-Wynnewood is primarily a question of fact. *See Fall River Dyeing & Finishing Corp. v. NLRB*, 482 U.S. 27, 43 (1987) (determining successor liability is "primarily factual in nature and is based upon the totality of circumstances in a given situation"); *see also Coastal Derby Refining Co. v. NLRB*, 915 F.2d 1448, 1452 (10th Cir. 1990) (the test for "substantial continuity" between enterprises is primarily a question of fact). The Parties do not dispute that OSHRC used the correct legal test for successorship. The only issue in dispute is the Commission's application of the facts to that legal test.

This Court's review of a final OSHRC decision is governed by 29 U.S.C. § 660(a), which "mandates that the 'findings of the Commission with respect to questions of fact, if supported by substantial evidence on the record considered as a whole, *shall be conclusive*.'" *Slingluff v. OSHRC*, 425 F.3d 861, 866 (10th Cir. 2005) (quoting *Interstate Erectors v. OSHRC*, 74 F.3d 223, 226 (10th Cir. 1996)) (quoting § 660(a)) (emphasis added)). "Substantial evidence is such relevant

evidence as a reasonable mind might accept as adequate to support a conclusion, and it must be enough to justify, if the trial were to a jury, a refusal to direct a verdict when the conclusion sought to be drawn from it is one of fact for the jury." *Id.* (quoting *Kent Nowlin Constr. Co. v. OSHRC*, 648 F.2d 1278, 1279 (10th Cir. 1981)).

II. CVR-Wynnewood is Not the "Same Employer" as GWE-Wynnewood Based on the Totality of Circumstances

OSHRC properly affirmed the ALJ's modification of the characterization of PSM citations from repeat to serious because there is substantial evidence in the record that CVR-Wynnewood is not the "same employer" as GWE-Wynnewood. Section 17(a) of the OSH Act imposes increased penalties on employers found to have repeated an OSHA violation:

> Any employer who . . . repeatedly violates the requirements of . . . this Act, any standard, rule, or order promulgated pursuant to . . . this Act, or regulations prescribed pursuant to this Act, may be assessed a civil penalty of not more than [10x the penalty for serious violations] for each violation . . . .

29 U.S.C §666(a). According to OSHRC, "[a] violation is properly classified [as repeat] if, at the time of the alleged repeat violation, there was a Commission final order against the *same employer* for a substantially similar violation." *Hackensack Steel Corp.*, 20 BNA OSHC 1387, 1392 (No. 97-0755, 2003) (citing *Jersey Steel Erectors*, 16 BNA OSHC 1162, 1167-68 (No. 90-1307, 1993), *aff'd without published opinion*, *Jersey Steel Erectors v. Secretary of Labor*, 19 F.3d 643 (3d

Cir. 1994) (emphasis added).

Following the CVR/GWE transaction in 2011, the refinery became Wynnewood Refining Company, LLC, and fell under new management influence. *See* Attachment B, Comm'n Dec. 13-14; (Tr. 1700-03.) The record shows that it underwent substantial changes in safety-related personnel, particularly among decisionmakers, and substantial improvement in safety-related working conditions, following a massive influx in new capital and the involvement by senior leaders from the acquiring CVR. *Id.*

The Secretary argues that despite the metamorphosis after the CVR acquisition, the two enterprises exhibit "substantial continuity" such that they are liable for "Repeat" violations under the OSH Act to obtain enhanced penalties.[3] Sec'y Br. 62-72. In so arguing, the Secretary asks the Court to reevaluate the factual findings made by the ALJ after hearing witnesses and reviewing evidence, which factual findings were affirmed by OSHRC. The Secretary urges the Court to ignore the full transformation of the refinery under CVR's corporate control and instead cherry-pick a subset of the Secretary's preferred factors. This substitution

[3] Because the predicate citations issued more than five years before OSHA the Repeat citations to CVR-Wynnewood, OSHA violated its "lookback" policy (i.e., how far back in time OSHA may look for prior violations to serve as the basis for a repeat citation). *See* OSHA Field Operations Manual, https://www.osha.gov/sites/default /files/enforcement/directives/CPL_02-00-163.pdf, at 4-26 (a three-year lookback was amended to five years in 2008). For the sake of equity, OSHA should be required to adhere to its publicly-stated lookback policy.

is unwarranted.

Specifically, the Secretary asserts that OSHRC misapplied its "substantial continuity" test in two ways. First, the Secretary states that OSHRC erred by basing its decision primarily upon one factor in the substantial continuity test—continuity of personnel responsible for safety decisions. Sec'y Br. 57-58. Second, the Secretary states that in finding a lack of continuity in personnel, the Commission erroneously relied on "irrelevant factors," *id.* at 58, but then acknowledges paradoxically that substantial continuity is "based on [considering] the totality of circumstances in each case," which the ALJ and OSHRC did. *Id*.

A. There Was Insufficient Continuity of Safety-Related Personnel and Working Conditions After the CVR Acquisition

The current citations are not appropriate to be characterized as repeat because "the undisputed record evidence establishes that the operations at the refinery have changed significantly since the purchase such that Wynnewood is an entirely different entity. . . [and the] Commission has never imposed successor liability on an employer under these circumstances." Attachment A, ALJ Dec. 38-40. To establish "the circumstances under which a predecessor's citation history may be attributed to a cited successor employer," the Commission in *Sharon & Walter Construction, Inc.*, 23 BNA OSHC 1286 (No. 00-1402, 2011), set forth a three-factor test to identify "whether there is 'substantial continuity' between the two enterprises," which included: (1) the nature of the business; (2) the jobs and

working conditions, because these have a "close correlation with particular safety and health hazards"; and (3) "continuity of the personnel who specifically control decisions related to safety and health," because "the decisions of such personnel relate directly to the extent to which the employer complies with the [OSH Act's] requirements." *Id*. at 1294-95. Under the substantial continuity test, the analysis is not just about overlapping employees of any type or about all types of working conditions, but rather, a close look at those employees and those working conditions related to the "particular legal obligation which is at issue," and in the context of the OSH Act, those would be safety and health related personnel and safety-related working conditions. *See id*. at 1295 (*citing Howard Johnson Co., Inc. v. Detroit Local Joint Executive Board*, 417 U.S. 249, 263, n.9 (1974) (noting successorship cases require analysis of "the facts of each case and the particular legal obligation which is at issue").

Applying that substantial continuity test to the present circumstances, both the ALJ and Commission found that "the issue here comes down to the third category," whether there is substantial continuity of the personnel who specifically control safety and health decisions that affect the refinery. Attachment B, Comm'n Dec. 13. Indeed, the ALJ and the Commission both acknowledged that this third factor, safety decisionmakers, is the most important factor in every such case, "stating that the same 'control over decision-making in both companies ... weighs

heavily in favor of attributing ... [the prior employer's] citation history to [the cited employer].'" *See id*. at 13 (quoting *Sharon & Walter*, 23 BNA OSHC at 1295-96).

The record shows that the executives who controlled the decisions about safety staffing, capital investment on safety improvements, and safety polices changed after the CVR acquisition, principally because CVR's VP of Safety, Health, and Environment and its EVP for Operations, who maintained a regular presence at the refinery, exercised extreme influence over safety. Attachment A, ALJ Dec. 6-7, 43; (Tr. 674-75, 749, 1612, 1701-06, 2133-34.) These new safety decisionmakers focused on improving safety and proper implementation of PSM at the refinery. (Tr. 234, 674-75, 749, 1612.) As both the ALJ and Commission noted, the CVR safety executives decided to double the number of refinery safety personnel (including four new assistant operations supervisors responsible for occupational safety compliance), decided to invest $130 million in upgrades, decided to establish more formalized safety training programs, and decided to renew focus on PSM. Attachment B, Comm'n Dec. 14. These leadership changes resulted in a widely-recognized safety culture shift. Attachment A, ALJ Dec. 6. An operations manager testified that "[t]he refinery went through some pretty drastic changes as a result of the purchase by CVR . . . ." Attachment B, Comm'n Dec. at 14. A safety specialist described how CVR's VP for Safety, Health, and Environment told managers "very clearly and very emphatically that, under his

watch . . . safety was the highest priority at the refinery," and that this resulted in specific safety-related improvements. Attachment B, Comm'n Dec. 14.

The Secretary has argued here that the key to substantial continuity is overlapping, low-level supervisors who worked in process units at the refinery or executed specific programs before and after the CVR acquisition, and that it is inappropriate to consider at all the changes in management at the corporate parent, because the new parent company is a distinct corporate entity from the refinery LLC that was cited. Sec'y Br. 67-68. But as the Commission found:

> The record . . . shows that safety *policy* at the refinery was not controlled by [these overlapping low-level supervisors], either before or after the purchase. Regardless of whether as a matter of corporate law the managers … had the right to refuse instructions . . . , the record shows [they] merely implemented the safety policies set by the previous parent company and then by CVR. Consequently, after the refinery was purchased, the safety policies *at the refinery* changed significantly as a direct result of the different attitude toward safety CVR [] brought to bear. . . . In short, a rote application of the "continuity of personnel" prong that considers only the management personnel working for each Wynnewood entity paints an inaccurate picture of how safety policy was set and how safety decisions were made at the refinery. As such, . . . we conclude that [the] changeover in ownership resulted in changes in management practices, procedures, and culture significant enough to break the chain of liability stemming from [GWE-Wynnewood's] previous actions.

Attachment B, Comm'n Dec. 14 n. 13.

The Secretary failed to meet his burden of establishing substantial continuity under the *Sharon & Walter* test. This case is a far cry from the situation in *Sharon & Walter*, as it does not involve a mere formal change to the legal identity of the

company, but rather a change in ownership, management and operations as a result of an arms-length transaction. Accordingly, the Commission properly concluded under a totality of the circumstances that CVR-Wynnewood is not the "same employer" as GWE-Wynnewood for purposes of assigning a repeat characterization to the citations in this case.

B. OSH Act Successorship Doctrine Focuses on Manipulation by an Employer to Evade Repeat Liability

In the *Sharon & Walter* case, OSHRC upheld repeat citations against an employer based on prior violations of a legally distinct corporate predecessor for the first time. The circumstances of that case reveal how narrow OSHRC's successorship test is. There, OSHA issued repeat citations to Sharon & Walter Construction, Inc. ("S&W II") based on prior citations it had issued to Walter Jensen d/b/a S&W Construction ("S&W I"). *See Sharon & Walter*, 23 BNA OSHC at 1288. S&W I filed for bankruptcy and ceased operations shortly before the formation of S&W II, and Walter Jensen was the sole proprietor of S&W I, as well as the president, director, and solitary shareholder of the newly incorporate S&W II. *See id*. Both companies were based in New Hampshire, and both "provided essentially the same construction services . . . ." *Id.* at 1295. The Commission determined that the same individual was "in charge of both companies," so the *only* change was the company's incorporation. *Id*.

OSHRC was "careful to note that successor liability for repeat violations

should only be applied in 'appropriate circumstances' and proceeded to do so based on a unique set of facts" in *Sharon & Walter*. Attachment A, ALJ Dec. 43 (citing *Sharon & Walter*, 23 BNA OSHC at 1294). The "primary concern" OSHRC expressed in *Sharon & Walter* was purposeful "manipulation" by an employer to avoid repeat liability by merely "changing its legal identity for each new project" or "going out of business and . . . reincorporating under a different name."[4] *Sharon & Walter*, 23 BNA OSHC at 1293. When viewed through that lens, the scope of "appropriate circumstances" that OSHRC intended to cover is clear: "repeat violations based on successor liability would be appropriate when the cited employer 'altered its legal identity from that of the predecessor employer . . . .'" *Id.*

The concern about willful evasion of liability similarly pervades successorship doctrine throughout federal law. "Under federal law, the extent of a successor's liability depends on whether there has been a continuity of ownership as well as a continuity of enterprise." Phillip I. Blumberg, *et al., 3 Blumberg on*

[4] That makes sense given that:

> the threat of a repeat characterization [and its much higher penalties] is designed as a deterrent to future bad behavior[. So,] the Commission held that "section 17(a) is most reasonably read to permit, in appropriate circumstances, the Secretary's application of a 'repeat' characterization to cases where the employer has altered its legal identity from that of the predecessor employer whose citation history forms the basis of that characterization."

Attachment A, Wynnewood Br.39 (quoting *Sharon & Walter*, 23 BNA OSHC at 1293.)

Corporate Groups 2d. ed. § 103.13[A], § 103-69 (Wolters Kluwer 2020). Early in the development of the federal labor law successorship doctrine, courts inquired "whether there was a true change of ownership . . . or merely a disguised continuance of the old employer." *Id.* (quoting and citing *Southport Petroleum Co. v. NLRB*, 315 U.S. 100, 106 (1942); *NLRB v. Herman Bros. Pet Supply Inc.*, 325 F.2d 68, 69 (6th Cir. 1963)). Even "[w]here courts are proceeding under classic . . . [veil] piercing . . . they also require some additional element of 'moral culpability' or 'conduct akin to fraud.'" *Id.*

There is no evidence in the record of any "sham" conduct with respect to CVR's acquisition. To the contrary, the evidence demonstrates that the transition from GWE-Wynnewood to CVR-Wynnewood was the result of an arm's-length $525 million corporate transaction between unrelated entities for entirely legitimate business reasons. *See, e.g.*, Ex. R-128. That is why the Commission found "no rationale here for imposing the OSHA violation history of [GWE-Wynnewood] upon [CVR-Wynnewood], a separate legal entity not created to avoid responsibilities under the Act." Attachment B, Comm'n Dec. 15 n.14 (citing *Sharon & Walter*, 23 BNA OSHC at 1293). This factual determination of the Commission should be affirmed for that reason alone.

C. Under an "Alter Ego" Test, CVR-Wynnewood Also Cannot be Found to be the "Same Employer" as GWE-Wynnewood

The Commission correctly determined there was insufficient continuity in

safety decisionmakers under the "substantial continuity" test, but the Commission expressed skepticism that "substantial continuity" is even the appropriate test to determine whether a violation should be characterized as repeat. *Id.* at 15-16 n. 14. Rather, OSHRC suggested a more appropriate test for OSHA cases may be narrower "alter ego" test (i.e., "the cited employer has [to be found to have merely] altered its legal identity from that of the predecessor employer whose citation history forms the basis [for the repeat] characterization."). *Id.* at 15 n. 14. This distinction may be more one of form than substance, but regardless, successor liability would be even less appropriate here under a true alter ego test.

Whatever label OSHRC applies to its test, since the 2010 *Sharon & Walter* decision, OSHRC has only invoked successor liability pursuant to *Sharon & Walter* three times, and each time in circumstances involving a true alter ego. The first case involved a company supervised, owned and operated by literally the same individual who previously owned Sharon & Walter Construction (both I and II), this time having renamed his virtually identical construction company to Summer & Winter Construction. *See Summer & Winter Constr., LLC,* 23 BNA OSHC 1755 (Nos. 09-1796 & 09-1797, 2011). Because the owner—the same owner as in the *Sharon & Walter* case—had been responsible for the prior related OSHA violations, the ALJ found no reason to break the chain of responsibility based on the prior conduct of S&W I and II. *Id.* at 1764-65. The two other cases similarly

involved the same factual scenarios as *Sharon & Walter*—the mere incorporation of the predecessor (or even just a name change) by the same individuals who owned and operated the predecessors. *See Domino Window Cleaning, Inc.*, 24 BNA OSHC 1393, 1404 (No. 11-0753, 2012); *Kirtley Roofing & Sheet Metal, LLC,* 25 BNA OSHC 2250, 2261 (No. 15-0613, 2015).

Accordingly, in practice, OSHRC's existing successorship test, whatever it may be labeled, means more than just a few overlapping low-level supervisors. The test requires extreme continuation of individual interests across the two enterprises; effectively a true alter ego test. The record establishes that CVR-Wynnewood arose out of an arm's length corporate transaction by unrelated entities, ending with a refinery directed by an entirely new corporate parent; nothing close to the facts necessary to establish substantial continuity or alter ego.

D. Successorship Doctrine Should Not Discourage Mobility of Capital

Finally, the Supreme Court has also "imposed limits on the application of successorship liability in order to encourage the mobility of capital and the efficient functioning of the business acquisition market." Blumberg at 103-84 (*citing NLRB v. Burns Int'l Sec. Servs.*, 406 U.S. 272 (1972) and *Howard Johnson Co., Inc. v. Detroit Local Joint Executive Board*, 417 U.S. 249 (1974) (cited by the Secretary)). In *Burns*, the Court declined to hold a new employer and union bound to the substantive terms of an old collective-bargaining contract because a

"potential employer may be willing to take over a moribund business only if he can make changes in the corporate structure, composition of the labor force, work location, task assignment, and nature of supervision." 406 at 287-88. In *Howard Johnson*, the Court similarly found that "holding a new employer bound by the substantive terms of the pre-existing collective-bargaining agreement might inhibit the free transfer of capital, and that new employers must be free to make substantial changes in the operation of the enterprise." 417 U.S. at 255. OSHRC has echoed these concerns:

> [T]he "general rule that a purchasing entity does not have successor liability applies, such that a corporation that purchases another corporation 'is not responsible for the seller's debts or liabilities, except where (1) the purchaser expressly or impliedly agrees to assume the obligations; (2) the purchaser is merely a continuation of the selling corporation; or (3) the transaction is entered into to escape liability.'" *Id.* at 1378 (MacDougall, Comm'r, concurring and dissenting) (*quoting Golden State Bottling Co. v. NLRB*, 414 U.S. 168, 182 n.5 (1973)).

Attachment B, Comm'n Dec. 15.

These inherent limitations on successor liability apply with equal force to GWE-Wynnewood, which was acquired with its prior OSHA citation history, but without any evidence that the possibility of repeat liability was contemplated as part of the price of the acquisition. To find CVR-Wynnewood to be "the same employer" as GWE-Wynnewood under the OSH Act would run contrary to the U.S. economic interest in encouraging transactions like CVR's acquisition, which

resulted in attendant changes in corporate group management and extraordinary new capital investment that enhanced health and safety at the Wynnewood refinery.

ARGUMENT FOR NO. 19-9578

I. Plain Meaning is Not Limited to a Pure Textual Reading

OSHRC couched its interpretation of the terms "process," "interconnected," and "could be involved" as "plain meaning" determinations. *See* Attachment B, Comm'n Dec. 6-12. OSHRC explained that it looked only at the text of a single provision of the standard—the definition of "process"—and at definitions of certain words in a general-purpose dictionary, *see* Attachment B, Comm'n Dec. 6-9, but explicitly declined to consider the standard's "Purpose" clause, and mentioned no other materials or considerations it relied upon in its analysis. OSHRC's apparent view of what should be considered in determining a text's plain meaning is overly restrictive.

In contrast to OSHRC's view, it is well-settled that Courts should consider a range of information in determining plain meaning. While some extra-textual material is surely too far afield, even the late Justice Antonin Scalia, the most ardent strict textualist, endorsed what he called the "Ordinary-Meaning Canon," and explained that "[m]any words have more than one ordinary meaning. The fact is that the more common the term (e.g., *run*), the more meanings it will bear . . .

Yet context disambiguates." *See* A. Scalia & B. Garner, Reading Law 70 (2012). The existence of multiple possible meanings of a text leads to the concept of "permissible meanings," a collection of all possible meanings the text can bear. *See id.* at 31. Once the universe of permissible meanings is identified, a decisionmaker must use the tools available to determine which of the permissible meanings best represents the text's intended plain meaning. *See id.* at 33; *see also Kisor v. Wilkie*, 139 S. Ct. 2400, 2419 (2019) ("a court must apply all traditional methods of interpretation to any rule, and must enforce the plain meaning those methods uncover."). The Supreme Court in *Kisor* emphasizes some of the tools that are appropriate to consider, including the "text, structure, history, and purpose of a regulation. . . ." *See Kisor,* 139 S. Ct. at 2415.

Importantly, "plain meaning" does not mean the simplest possible meaning is always the right one, particularly in cases such as this, involving highly specialized, technical areas of law and industry. "Every field of serious endeavor develops its own nomenclature—sometimes referred to as *terms of art*. Where the text is addressing a scientific or technical subject, a specialized meaning is to be expected . . . ." *See* Scalia, Reading Law, at 73. Thus, in circumstances involving a technical field, it is often necessary for decisionmakers to look to extra-textual sources. *See id*.

Although OSHRC refused to consider the useful context OSHA provided in

its Preamble, it is well-settled that courts should consider a regulation's preamble in determining the intended plain meaning of a regulation that bears multiple permissible meanings. *See Wiggins Bros., Inc. v. Dep't of Energy*, 667 F.2d 77, 88 (Temp. Emergency Ct. App. 1981); *see also Halo v. Yale Health Plan*, 819 F.3d 42, 52-53 (2nd Cir. 2016). In explaining the "Prefatory-Materials Canon," even Justice Scalia notes that a "preamble, purpose clause, or recital is a permissible indicator of meaning." *See* Scalia, Reading Law, at 217. OSHRC's statement that preambles and purpose clauses cannot *override* a text's plain meaning is true but misleading in this instance. When faced with the assertion that a text's preamble "cannot be invoked when the text is clear," Justice Scalia explained that such a prohibition is only reasonable "if it means that the prologue cannot give words and phrases of the dispositive text itself *a meaning that they cannot bear*." *See id.* at 218 (emphasis added). In short, if a text bears multiple permissible meanings, a preamble is an appropriate "indicator of meaning."[5]

Accordingly, this Court's analysis of the plain meaning of the PSM standard

[5] Particularly in this case, fundamental fairness requires consideration of the Preamble. OSHA responded to rulemaking comments about the proposed definition of "process" by adding the interconnection/co-location sentence after the comment period closed (right before the agency could face legal challenges about the rule), so OSHA provided a meaningful explanation of the new sentence in the Preamble. *See* Process Safety Management of Highly Hazardous Chemicals; Explosives and Blasting Agents, 57 Fed. Reg. 6356, 6372 (Feb. 24, 1992) ("Preamble"). Ignoring it now would allow OSHA to have introduced a new scope provision at the last minute, persuading the regulated community the new scope was limited with the Preamble (perhaps avoiding legal challenge as a result) before decades later abandoning its contemporaneous explanation without consequence.

should not be based on the incredibly limited context that OSHRC's was. In this case, determining the plain meaning of the standard requires the use of all the traditional tools of construction, including the standard's Preamble and OSHA's other contemporaneous interpretations, as appropriate.

II. The Commission Erred in Finding that the Wickes Boiler is Part of a PSM-Covered Process

A. By the Standard's Plain Meaning, Establishing PSM Coverage of Interconnected Vessels Requires Proof that a HHC "could be involved" in a Potential Release because of the Interconnection

The Secretary asserts that CVR-Wynnewood "fails even to attempt to show how the definition's language can be reasonably construed to require a showing that an interconnected vessel . . . could be involved in a potential release of HHCs." Sec'y Br. 35. Though this is of course untrue, we include here a more explicit explanation why the correct plain meaning of the definition of "process" requires proof that interconnected vessels could be involved in a potential release of HHCs.

First, we reiterate how interconnection fits into the structure of the standard's "Application" criteria. The interconnection concept matters here because the Wickes boiler, considered on its own, does not meet the application criteria.[6] *See* 29 C.F.R. §1910.119(a). Accordingly, OSHA can only cite the PSM

[6] The Wickes boiler does not itself contain any HHCs, much less a TQ. Thus, as a stand-alone "process," the boiler is indisputably not PSM-covered.

standard if the boiler is part of some other "process" by way of the interconnection/co-location criteria in the second sentence of the definition of "process." The language at issue is here:

> For purposes of this definition, any group of vessels which are interconnected and separate vessels which are located such that a [HHC] could be involved in a potential release shall be considered a single process.

29 C.F.R. §1910.119(b).

In its analysis, OSHRC began correctly by identifying a two-part parallel structure in the definition of "process" that is set up by the repetition of the word "which." Attachment B, Comm'n Dec. 6. However, OSHRC quickly erred by concluding there is but one plain meaning of the sentence, declaring that because the phrase "which are located" cannot stand alone, the "such that" clause modifies only "which are located," and not also "which are interconnected." *Id*. at 6-7. OSHRC offered no other justification, and in its brief, the Secretary offers no additional argument related to the intended plain meaning of this text.

As noted *infra* at 26-28, determining a text's plain meaning begins with evaluating whether there are multiple permissible meanings the text can bear. *See* Scalia, Reading Law, at 31-33. OSHRC identified one possible meaning, but it is not the only one. The interconnection sentence includes, in relevant part, a compound subject and a simple predicate. With that construction, the predicate serves equally the two parts of the compound subject. OSHRC identified the

compound subject's parallel structure, then read the subordinate "such that" clause to modify only the second half of the subject, as depicted in the simplified diagram in Figure 1:

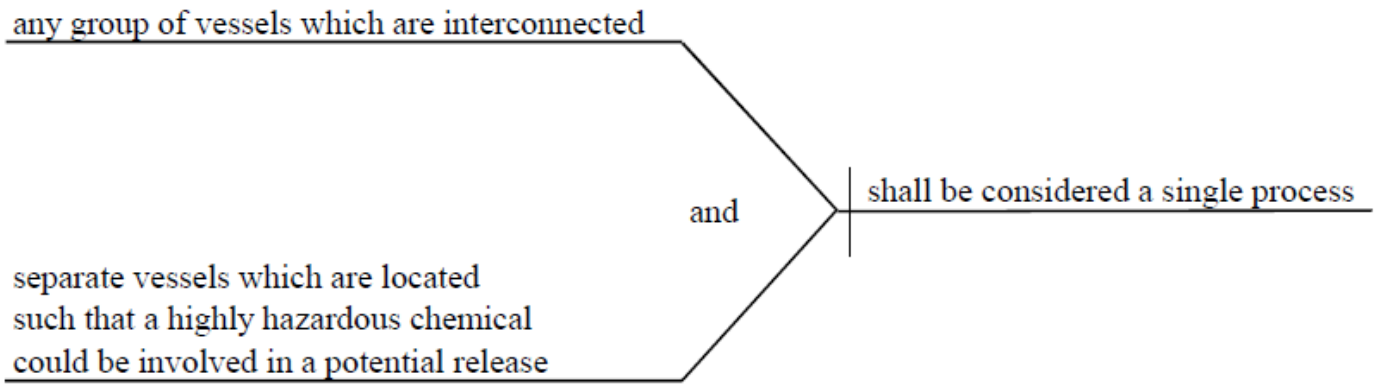

Figure 1 - OSHRC's Interpretation

However, the sentence may just as easily be read as noted in the simplified diagram in Figure 2, with the subordinate "such that" clause modifying both halves of the compound subject:

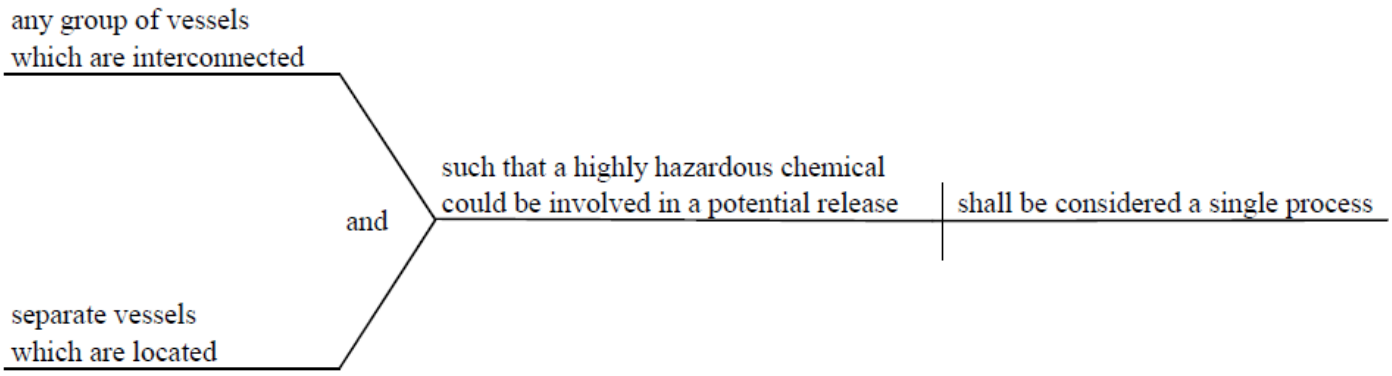

Figure 2 - Wynnewood's Interpretation

OSHRC rejected that reading in only three sentences, never even addressing whether it is even a permissible meaning. Attachment B, Comm'n Dec. 6-7. But

that reading (Figure 2) is not only a permissible meaning of the text, it is: (1) the default meaning of the text; and (2) the meaning most technically consistent with the express Purpose of the standard.

The "Series-Qualifier Canon" states that "[w]hen there is a straightforward, parallel construction that involves all nouns or verbs in a series, a prepositive or postpositive modifier normally applies to the entire series." *See* Scalia, Reading Law, at 147. In the interconnection/co-location sentence, there is a straightforward, parallel construction in the compound subject (i.e., "any group of vessels which are located and separate vessels which are located"), and the "such that" clause is a postpositive modifier. As Justice Scalia explains, absent some contradictory context, the default reading for a sentence with this structure is to apply the modifier to both parts of the compound subject. *See id*. Therefore, unless there is a clear reason to do otherwise, this Court should default to reading the "such that" subordinate clause to modify both the interconnection and co-location terms. This would result in a plain meaning that interconnected vessels are not part of a process unless they are interconnected "such that a [HHC] could be involved in a potential release."

If it is not yet clear that this is the better of the two permissible meanings, the Court should consider additional context, which is found in the standard's prefatory materials, including this plain statement in the Preamble:

> The boundaries of a 'process' would extend to quantities . . . located such that … ***an event such as an explosion would affect interconnected and nearby unconnected vessels*** … ***and provide a potential for a catastrophic release***.

57 Fed. Reg. at 6372 (emphasis added). This context leaves no doubt how the Court should interpret the text.[7]

Because the Secretary believes it is not necessary, he presented no arguments to demonstrate how the boiler could be involved in a potential release of HHCs in a common event with another vessel by virtue of their indirect connection to each other.[8] S*ee generally* Sec'y Br. Based on the total absence of such proof, OSHRC's decision on interconnection can be overturned with no further analysis.

B. The Wickes Boiler Was Not PSM-Covered by Interconnection or Co-Location Because it Did Not Contain HHCs

In arguing that vessels need not contain HHCs to be covered by the PSM standard, the Secretary repeatedly takes portions of the definition of "process" out of context and ignores the standard's application criteria. Sec'y Br. 36-40, 46-47.

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[7] The Secretary invokes the Akzo-Nobel Letter in vain. Sec'y Br. 45. Where a standard's application relies on the existence of a hazard (as it does here), it *is* the Secretary's burden to prove the hazard exists. *Pratt & Whitney Aircraft, Div. of United Techs. Corp. v. Donovan*, 715 F.2d 57, 63-64 (2nd Cir. 1983). The Akzo-Nobel letter cannot shift the Secretary's burden to prove that interconnected vessels could be involved in a potential release. To the extent there is any presumption to be rebutted, Wynnewood did so with its 2012 Facility Siting Study and 2008 PHA. *See infra* 51-52.

[8] As discussed in Wynnewood's Br. 34-35 and in this brief *supra* at 47-52, the Secretary attempts, unsuccessfully, to establish a potential impact the boiler could have on the FCCU by virtue of co-location, but nowhere does he assert such potential exists based on interconnection of the boiler to any vessel in the FCCU.

Having previously addressed the proper interpretation on this issue (*see* Wynnewood Br. 24-26), we address here only those arguments from the Secretary that mislead or mischaracterize the relevant portions of the standard.

To properly interpret the relevant terms, it is important to consider the structure of the application criteria. 29 C.F.R. §1910.119(a). Of the four criteria, only two are pertinent to this case: (1) a "process"; (2) which involves a TQ of a HHC. Stating the obvious, each of these two criteria is equally necessary for PSM coverage.[9]

For that reason, the Secretary's coverage argument requires a leap in logical that a TQ of HHCs present in just one vessel can be used to satisfy the application criteria for *any* other interconnected/co-located vessel, even if it contains no HHCs—like a water tower or a steam boiler. Sec'y Br. 39. To try to support this leap, the Secretary argues that the standard "does not state or imply that all interconnected vessels must contain HHCs to be considered part of a covered process." *See id*. We concede the standard's text does not contain that explicit statement, but the purpose and structure of the standard imply it, and the history of the standard demands it.

The parties advance two different interpretations of the text of the standard,

[9] The co-equal importance of these application criteria is particularly relevant here, where it is undisputed that the Wickes boiler did not itself contain any HHCs. (Tr. 1526.)

neither of which can be said on its face to be impermissible. Given this, it is incumbent on this Court to dig deeper into the legal toolkit to determine the text's plain meaning. *See Kisor*, 139 S. Ct. at 2415. Doing so requires consideration of the purpose and the Preamble (i.e., the history). Since the application criteria require the existence of both a process and a TQ of a HHC, any suggestion that the presence of HHCs is an afterthought when evaluating coverage is intellectually dishonest, not to mention in conflict with every indicator we have of the standard's meaning.

And the best indicator of the meaning of the interconnection/co-location sentence is OSHA's own explanation in the Preamble for why it added the sentence:

> [The] new sentence has been added to clarify the fact that *interconnected and nearby vessels containing a highly hazardous chemical would be considered part of a single process* and the quantities of the chemical would be aggregated to determine if the threshold quantity of the chemical is exceeded.

57 Fed. Reg. 6372 (emphasis added). No amount of protestation by the Secretary can discount the clarity of this statement—interconnected or co-located vessels are only part of a PSM-covered process if they contain HHCs.

The Secretary advances several other absurd arguments related to his contention that the Wickes boiler can be a covered process even if it contains no HHCs. First, he puts the cart before the horse by arguing that the duties and

responsibilities imposed by various sub-elements of the PSM standard somehow demonstrate that a piece of non-HHC containing equipment should be treated as a covered process. Sec'y Br. 38-40. In this way, OSHA conflates the purpose/application elements of 29 C.F.R. §1910.119 with the duties an employer must undertake *after* coverage has been established. This is erroneous on its face.

The substantive requirements of the standard apply only after an employer determines it has a covered process. For example, 29 C.F.R. § 1910.119(e)(1) states: "The employer shall perform an initial [PHA] on processes covered by this standard." This provision, by its terms, is irrelevant until a covered process has been identified. The fact that a good PHA considers the impacts of a loss of steam (among many other scenarios) on the process, has no bearing on the PSM coverage determination of the steam equipment. Just as considering the effect of an operator's failure to follow a procedure (Human Factors) does not make the operator "a part of the process," or considering the effect on the process of the soil on which it was built or a tornado in the area (Facility Siting) does not make the earth and wind "part of the process." The same is true for the other responsibilities the Secretary references, all of which are triggered only after PSM coverage is established.

In another perplexing argument, the Secretary points to the "hydrocarbon fuels exception" to argue the Wickes boiler is covered, Sec'y Br. 39, but that

argument is meritless. This exception excludes from PSM coverage "hydrocarbon fuels used solely for workplace consumption as fuel, if such fuels are not a part of a process containing another [HHC] covered by this standard." 29 C.F.R. §1910.119(a)(1)(ii)(A). OSHA argues without justification or support that this exception "plainly implies" a vessel can "be part of a process even when it does not contain the HHCs triggering coverage of the process" Sec'y Br. 39, but that is nonsensical. The hydrocarbon fuels exception could not plainly imply that a vessel without HHCs could be covered, since the exception itself can only be invoked for a vessel that contains an HHC (hydrocarbon fuel), and loses its application, by its terms, if it is connected to another process that also contains HHCs. 29 C.F.R. §1910.119(a)(1)(ii)(A). Likewise, it is undisputed that the Wickes boiler does not contain any HHCs, so this example is entirely irrelevant.

Finally, the Secretary misleads the Court by asserting there is a parenthetical in OSHA's Preamble that specifically includes boilers as a type of covered equipment. Sec'y Br. 40. In explaining the hydrocarbon fuels exception (and how the exception can be lost), the Preamble states: "OSHA . . . has changed the final provision to clarify its intent not to exclude from coverage hydrocarbon fuels used for process related applications such as furnaces, heat exchangers and the like at facilities covered by this rule." 57 Fed. Reg. at 6357. Steam boilers are not listed there, and anyone familiar with a refinery's operations knows a utility steam boiler

is nothing like a furnace or heat exchanger.[10] Although OSHA does not clarify this point, the furnaces and heat exchangers it references in the Preamble are PSM-covered *because they contain HHCs in addition to* the hydrocarbon it uses as fuel. For example, HHCs used in a covered-process pass through tubes contained inside furnaces, where the furnaces heat the process chemicals using hydrocarbon fuel in its firebox; i.e., furnaces use hydrocarbons to heat other HHCs in a covered process. Conversely, the Wickes boiler contains only water and steam, not HHCs, so it uses hydrocarbons in its firebox to heat only water. (Tr. 1203-04, 1526, 2057-58.)

For all of these reasons, and those presented in Wynnewood's Opening Brief, the Wickes boiler cannot be part of a PSM-covered process because it does not contain any HHCs.

C. The Wickes Boiler Was Not Interconnected with a PSM-Covered Vessel

Even if this Court accepts an interpretation of "process" that does not require a causal nexus between interconnected vessels and/or the presence of HHCs, it still should reverse OSHRC's decision because the nature of the indirect links between the Wickes boiler and the refinery's operating units establishes that the boiler was not "interconnected" at all. The boiler does not directly connect to any covered

[10] In any event, there is nothing in the record that would substantiate that comparison.

process. The boiler's firebox receives fuel through a series of pipes coming from a fuel drum, which itself receives fuel from pipes leading to the RFG system. (Tr. 1602-1603, 1707, 1710-1711.) The steam produced by the boiler moves through another series of pipes, entering the plant's general steam header, from where steam is then supplied to the units via more pipes connected to the steam header. (Tr. 2057–58; Ex. C-8 to C-13).

OSHRC considered only a handful of facts to support its finding that these indirect links are enough for interconnection, each related to the boiler's use of fuel from the RFG system and the use of steam from the boiler throughout the refinery. Attachment B, Comm'n Dec. 8, 10. Similarly, the Secretary argues that interconnection is established because the boiler is "involved in" processing HHCs in the Alky and FCCU via those same indirect links. Sec'y Br. at 28-29. However, the plain meaning of the term "interconnection" undermines OSHRC's conclusion and the Secretary's arguments.

OSHRC's attempt to determine the plain meaning of "interconnected" led again to a general-purpose dictionary, and this effort was again fraught with error. First, OSHRC inferred from the dictionary definitions that "interconnect" contemplates indirect connections among a group of things, whereas "connect" requires a direct link. Attachment B, Comm'n Dec. 9. But OSHRC's inference is a clear misreading of the definitions; indeed, it reverses their meanings. Using

either OSHRC's referenced dictionary or the more authoritative Oxford English Dictionary,[11] the definition of interconnect does not bear the meaning OSHRC ascribes. OSHRC's dictionary defines "interconnect" as "to connect mutually or with one another," WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE, UNABRIDGED 1177 (3d ed. 1986), and the Oxford English Dictionary defines it as "to connect each with the other; to connect by reciprocal links." *Interconnect Definition*, OXFORD ENGLISH DICTIONARY, *available at https://www.oed.com/*. Neither definition supports OSHRC's conclusion that "interconnect" allows for an indirect link between two objects. Rather, both definitions contemplate a direct link with the additional requirement of some interplay between the objects, suggested by the words "connect mutually" and "connect by reciprocal links."

Accordingly, this Court should reverse OSHRC's finding on interconnection because OSHRC's interpretation ascribes to the text a meaning that it cannot bear, and such an interpretation cannot be a valid "plain meaning" interpretation of the term "interconnected." *See* Scalia, Reading Law, at 69-77.

Even if this Court found OSHRC's interpretation to be *a* permissible

[11] Justice Scalia maintained a list of the most authoritative dictionaries at any given time in history. We reference the Oxford English Dictionary because it is accurate in the present and shows historical development of word-senses. *See* Scalia, Reading Law, at 419. Interestingly, Scalia urges caution when using the specific dictionary OSHRC cited "because of its frequent inclusion of doubtful, slipshod meanings without adequate usage notes." *Id*. at 422.

meaning, it is but one of two permissible meanings. As outlined above, the word "interconnect" can easily support an interpretation that requires a closer, direct connection of two objects to each other. Because there are multiple permissible meanings, this Court must next evaluate the structure, history, and purpose of the standard. *See Kisor* at 14. As discussed more fully in Wynnewood Br. 18-26 and *infra* at 26-29, considering the PSM standard's stated purpose—to prevent catastrophic releases of HHCs—and the clear guidance OSHA provided in the Preamble, the plain meaning of "interconnected" becomes clear. It requires proof of a connection so direct that the vessels could be involved in a common event involving the release of HHCs because of their interconnection. 57 Fed. Reg. at 6372. The record includes no evidence to establish this, and the Court should rule that the Wickes boiler is not PSM-covered by way of interconnection.

D. OSHRC Adopted the Wrong Reading of the "Could Be Involved" Text in the Definition of "Process"

Based on the terms of the PSM standard, whether the Wickes boiler is part of a PSM-covered process by way of "co-location" depends on whether the boiler and vessels in the FCCU are located in such close proximity to each other that each vessel "could be involved" in a common potential release.[12] 29 C.F.R.

[12] The same analysis applies to the interconnection element, although the Commission has not, to this point, reached any conclusion about the Wickes boiler's potential impact on any interconnected because of its interconnection.

§1910.119(b). For any vessel to be covered by the PSM standard because of its co-location with another, there must be more than a *mere possibility* it could be involved in a potential release because of its location.

OSHRC's decision implies that the plain meaning of the regulation requires PSM-coverage based on *any* possibility, no matter how remote or unforeseeable, but it offered only conclusory reasoning in support. Attachment B, Comm'n Dec. 10-11. A rigorous analysis, using the traditional tools of construction and considering the scope of OSHA's authority to regulate, demonstrates the error of that interpretation.

The plain meaning of "could be involved" turns primarily on the meaning of the word "could." Dictionaries provide a range of definitions, including to express objective possibility when "can" or "could" is used as an auxiliary verb. *Can Definition*, OXFORD ENGLISH DICTIONARY, 18, *available at https://www.oed.com/.* Because neither OSHRC nor OSHA offered an actual definition or limitation, they would have this Court define the word as requiring evidence of any degree of possibility. But such an interpretation is unacceptable for two reasons.

First, using dictionary definitions for the term "could" does not reveal a single permissible meaning. There is nothing in the text that prohibits this Court from interpreting "could" to mean "a slight possibility," "a strong possibility," or "a reasonable probability." It would be an error to conclude a plain reading of the

text cannot encompass these equally viable meanings, so there is still interpretative work to be done.

As before, when there is more than one permissible meaning, the Court must consider additional context, and the Preamble provides clear guidance on the meaning of this specific text: "The boundaries of a 'process' . . . would include separate vessels located such that there is a ***reasonable probability*** that an event such as an explosion would affect interconnected and nearby unconnected vessels . . . and provide a potential for a catastrophic release." 57 Fed. Reg. at 6372 (emphasis added).

The second reason OSHRC's interpretation is unacceptable relates to the fundamental limitation on OSHA's authority to regulate. In a landmark case, the Supreme Court addressed the limits of OSHA's regulatory authority, finding that the OSH Act requires the agency to establish that there is a "significant risk" of harm to employees before it may issue a standard to address that risk. *Indus. Union Dep't, AFL-CIO v. API*, 448 U.S. 607, 643 (1980). This decision resulted from a challenge to OSHA's benzene standard, and the Supreme Court invalidated that standard because OSHA had not sufficiently established that employee exposures to benzene at certain levels presented a significant enough risk of harm. *See id*. at 653. Although the context here is different (interpreting an existing standard vs. promulgating a new one), the benzene case clarified that a "mere

possibility that some employee somewhere in the country may confront some risk of cancer" is not a sufficient basis for OSHA to issue a standard. *Id.* at 652. If such a standard may not be promulgated, it follows that OSHA may not interpret an existing standard to achieve the same end—addressing the "mere possibility" of harm. *See Pratt & Whitney Aircraft v. Sec'y of Labor*, 649 F.2d 96, 103 (2nd Cir. 1981). OSHRC's preferred interpretation of "could be involved" violates this principle.

The PSM standard itself is only a proper exercise of OSHA's rulemaking authority because the agency established during the rulemaking that the catastrophic release of large quantities of HHCs posed a significant risk of harm. 57 Fed. Reg. at 6359. During the rulemaking, OSHA commissioned a study of safety and health issues in the petrochemical industry, considered more than 200 comments, and held hearings resulting in approximately 4,000 pages of testimony. *See id*. at 6358. It then published the PSM standard and its Preamble outlining the significant risk to employees that OSHA used as the basis for the standard. OSHA's assessment of the significant risk to employees led directly to the "application" criteria in the standard, with OSHA explaining in the Preamble that it had "carefully evaluated participants' comments and information concerning the appropriate scope and application of the standard in order to assure that the standard is clearly and properly focused to achieve its goal of eliminating the

occurrence of releases or mitigating the consequences of releases that occur."[13] *Id*. at 6363.

OSHA continued to link the significant risk of a catastrophic release to the standard's application criteria when it responded in the Preamble to comments suggesting that the risk would not be as great when HHCs are dispersed throughout several areas. 57 Fed. Reg. at 6364. The Preamble provides:

> OSHA continues to believe that the potential hazard of a catastrophic release exists when [HHCs are] concentrated in a process . . . . OSHA has clarified the language contained in the application paragraph to reflect its intent that coverage is triggered by a specified threshold quantity of an appendix A substance being used in a single process.

Id. at 6364. OSHA went on to also link the significant risk of harm to the definition of "process," when it explained that the "term 'process' when used in conjunction with the application statement of the standard establishes the intent of the standard," which is to cover processes that present the significant risk of a catastrophic release of HHCs. *Id.* at 6372, 6364. Interpreting the PSM standard to cover co-located vessels (or interconnected vessels) upon proof of a *mere possibility* they could be involved in a common release with other vessels is impermissible given the limits on OSHA's authority to regulate only significant

[13] The Secretary repeatedly objects to the consideration of the standard's Preamble here, but the Supreme Court cited the Preamble multiple times in the benzene case. *See generally*, *Indus. Union Dep't, AFL-CIO v. API*, 888 U.S. 607 (1980) (citing Preamble about 11 times in body of Opinion). This Court should do the same as it evaluates the proper scope of the PSM standard in light of OSHA's own findings with regard to significant risk of harm.

risks and OSHA's expression of when that risk exists.

Shortly after the Supreme Court decided the *Indus. Union Dep't, AFL-CIO v. API* case, the Second Circuit also addressed an OSHA citation involving an OSHA standard similar to PSM. In *Pratt & Whitney Aircraft v. Sec'y of Labor*, OSHA alleged a violation of a standard that prohibits use of common exhaust systems where combining vented chemicals "may constitute a fire, explosion, or chemical reaction hazard." 649 F.2d at 102*; see also* 29 C.F.R. §1910.94(d)(7)(ii). OSHA argued and OSHRC affirmed that the use of "may" meant OSHA had to prove only the mere possibility that a hazardous combination of chemicals could occur. *Id.* at 103. The Second Circuit disagreed, holding that in light of the Supreme Court's benzene ruling and the use of the word "may," the cited standard can be read to prohibit common exhaust systems only where there was a "significant risk" that a hazardous combination of chemicals could form. *See id*. at 104. In so holding, the Second Circuit recognized that an OSHA standard cannot be read to establish a violation on proof of only a mere possibility of a hazard.

The same logic must apply here. OSHRC and OSHA urge an impermissible interpretation of the phrase "could be involved" to avoid the requirement to prove the existence of a significant risk of the harm, but this Court is bound to require proof beyond a mere possibility of a hazard before applying the PSM standard to allegedly co-located vessels.

E. The Record Does Not Include Substantial Evidence to Support a Determination that the Wickes Boiler Could be Involved in a Release of HHCs with Another Vessel

OSHRC's determination that the Wickes boiler was located such that an HHC could be involved in a potential release is not supported by substantial evidence, regardless how this Court interprets the "could be involved" language. The Secretary advances two arguments why there is substantial evidence to support OSHRC's decision: (1) the September 2012 explosion purportedly demonstrates that the boiler could affect a covered process; and (2) the Secretary's expert opined that a hypothesized boiler explosion (rather than a gas-flooded firebox explosion) could have affected a covered process. Sec'y Br. 29-31, 51-53.

With respect to the 2012 firebox explosion, the facts the Secretary references do not demonstrate that the Wickes boiler was located "such that a [HHC] could be involved in a potential release." The Secretary argues that the boiler "was centrally located in the FCCU" and points to a ladder that flew approximately forty feet from the boiler and landed near a building as a result of the explosion. Sec'y Br. 30. But the Secretary does not propose any connection between these two assertions and how the FCCU could have been affected at all, much less in a manner that could have caused a catastrophic release of HHCs. Sec'y Br. 30. The Secretary does argue that the "firebox explosion that did occur in January (*sic*) 2012 was of sufficient force to demonstrate that an HHC could be involved in a

potential release," Sec'y Br. 30-31, but that unsupported, conclusory statement similarly draws no link to a covered process, and thus, cannot be the substantial evidence required to support OSHRC's decision.

In contrast to the Secretary's lack of supporting evidence, there is ample evidence that the September 2012 firebox explosion could not have affected the FCCU. First, the firebox explosion in fact resulted in no damage to equipment in the FCCU. (Tr. 1726.) Indeed, OSHA's own compliance officer testified that the explosion did not cause damage to any equipment more than 10-15 ft. from the boiler, and when he was asked to provide specific distances between the boiler and the FCCU, he guessed they were 100-200 ft. apart. (Tr. 1214, 1219, 1227.) The Secretary's own witness established that the 2012 firebox explosion did not come even close to affecting the covered process located nearest the boiler.

The Secretary then repeatedly points to testimony from CVR-Wynnewood's expert, Mr. Arendt, that he was surprised the boiler's own fuel lines did not catch fire during the firebox explosion, and the Secretary bizarrely argues this is evidence the boiler could affect a covered process. Sec'y Br. at 14, 30-31. But this is actually evidence of a consequence that did *not* occur (the fuel lines did not catch fire), and it is a consequence that would be irrelevant to co-location because the lines Mr. Arendt referenced were the fuel lines supplying the boiler itself, not lines associated with any nearby covered process. (Tr. 2072-73.) This also could

not be substantial evidence to support OSHRC's decision.

With respect to the Secretary's reliance on the testimony of his own expert, Mr. Johnstone, that reliance is also misplaced because his opinions on this point are not supported by any facts. Mr. Johnstone testified that a *boiler* explosion (as opposed to a *firebox* explosion) was capable of producing a much worse outcome, but he provided no justification to support this opinion. He simply stated:

- In 1905, a steam boiler explosion occurred at the Grover Shoe Factory in Brockton that "leveled a city block." (Tr. 831-32.)
- "[I]f [the Wickes boiler] would have been under pressure, not only would you have had the firebox explode, as we saw, with shrapnel and walkways and all sorts of stuff flying all over the place, but you would've had a steam boiler explosion. Okay? Because those tubes would have been breached during that. And so if those tubes were breached -- and again, being out there, we saw that some of the tubes were indeed broken -- you would've had a horrendous explosion." (Tr. 832.)
- "[T]here is a case where you could've had a flammable mixture throughout all portions of that unit, and it would've been a much worse case scenario." (Tr. 833.)

Despite his colorful testimony, Mr. Johnstone's "explanation" of how a steam boiler explosion could have been caused and why it would be a "horrendous explosion" is confusing, is completely devoid of any technical justification, and raises many more questions than it answers. For example, in the 1905 explosion was the shoe factory's boiler in any way similar (type, size, location, function) to the Wickes boiler? (Tr. 831-32.) How could a boiler simultaneously be under

pressure and making steam (which requires consumption of the fuel when it reaches the firebox) and have its firebox explode (which requires unignited gas flooding the space and contacting an ignition source)? (Tr. 832.) Why would an event involving breached tubes in the boiler have been a larger event instead of just a steam leak? (Tr. 832-33.) And how would a flammable mixture have developed "throughout all portions of that unit" when the boiler itself contains no HHCs at all? (Tr. 833.)

In addition to offering purely conclusory opinions about some hypothesized boiler explosion, Mr. Johnstone did not even have the information one would need to determine whether any explosion could have affected the covered process closest to the boiler, the FCCU. Mr. Johnstone admitted he lacked the following information, all of which would be essential for one to be able to support the opinions he offered:

- He had no knowledge of any blast pressure for the Wickes boiler. (Tr. 966-67.)
- He did not see any vessels other than the boiler during his visit to the refinery. (Tr. 924.)
- He had no knowledge of the distance between the Wickes boiler and the vessels in the FCCU or Alky. (Tr. 917-18, 922-23, 964.)
- He made no measurements as to how far the Wickes boiler was from vessels containing HHCs, and he did not know which vessels contained any flammable materials. (Tr. 917-18.)

- He never even determined what HHC-containing vessel was closest to the Wickes boiler. (Tr. 966).

Without these and other key facts, Mr. Johnstone could not have reached any legitimate conclusions about how some imagined other explosion scenario could have involved a release of HHCs from the FCCU. This Court should see Mr. Johnstone's opinion for what it is, unsupported conjecture. *See J.C. Penney Co. v. NLRB*, 123 F.3d 988, 996 (7th Cir. 1997) (refusing to "defer to something that is not based on facts—logical facts—in the record…. [T]he reasons [must] build an accurate and logical bridge between the evidence and the result.").

The weakness of the Secretary's expert testimony is further revealed when contrasted with a properly rigorous technical analysis like those that the refinery had conducted to determine the potential effects of incidents involving various equipment at the refinery. For example, earlier in 2012, Wynnewood completed a Facility Siting Study to evaluate the extent to which fires and explosions in its facility could affect other equipment or present danger to employees. (Ex. C-21.) Even a cursory review of this study reveals its superior intellectual rigor, which is required for such an analysis to have any value. That study did not find a potential impact of the Wickes boiler on the FCCU. (Tr. 970, 1611.) Similarly, the refinery's PSM manager testified that in a 2008 PHA conducted for the Wickes boiler (Ex. R-94), the impact of the boiler exploding was assessed and the furthest potential hazardous effect identified was on the operator shelter that did not house

any operational controls or HHCs.[14] (Tr. 364, 1609-1611; see also Ex. R-94.)

Because substantial evidence does not exist in the record to support OSHRC's determination that the boiler was located such that it could be involved in a potential release of HHCs from a nearby covered vessel, this Court should rule that the PSM standard does not apply to the Wickes boiler.

III. The Secretary's Objections to Wynnewood's Arguments about Fair Notice and the Improper Establishment of a New Standard Lack Merit

Wynnewood demonstrated that it lacked fair notice that its utility steam boilers were PSM-covered because: (1) the Secretary's prior guidance contradict his current interpretation; and (2) OSHA previously cited alleged process safety related violations involving a virtually identical boiler at this same refinery under the General Duty Clause (the enforcement tool OSHA uses when there is no applicable specific standard). Wynnewood Br. 40-45.

The Secretary not only rejects that the agency's past PSM interpretations deprive the refinery of fair notice that its steam boilers are PSM-covered, he actually denies that OSHA's past interpretations are inconsistent at all with the Secretary's arguments in this case. *See, e.g.*, Sec'y Br. 42. But they could not be more contradictory:

[14] We do not have to guess whose analysis was better reasoned. The 2012 explosion, which represented the scenario with the most possible fuel present in the firebox, resulted in impacts precisely of the scale identified by the refinery's worst-case assessments, even without the benefit of 20/20 hindsight, like Mr. Johnstone had.

OSHA's PSM Preamble	The Secretary's Positions in this Case
"The boundaries of a 'process' would extend to quantities . . . located such that … ***an event such as an explosion would affect interconnected and nearby unconnected vessels*** … ***and provide a potential for a catastrophic release***." 57 Fed. Reg. at 6372 (emphasis added)	"None of this language suggests that the definition requires a showing that an interconnected vessel is capable of causing a release to be considered part of a covered process." Sec'y Br. at 42
"[L]ocated such that there is a ***reasonable probability*** that an event such as an explosion *would affect interconnected and nearby unconnected vessels . . . and provide a potential for a catastrophic release*." *Id.* (emphasis added)	"The Secretary … did not have to prove … 'the potential for a *catastrophic* release was *probable.' ...* Instead, [his] burden was to show that 'a [HHC] *could* be involved in a *potential* release.'" Sec'y Br. to OSHRC at 14 n.6 (Secretary's emphasis)
"[A] new sentence has been added to clarify the fact that *interconnected and nearby* ***vessels containing a [HHC]*** *would be considered part of a single process and* ***the quantities of the chemical*** *would be aggregated*…." *Id.* (emphasis added)	"The fact that the boiler itself does not contain HHCs is not determinative [of whether it can be] be considered part of a covered process." Sec'y Br. at 39

The Secretary is asking this Court, like in Orwell's dystopian novel 1984, "to reject the evidence of your eyes and ears." George Orwell, 1984, 90, (2020) eBooks@Adelaide, available at https://www.openrightslibrary.com /nineteen-eighty-four-1984-ebook/.

The Secretary also denies that having cited process safety related issues involving a virtually identical utility steam boiler at the same refinery under the General Duty Clause only a few years earlier "does not introduce any ambiguity" about PSM applicability "or deprive [Wynnewood] of fair notice" that OSHA

would one day consider the same type of boiler at the same refinery to be covered by the PSM Standard. Sec'y Br. 55. The Secretary's two explanations do not pass the smell test. First, he tries to persuade this Court that it did not know in 2007 whether that the boiler that fed the same plant steam header was interconnected to another process, which is preposterous considering the expansive definition of interconnection the Secretary is advancing here. Sec'y Br. 55. Second, the Secretary contends that OSHA's agreement in a settlement to withdraw the General Duty Clause citation undermines the clear message OSHA had delivered that boilers are outside the scope of PSM. *See id*. That argument is frivolous. If OSHA had attempted to amend the General Duty Clause citation to allege a PSM violation, that may have been enough to undo the clear notice it had conveyed that boilers are not PSM-covered, but that did not happen.

Wynnewood also demonstrated that the Secretary's new interpretation expanding the definition of "process," memorialized in the PSM citations issued in this case, is tantamount to a new standard promulgated without notice-and-comment rulemaking. *Id.* at 45-48. The Secretary's responses to these arguments are irrational, at best. The Secretary responds in a footnote, without any authority, that issuance of citations that reflect a new regulatory interpretation (undoubtedly an official agency action) cannot equate to the type of official agency action that may be treated as a *de facto* new rule under the DC Circuit's *Ag Retailers*

jurisprudence. Sec'y Br. 55 n. 17. Ironically, in the *Ag Retailers* case, the Secretary raised the same objection—"the Memorandum did not issue or modify a standard. In the agency's view, the Memorandum only interpreted an existing standard, and it therefore was [not] subject . . . to the procedural requirements set out in the OSH Act . . . ." *Agric. Retailers Ass'n v. U.S. Dep't of Labor & OSHA,* 837 F.3d 60, 64 (D.C. Cir. 2016). But it matters not in what type of document OSHA's effort to expand PSM coverage comes. What matters is the result the new interpretation has on regulatory requirements and the regulated community, as the DC Circuit explained:

> Of course, the Memorandum itself does not require new preventative measures of its own accord; it does so in conjunction with the PSM Standard. But we do not look at the Memorandum in strict isolation. We consider the Memorandum's 'practical effect,' not 'its formal characteristics." Id. at 209. And the essential effect and object of the Memorandum is to expand the substantive reach of the PSM Standard by narrowing an exemption from that standard.

Id. at 63-65 (quoting *Chamber of Commerce of the United States v. United States DOL*, 174 F.3d 206, 209 (D.C. Cir. 1999)). The DC Circuit rejected the Secretary's defenses in *Ag Retailers*, just as this Court should reject the Secretary's assertions here.

CONCLUSION

For the reasons set forth above, the Court should reverse the Commission's finding that the PSM standard applied to the Wickes boiler and vacate the PSM

citations accordingly. If any citation remains, the Court should affirm the Commission's determination that the repeat characterization should be amended to serious.

January 17, 2020

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CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(g)(1), the undersigned hereby certifies:

1. This brief complies with the type-volume limitation of Fed. R. App. P. 32(a) because, excluding the parts of the document exempted by Fed. R. App. P. 32(f) and 10th Cir. R. 32(B), this document contains 12,989 words.

2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and 10th Cir. R. 32(B) and the type-style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word 2016 in 14-point font size and Times New Roman font.

Dated: January 17, 2020

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CERTIFICATE OF SERVICE

I certify that on January 17, 2020, I electronically filed the foregoing Reply and Response Brief of Wynnewood Refining Company, LLC using the Court's CM/ECF system and thereby caused it to be served by electronic transmission to counsel of record that are registered to use the court's CM/ECF system.

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CERTIFICATE OF DIGITAL SUBMISSION

With respect to the foregoing brief, I hereby certify that:

1. All required privacy redactions have been made per 10th CIR. R. 25.5;

2. If required to file additional hard copies, that the ECF submission is an exact copy of those documents; and

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Dated: January 17, 2020

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ATTACHMENT A

Secretary of Labor V. Wynnewood Refining, Co., LLC, OSHRC Docket Nos. 13-0644 and 13-0791

Administrative Law Judge's Decision

UNITED STATES OF AMERICA
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

SECRETARY OF LABOR, Complainant, v. WYNNEWOOD REFINING CO., LLC and its successors, Respondent.	DOCKET NOS. 13-0644 13-0791

Appearances:

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For Respondent

Before: Administrative Law Judge Brian A. Duncan

DECISION AND ORDER

I. Procedural History

This matter is before the United States Occupational Safety and Health Review Commission ("Commission") pursuant to Section 10(c) of the Occupational Safety and Health Act of 1970, 29 U.S.C. § 651 *et seq*. ("the Act"). On September 28, 2012, a boiler exploded during a turnaround at the Wynnewood Refinery in Wynnewood, Oklahoma, killing two employees. In response, the Occupational Safety and Health Administration ("OSHA") initiated an inspection of the Wynnewood Refinery on September 29, 2012. (Tr. 1379; Ex. R-1). On

October 29, 2012, Complainant initiated a second, simultaneous inspection of the worksite in response to complaints about the conditions in the refinery warehouse. (Tr. 1381; Ex. R-19). As a result of the inspections, OSHA issued two separate *Citations and Notifications of Penalty* ("Citations") to Respondent. (Ex. R-1, R-2). The Citation for Inspection No. 663538 alleges one other-than-serious, eleven serious, and five repeat violations of the Act, with a total proposed penalty of $234,500.00. The Citation for Inspection No. 778042 alleges one repeat, one other-than-serious, and eleven serious violations of the Act, with a total proposed penalty of $46,600.00.[1] Both Citations were issued on March 27, 2013. (Ex. R-1, R-2). Respondent timely contested the Citations. A trial was conducted in Oklahoma City, Oklahoma beginning on September 16–23, 2014 and concluding February 10–12, 2015. The parties each submitted post-trial briefs for consideration.

Twenty-one witnesses testified at trial: (1) John Koesler, operator for Respondent; (2) Greg Kellerhall, operator for Respondent; (3) Jeff Sutton, console technician ("CT") for Respondent; (4) James Willson, former CT for Respondent; (5) Wesley Walker, CT for Respondent; (6) Justin Sutton, operator for Respondent; (7) Kyle McCurtain, shift supervisor for Respondent; (8) Mitch Underwood, unit supervisor for Respondent; (9) Troy Stephenson, unit supervisor for Respondent; (10) Paul Howard, DCS technician for Respondent; (11) James Johnstone, Complainant's expert; (12) Casey Perkins, Assistant Director for OSHA's Austin, Texas Area Office; (13) Richard Hartung, Compliance Safety and Health Officer ("CSHO"); (14) David Armstrong, warehouse technician for Respondent; (15) Marcus Rambo, CSHO; (16) Dick Jackson, Process Safety Management ("PSM") Manager for Respondent; (17) Darin Rains, current VP/GM of Respondent's Coffeyville refinery and former operations manager at

1. Inspection No. 663538 was assigned Docket No. 13-0791. Inspection No. 778042 was assigned Docket No. 13-0644. For ease of reference, however, the Court shall refer to the inspections as the PSM Inspection and the Warehouse Inspection, respectively.

Wynnewood; (18) Janet Barker, current Voluntary Protection Plan coordinator and former Assistant Area Director for Complainant; (19) James Stanley, Respondent's expert; (20) Steve Arendt, Respondent's expert; and (21) David Johnson, former safety specialist for Respondent.

II. Jurisdiction

The parties stipulated that the Commission has jurisdiction over this proceeding pursuant to Section 10(c) of the Act. (Tr. 51). The parties also stipulated that, at all times relevant to this proceeding, Respondent was an employer engaged in a business and industry affecting interstate commerce within the meaning of Sections 3(3) and 3(5) of the Act, 29 U.S.C. § 652(5). (Tr. 51). *See Slingluff v. OSHRC*, 425 F.3d 861 (10th Cir. 2005).

III. Factual Background

This section constitutes an overview of the operations of the Wynnewood refinery; its history of ownership; the events that occurred on September 28, 2012; and the subsequent inspections. To the extent that certain findings of fact are not included in this Section III, any additional factual findings necessary to find (or not find) that a violation has been established will be found in Section IV.C.

A. The Wynnewood Refinery

The Wynnewood refinery is a 70,000 barrel-per-day (bpd) crude oil refinery, which produces gasoline, propane, propylene, butane, fuel oils, and solvents. (Tr. 802–803; Ex. C-5, C-16). The refinery is broken into separate zones, each of which performs a different function in the refining process. The citation items in Docket No. 13-0791 (Inspection No. 663538) focus on Zone 2. Zone 2 contains the Alkylation Unit, the Fluid Catalytic Cracking Unit (FCCU), and the Wickes boiler, which caused the explosion and prompted the inspections leading to this litigation. (Tr. 92–93). The citation items in Docket No. 13-0644 (Inspection No. 778042) focus

on alleged violations in the warehouse, as well as general safety items identified throughout the refinery.

The refinery is owned and operated by Wynnewood Refining Co., LLC, which, at the time of the 2012 explosion, was a subsidiary of CVR Energy, Inc. (CVR). (Tr. 1700). CVR acquired Wynnewood from a subsidiary of The Gary-Williams Energy Company, Inc. (GWE) in a stock purchase in December 2011. (Tr. 1700). According to the evidence, there was no prior connection or affiliation between CVR and GWE. (Tr. 1701). They are completely separate, unrelated companies.

B. History of Wynnewood's Ownership

i. Gary-Williams Energy

During Complainant's presentation of the evidence, the Court heard from a number of employees and supervisors that worked at the Wynnewood refinery prior to and after its purchase by CVR. The more notable examples include: (1) Dick Jackson, who served as the refinery's PSM manager starting in 2010; (2) Troy Stephenson, who became a roving shift supervisor in 2006 and was promoted to Zone 2 supervisor in 2012, after the purchase;[2] (3) Mitch Underwood, who served as the Alky Unit supervisor before and after the purchase, and (4) Darin Rains, who served as operations manager prior to and after the purchase, and is now the Vice President and General Manager of the Coffeyville refinery, which is also owned by CVR. (Tr. 571, 618, 1578, 1699–1700). With a few exceptions, such as Rains and Jackson, all of the individuals that testified worked in a particular unit of the refinery.

During GWE's tenure as the owner of Wynnewood, the refinery was inspected and cited for violations of the Process Safety Management (PSM) standard, which, as is relevant to this

2. Paul Howard was his predecessor. (Tr. 684). According to Stephenson, Howard continued to serve in an advisory capacity once Stephenson took over. (Tr. 672).

case, form the basis of the repeat violations alleged by Complainant. Those violations, as well as prior boiler explosions, including incidents involving the specific boiler at issue in this case, will be discussed in further detail in the succeeding sections of this Decision. *See* Section III.C, *infra*.

In 2006, there was a fire in the refinery's alkylation unit (Alky Unit), which prompted an inspection and the issuance of citations by Complainant. (Ex. C-27). In that case, Respondent conceded that the equipment involved in the Alky Unit fire "involve[d] the use of HHCs [highly hazardous chemicals] and/or flammables in amounts that [met] the threshold quantity for PSM coverage . . . ." *Resp't Br.* at 5. The parties executed a partial settlement agreement, which became a final order of the Commission around April of 2007.[3] (Tr. C-28 at 11–12 n.1).

Around the same time that the partial settlement agreement became a final order of the Commission, Respondent's employees were attempting to manually light the H-4 boiler, which is located in the refinery's boiler house. (Ex. R-46 at 1–2). During the lighting process, there was an explosion in the H-4 boiler, which injured two employees. (*Id.*). The explosion prompted another OSHA inspection, which resulted in the issuance of two citation items, each alleging violations of the general duty clause. (Ex. R-45). Respondent points out that, notwithstanding the similarity between the explosion in April 2007 and the explosion of the boiler in this case, Complainant did not issue citations pursuant to the PSM standard in 2007. The matter was settled when Complainant agreed to withdraw one of the citation items. (Ex. R-47).

Shortly after the H-4 boiler explosion, Complainant initiated an inspection pursuant to the National Emphasis Program on PSM. (Tr. 2004–2006). The focus of this particular inspection was the Fluid Catalytic Cracking Unit ("FCCU"), which introduces catalysts into crude oil to

3. The remaining citation, which addressed a flare line running from the Alky Unit, was affirmed by Administrative Law Judge Covette Rooney as a final order of the Commission on September 8, 2008. (Ex. C-28).

"strip" the product and create high octane fuels.[4] (Tr. 256–57). The inspection lasted until March 24, 2008, at which time Complainant issued multiple citation items, alleging violations of the PSM standard. (Ex. C-25). The parties executed a settlement agreement on September 15, 2008, which became a final order of the Commission on November 10, 2008. (Ex. C-26). Respondent points out that, notwithstanding the H-4 boiler explosion just months before, there was no apparent attempt to inspect the boilers pursuant to the PSM standard. (Tr. 2010–2012)

ii. CVR Energy (Respondent)

As noted above, CVR purchased Wynnewood from GWE in December of 2011. According to Darin Rains, this was done via stock purchase. (Tr. 1700). In contrast with the relatively scant evidence regarding GWE's involvement at Wynnewood, Rains testified that the refinery "went through some pretty drastic changes as a result of the purchase by CVR Energy." (Tr. 1701).

Some examples of the changes noted by Rains include access to previously unavailable capital, an increase in the number of safety and supervisory operations personnel, and the regular presence of CVR corporate management. (Tr. 1701–1703). The increase in capital led to improvements in equipment—CVR spent roughly $130 million on improvements to the refinery in the Fall 2012 Turnaround. (Tr. 1706; Ex. C-16). Rains noted, though, that the most significant changes were in the personnel arena. (Tr. 1701). Once CVR purchased the refinery, Wynnewood "substantially increased the number of people working at the facility", including two new safety technicians and four assistant operations supervisors, whose primary role was to focus on procedure development, training, management of change (MOC) compliance, and other issues touching on PSM and occupational safety. (Tr. 1702). In addition to changes at the

4. As will be discussed later in this Decision, the Wickes boiler, which is the subject of many of the citations at issue in this case, was a part of, or at least directly adjacent to, the FCCU. (Ex. C-7, C-11).

ground level, Rains also testified that members of CVR's corporate management, including the executive vice president for operations, Robert Haugen, and the vice president for safety, health, and environment, Chris Swanberg, made regular visits to the refinery. (Tr. 1703). There is no evidence to suggest that similarly situated GWE corporate managers were so involved.

This perception of wholesale change to the organization and management of Wynnewood was shared by a number of Respondent's employees and managers. For example, Stephenson noted, "[P]rior to CVR buying us, things were not as formal . . . . We did our best but since CVR has taken over, we've formalized everything and the expectations are a lot higher in regards to safety, MOCs, procedures. Things are a lot more strict and a lot more disciplined." (Tr. 674–75). These sentiments were echoed by Paul Howard and Dick Jackson, who stated, "The new company has raised the level of the safety programs since they've taken over, and their involvement in the safety program included process safety." (Tr. 749, 1612).

C. The Wickes Boiler

The explosion that killed two employees on September 28, 2012, originated at the Wickes boiler, which is part of the FCCU located in Zone 2. (Tr. 92–93; Ex. C-7, C-11). The Wickes, as described by many of Respondent's employees, "was by far the workhorse of the plant for steam." (Tr. 360). It is one of four boilers that provide steam to the 225-pound steam header, which, in turn, routes steam for use in various processes throughout the plant. (Tr. 2057–58; Ex. C-8 to C-13). Some of those processes include providing emergency steam to the riser, which clears it of HHCs; injecting steam into the FCCU process to drive high-end products out of the crude oil, also known as steam-stripping; purging low-lying gases in the firebox of the Alky Unit heater during start-up; powering turbines to pump product; and serving as a back-up to the electric pumps. (Tr. 162–63, 236–37).

The Wickes itself is fueled by two separate fuel streams within the refinery—the refinery fuel gas (RFG) system and a natural gas fuel line. (Tr. 134–40; Ex. C-10). The RFG system, which is the primary source of fuel for the Wickes, is a fuel recycling system of sorts. Various processes throughout the plant, such as the FCCU, refine crude oil to a saleable product. As a result of these processes, a certain amount of non-condensable flammable gas remains. (Tr. 138). Though this gas cannot be converted into a saleable product, the refinery still uses it to fuel various processes throughout the plant. (Tr. 139). These "off-gases" that are produced throughout the plant are directed via pipeline to a fuel drum, where the refinery fuel gas is treated. (Tr. 1602–1603). The resulting gas mixture is then piped out of the drum into a 4.1-mile pipeline network that leads to different processes throughout the refinery, including the Wickes. (Tr. 1710–11). Such is the process for normal operations; however, in some instances, such as during a turnaround, the Wickes can be powered by natural gas alone. (Tr. 134–35).

In order to start the Wickes boiler, Respondent had to go through a fairly detailed process, which involved no fewer than three employees. (Tr. 98). The first step requires the CT to purge HHCs from the boiler's firebox for 30 minutes by blowing air into it. (Tr. 111, 421; Ex. C-34). Once the firebox has been adequately purged, the pilot light has to be lit. (Tr. 335). After the pilot is lit, an operator is directed to open the fuel gas bypass valve, which introduces the RFG mixture into the firebox. (Tr. 335). Each operator that testified gave a slightly different description as to how this part of the process is carried out. Koesler, for example, stated that he was told to turn the bypass valve "one-quarter of a spoke" and to leave it open for 5–10 seconds, though he admitted there was not a set amount of time to keep the valve open. (Tr. 113, 116–17). McCurtain testified that he was trained to open the valve "slightly" or "just a little bit" and to close the valve if he did not achieve ignition "quickly" or "shortly". (Tr. 518, 528). During this

process, another operator positions himself at the sight glass, which allows him to determine whether there has been a successful ignition.[5] Once ignition is achieved, control over fuel management is handed over to the CT in the control room. (Tr. 335).

With the exception of a shutdown because of a turnaround or annual boiler inspection by the State of Oklahoma, the Wickes was operated constantly. (Tr. 376). As such, there were limited opportunities for operators and CTs to light the boiler.[6] (Tr. 376). According to McCurtain, however, it was "not uncommon" for operators to experience a "hard start" when attempting to light the Wickes. (Tr. 516). A hard start is best characterized as a mini-explosion occurring within the firebox, typically a result of allowing too much fuel into the system. (Tr. 102–103). Koesler stated that, instead of lighting smooth, a hard start causes the boiler to "woof" or "huff" as a result of a sudden pressure increase within the firebox. (Tr. 104). In some cases, this merely caused the boiler to spew dust and smoke; in others, the structure of the boiler actually bowed outward as a result of the explosion. (Tr. 106–107, 213; Ex. C-31). In one instance, Willson, who was manning the sight glass, was actually struck by the boiler, which had bowed outward during a hard start. (Tr. 357–58; Ex. C-31).

D. The Turnaround

On September 28, 2012, Respondent was in the middle of a refinery turnaround.[7] (Tr. 108–109). During the turnaround, the refinery was shut down and was not refining petroleum. Instead, Respondent hired multiple subcontractors to come to the refinery to repair, replace, or maintain various pieces of equipment throughout the refinery. (Tr. 1704–1706). According to

5. The Wickes boiler does not have a burner management system (BMS), which allows for remote ignition of the burner. (Tr. 100).
6. According to James Willson, who had worked at the refinery for seven years at the time of the accident said he had only lit the boiler 4 to 5 times during that period. (Tr. 376).
7. A turnaround is a period of time when the refinery shuts down temporarily to allow for improvement and maintenance projects. (Tr. 1704).

David Johnson, there could be as many as 1500 contractors working on a shift, which drastically increased the number of people present at the refinery. (Tr. 2104).

In order to facilitate repairs and maintenance, Respondent needed to produce steam to purge HHCs from various lines and equipment. (Tr. 369). This required starting up the Wickes boiler. Because the refinery was off-line and not producing fuel products, Respondent had to use natural gas to light the Wickes. (Tr. 346). According to Willson, the Wickes had been taken off-line earlier that day to make a switch of the electrical supply circuits. (Tr. 347). Due to power supply problems, the crew implemented a temporary solution by running an extension cord to a small generator, which powered the controls and interlocks of the Wickes. (Tr. 347). According to Jeff Sutton, the previous CT reported that the temporary power supply was causing the vanes, which control air flow, to malfunction. (Tr. 278–79). Eventually the problem was fixed, and Sutton began to increase the airflow to purge the Wickes firebox of any remaining HHCs. (Tr. 279).

At the conclusion of the purge, which lasted about five minutes, Sutton reduced the airflow to 15,000 cubic feet per minute (cfm) to light the pilot. (Tr. 281). While Sutton was working in the control room, Lead Operators Koesler and Willson; "A" Operators Russell Mann, Billy Smith, and Justin Sutton; and "B" Operator Steve Graves were located at or around the boiler. (Ex. R-110 at 4). Lead Operators Koesler and Willson were located at the northwest corner of the Wickes and were overseeing the lighting attempt. (Tr. 98). Mann was positioned at the fuel bypass valve, and Smith was positioned at the sight glass to verify ignition. (Ex. R-110 at 4). Justin Sutton and Graves did not have specific responsibilities related to the lighting process.

After the firebox had been purged, Mann opened the fuel gas bypass valve to introduce natural gas into the firebox. (Tr. 112). At some point in the process, Koesler instructed Mann to close the valve because they had not achieved ignition. (Tr. 126). Mann did not comply with this instruction. (Tr. 191). When Koesler confronted him, Mann informed Koesler that he was taking instructions from Willson, who was standing nearby. (Tr. 191). After a brief interaction between Willson and Koesler, Koesler moved to the north side of the boiler to check water levels. (Tr. 125). Willson continued to oversee Mann, who kept the bypass valve open.

As fuel was being introduced into the firebox, the other CT in the control room, Wesley Walker, looked at Sutton's console and noticed that the firebox was flooded with too much natural gas. (Tr. 401–402). Walker immediately radioed the operators to inform them that they should close the bypass valve. (Tr. 402). Shortly after Mann closed the valve, the boiler exploded. Smith, who was manning the sight glass, was pronounced dead at the scene, and Mann, who was critically injured in the explosion, died twenty-eight days later. (R-110).

Subsequent investigations by Respondent revealed shrapnel in the area surrounding the Wickes, and a ladder, which was attached to the west end of the boiler, that had been blown completely across the street. Additionally, investigators found that the valve was opened approximately one-and-a-half spokes and that fuel had been flowing into the firebox for approximately 5 minutes. (Ex. R-110 at 8). Many of the operators and CTs involved in the lighting were disciplined, and one of the Lead Operators, Willson, was discharged. (Tr. 95, 369; Ex. C-89).

IV. Discussion

Prior to answering the question of whether any particular standard was violated, the Court must resolve two important issues. First, the Court must determine whether the PSM standards

cited by Complainant apply to the Wickes boiler. Respondent contends that, by including the boiler within the ambit of the PSM standard, Complainant has improperly expanded the scope of the standard beyond its intended purpose, which is to "prevent[] or minimiz[e] the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals". 29 C.F.R. § 1910.119. Consistent with that assertion, Respondent argues that although the boiler is physically connected to a PSM-covered process, the boiler itself is not subject to the PSM standards because it cannot contribute to, cause, or interfere in the mitigation of a catastrophic release of HHCs. *See Delek Refining Co., Ltd.*, 25 BNA OSHC 1365 (No. 08-1386, 2015). In response, Complainant has asserted multiple theories of coverage to suggest that the boiler would have just such an impact.

Second, the Court shall also address the issue of successor liability in the context of the repeat violations issued to Respondent. As previously discussed, Wynnewood Refinery changed ownership in 2011. The purchase occurred after the underlying citations were issued but before the issuance of the citations that are currently under discussion. Complainant submits that the citations were properly characterized as repeat and bases that conclusion on the substantial continuity test for successor liability, which was adopted by the Commission in *Sharon & Walter*, 23 BNA OSHC 1286 (No. 00-1402, 2010). Respondent, on the other hand, contends that the changeover in ownership resulted in changes in management practices, procedures, and culture significant enough to break the chain of liability stemming from GWE's previous actions.

Ultimately, based on what follows, the Court finds that the PSM standards did apply to the Wickes boiler. Complainant's application of the standard under this set of facts comports with its plain language and is consistent with its historical interpretation of the standard. The Court also finds, however, that Complainant failed to show the requisite nexus between

Wynnewood under the ownership of GWE and Wynnewood under the ownership of CVR such that liability for repeat violations survived the transfer of ownership.

A. PSM Coverage

i. The Standard – 29 C.F.R. § 1910.119

The stated purpose of the PSM standard is to "prevent[] or minimiz[e] the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals." 29 C.F.R. § 1910.119. A catastrophic release, according to the standard, is "a major uncontrolled emission, fire, or explosion, involving one or more highly hazardous chemicals, that presents serious danger to employees in the workplace." *Id.* § 1910.119(b). The standard sets a threshold quantity for various hazardous chemicals—that threshold quantity (TQ) represents the point at which a particular chemical is considered capable of producing a catastrophic release. *See id.* § 1910.119(a)(1). In this case, the operative question is whether the Wickes boiler is a part of a "process which involves a Category 1 flammable gas (as defined in 1910.1200(c)) or a flammable liquid with a flashpoint below 100 °F (37.8 °C) on site in one location, in a quantity of 10,000 pounds (4535.9 kg) or more" such that the standard applies.[8] *Id.* § 1910.119(a)(1)(ii). Such a determination would establish a *prima facie* case for coverage; however, the Court must also decide whether the exception for HHCs "used solely for workplace consumption of fuel" applies. *See id.* § 1910.119(a)(1)(ii)(A).

As the title implies, the focus of this standard are *processes* involving highly hazardous chemicals. Insofar as a process involves a threshold quantity of HHCs, it is covered, subject to certain exceptions. A process, according to the standard, is:

> [A]ny 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

8. For all other chemicals, one must refer to Appendix A of 29 C.F.R. § 1910.119.

> 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.

Id. § 1910.119(b). This definition indicates (1) the basic understanding of a "process" and (2) the potential boundaries for that process. This was explained in more detail in the preamble to the standard, which states:

> The term "process" when used in conjunction with the application statement of the standard establishes the intent of the standard. The intent of the standard is to cover a "process" where the use, storage, manufacturing, handling or the on-site movement of a highly hazardous chemical exceeds the threshold quantity at any time. The boundaries of a "process" would extend to quantities in storage, use, manufacturing, handling or on-site movement which are interconnected and would include separate vessels located such that there is a reasonable probability that an event such as an explosion would affect interconnected and nearby unconnected vessels which contain quantities of the chemical that when added together would exceed the threshold quantity and provide a potential for a catastrophic release. In order to clarify this intent, a new sentence has been added to clarify the fact that interconnected and nearby vessels containing a highly hazardous chemical would be considered part of a single process and the quantities of the chemical would be aggregated to determine if the threshold quantity of the chemical is exceeded.

Process Safety Management of Highly Hazardous Chemicals, 57 Fed. Reg. 6356, 6372 (Feb. 24, 1992).

ii. Complainant's Theories of PSM-Coverage

Complainant asserts multiple bases upon which the Wickes boiler should be considered a PSM-covered process. Specifically, Complainant asserts that (1) the Wickes is interconnected to a covered process through the refinery fuel gas system and steam header; (2) the Wickes is located such that a HHC could be involved in a potential release involving other PSM-covered equipment; (3) the exception for workplace fuel consumption does not apply; and (4) Respondent treated the Wickes in its own internal documentation as a PSM-covered process. In response, Respondent contends that (1) Complainant's interpretation of the standard improperly expands the scope of what is considered a "process"; (2) the Wickes is not sufficiently close to

PSM-covered equipment such that it could be involved in a potential release; (3) the workplace fuel exception clearly applies; and (4) the fact that it applied PSM-related practices to the Wickes is only reflective of "best practices" and not an admission of coverage.

1. Interconnection

The Wickes boiler, viewed in isolation, is not a PSM-covered process. There is no single point in time where it processes, uses, or holds a threshold quantity of HHC. Thus, the determination of whether it is covered necessarily depends on its connection or location relative to other covered processes. The dispute over interconnection stems from the second sentence of the definition of the term "process", which states that "*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." 29 C.F.R. § 1910.119(b) (emphasis added). Complainant asserts that the definition establishes two separate bases upon which coverage can be established: (1) interconnected vessels; and (2) separate vessels located such that a HHC could be involved in a potential release. Respondent contends, however, that the modifier "such that a highly hazardous chemical could be involved in a potential release" is applicable to both separate and interconnected vessels, thereby grafting an additional burden of proof for establishing PSM coverage under a theory of interconnection. The Court disagrees.

This dispute stems from what is known as the Motiva Response, which was a formal interpretation issued by Complainant in response to *Motiva Enterprises., LLC*, 21 BNA OSHC 1696 (No. 02-2160, 2006). (Ex. C-3). *See also* Interpretation of OSHA's Standard for Process Safety Management of Highly Hazardous Chemicals, 72 Fed. Reg. 31453 (June 7, 2007). In *Motiva*, the Commission grappled with what it believed to be an undefined term within the PSM

standard's TQ requirements for flammables; namely, what constituted "on site in one location". *Motiva*, 21 BNA OSHC 1696. Due to the lack of clarity within the application paragraph, and less than convincing evidence, the Commission vacated the citation and placed the onus on the OSHA to offer an "authoritative interpretation" that would be reviewed in future cases under "standard deference principles." *Id.* at *4.

In response, OSHA issued a formal interpretive document in the Federal Register. First, OSHA agreed that the language "on site in one location" in the application paragraph has considerable overlap with the definition of process. (Ex. C-3 at 1524). This was due, in part, to the fact that the definition of "process" was revised in the final rule to clarify that a single process includes both interconnected and co-located vessels, depending on proximity. (*Id.*). Due to this change, OSHA noted that "the limitation placed on application of the standard to flammable liquids and gases denoted by the related phrase 'on site in one location' no longer carries the independent weight it had before OSHA clarified the intended meaning of 'process.'" (*Id.*). However, its import was not entirely diminished, as "it continues to serve a separate purpose by operating to exclude coverage where the HHC threshold would only be met only if all amounts in interconnected or co-located vessels were aggregated but some of the amounts needed to meet the threshold quantity are outside the perimeter of the employer's facility."

Second, and more pertinent to this case, OSHA clarified the burden of proof relative to interconnected versus co-located processes by stating that the PSM standard "presumes that all aspects of a physically connected process can be expected to participate in a catastrophic release." (*Id.*). With respect to co-located processes, however, OSHA must prove that they are located such that a hazardous chemical could be involved in a potential release. (*Id.*).

Respondent takes issue with this formulation because it believes that such an interpretation is "in direct contradiction" with the plain terms of the standard. *Resp't Br.* at 27.

Respondent's primary argument in this regard is that "[t]he absence of punctuation between the term "interconnected" and "separate" establishes that the requirement that an HHC could potentially be involved in a release applies to both interconnected and co-located equipment." First, it is not clear what sort of punctuation Respondent is referring to. Second, the basic structure of the sentence belies Respondent's argument regarding plain meaning. The sentence describes two configurations on either side of the conjunction "and" and concludes that either configuration constitutes a "process" for the purposes of the PSM standard. The first configuration is "any group of vessels which are interconnected". The second configuration is "separate vessels which are located such that a highly hazardous chemical could be involved in a potential release." In both cases, the noun is described through the use of a dependent clause, indicated by the term "which". In other words, there is a basic, parallel structure on either side of the "and", which can be diagrammed as follows: "For the purposes of this definition, [A's] which are [x] and [B's] which are [y] shall be considered [C]." *See* 29 C.F.R. § 1910.119(b). When analyzed in this way, the Court finds that Complainant's interpretation, as expressed through the *Motiva* response, comports with the plain meaning of the definition.

Let us assume, however, that Respondent is correct to the extent that the definition of process is ambiguous. If a determination cannot be reached based on the text and structure of the regulation, courts then turn to "contemporaneous legislative histories of that text." *Unarco Comm. Prods.*, 16 BNA OSHC 1499 (No. 89-1555, 1993). On such contemporaneous legislative history is the preamble to the final rule. *See generally* 57 Fed. Reg. at 6356; *see also* 72 Fed. Reg. 31453. The preamble provides a clear distinction between interconnected and separate

vessels: "The boundaries of a 'process' would extend to quantities in storage, use, manufacturing, handling or on-site movement which are interconnected and would include separate vessels located such that there is a reasonable probability that an event such as an explosion would affect interconnected and nearby unconnected vessels which contain quantities of the chemical that when added together would exceed the threshold quantity and provide a potential for a catastrophic release." 57 Fed. Reg. at 6372. This discussion, which provides contour to the definition of process, makes clear that the term "process" *extends* to interconnected vessels and *includes* separate vessels, insofar as such vessels could reasonably be expected to participate in a catastrophic release. Given this explanation, the Court still finds that the standard presumes the potential for a catastrophic release when vessels are physically connected.

Finally, even if the preamble is somehow considered deficient in its clarification, the Court finds that the interpretation espoused by Complainant is both reasonable and consistent with its longstanding interpretation of the issue. *See Simpson, Gumpertz & Heger, Inc.*, 15 BNA OSHC 1851 (No. 89-1300, 1992) ("The weight of such [an interpretation] in a particular case will depend on the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking the power to control.") (citing *General Elec. Co. v. Gilbert*, 429 U.S. 125, 142 (1976) (quoting *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944))). There is nothing patently unusual or unreasonable about considering vessels that are physically connected by pipeline to be part of the same process, nor is it unreasonable to presume that vessels connected in such a way could be involved in a potential release of HHCs. This has been Complainant's interpretation of the standard since its inception. (Ex. C-4). Accordingly, the Court finds that

Complainant's interpretation of the standard is reasonable and, therefore, entitled to deference. *See Martin v. OSHRC (CF&I Steel)*, 499 U.S. 144, 145–46 (1991) (Secretary's interpretation of a standard, even when embodied in a citation, is entitled to deference so long as it is reasonable).

According to the P&IDs involving the Wickes boiler, it is physically interconnected to otherwise-covered PSM processes in two ways. First, the Wickes boiler is connected to both the Alky Unit and the FCCU through the RFG pipeline. (Tr. 655, 911). It is undisputed that the Alky and the FCCU are PSM-covered processes by virtue of the quantity of flammables contained in each.[9] (Ex. C-5). Second, the Wickes is connected to virtually all of the refinery's processes through the 225-lb. steam header. (Ex. C-7). As such, Complainant has, at the very least, established a *prima facie* case for PSM coverage, because interconnected processes are presumed to have the potential to participate in a catastrophic release. However, such a presumption could be rebutted by a showing that the interconnected processes at issue could not participate in or contribute to a catastrophic release.

Perhaps anticipating the potential failure of its argument regarding the presumption associated with interconnected processes, Respondent also argues that the Wickes should not be considered interconnected to a covered process under the terms of the standard. First, Respondent suggests that the Wickes is not a "vessel" because it does not store or contain any measureable quantity of HHC. Second, Respondent argues that the concept of interconnection, as espoused by Complainant, does not merely equate to a physical connection between equipment; rather:

> [T]he concept of interconnectivity is merely intended to address a situation in which connected vessels within a single process that contain quantities of HHC, such as flammable gas storage tanks, will be deemed to satisfy the threshold requirement even though the amount of flammables in each individual vessel is

9. According to the RMP that Respondent submitted to the EPA, the Alky Unit stores and/or processes 100,000 pounds of flammable liquid; the FCCU stores and/or processes 50,000 pounds. (Ex. C-5).

> less than 10,000 pounds. This theory does not operate to extend coverage to any structure, regardless of its form or contents, that is physically connected to a PSM-covered process.

Resp't Br. at 29 (internal citations omitted). The Court disagrees.

The Commission dealt with a similar attempt to narrow the scope of the standard in *Delek Refining Co., Ltd.*, 25 BNA OSHC 1365 (No. 08-1386, 2015).[10] In that case, OSHA alleged that the employer violated a portion of the PSM standard by failing to inspect and test its positive pressurization unit (PPU) in the control room of its own FCCU. *Delek*, 25 BNA OSHC 1365 at *6. The PPU was designed to pressurize the control room to prevent hazardous vapors, which are a byproduct of the FCC process, from entering the control room and poisoning the employees inside or causing an explosion hazard due to the presence of wiring, which could serve as an ignition source. *Id.* Delek contended that the PPU was not "process" equipment, because it was not directly involved (physically connected) in the process of converting crude oil to usable fuel.

Although the specific subsection of the PSM standard at issue in that decision was different, the Commission still had to address the question of what constitutes the boundaries of a process. The Commission made it clear that the focus of the standard—the process—was not as narrow as suggested by Respondent. According to the Commission:

> [T]he PSM standard does not require that every part of a 'process' come into contact with hazardous materials. 29 C.F.R. § 1910.119(b) (defining 'process' as 'any activity *involving* a highly hazardous chemical") (emphasis added). Here viewing the 'activity' involving the FCC unit in its entirety, the PPU is part of a 'process' covered by the PSM standard because it is an integral part of the 'manufacturing, handling [and] onsite movement of [highly hazardous chemicals]."

Delek, 25 BNA OSHC 1365 at *7. Citing favorably to an OSHA Interpretation Letter from Richard Fairfax to Howard J. Feldman, the Commission noted that machinery not containing

10. *Delek* is currently on review to the Fifth Circuit Court of Appeals. Nonetheless, it still serves as precedent for the Court in this case.

HHCs can nonetheless be a part of a process insofar as such machinery is used to control, prevent, or mitigate catastrophic releases. *Id.* at *8–9.

The Court finds that Respondent places undue emphasis on individual terms such as "vessel" and "interconnected" at the expense of the focus of the standard as a whole—the process. As noted by the Commission, the definition of "process" is broad—it is *any* activity *involving* a HHC, including *any* use, storage, manufacturing, handling, or on-site movement. *See* 29 C.F.R. § 1910.119 (emphasis added). So broad, in fact, that the Commission held that the PPU in Delek's FCC control room, although not a vessel, was part of the FCC process because it could affect or cause a release. *Id.*

In this case, the connection between the Wickes and the FCCU is more concrete: the off-gases produced by the FCCU are directed via pipeline to a fuel drum, which mixes the off-gases treats them, and directs the resulting product to the Wickes. (Tr. 857, 918). The Wickes is clearly an activity that *involves* a HHC, because it *uses* the treated off-gases from various processes around the refinery. It is, in fact, a downstream endpoint of the RFG process. (Tr. 838). During normal operations,[11] there are multiple processes that feed the RFG system, including the FCCU and the Alky Unit. (Tr. 920, 1098). These processes, with the exception of a turnaround, are basically running all the time. (Tr. 1706). As the Court observed during the trial, the bypass valve that controls the flow of RFG can apparently be left open indefinitely without an alarm—it was not until CT Walker happened to look over the shoulder of CT Sutton and noticed a large amount of fuel in the firebox that the order was given to shut it down.[12] (Tr. 293, 402). Further,

11. The Court would like to make a brief note regarding the distinction between normal operations and turnaround operations. During normal operations, the system is fueled by a combination of refinery fuel gas and natural gas, whereas during a turnaround, the Wickes is run by natural gas because there are no other processes running to produce the RFG. While this might call into question whether the Wickes is covered during the period of a turnaround, the Court cites favorably to Respondent's expert, Steve Arendt, who stated that the determination of whether a process is covered does not depend on whether it is in operation or in turnaround status. (Tr. 2095).

12. In fact, Complainant has interpreted the term interconnected such that even energy-isolating devices, such as

the Wickes, which all witnesses testified is almost always running, requires a constant stream of fuel. Thus, even if the Court accepts Respondent's assessment of the RFG pipeline's capacity, which it determined to be 860 pounds of fuel, that assessment disregards the source of the fuel, such as the FCCU and the Alky, which feed the RFG system and are directly connected to the Wickes.[13] (Tr. 1598; R-124). The Court cannot find any basis in the regulatory history or the language of the standard itself that would suggest such an arbitrary determination of what is interconnected. Accordingly, the Court finds that the Wickes was interconnected to a covered process, and, as such, should be considered a single process. *See* 29 C.F.R. § 1910.119(b).

Respondent further contends that even if the foregoing is true, the Wickes should still be exempt from coverage. According to section 1910.119(a)(1)(ii)(A), the following are exempted from PSM coverage: "Hydrocarbon fuels used solely for workplace consumption as a fuel (e.g., propane used for comfort heating, gasoline for vehicle refueling), if such fuels are not a part of a process containing another highly hazardous chemical covered by the standard." *Id.* § 1910.119(a)(1)(ii)(A). The intended scope of this rule was described in the preamble to the standard, wherein the American Petroleum Institute noted that

> OSHA's intention in providing exemption (b)(1)(ii)(A) was to exclude the enormous number of small business locations across the nation which would not be covered by the proposed rule, except for their on-site storage of hydrocarbon fuels for low-risk applications such as heating, drying, and the like. Such activities are not the subject of this rule, and this exclusion is entirely appropriate.
>
> On the other hand, interpreting this exclusion to apply to hydrocarbon fuels used for process-related applications such as furnaces, process heaters, and the like at facilities covered by the rule was not intended.

57 Fed. Reg. 6356, 6367. At the very outset, this exception had a very limited scope: small businesses that used on-site hydrocarbon fuels "for *low-risk* applications such as heating, drying,

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blocks, are not sufficient in and of themselves to break the connection between two physically connected processes. (Ex. C-4 at 1530).

13. This also highlights the problematic nature of Respondent's definition of interconnection, as it imposes artificial boundaries that do not comport with the plain reading of the definition of process.

and the like." *Id.* (emphasis added). The exception was not, however, intended to cover process-related applications such as process heaters and furnaces. *Id.* It is significant that this was recognized by API, which promulgates consensus standards covering the petroleum industry. *See, e.g.*, 72 Fed. Reg. 31453, 31454 (citing API 750 as basis for definition of "process"). Thus, the issue is, again, one of degree: Is the Wickes, as compared to process heaters and furnaces, which are explicitly not covered under the exception, properly considered a part of a process involving another highly hazardous chemical covered by the standard?[14] Respondent contends that furnaces and heaters are more directly linked to a process than a boiler, because furnaces and heaters typically apply heat directly to a product, whereas a boiler merely supplies steam to a header, which directs that steam to various processes around the refinery.

The Court is not convinced by the furnace versus boiler distinction urged by Respondent, nor is it convinced that the workplace fuel exception applies. Though the preamble mentions furnaces and process heaters as specific process-related applications, the list is not exhaustive, but exemplary. *See* 57 Fed. Reg. 6356, 6367 (exception does not cover "furnaces, process heaters, *and the like*") (emphasis added). To the extent that process heaters, furnaces, "and the like" are the examples of what is not covered by the exception, and considering Respondent's argument that there is a qualitative difference between the manner in which a furnace is connected to a process, as opposed to a boiler, the Court will address the manner in which the Wickes is connected to other PSM-covered processes and determine whether that connection is sufficient to establish PSM coverage.

14. Complainant addressed a similar situation to the one presented here through a letter of interpretation. (Ex. C-4 at 1542). In that letter, Complainant was asked whether the use of coke oven and blast furnace gases—which are generated as a by-product during steel industry processes—as fuel for other steel mill processes would be covered by the PSM standard. (*Id.*). In response, Complainant stated that the workplace fuels exception would apply insofar as the by-product gases are not used in a process involving another highly hazardous chemical covered by the standard. (*Id.*). Although it discussed the potential coverage of a by-product recovery plant, the interpretation did not clarify the extent to which a particular fuel use is considered to be "part of a process involving another highly hazardous chemical covered by the standard."

While the Wickes is the downstream endpoint for the RFG system, it is also a starting point for many other process-related applications. The Wickes' core function is to produce steam. That steam is used in multiple process-related applications throughout the refinery. For example: (1) When the FCC emergency shut down (ESD) system is activated, steam is directed to the riser, where it knocks down gases to prevent further catalyzing of crude oil; (2) Steam is used as a catalyst in certain reactions, driving high-end products from crude oil, also known as steam-stripping; (3) In normal operations and emergencies, steam was used as a primary source to drive turbines that pumped product and as a back-up to electric pumps; (4) In the Alky, steam is used to snuff out low-lying gases and purge fugitive HHCs from the heater prior to lighting it (in much the same way that air is used to snuff gases in the Wickes); (5) Steam is used as a heat medium in an exchanger, which transfers heat to a process; and (6) Steam hoses are used to put out small fires on a process pipe. (Tr. 162–63, 236, 239, 1716–17; Ex. C-8). On the face of it, all of these applications are a process-related to some degree. Nonetheless, Respondent contends that the steam producing system is a mere utility and that it has specifically determined that "the boiler could not cause or interfere in mitigating the consequences of a catastrophic release." *Resp't Br.* at 31 (citing Ex. R-84).

Respondent, much like the employer in *Delek*, urges a narrow view of the concept of process-relatedness. In *Delek*, the employer cited an OSHA Interpretation Letter, which contained language stating that "'[t]he boundaries of the covered process are based on the equipment which contain [highly hazardous chemicals].'" *Delek*, 25 BNA OSHC 1365 at *7. The Commission disagreed with such a narrow reading, focusing on the following language:

> OSHA does not agree that utility systems are categorically outside the scope and application of the PSM standard. It is OSHA's long-standing position that utility systems *are* part of the PSM-covered process when employers use them to control/prevent and mitigate catastrophic releases . . . .

* * *

> [T]he proper safe functioning of all aspects of a process, whether they contain [highly hazardous chemicals] or not, are important for the prevention and mitigation of catastrophic releases of [highly hazardous chemicals], due to their direct involvement in the overall functioning of the process.
>
> As a result, it is OSHA's position that if an employer determines that a utility system or any aspect or part of a process which does not contain a [highly hazardous chemical] but can affect or cause a release . . . then, relevant elements of PSM could apply to these aspects. OSHA's position is that any engineering control, including utility systems, which meets the above criteria must be . . . inspected/tested/maintained per OSHA PSM requirements.

Id. at *8–9. Here, Respondent cites the same letter, in addition to another interpretive document, for the essentially the same proposition. (Ex. R-83, R-84).

Specifically, Respondent contends that, notwithstanding the numerous ways in which the Wickes is connected to various covered processes, it has analyzed those connections and specifically determined that the failure of the Wickes would not "cause a HHC release or interfere with the consequences of a HHC release . . . ." (Ex. R-84). Like the employer in *Delek*, Respondent places significant emphasis on the "if an employer determines" language to argue that the determination of the boundaries of a PSM-covered process "is the responsibility of the employer, not Complainant." *Resp't Br.* at 30. While there is no doubt that the PSM standard is a performance standard, which allows an employer some discretion as to how a particular hazard should be addressed, "there is no indication in the language of the PSM standard or its regulatory history that OSHA meant to give to employers, at their sole discretion, the option of excluding equipment from the standard's coverage." *Delek*, 25 BNA OSHC 1365 at *9. Thus, the interpretive letter states that if an employer makes a determination that a component failure in the utility system cannot affect, cause, or interfere in the mitigation of a potential release, the employer must be able to proactively demonstrate why the utility system is no longer a part of a covered process. (Ex. R-83). In other words, the determination must be reasonable. *See, e.g.*,

Siemens Energy & Automation, Inc., 20 BNA OSHC 2196 at *1 (No. 00-1052, 2005) (performance standard give a "certain degree" of discretion but meaning of standard interpreted in light of what is reasonable).

Respondent argues that it conducted the analysis of the Wickes as described above and concluded that the boiler could not cause or interfere in mitigating the consequences of a catastrophic release. Specifically, Respondent points to the testimony of Jackson, the PSM Manager, who states that he considered the failure of the Wickes and other aspects of the 225-pound steam system as part of his analysis of a loss of heat to a covered process. (Tr. 1606–1610). Jackson and Rains concluded that a failure of the Wickes would not have such an effect because the other boilers that sourced the steam system could produce sufficient steam to continue operations at the refinery and that any temporary effects would only impact product quality. (Tr. 1671–72, 1718–1725). Respondent's expert testified similarly. (Tr. 2066–2067).

This determination, Respondent contends, was reinforced by the record evidence, including: (1) the Wickes was taken offline once per year for an annual inspection; (2) the refinery had redundancies in place such that only two of the four utility boilers were needed to contribute steam to the header. (Tr. 1719–1720). Further, Respondent also argues that the snuffing steam system, as used in the Alky heater firebox, was only for small fires and that no evidence was presented to show that such a fire could cause a catastrophic release of HHC.

The Court has a different perspective on the record evidence, as well as the sufficiency of Respondent's determinations regarding the impact of a loss of steam on PSM-covered processes. First, the PHA/Hazop analysis performed by Jackson was, according to his testimony, focused on the impact of too little or too much heat being supplied by the Wickes and how that could cause a loss of containment. (Tr. 1606–1607). In response to a question regarding whether he was

confident that he considered a loss of steam in all PHAs for covered processes, Jackson stated, "I'm confident in that based on the questions you have to ask yourself in a HAZOP of too much heat or too little heat. And steam provides heat to our processes." (Tr. 1607; Ex. R-93, R-94). The problem, however, is that the functions described above are not limited to supplying heat to a particular process. It is also used to snuff out fires, remove HHCs from the FCC riser in emergencies, and purge HHCs from furnace fireboxes during the lighting process. Based on the Court's review of the PHAs, there is no indication that the impact on these safety functions was considered.

Second, in an attempt to downplay the significance of the Wickes, Raines noted that it is one of four boilers on location at the refinery and that there is a redundancy system built in to reduce the refinery's reliance on any one boiler. (Tr. 1719). While this may be the case, there was no independent evidence, by way of PHAs or SOPs, to indicate that the system was designed this way. (Tr. 1764). Further, Respondent's employees testified that the Wickes was the workhorse of and a main contributor to the plant's steam system. (Tr. 171, 242–43). Respondent lent credence to that characterization by choosing the Wickes as the boiler of choice for the turnaround. Respondent recognized that problems with the Wickes and connected steam system could lead to process upsets. While those upsets likely had the most direct impact on product quality, there was also testimony that such upsets may also impact the use of certain safety measures associated with the steam system. (Tr. 238, 360, 1037, 1761, 1765). That the safety measures associated with a covered process could be affected by a boiler system upset is alone sufficient to warrant finding a connection sufficient to establish the inapplicability of the exception. *See Delek*, 25 BNA OSHC 1365 at *8 (citing favorably to OSHA Interpretation Letter stating "proper safe functioning of all aspects of a process, whether they contain [HHC] or not,

are important for the prevention and mitigation of catastrophic releases"). Just because a redundancy system is built in does not remove a particular boiler from the ambit of the standard. *See id.* ("OSHA's position is that *any* engineering control, including utility systems, which meets the above criteria must be . . . inspected/tested/maintained per OSHA PSM requirements."). The key is the connection to the process, and whether a failure in that connection could have an impact on a potential catastrophic release of HHCs. As testified to by Rains, certain process upsets, if left alone for a long enough, can cause a catastrophic release. (Tr. 1761). For example, what if the emergency shutdown system in the FCC Riser cannot be activated because the purported steam redundancy system failed? Under such a set of circumstances, surely it would be reasonable to conclude that a failure at the Wickes would have an impact on the system's ability to control, prevent, and/or mitigate a catastrophic release.

As noted above, the Commission in *Delek* determined that the PPU in the control room was governed by the PSM standard. The PPU did not have a direct connection to the process; rather, it was a control to prevent the spread of harmful gases that were a result of the FCC process, which could, in turn, prevent the control room from managing the refining process. *Delek*, 25 BNA OSHC 1365 at *8. The connection of the Wickes to various processes throughout the plant was not nearly so attenuated. The Wickes provided steam, which was used directly on the various PSM-covered processes throughout the plant in both a production- and safety-related capacity. In its safety-related capacity, the steam provided by the Wickes served to control, prevent, and/or mitigate catastrophic releases through its use as a snuffing and purging agent. While such uses may not be a complete or sufficient control in and of themselves, the Court finds that such a connection is sufficient to bring the Wickes under the umbrella of the PSM standard.

At a very basic level, the Wickes connected to PSM-covered processes on the front and back end: It is fueled by off-gases from the FCCU and Alky, and, in turn, it supplies steam to those same processes. The explosion in this case provides a clear example of how physical connections between processes can lead to a catastrophic release. There was no independent, automatic control that could stop the flow of fuel to the Wickes during the lighting process; the explosion that resulted from flooding the firebox was only mitigated by the fact that CT Walker happened to notice the overflow of fuel. Independent of that, there was nothing to impede the flow of fuel to the system (although it was natural gas, the same event could have occurred with RFG). Further, to suggest, as Respondent has, that this was a worst case scenario disregards the fact that, but for CT Walker intervening, gas would have continued to flow to the firebox even after the explosion. In fact, Stephenson, the unit supervisor, testified that gas was released into the atmosphere as a result of the explosion, noting a smell of gas in the air. (Tr. 667).

In light of the foregoing, the Court finds that the Wickes boiler is a critical aspect of multiple PSM-covered processes, is not subject to the workplace fuels exception, and, therefore, was properly cited under the PSM standard under a theory of interconnection.

2. Proximity to a Covered Process

An additional basis for coverage urged by Complainant is that the Wickes, independent of its connections to covered processes, was "located such that a highly hazardous chemical could be involved in a potential release". 29 C.F.R. § 1910.119(b). As a result of the explosion, there was significant damage to surrounding equipment, including piping and valves; and the ladder and platform, which were attached to the Wickes, were blown across the street and hit the operator shelter. (Tr. 152, 156–57, 364, 367; Ex. C-62 at 3, 4, R-110 at 19–20). Complainant contends that, in addition to the damage described above, parts of the FCCU process lines,

including the Intercat loader and process pipe racks, could have been impacted by flying shrapnel. (Tr. 204–206; Ex. C-62 at 15). Based on its location relative to other aspects of the FCCU process, as reflected in the FCCU Equipment Location Plot Plan, Complainant's expert, Johnstone, concluded that the Wickes' location was such that it should be considered part of the FCCU process. (Tr. 830; Ex. C-11). *See* 29 C.F.R. § 1910.119(b). Respondent contends that the Wickes is not close enough to any covered process such that a highly hazardous chemical could be involved in potential release and, therefore, should not be considered a single process with any adjacent PSM-covered processes, such as the FCCU. *See id.*

Respondent places significant emphasis on the way this particular explosion occurred to support its argument that the Wickes was not sufficiently close to a covered process to be considered a part of that process and therefore covered under the PSM standard. In particular, Respondent points out that the closest aspects of a process that contains any HHC is the FCCU reactor column, which is approximately 100 feet away. (Tr. 1214). Noting that there was no damage to equipment beyond a 10–15 foot radius, and that no release of HHC occurred, Respondent contends that this "worst-case scenario" shows that the Wickes could not participate in a catastrophic release. (Tr. 1726).

The Court disagrees. As noted by Complainant, the Wickes was centrally located in the FCCU Equipment Location Plot Plan. (Tr. 829–830, Ex. C-11). Thus, before any discussion of distance, the Court finds that the Wickes is at least situated such that it could impact co-located, covered processes, i.e., not in some remote location. As to distance, it is true that many of the covered processes are not located within the apparent radius of the blast zone (10–15 feet) as determined by Respondent; however, that assessment disregards one very large piece of shrapnel that traveled much further: the ladder and platform, which were previously attached to the

Wickes. As a result of the explosion, the ladder and platform attached to the east side of the Wickes were propelled across the street and hit the operator shelter. (Tr. 152, 156–57, 364, 367; Ex. C-62 at 3, 4). Arendt estimated the distance from the boiler to the shelter was about 40 feet. (Tr. 2071). In addition to the ladder and platform, the photographs also show a significant amount of refractory[15] that had been blasted across the street at the operator shelter. (Tr. 149; Ex. C-62 at 1–4). Had the ladder and platform simply been blown in a different direction as a result of the explosion, perhaps toward the FCCU, it is reasonable to assume a catastrophic release would have occurred.

The fact that a catastrophic release from an adjacent PSM-covered process did not actually occur under these circumstances does not, in any way, establish that such an eventuality *could* not occur. *See* 29 C.F.R. § 1910.119(b) (deeming as a single process separate vessels "which are located such that a highly hazardous chemical *could be* involved in a potential release") (emphasis added). The fact that a larger explosion did not occur is likely attributable to two factors: (1) CT Walker noticing the excessive flow of fuel to the firebox and directing the operators to shut it down; and (2) the Wickes was being fueled by natural gas and was not using the RFG pipeline at the time of the explosion. The Court is mindful of the fact that the explosion occurred shortly after the order to shut the bypass valve; however, the valve connecting the RFG and natural gas lines to the Wickes were within the blast radius, as exemplified in the photographs taken of the west end of the boiler after the explosion. If the boiler was running on RFG at the time, damage to the fuel lines or simply an inability to turn off the valve after the explosion could lead to a catastrophic release. Although Respondent has argued that the RFG system only contains approximately 1500 pounds of fuel gas at any given time, as noted before,

15. Refractory is a brick-like lining that is used inside of the Wickes to protect the piping from flame impingement. (Tr. 149).

that assessment does not take into consideration the source of that fuel—processes such as the FCCU and Alky. Under normal operations, the Wickes is constantly consuming fuel and the FCCU and Alky are constantly producing it. This constant loop of off-gas production and consumption leads the Court to conclude that Respondent's attempt to place artificial boundaries on the RFG process such that a covered process would not be affected is misguided and disregards the concrete connection that exists between the Wickes and the FCCU, for example.[16]

Perhaps the strongest justification for deeming the Wickes to be part of a single process, and thus PSM-covered, is the potential impact on the control room. As noted above, the ladder and platform assembly, along with a significant amount of refractory, were blown across the street and into the operator shelter, which housed CT Sullivan and CT Walker. In *Delek*, the Commission found that the control room (operator shelter) and the controls associated therewith were part of the overall FCC unit process:

> Delek's refining process includes operating the FCC unit as a whole, and this is done from the FCC unit's control room, which is kept in safe working order by the PPU. Without the PPU providing positive pressure, hydrocarbon vapors could leak into the control room and—because of the wiring there—cause the type of catastrophic explosion that the PSM standard was intended to prevent. And short of such an explosion, the toxic vapors could harm the employees inside the control room, compromising the management of the refining process. We find, therefore, that the PPU is an integral part of the overall FCC unit "process."

25 BNA OSHC 1365 at *9. The key point in the passage above is that an incident, such as an explosion at the Wickes, which compromises the management of a PSM-covered process could cause the type of catastrophic event that the standard was designed to prevent. As such, the Commission held that even the positive pressurization unit (PPU), whose connection to a PSM-covered process is even more attenuated than the control room itself, was governed by the PSM

16. The Court also finds that the fact that the blast caused a ladder and platform to fly across a street and into an adjacent operator building (which houses the CTs) suggests that smaller pieces of shrapnel could fly much farther and, as a result, could impact covered aspects of the FCCU. However, as discussed further below, there is an even stronger basis upon which to find PSM coverage based on co-location.

standards. *Id.* at *8 ("The PPU's regulation of the control room's positive-pressure atmosphere makes the PPU integral to that "control"—and thus a "control" itself—because, as discussed above, entry of hazardous hydrocarbon vapors into the room could prevent the control room from managing the refining process.").

Throughout its brief, Respondent was intently focused on whether the putative impacted process contains a threshold quantity of HHCs. The Commission made it clear that the scope of the standard's coverage is not so narrow. Instead, the Commission takes a holistic approach to the issue: "[T]he PSM standard does not require that every part of a 'process' come into contact with hazardous chemicals . . . . [V]iewing the 'activity' involving the FCC unit in its entirety, the PPU is part of a 'process' covered by the PSM standard because it is an integral part of the 'manufacturing, handling, [and] on-site movement of [highly hazardous chemicals]." *Id.* at *7. The Court sees no difference between the potential impact on the control room in *Delek* and the circumstances presented here, wherein the control room was actually in the line of fire of the explosion. Respondent was presented with direct evidence that this could be the case in 2008 when Respondent performed a blast study for the FCCU as part of the PHA revalidation of the Wickes. (Ex. R-94). At that time, Wynnewood determined that the operator shelter adjacent to the Wickes should be pressurized and hardened to meet overpressure requirements. (Ex. R-94). In other words, an integral aspect of a PSM-covered process could be impacted by an explosion at the Wickes. Nevertheless, Respondent maintained its narrow view and concluded that additional measures were unnecessary to protect process vessels and equipment in the FCCU. (Tr. 1610–1611; Ex. R-94).

Based on the foregoing, the Court finds that the Wickes was located such that an event, like the explosion that occurred in this case, could affect or cause a catastrophic release.

Accordingly, the Court finds that the Wickes boiler is subject to the PSM standards under either the interconnection or proximity theory of coverage.

3. Respondent Treated Wickes as PSM-Covered

As further support for its argument that the Wickes was a PSM-covered process, Complainant contends that Respondent essentially treated the Wickes as such. Respondent argues that, to the extent it treated the Wickes as PSM-covered, it only did so as a matter of best practices and that taking additional precautions should not subject it to liability. The Court notes that while Respondent's treatment of the Wickes, in and of itself, is not sufficient to establish PSM coverage, it undercuts Respondent's claims that it conclusively determined that the PSM standard did not apply.

Complainant identified the following as examples of the Wickes being treated as part of a PSM-covered process: (1) In 2008, the Wickes experienced a "hard start", and the incident report characterized the event as a "PSM Incident"; (2) the plot plan and various P&IDs for the FCCU include the Wickes; and (3) Respondent performed Process Hazard Analyses (PHA) and implemented Management of Change (MOC) procedures on the Wickes. (Exs. C-8 to C-13, C-18, C-19, C-31, R-110 at 162). Jackson contends that he inadvertently checked the "PSM Incident" checkbox while inputting the findings of an hourly employee that assisted in the incident investigation and that such documentation does not reflect his or Wynnewood's opinion as to PSM coverage. Further, Respondent claims that Jackson determined the Wickes was not PSM-covered when the PHA revalidation for the Wickes was performed. (Tr. 1616).

Contrary to Respondent's arguments, the Court cannot find any documentary evidence that Respondent made a conclusive determination that the Wickes was not PSM-covered. (Ex. C-4 at 1535) ("If an employer makes this determination, then, the employer must be able to

proactively demonstrate why the utility system is no longer part of the covered process."). The problem for Respondent is that the documentation that would normally be used to establish coverage does not reflect the sort of proactive demonstration of non-coverage; rather, as the Court indicated above, the evaluations performed by, or at the request of, Respondent either lack any affirmative determination of non-coverage or should have put Respondent on notice of potential coverage. *See* Section IV.A.ii.2, *supra* (discussing blast study and potential impact on adjacent operator shelter). Instead, Jackson testified that Respondent "must have ruled out" that an explosion at the Wickes would impact adjacent processes; however, even he admitted that his conclusion was "pure speculation". (Tr. 1620–21).

While it is true that the PSM standard is performance-based, and thus places the onus on the employer to determine how to comply, Respondent has not provided a reasonable basis for its determination. As noted above, the PHA/Hazop analysis performed by Jackson was focused on the impact of too little or too much heat being supplied by the Wickes and how that could cause a loss of containment. (Tr. 1606–1607). This analysis did not take into account numerous other ways in which a failure of the Wickes could impact other processes to which it was connected, such as snuffing steam in the Alky heater's firebox and emergency steam to the FCC riser. This narrow view comports with Respondent's arguments throughout and fails to account for the Wickes' significant connections to covered processes throughout the refinery.

B. Repeat Violations and Successor Liability[17]

As a result of the 2012 inspection, Respondent was cited for five repeat violations, which were issued on March 27, 2013. (Ex. R-1). The citations upon which the repeat violations were based were issued to Wynnewood Refining while owned and operated by Gary Williams Energy

17. For the purpose of making the distinction clear, and for this section only, the Court will refer to the two entities involved in the purchase of Wynnewood as GWE-WR and CVR-WR. As a reminder, CVR-WR is the Respondent in this case.

(GWE), most of which became final orders of the Commission in April of 2007.[18] (Ex. R-1, C-28 at 11–12, n.1). Respondent contends that the present citations are not properly characterized as repeated on three separate bases. First, Respondent contends that Complainant failed to comply with its own internal policies regarding the issuance of repeat citations because more than five years had elapsed since the underlying citations were issued. Second, Respondent contends that it should not be held liable for repeat violations that are premised on violations committed by the previous owner of Wynnewood Refinery. Third, Respondent contends that the current citations, and the citations which form the basis of the repeat characterization, are not substantially similar. Based on what follows, the Court finds that Respondent is not a successor to GWE and that the citations at issue were improperly characterized as repeated.[19]

Prior to analyzing the question of successor liability, the Court would like to briefly address Respondent's argument that Complainant violated its own citation policy by issuing the repeat citations more than five years after the underlying citations were issued. According to Complainant's Field Operations Manual, a citation will be issued as a repeated violation if "[t]he citation is issued within five years of the final order date of the previous citation or within five years of the final abatement date, whichever is later . . . ." OSHA, Field Operations Manual, *available at* https://www.osha.gov/OshDoc/Directive_pdf/CPL_02-00-159.pdf.

Four out of the five citations were nearly (but not quite) six years old by the time the current, repeat citations were issued. Respondent contends that, although there is no statutory restriction on the "look-back" period for repeat violations, Complainant's attempt to expand the applicable look-back period beyond its stated policy creates an "unworkable framework"

18. Four out of the five underlying violations, which were part of OSHA Inspection No. 309785459, became final orders in April of 2007, after a partial settlement. (Ex. C-28). The remaining violation, which was part of OSHA Inspection No. 311001234, became a final order on November 10, 2008. (Ex. C-26).

19. This section deals primarily with the question of whether Respondent is a successor-in-interest to GWE. Because the Court finds that Respondent is not properly characterized as a successor, it will not address the substantive argument of whether the present and underlying citations are substantially similar.

wherein citations that were decades old could serve as the basis for a repeat citation.

According to the Commission, "A violation is properly classified as repeated under section 17(a) of the Act if, at the time of the alleged repeated violation, there was a Commission final order against the same employer for a substantially similar violation." *Hackensack Steel Corp.*, 20 BNA OSHC 1387 (No. 97-0755, 2003) (citing *Jersey Steel Erectors*, 16 BNA OSHC 1162, 1167–68 (No. 90-1307, 1993), *aff'd without published opinion*, 19 F.3d 643 (3rd Cir. 1994)). "[T]he 'time between violations does not bear on whether a violation is repeated." *Id.* (citing *Jersey Steel*, 16 BNA OSHC at 1168).

Just as Respondent argues here, the employer in *Hackensack* argued that the then-current version of the Field Operations Manual (the Field Inspection Reference Manual) limited repeat citations to a period of three years after the issuance of the original citation. *Id.* Citing to previous decisions, the Commission noted that the FOM and the FIRM "are only [] guide[s] for OSHA personnel to promote efficiency and uniformity, are not binding on OSHA or the Commission, and do not create any substantive rights for employers." *Id.* (citations omitted). Accordingly, the Commission upheld the repeat characterization.

The Court finds that the enforcement policy of Complainant does not preclude the issuance of a repeat citation after more than five years. As noted by the Commission in *Hackensack*, such a policy is only a guide and does not confer rights upon employers. While Respondent's concern regarding an ever-expanding look-back period is legitimate, the citations in this case all occurred within a six-year period, only slightly longer than the stated policy of Complainant. Because this Court is bound to follow the precedent set by the Commission, the Court rejects Respondent's argument to vacate the repeat characterization on this basis.

Respondent's second argument, however, is far more persuasive. The citations that form

the basis of the repeat violations in this case were issued to GWE, which owned the Wynnewood Refinery until it was purchased by CVR Energy, Inc. in 2011. (Tr. 1760). Respondent contends that it should not be held liable for repeat violations that are premised on violations committed by the previous owner of Wynnewood Refinery. Complainant argues that Respondent should be characterized as a successor-in-interest to GWE and therefore liable as a repeat offender under the Act.

The Commission addressed the issue of successor liability, albeit in a slightly different context, in *Sharon & Walter Constr., Inc.*, 23 BNA OSHC 1286 (No. 00-1402, 2010). In that case, OSHA cited Sharon & Walter Construction, Inc. ("S&W II") for repeat violations of the construction fall protection standards. The underlying citations were issued to Walter Jensen d/b/a S&W Construction ("S&W I"). S&W I filed for bankruptcy and ceased operations approximately six weeks prior to the formation of S&W II. Walter Jensen was the sole proprietor of S&W I, as well as the president, director, and solitary shareholder of S&W II. Both companies were based in New Hampshire, and both "provided essentially the same construction services . . . ." *Id.*

The starting point of the Commission's analysis is the language of Section 17(a) of the Act, which states, "Any employer who . . . repeatedly violates . . . the Act . . . may be assessed a civil penalty of not more than $70,000 for each violation." 29 U.S.C. § 666(a). Applying a plain meaning analysis to the statute, the Commission found that there is "no language in the statute that would compel restricting attribution of an employer's violation history to the identical legal entity, nor do we find anything that would preclude attribution of a predecessor's citation history to a successor." *Sharon & Walter*, 23 BNA OSHC 1286 at *7. In other words, the statute is ambiguous in this context.

The Commission resolved the ambiguity by looking at the purpose of Section 17(a) in the context of the Act as a whole. *Id.* at 8 (citing *Gade v. Nat'l Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 99–100 (1992)). The Supreme Court has held that the Act "is to be liberally construed to effectuate the congressional purpose", *Whirlpool Corp. v. Marshall*, 445 U.S. 1, 10–11 (1990), which is to "assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources." 29 U.S.C. § 651(b). Thus, to carry out this purpose, the "enforcement framework creates a deterrent to an employer that might otherwise ignore potential hazards . . . and an *enhanced* deterrent against subsequent infractions 'once alerted by a citation and final order.'" *Sharon & Walter*, 23 BNA OSHC 1286 at *8 (quoting *Dun-Par Eng'd Form Co. v. Marshall*, 676 F.2d 1333, 1337 (10th Cir. 1982)).

Given its determination that the threat of a repeat characterization is designed as a deterrent to future bad behavior, the Commission held that "section 17(a) is most reasonably read to permit, *in appropriate circumstances*, the Secretary's application of a "repeat" characterization to cases where the employer has *altered its legal identity* from that of the predecessor employer whose citation history forms the basis of that characterization." *Id.* at *8 (emphasis added). This reading stems from the Commission's concern that an overly restrictive application of Section 17(a) "could 'creat[e] an economic incentive to avoid a penalty by going out of business and, perhaps, then reincorporating under a different name.'" *Id.* (quoting *Joel Yandell*, 18 BNA OSHC 1623, 1625 (No. 94-3080, 1999) (internal citations omitted)). To the extent that such a possibility could undermine the purpose of the repeat characterization under 17(a), the Commission found it appropriate to "allow attribution of a predecessor's citation history to a successor in appropriate circumstances." *Id.*

At the urging of the Secretary, and after its own review of relevant case law, the

Commission determined that the substantial continuity test used by the National Labor Relations Board and the courts "promotes the Act's goals of ensuring workplace health and safety by preserving the deterrent effect of a repeat characterization, and is appropriately adapted to a determination of the requisite nexus between a successor and predecessor's violation history for purposes of ascribing a repeat characterization under the OSH Act." *Id.* at *9; *see also Nat'l Labor Relations Bd. v. Burns*, 406 U.S. 272, 280–81 (1972). The Commission found that "this test enables us to fully assess the nature and extent of the distinctions and similarities between a successor and a predecessor based on criteria that are well-suited to the OSH Act and the facts of each case before us." *Id.* (citing *Howard Johnson Co. Inc. v. Detroit Local Jt. Bd., Hotel and Rest. Employees*, 417 U.S. 249, 263, n.9 (1974) (noting successorship cases require an analysis based on "the facts of each case and the particular legal obligation which is at issue")). In particular, the Commission noted that the substantial continuity test focuses on factors that fall into three primary categories: (1) nature of the business, (2) jobs and working conditions, and (3) personnel.

Applying the foregoing test to the facts of *Sharon & Walter*, the Commission found that S&W II was a successor to S&W I. The nature of the business—roofing and general construction—did not change. In particular, the Commission noted that both entities served customers in the same geographic area, and occupied the same office space and use the same telephone number. Further, a check drawn on an account belonging to S&W I was used to pay a debt of S&W II, and S&W II continued performance on a contract entered into by S&W I. *Id.* at *10. Because the employing entity and the nature of the business remained "essentially unchanged", the jobs and working conditions also remained the same—both companies provided the same general construction services, which required the same tools and exposed employees to

the same hazards. *Id.*

As to the third category—personnel—the Commission noted that "continuity of personnel *who specifically control decisions related to safety and health* is certainly relevant in the context of the Act because the decisions of such personnel relate directly to the extent to which the employer complies with the statute's requirements." *Id.* (emphasis added). In that regard, finding that S&W II was a successor to S&W I was a fairly perfunctory exercise. As noted above, Walter Jensen was the sole proprietor of S&W I, and the president, sole shareholder, and supervisor of S&W II. Accordingly, "Jensen's control over decision-making in both companies, including that related to employee safety and health, weighs heavily in favor of attributing S&W I's citation history to S&W II." *Id.* Notably, however, the Commission placed little to no weight on the continuity of nonsupervisory employees, "because those employees are not responsible for OSH Act compliance and would not have supervised its implementation." *Id.*

In this case, there is no real dispute as to the first two categories of factors.[20] It is clear that the Wynnewood refinery is still in the business of refining oil, produces similar products, and services similar customers. (Tr. 1735–56; Ex. C-16). Likewise, as testified to by many of Respondent's employees, the jobs and working conditions have remained essentially unchanged since Respondent's purchase of the refinery from GWE. (Tr. 142). Thus, the remaining factor to consider is the continuity of personnel who control the decisions related to safety and health. The Court finds that this factor, more than the others, is particularly relevant to the issue of whether a successor should be held liable for the acts of its predecessor.[21]

20. Respondent contends that Complainant failed to establish continuity in operations and working conditions due to the implementation of more formal policies and procedures after the acquisition. These changes are more germane to the issue of continuity in personnel responsible for decision-making. While the implementation of more formal policies and procedures, especially in the arena of safety and health, may have an impact on the manner in which a job is carried out, the basic nature of the job and the conditions of the refinery did not change.

21. This sentiment was expressed by the Commission in *Sharon & Walter*, when it held that an individual's common control over decision-making in both companies "weighs heavily" in favor of finding successor liability.

In 2007, when the original, underlying citations were issued, GWE was the owner of the Wynnewood Refinery. Nearly all of Respondent's current and former employees testified that, upon Wynnewood's acquisition by Respondent in December 2011, the new company placed significant emphasis on improving safety and health and proper implementation of PSM. (Tr. 234, 674–75, 749, 1612). This included changes to policies, procedures, and the overall culture of safety at Wynnewood Refinery. Some of the other changes noted by Respondent included: (1) nearly doubling the number of safety personnel at the refinery, including four new assistant operations supervisors, who were responsible for procedure development, compliance, PSM, and occupational safety; (2) new, high-level executives, including the Executive Vice President for Operations and the Vice President of Environmental Health and Safety, were more involved in the day-to-day operations, and were present on a frequent basis to oversee the transition from GWE; (3) a $130 million upgrade to equipment; and (4) more formalized training programs and a renewed emphasis on "management of change" (MOC) procedures. (Tr. 1701–1703).

In support of its argument that there was continuity of personnel sufficient to find successor liability, Complainant points to the following: (1) Dick Jackson, Respondent's current PSM Manager, and Darren Rains, Respondent's former operations manager,[22] were members of management before and after the acquisition; and (2) key personnel and managers, such as Koesler, Howard, Underwood, and Walker, who were present at the time of the underlying violations were still working in Zone 2 at the time of the accident. Although these individuals were responsible for implementing safety and health policies, and may have had input into them, there was no indication that these individuals were ultimately responsible for making the decision to change safety and health procedures, PSM policies, and organizational culture. *See*

Sharon & Walter, 23 BNA OSHC 1286 at *10.

22. Mr. Rains is now the Vice President and General Manager of Respondent's Coffeyville refinery.

Sharon & Walter, 23 BNA OSHC 1286 at *10 (focusing "continuity of personnel" analysis on "who specifically controls decisions related to safety and health").

According to Darin Rains, however, there were significant changes in the management of Wynnewood. (Tr. 1703). Specifically, Rains noted that GWE management was less involved in day-to-day operations, whereas CVR's corporate management, inclusive of its Vice President of Safety, Health, and Environment, Chris Swanberg, and Executive Vice President of Operations, Robert Haugen, were actively involved in daily operations. This, in and of itself, is a strong fact in favor of Respondent—new corporate management responsible for ultimate decision-making in the areas of operations and safety and health. It should also be noted that neither of these men, nor any of the other CVR managers, worked for GWE.

In *Sharon & Walter*, the Commission was concerned with applying section 17(a) in an overly restrictive manner such that companies could evade higher penalties by merely changing form, but it is equally problematic to be over-inclusive. Respondent notes that successor liability has not previously been imposed under circumstances such as these. In *Sharon & Walter*, the Commission was careful to note that successor liability for repeat violations should only be applied in "appropriate circumstances" and proceeded to do so based on a unique set of facts. The primary concern was manipulation—the Commission repeatedly discussed the possibility that an employer could avoid liability by "changing its legal identity for each new project" or "by going out of business and . . . reincorporating under a different name." *Sharon & Walter*, 23 BNA OSHC 1286 at *8. When viewed through that lens, the scope of the Commission's interpretation of section 17(a) becomes clearer: repeat violations based on successor liability would be appropriate when the cited employer "*altered its legal identity* from that of the predecessor employer . . . ." *Id.* (emphasis added). In other words, the Commission sought to

prevent manipulation of the system, not to expand liability.

The purpose of a repeat violation is to deter an employer from committing violations by drastically increasing the penalty for subsequent, substantially similar violations. *Dun-Par*, 676 F.2d at 1337. This implies that the employer was responsible for the underlying violation. While higher penalties are a deterrent, irrespective of the basis therefor, there must be some justification for increasing the penalties in the first instance. Respondent did not commit the underlying violations in this case. Drastically increasing the penalty for a violation that occurred on someone else's watch does not deter future misconduct because there was no past misconduct to deter.

Complainant seeks to circumvent this problem by arguing that CVR-WR was on notice of the underlying violations when it acquired Wynnewood from GWE-WR and is therefore responsible for any obligations stemming from them. Without citing case law, Complainant attempts to analogize economic obligations acquired in the purchase of a business and OSHA citations that were incurred by the former owner, stating:

> If the new employer has notice of the obligation, then the price paid for the business will reflect that knowledge and it is fair to impose the obligation on the new employer. In the OSHA context, notice shows culpability on the part of the new employer and supports imposition of a higher repeat penalty because the new employer had notice of the violative condition but failed to prevent its occurrence."

Compl't Br. at 28. First, a prior OSHA citation, which has become a final order of the Commission, is not an outstanding obligation. Second, notice does not, on its own, equal culpability as argued by Complainant.

The importance of notice can be seen in the distinction between a willful violation and a repeat violation. A willful violation is punishment for what an employer *knew* before it committed a violation. *See, e.g.*, *Sharon & Walter*, 23 BNA OSHC 1286 at *5 (citing *Kaspar*

Wire Works, Inc., 18 BNA OSHC 2178, 2181 (No. 90-2775, 2000) ("The hallmark of a willful violation is the employer's state of mind at the time of the violation-an 'intentional, knowing, or voluntary disregard for the requirements of the Act or … plain indifference to employee safety.'") (citations omitted)). A repeat violation is punishment for what an employer *did* (or did not do) in the past. *See Dun-Par Eng'd Form Co. v. Marshall*, 676 F.2d 1333, 1337 (10th Cir. 1982) ("Once an employer has been cited for an infraction under a standard, this tends to apprise the employer of the requirements of the standard and to alert him that special attention may be required to prevent future violations of the standard."). Thus, in the context of successor liability, the Court must be mindful of *who* we are holding responsible and *what* we are holding them responsible for.

The threat of increased penalties for subsequent violations only makes sense if the same employer was responsible for the underlying past violation. In the case of *Sharon & Walter*, though the "employer" was different in name, the controlling entity (Walter Jensen) did not change. What Complainant proposes—holding CVR-WR, a separate and distinct purchasing entity, responsible for what GWE-WR did in the past—expands repeat liability beyond what the Commission envisioned when it decided *Sharon & Walter*. Based on the facts and law discussed above, the Court holds that the citations issued to Respondent were improperly characterized as repeat.

C. The PSM Inspection – Docket No. 13-0791 – Inspection No. 663538

i. Applicable Law

To prove a violation of an OSHA standard, Complainant must prove, by a preponderance of the evidence, that: (1) the cited standard applied to the facts; (2) the employer failed to comply with the terms of the cited standard; (3) employees were exposed or had access to the

hazard covered by the standard, and (4) the employer had actual or constructive knowledge of the violative condition (*i.e.*, the employer knew, or with the exercise of reasonable diligence could have known). *Atlantic Battery Co.*, 16 BNA OSHC 2131 (No. 90-1747, 1994).

A violation is "serious" if there was a substantial probability that death or serious physical harm could have resulted from the violative condition. 29 U.S.C. § 666(k). Complainant need not show that there was a substantial probability that an accident would actually occur; he need only show that if an accident occurred, serious physical harm could result. *Phelps Dodge Corp. v. OSHRC*, 725 F.2d 1237, 1240 (9th Cir. 1984). If the possible injury addressed by a regulation is death or serious physical harm, a violation of the regulation is serious. *Mosser Construction*, 23 BNA OSHC 1044 (No. 08-0631, 2010); *Dec-Tam Corp*., 15 BNA OSHC 2072 (No. 88-0523, 1993).

ii. Citation 1, Item 1

> Complainant alleged a serious violation of the Act in Citation 1, Item 1 as follows:
>
> 29 CFR 1910.119(d)(3)(i)(F): Process safety information pertaining to the equipment did not include the design codes and standards employed:
>
> The employer does not ensure process safety information pertaining to the equipment includes design codes and standards employed. In the Zone2/CAT Wickes Boiler Area the employer does not ensure process safety information pertaining to the equipment included the design codes and standards employed such as the National Fire Protection Association (NFPA) Standard 85, Boiler and Combustion Systems Hazard Code, and ASME CSD-1, sections CF-210 & CF-330, and ASME Section VI for the Wickes boiler burner and gas train exposing employees to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gases.

The cited standard provides:

> *Information pertaining to the equipment in the process.* (i) Information pertaining to the equipment in the process shall include . . . [d]esign codes and standards employed . . . .

29 C.F.R. § 1910.119(d)(3)(i)(F).

Complainant alleges that Respondent failed to include design codes and standards in the process safety information (PSI) for the Wickes boiler and the associated gas train. In particular, Complainant notes that it requested such information during the inspection and that none was provided. Further, Howard, the former Zone 2 Supervisor, stated that he did not know what design codes and standards were employed with respect to the Wickes and gas train. (Tr. 703). Respondent contends that Complainant failed to establish that the design codes cited were applicable to the Wickes and gas train, noting NFPA 85 has a retroactivity provision that excludes equipment "that existed or were approved for construction or installation prior to the effective date of the code." (Ex. R-130 at 85-11). Respondent also notes the boiler passed inspection by the Oklahoma Department of Labor and was approved for operation one month prior to the explosion.

As repeatedly noted by Respondent, and echoed by Complainant's expert, Johnstone, this is a performance standard. (Tr. 873, 1117). As such, Respondent is entitled to elect which design codes and standards they wish to employ with respect to a particular piece of equipment. (*Id.*). Nevertheless, Respondent must still make a choice as to which standards or codes to apply. Herein lies the problem. Regardless of whether design codes and standards identified by Complainant in this citation item are specifically applicable to the Wickes and its gas train, Respondent failed to identify *any* design codes or standards in their PSI. (Tr. 703, 874, 1118). Further, according to Johnstone, Respondent's P&IDs for the Wickes did not comply with any known design code or standard. (Tr. 874–75). Although the Wickes may have passed inspection with the State of Oklahoma—which may or may not have indicated compliance with certain applicable design codes or standards—this does not excuse Respondent from its obligations to

document that information under the cited standard. Accordingly, the Court finds that Respondent violated the terms of the standard.

The Court also finds that Respondent knew or could have known of the violative condition. For example, in 2007 the refinery conducted an investigation of an explosion at the H-4 boiler. (Ex. C-32). That boiler, similar to the Wickes, was designed and installed prior to the purported grandfathering date of NFPA 85. (Ex. C-32 at 4). Nonetheless, the investigation report noted that consideration should be given to the requirements of NFPA 85 with respect to the operation sequence of the H-4 boiler. (*Id.* at 13). This incident highlighted the importance of applying consensus design codes and standards to a PSM-covered process and should have placed Respondent on notice that such information would be equally applicable to the other boilers in its facility.

Further, the H-4 incident illustrated the impact of failing to utilize and apply such information to PSM-covered processes; namely, that without having proper PSI, employees are exposed to explosion and fire hazards. (Tr. 876). According to CSHO Hartung, "When you define the design code and standard, that sets forth the standard to which all engineering, design, installation and use and maintenance of that equipment will be conducted as it's in the process, as it's installed, again as it's engineered and maintained." (Tr. 1119). The purpose of the cited standard is to "enable the employer and the employees involved in operating the process to identify and understand the hazards posed by those processes involving highly hazardous chemicals." 29 C.F.R. § 1910.119(d). If no standard or code is defined, there is no basis upon which to determine whether a particular aspect of the process "is appropriate for the operation and that it meets appropriate standards and codes . . . ." 57 Fed. Reg. at 6374. Without such a basis, the ability to identify and understand the hazards of a process is reduced, thereby exposing

employees to potential injury from explosion or fire.[23] As indicated by the incident in this case, as well as the incidents pre-dating the Wickes explosion, exposure to fire and explosion hazards can cause serious injury and/or death.

Based on the foregoing, the Court finds that Respondent violated the standard and that the violation was serious. Accordingly, Citation 1, Item 1 is AFFIRMED as a serious violation of the Act.

iii. Citation 1, Items 2(a), (b), and (c)

Complainant alleged three serious violations of the Act in Citation 1, Item 2, subparts (a), (b), and (c). Given their similarity, all three items will be addressed together. Complainant's allegations with respect to Item 2(a) are as follows:

> 29 CFR 1910.119(e)(3)(i): The process hazard analysis did not address the hazards of the process:
>
> The employer does not ensure the process hazard analysis addresses the hazards of the process. In the Zone2/CAT Wickes Boiler Area the employer did not ensure the 1992 and 2008 Process Hazard Analyses addressed the hazards of the process where employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses for hazards of the process such as but not limited to:
>
> a) Failure to purge or adequately purge the boiler firebox prior to lighting the burner pilot.
> b) Loss of burner pilot during the initial start-up of the boiler burner.
> c) Loss of burner flame.
> d) High or prolonged fuel gas flow to the burner without a pilot or flame present.
> e) Failure of the burner to light.

The cited standard provides that "[t]he process hazard analysis shall address . . . [t]he hazards of the process. 29 C.F.R. § 1910.119(e)(3)(i).

Complainant's allegations regarding Item 2(b) are as follows:

23. The Court also finds the Oklahoma State boiler inspection is not sufficient to establish *Respondent's* compliance with *its* obligation to compile PSI. As Johnstone testified, the state inspection report did not indicate whether the design complied with any specific applicable requirements. (Tr. 1016).

> 29 CFR 1910.119(e)(3)(iii): The process hazard analysis did not address the engineering and administrative controls applicable to the hazards and their interrelationship, such as, appropriate detection methodologies to provide early warning of releases:
>
> The employer does not ensure the process hazard analysis addresses the engineering and administrative controls applicable to the hazards and their interrelationship, such as, appropriate detection methodologies to provide early warning of releases. In the Zone2/CAT Wickes Boiler Area the employer did not ensure the 1992 and 2008 Process Hazard Analyses addressed the engineering and administrative controls applicable to the hazards and their interrelationships such as the appropriate methodologies to provide early warning where employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses for occurrences such as but not limited to:
>
> a) Failure to purge or adequately purge the boiler firebox prior to lighting the burner pilot.
> b) Loss of burner pilot during the initial start-up of the boiler burner.
> c) Loss of burner flame.
> d) High or prolonged fuel gas flow to the burner without a pilot or flame present.
> e) Failure of the burner to light.

The cited standard provides:

> The process hazard analysis shall address . . . [e]ngineering and administrative controls applicable to the hazards and their interrelationships such as appropriate methodologies to provide early warning of releases. (Acceptable detection methods might include process monitoring and control instrumentation with alarms and detection hardware such as hydrocarbon sensors.)

29 C.F.R. § 1910.119(e)(3)(iii).

> Complainant's allegations regarding Item 2(c) are as follows:
>
> 29 CFR 1910.119(e)(3)(iv): The process hazard analysis did not address the consequences of failure of engineering and administrative controls:
>
> The employer does not ensure the process hazard analysis addresses the consequences of failure of engineering and administrative controls. In the Zone2/CAT Wickes Boiler Area the employer did not ensure the 1992 and 2008 Process Hazard Analyses addressed the consequences of failure of engineering and administrative controls where employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses for occurrences such as but not limited to:
>
> a) Failure to purge or adequately purge the boiler firebox prior to lighting the burner pilot.
> b) Loss of burner pilot during the initial start-up of the boiler burner.

c) Loss of burner flame.
d) High or prolonged fuel gas flow to the burner without a pilot or flame present.
e) Failure of the burner to light.

The cited standard provides that "[t]he process hazard analysis shall address . . . [c]onsequences of failure of engineering and administrative controls . . . ." 29 C.F.R. § 1910.119(e)(3)(iv).

Respondent's primary argument with respect to the foregoing citation is that the PSM standard does not apply, which the Court disposed of earlier in Section IV.A, *supra*. Its secondary argument is that, insofar as the Wickes is subject to PSM because of its connection to other covered processes, Complainant was required to prove that the PHAs for the Alky and the FCCU failed to contain the information alleged to be missing from the Wickes PHA. *Resp't Br.* at 53. This argument is undercut by the fact that Respondent performed a PHA on the Wickes on two separate occasions—initially in 1992 and a revalidation in 2008.[24] Insofar as it performed PHAs on the Wickes, Respondent effectively treated it as a part of a process subject to the PSM standard.

A review of the disputed PHAs reveal that neither contains an analysis of the hazards identified in the foregoing citation items. (Ex. C-18, C-19). Paul Howard, who participated in both the initial analysis and subsequent revalidation, testified that both PHAs should have identified hazards, the controls, and consequences of failure, but failed to do so. (Tr. 720–23). The Court agrees and finds that the terms of the standard were violated.

The Court also finds that Respondent knew or could have known of the hazard. The PHAs, which were performed under the ownership of GWE-WR, were available to Respondent and its employees, and the 2008 PHA was effective for a period of five years. *See* 29 C.F.R. § 1910.119(e)(6). Respondent could have known, with the exercise of reasonable diligence, that the PHA for the Wickes was deficient. These deficiencies, especially as they relate to the

24. These PHAs occurred when the refinery was owned by Gary Williams Energy.

accident that occurred in this case, clearly exposed Respondent's employees to fire and explosion hazards that were otherwise left unexplained and un-analyzed in the Wickes PHA. Without a complete understanding of the hazards associated with a process, the impact of administrative and engineering controls, and the consequences of failure of those controls, employees were exposed to hazards that were potentially unknown and, if known, may not have been properly addressed with effective engineering and administrative controls. As noted above, fire and explosion hazards can lead to serious physical injuries, including (as happened in this case) death.

The Court finds that Complainant established a serious violation of the standards cited above. Accordingly, Citation 1, Items 2(a), (b), and (c) are AFFIRMED as serious violations of the Act.

iv. Citation 1, Items 3(a) and (b)

Complainant alleged two serious violations of the Act in Citation 1, Item 3, subparts (a) and (b). Given their similarity, both items will be addressed together. Complainant's allegations with respect to Item 3(a) are as follows:

> 29 CFR 1910.119(f)(1)(i)(A): The employer's written operating procedures covering the steps for each operating phase did not address initial startup.
>
> The employer's written operating procedures covering the steps for each operating phase do not address initial startup. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure the written operating procedures covered steps for each operating phase including initial startup such as but not limited to:
>
> a) The length of time in which the gas can flow to the boiler burner without the burner lighting.
> b) A description of how much the main gas valve can be opened or what the maximum pressure should/can be at the inlet to the burner.
> c) The length of time the firebox is to be purged of gas prior to or after a failed burner lighting attempt.
> d) The maximum gas pressure at the inlet to the gas train on the boiler burner.
> e) The use of natural/purchased gas versus refinery gas.

> Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard states, "The employer shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements: . . . Initial Startup." 29 C.F.R. § 1910.119(f)(1)(i)(A).

> Complainant's allegations with respect to Item 3(b) are as follows:
>
> 29 CFR 1910.119(f)(3): The operating procedures were not reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process, chemicals, technology, and equipment, or changes to facilities:
>
> The employer does not ensure operating procedures are reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, or changes to facilities. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure written operating procedures were reviewed as often as necessary to assure that they reflected current operating practice. Identified errors include but not limited to:
>
> a) The amount of time the firebox is purged prior to attempting to light the pilot or after a failed burner lighting attempt.
> b) The level the gas control valve bypass is to be opened.
> c) The time the gas control valve bypass valve is allowed to open before the burner lights.
>
> Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard states, "The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to facilities. The employer shall certify annually that these operating procedures are current and accurate." 29 C.F.R. § 1910.119(f)(3).

In response to Complainant's allegations, Respondent contends that: (1) it was not feasible to provide precise instructions on how far or how long to open the gas bypass valve because the fuel composition changes from hour to hour; (2) the instructions provided to operators during formal and on-the-job training were consistent (e.g., "no more than a spoke", "no longer than a minute") and that the operators failed to comply; and (3) the remaining deficiencies identified by Complainant are irrelevant to the boiler startup.

As to providing precise instructions regarding the bypass valve, the Court disagrees that doing so would be infeasible. According to Respondent's Formal Incident Report, an earlier iteration of the standard operating procedures (SOP) for lighting the Wickes included fairly precise instructions for opening the bypass valve, whereas the most recent version did not.[25] (Ex. C-30 at 13). Notwithstanding its obligation under a 2008 settlement agreement to update its SOPs, Respondent failed to include all of the earlier startup steps in its revised SOP. (*Id.* at 7). Thus, Respondent's own investigation revealed as a root cause of the explosion that the "SOP Did Not Include Critical Safety Information from Earlier Startup Procedures". (*Id.*). In addition, any claim that providing precise instructions was infeasible is belied by the same report, wherein the investigation team "was able to identify other similar equipment SOPs in Zone 2 that had more specific instructions on how long a lighting procedure was to be performed until aborting a task, and contained specific hazard warnings about the consequence of not aborting the task if light-off failed in a short time period." (Ex. C-30 at 8). Further, the fact that Respondent's employees may have received training consistent with the earlier procedure does not obviate the need to include such steps in the updated, written procedures. In fact, the effect of Respondent's

25. Specifically, the previous SOPs indicated that the valve should be opened slowly, 1/16 of an inch at a time, and no more than one spoke. (Ex. C-30 at Exhibit 42). It also indicated that fuel gas was not to exceed 1,000 MCSFD and that if ignition was not achieved to close the valve and restart the lighting sequence. (*Id.*). The "current" SOPs only instruct an operator to "LIGHT main burner by slowly opening 3-[inch] bypass valve around 20FC702 until burner lights." (*Id.* at Exhibit 44).

failure to do so is reflected in the testimony of the witnesses, each of whom gave a slightly different description of how much to open the valve and for how long. (Tr. 116–17, 215, 335, 353, 453, 518). Accordingly, the Court rejects Respondent's argument as to infeasibility of including more precise instructions on the bypass valve and finds a violation on this basis.

As to the remaining deficiencies, first, it is not clear that the gas pressure at the bypass valve is irrelevant as Respondent suggests. Merely because the pressure valve is not in an operator's line of sight does not render that indicator unimportant. According to Respondent's Incident Report, "Normal operation data indicated that a 3–5 psig burner pressure is in the range to support normal operation of the boiler . . . . This data also shows that the burner pressure should have been between 1.4 to 1.8 psig." (Ex. C-30 at 12). The Report indicates that "high burner pressure resulted in a fuel velocity that far exceeded the condition necessary to light the burner." (*Id.*). To the extent that data available to Respondent revealed a connection between fuel pressure and the ability to light the burner, Respondent should not be absolved of including that information as a step in the lighting process merely because the operator turning the bypass valve does not have pressure information in his line of sight.

Second, the Court agrees with Respondent that the SOPs for the Wickes indicate that the firebox should be purged for 30 minutes prior to lighting the pilot and that such would be the case for starting the boiler regardless of whether it is the initial lighting attempt or an attempt to light the boiler after a failed attempt. (Ex. C-30 at Exhibit 44). However, the problem with the procedures in place at the time of the explosion was that they did not account for a failed lighting attempt at any step in the process.[26] (*Id.*). Thus, there was no indication, in the SOPs at least, as to what the next step in the process would be if the lighting attempt failed.

26. By comparison, the previous iteration of the SOP indicated when a lighting attempt should be aborted and what steps should be taken in the event of a failed lighting attempt. (Ex. C-30 at Exhibit 43).

Third, Respondent's argument that the process would be the same irrespective of whether the Wickes was being lit by natural gas or refinery fuel gas is equally unavailing. Respondent contends that there are only slight differences between the flame speed and flammable range of natural and refinery fuel gas and that such differences were not significant enough to affect the boiler's startup procedures. Further, Respondent contends that due to the variability of the hydrogen content of RFG, it is infeasible for Respondent to create different SOPs for every potential iteration of fuel gas. According to Respondent's Incident Report:

> Differences in the flame speed and flammable range of natural gas versus hydrogen coupled with the high velocity of fuel and air flowing through the burner ring would prevent the fuel/air mixture from being lit by the pilot. Natural gas has a flammable range of 5% to 15% and a flame speed of approximately 1.0 feet/sec. Hydrogen has a flammable range of 4% to 75% and a flame speed of approximately 10 feet/sec. The velocity of the fuel moving through the burner tip along with the air flow is crucial to enable the fuel/air mixture to ignite with a stable flame at the burner tip. The lower flame speed of natural gas and the higher than normal velocity of both the fuel and air prevented the mixture from contacting the pilot flame . . . .

(Ex. C-30 at 5). While it may be infeasible to account for every iteration of fuel gas that comes through the RFG pipeline, the Court finds that is not the case for pure natural gas. According to the testimony of Respondent's employees, the Wickes runs on natural gas alone only during turnaround activities, during which time the processes which feed the RFG pipeline are offline. (Tr. 553–54). Given the investigative team's finding that the lower flame speed of the natural gas contributed to the failed lighting, and in consideration of the fact that lighting the Wickes with natural gas is a unique and seldom-used process, the Court finds that Respondent's SOPs should account for it to avoid accidents such as the one that occurred in this instance.

In addition to the foregoing, which addresses 1910.119(f)(1), the Court also finds that Respondent failed to review the SOPs as often as necessary to assure they reflect current operating practice. *See* 29 C.F.R. § 1910.119(f)(3). According to Underwood and Stephenson,

both unit supervisors for Respondent, the purpose of the review of SOPs is to make sure they are accurate and address the hazards employees are exposed to, set forth applicable operating limits, consequences of deviation, and steps to correct deviations. (Tr. 576, 651–52). Underwood stated that he personally reviewed and approved numerous versions of the SOP for lighting the Wickes prior to the explosion and admitted that the steps discussed above should have been included in the SOPs that he reviewed and approved. (Tr. 580–82, 679–80). This not only establishes Respondent's failure to comply with 1910.119(f)(3) but also illustrates that Respondent knew or, with the exercise of reasonable diligence, could have known of the deficiencies in its SOPs.

The Court also finds that Respondent's failure to have clear, complete, and up-to-date procedures exposed its employees to fire and explosion hazards and that such exposure had the potential to cause serious injury and/or death. (Tr. 1144). Accordingly, Complainant established its *prima facie* case.

Respondent contends that the foregoing failures were not the product of insufficient procedures, but were instead the result of unpreventable employee misconduct. In particular, Respondent notes that operators disregarded their training and opened the valve too far (approximately a spoke-and-a-half) and for too long (approximately 5 minutes). (Ex. R-110 at 9). Respondent also notes that Willson, the senior operator supervising the lighting process, instructed Mr. Mann, who was operating the bypass valve, to keep the valve open even though he was instructed to close it by Koesler.

In order to prevail on the affirmative defense of unpreventable employee misconduct, Respondent must prove that: (1) it has established work rules designed to prevent the violation, (2) it has adequately communicated those rules to its employees, (3) it has taken steps to discover violations, and (4) it has effectively enforced the rules when violations have been discovered.

W.G. Yates & Sons, 459 F.3d 604, 609 (5th Cir. 2006). First, as noted above, Respondent did not have established rules designed to prevent the violation—there was no specification in the SOP as to how long the valve should remain open or how much it should be opened. This, in and of itself, is sufficient to reject Respondent's defense. *See Stuttgart Machine Works, Inc.*, 9 BNA OSHC 1366 (No. 77-3021, 1981) ("Respondent's inability to unambiguously state the content of its rule casts serious doubt on whether Respondent effectively communicated any rule to its employees."). Without specific outer limits on the process, there is no sense in which an employee can be said to comply. One of the witnesses testified that the procedure for lighting was like a dance, of sorts. (Tr. 353). Second, and relatedly, Respondent's own Incident Report indicated that, though the operators seemed to generally understand how to safely light the Wickes, the knowledge demonstration tests revealed "that there were no specific questions regarding the lighting the burner of the Wickes boiler as part of the test." (Ex. C-30 at 13). This indicates a failure to adequately communicate the rules to employees and is exemplified by the different characterizations each employee gave regarding how much to open the valve and for how long.

While the Incident Report findings indicate that the valve was open far too wide for far too long, this was not the sole root cause identified nor, in light of the deficient procedures identified above, was it the product of unpreventable employee misconduct. (Ex. C-30). Lighting the Wickes, as illustrated by the history of accidents associated with it, clearly requires attention to detail, whether that is being cognizant of what fraction of a spoke one is supposed to turn the bypass valve or tracking the amount of fuel flowing into the firebox. Tracking those all-too-important details is made all the more difficult by the fact that it is done infrequently—according to most witnesses, maybe once per year for the annual boiler inspection. Given that set

of circumstances, it was incumbent upon Respondent to ensure, as the law requires, a set of procedures that accounted for hazards that Respondent knew existed. That the accident itself may have been caused, in part, by the misguided actions of an employee does not absolve Respondent of liability for having insufficient procedures. *See Western Waterproofing Co., Inc.*, 7 BNA OSHC 1625 (No. 1087, 1979) ("[A]s a general rule, whether an employer is in violation of the Act does not depend on the cause of a particular accident."); *Propellex Corp.*, 18 BNA OSHC 1677 (No. 96-0265, 1999) (finding judge mistakenly focused on cause of accident in determining whether a violation occurred). The responsibility of having adequate procedures is Respondent's. *See Brown & Root, Inc.*, 7 BNA OSHC 2074 (No. 16162, 1979) ("The Act . . . places final responsibility for compliance on the employer. An employer cannot shift this responsibility to an employee by a work rule that is not effectively communicated and enforced."). The failure to have adequate procedures would be a violation irrespective of whether an accident occurred, especially in light of Respondent's history of "hard starts".

Based on the foregoing, the Court finds that Complainant established a violation of the cited standards and that the violation was serious. Accordingly, Citation 1, Items 3(a) and (b) are AFFIRMED as serious violations of the Act.

v. Citation 1, Item 4

Complainant alleged a serious violation of the Act in Citation 1, Item 4 as follows:

> 29 CFR 1910.119(l)(3): Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process were not informed of, and trained in, the change prior to start-up of the process or affected part of the process:
>
> The employer does not ensure employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process are informed of, and trained in, the change prior to start-up of the process or affected part of the process. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure employees whose job tasks were affected by a change in the process were informed of an trained on the changes prior to startup of the

> process. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses for process changes such as, but not limited to:
>
> a) Standard Operating Procedures covering the start-up of the Wickes Boiler burner after the 2008 Wickes Boiler Explosion.
> b) Use of temporary power to power the Wickes boiler during the shutdown/turnaround.

The cited standard provides:

> Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process.

29 C.F.R. § 1910.119(l)(3).

Complainant alleges that Respondent violated the above-referenced standard by failing to inform and train employees regarding (1) changes made to the SOP for lighting the Wickes after the 2008 hard start; and (2) the change to temporary power on the day of the explosion. Respondent contends that Complainant's allegations as to the changes made to the SOP in 2008 are time-barred. As regards the use of temporary power, Respondent submits that all affected employees were informed of the use of temporary power and that Complainant failed to prove that the procedures for lighting the boiler with temporary power would be different than with grid power.

Complainant's argument on the topic of the 2008 SOP changes is somewhat confusing. Complainant asserts that important warnings contained in the SOPs prior to the 2008 explosion did not make the transition to the any set of SOPs that were approved in subsequent years. Relying on Howard's testimony, Complainant concluded that the procedures were deficient because of this failure. Complainant then goes on to argue that the failure to train on the changes that occurred in 2008 exposed employees to fire and explosion hazards. This is confusing for a couple of reasons: (1) It is not clear whether Complainant is asserting that Respondent violated

the standard because it failed to include important information in the updated SOPs, which is covered by a different standard (and an allegation already made by Complainant); and (2) If the failure to include that information is indeed the basis for the violation, then it would appear that Respondent is being charged with the responsibility to train employees on changes that should be included, but are not. To the extent that the argument is directed at the failure to account for the implementation of a ¾" bypass valve to reduce fuel flow to the firebox—neither the allegation contained in the citation item nor Complainant's brief clarify exactly what is being asserted—CSHO Hartung admitted that the SOPs were revised in 2010, meaning that any change made to the procedures in 2008 are no longer effective, thereby obviating the need to train on such changes. Further, to the extent that Complainant is alleging that Respondent failed to train employees on the change in 2008, such an allegation is time-barred. While there is a question about the viability of the continuing violations theory, such is not applicable here where Respondent updated its procedures in 2010. In other words, the door was closed on a continuing violation theory when Respondent was no longer obligated to train on changes to the process that were no longer a part of the process. In light of the foregoing, the Court finds that Complainant failed to establish a violation of the standard based on this particular instance.

However, as regards the use of temporary power, the Court finds that it was incumbent upon Respondent to implement MOC procedures and both inform affected employees of the use of temporary power and train them regarding its use. CT Sutton, who was responsible for monitoring the control boards during the Wickes lighting, stated that the previous CT had reported trouble with the electrical components controlled by a temporary generator. (Tr. 277). In particular, CT Sutton noted that the use of temporary power was impacting the functionality of the vanes, which control air flow to the firebox. (Tr. 279). He also stated that, based on his

experience in construction, generators equipped with ground faults (as the generator in this case) can trip out for unknown reasons. (Tr. 487). In the case of the Wickes, he was concerned that they could lose power to the controls, such as the vanes, during the lighting process. (Tr. 487–88). Though he noted that a loss of power would cause the controls to go into a fail-safe position, he still "thought they ought to be aware of the situation they had." (Tr. 488).

Clearly there was a change in the process; the Wickes boiler was typically run on grid power. None of the employees who testified could recall running the Wickes on temporary generator power before. (Tr. 278, 305, 347–48). While running on temporary power that day, the CT reported problems controlling the vanes, which have a direct impact on creating the atmosphere necessary to ignite the burner and purging the firebox prior to a lighting attempt. (Tr. 278–79). An operator expressed a safety concern over the consequences of the generator tripping and loss of power to the controls. Based on the testimony of Respondent's employees, the Court finds that Complainant presented sufficient evidence to establish that the procedures for lighting the boiler had changed to the extent that Respondent was obligated to inform and train its employees regarding that change. To a certain extent, it could be said that Respondent, through the actions of Operator Sutton, complied with its obligation to inform affected employees of the change in the process; however, as testified to by the operators and other employees present that day, they had not received training on those changes. (Tr. 488–90).

The Court finds that Complainant has established a violation and that it was serious. There is no question that Respondent knew that temporary generator power was going to be used that day, and it does not attempt to argue that it provided training regarding the change in the process or that such a change was documented, arguing instead that the change was not material. CSHO Hartung testified that the potential failure of the generator could impact a number of

controls in the process, which could expose employees to potential fire and explosion hazards. (Tr. 1161–62). Similar concerns were expressed by Operator Sutton. (Tr. 490). Accordingly, Citation 1, Item 4, instance (a) is VACATED, and instance (b) is AFFIRMED.

vi. Citation 1, Item 5(a) and (b)

Complainant alleged two serious violations of the Act in Citation 1, Item 5, subparts (a) and (b). Given their similarity, both items shall be addressed together. Complainant's allegations with respect to Item 5(a) are as follows:

> 29 CFR 1910.147(c)(4)(ii)(B): The energy control procedures did not clearly and specifically outline the steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy.
>
> The employer does not ensure the energy control procedures clearly and specifically outline the steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure the energy control procedures for the lockout/tagout of the fuel gas and purchased gas supply lines to the Wickes Boiler burner clearly and specifically outline the steps for shutting down, isolating, blocking, and securing equipment to control hazardous energy. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard requires energy control procedures to include "[s]pecific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy." 29 C.F.R. § 1910.147(c)(4)(ii)(B).

Complainant's allegations with respect to Item 5(b) are as follows:

> 29 CFR 1910.147(c)(4)(ii)(D): The energy control procedures did not clearly and specifically outline the requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures:
>
> The employer does not ensure the energy control procedures clearly and specifically outline the requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure the energy control procedures for the lockout/tagout of the fuel gas and purchased gas supply lines to the Wickes Boiler burner clearly

> and specifically outline the requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

This section of the cited standard requires that energy control procedures to include "[s]pecific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures." 29 C.F.R. § 1910.147(c)(4)(ii)(D).

According to CSHO Hartung, this citation resulted from OSHA's request to analyze the valve and natural gas regulator on the Wickes gas train approximately one month after the explosion. (Tr. 1176, 1285). Hartung stated that he wanted to see whether the valve was working as it was intended, as he understood that it had not been tested in a while. (*Id.*). Prior to Respondent carrying out the procedure, Hartung reviewed Respondent's LOTO procedures. (Tr. 1178). Based on how Respondent's employees carried out the procedure of removing the valve and regulator and his review of Respondent's lock-out/tag-out (LOTO) procedures, Hartung cited Respondent for having deficient LOTO procedures. Respondent contends that the citation is inappropriate because the valve removal was only done at the request of CSHO Hartung. Further Respondent argues that Complainant failed to prove that anyone was exposed to a hazard as a result of the alleged LOTO deficiency.

The standard requires such LOTO procedures to be "clearly and specifically" outlined. 29 C.F.R. § 1910.147(c)(4)(ii); *see also Gen. Motors*, 22 BNA OSHC 1019 (No. 91-2834, 2007). Respondent's LOTO procedures were deficient in two respects: (1) the procedures did not identify specific valves that may have been used to relieve energy and whether those valves should be open or closed; and (2) the procedures did not have steps for testing a machine/equipment to determine whether the lockout was effective. (Tr. 1177, 1182–83; Ex. C-

65). Respondent did not proffer any evidence to contradict these deficiency findings. Accordingly, the Court finds that the terms of the standard were violated.

Instead of attempting to establish that its procedures were complete, Respondent contends that the removal of the valve would not have occurred but for CSHO Hartung's request and that Complainant failed to prove that any of Respondent's employees were exposed to a hazard as a result of the deficient procedures. The Court agrees with Complainant. The LOTO procedure, which was in effect prior to the explosion, was deficient irrespective of when or for what reason it was implemented. CSHO Hartung testified that he requested to look at the valve approximately five days before it was removed and that he waited to perform this particular aspect of his inspection until Respondent was ready to do it. (Tr. 1178). Further, CSHO Hartung was well within his rights to request the removal of the valve for inspection, and Respondent was under an obligation to ensure that its LOTO procedures were adequate for carrying out that job.[27] As Complainant alleged, the procedures were not adequate.

The Court also finds that, contrary to Respondent's argument, its employees were exposed to fire and explosion hazards. While it may be the case that the Wickes had been offline since the explosion, there was no evidence to suggest that it had been completely isolated from other equipment such that the removal of the valve, which was upstream from the Wickes, did not involve the potential for release of hazardous energy. Further, and more importantly, Respondent's failure to have adequate procedures for LOTO exposed employees to fire and explosion hazards regardless of whether the Wickes had been offline. The failure to have specific LOTO procedures exposes employees to hazards each time those procedures are implemented, not just in the particular context in which the alleged deficiencies came to light.

27. It should also be noted that the work requested by CSHO Hartung was not a work activity which never occurred but for OSHA's valve examination request. As noted above, Respondent had previously done work on this valve in order to change the size and restrict the flow of gas to the firebox of the Wickes. (Tr. 311-12).

Respondent's LOTO form, which is presumably used for each LOTO procedure and modified to fit the particulars of a particular job, does not have a provision for verifying the effectiveness of energy control measures, nor is there any indication on the form or its attachment as to the position of the valves (open or closed) that were supposed to be a part of the process for isolating the bypass valve for removal. The purpose of the prescribed procedure is "to guide an employee through the lockout process." *Drexel Chem. Co.*, 17 BNA OSHC 1908 (No. 94-1460, 1997). Without an adequate guide for what is clearly a complex lockout procedure, employees may overlook critical steps in the process, which could result in an unintentional release of hazardous energy, such as hazardous hydrocarbons. Accordingly, the Court finds that Respondent's employees were exposed to a hazard.

The Court also finds that Respondent knew or, with the exercise of reasonable diligence, could have known of the hazardous condition. Not only is it the responsibility of management to ensure that adequate procedures are in place, but members of Respondent's management team were present at the time the procedures were implemented and the bypass valve was removed. Further, during his interview with CSHO Hartung, Stephenson admitted that the procedure did not indicate whether certain valves should be open or closed, nor how an employee should go about verifying that no energy remained in the system. (Ex. R-9).

Based on the foregoing, the Court finds that Respondent violated the cited standards and that the violation was serious. Accordingly, Citation 1, Items 5(a) and (b) are AFFIRMED.

vii. Citation 1, Item 6(a) and (b)

Complainant alleged two serious violations of the Act in Citation 1, Item 6, subparts (a) and (b). Given their similarity, both items will be addressed together. Complainant's allegations with respect to Item 6(a) are as follows:

> 29 CFR 1910.147(d)(3): All energy isolating devices that were needed to control the energy to the machine or equipment were not physically located and operated in such a manner as to isolate the machine or equipment from the energy source:
>
> The employer does not ensure all energy isolating devices that are needed to control the energy to the machine or equipment are physically located and operated in such a manner as to isolate the machine or equipment from the energy source. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure all energy isolating devices for the lockout/tagout of the fuel gas and purchased gas supply lines such as, but not limited to, the control valves (FC 702 & FC 704) and bleed valves to the Wickes Boiler were physically located and operated in such a manner as to isolate the machine or equipment from the energy source. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard provides that "[a]ll energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s)." 29 C.F.R. § 1910.147(d)(3).

Complainant's allegations with respect to Item 6(b) are as follows:

> 29 CFR 1910.147(d)(5)(i): All potentially hazardous stored or residual energy was not relieved, disconnected, restrained or otherwise rendered safe after the application of lockout or tagout devices to energy isolating devices:
>
> The employer does not ensure all potentially hazardous stored or residual energy is relieved, disconnected, restrained, or otherwise rendered safe after the application of lockout or tagout devices to energy isolating devices. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure all potentially hazardous stored or residual energy was relieved after the application of lockout or tagout devices such as between the two control valves (FC 702 & FC 704) on the fuel gas and purchased gas supply lines to the Wickes Boiler. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard states, "Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe." 29 C.F.R. § 1910.147(d)(5)(i).

According to Hartung, the basis for Complainant's allegations with respect to Citation 1, Item 6 is the same activity as indicated in Citation 1, Item 5; namely, Respondent's failure to

take the steps that were required to be documented in the LOTO procedures. (Tr. 1185–87). Respondent does not contend that it complied with the requirements of the standard, and, indeed, there is no evidence to suggest that Respondent's employees complied. Respondent failed to identify all of the energy isolating devices that were needed to remove the bypass valve and did not ensure that hazardous energy had been removed from the system. Not only does this show that Respondent failed to comply with the standards cited in Items 6(a) and 6(b), but it also illustrates the importance of specific, well-documented procedures: If Respondent had documented all appropriate isolation points, how they would be operated, and the manner in which employees could verify isolation, then such steps would probably not have been missed. *See* Control of Hazardous Energy, 54 Fed. Reg. 36644, 36670 (September 1, 1989) (noting the importance of detailed procedures in light of the need to follow directions carefully and the number of variables involved in controlling hazardous energy). Based on the evidence introduced by Complainant the Court finds that Respondent violated the cited standards.

Instead, Respondent contends that Complainant failed to establish that employees were exposed to a hazard. Specifically, Respondent argues that: (1) Hartung was present during the valve removal and would not have allowed the removal of the valve to take place if there was a serious threat of injury; and (2) the removal of the valve took place one month after the explosion, which means that any residual gas left in the pipeline would have dissipated by the time the valve was removed. First, CSHO Hartung's presence during the removal of the valve has no bearing on whether Respondent's employees were exposed to a hazard. There is no indication in the record that CSHO Hartung knew whether the process being followed by Respondent's employees was safe at the time, nor is it clear at what point in time he made the determination that Respondent's LOTO procedures were deficient. Without additional evidence,

the Court finds that CSHO Hartung's presence on the day of the valve removal does not make it any more or less likely that Respondent's employees were exposed. Second, as noted in the Court's discussion of Citation 1, Item 5, *supra*, there was no definitive indication that the valve or its associated pipes were free of hazardous energy at the time the valve was removed. The fact that the Wickes had been offline for approximately 30 days does not, of itself, obviate the need to protect against the possibility of hazardous releases of energy. Further, though the boiler was offline, there was no evidence regarding the presence of hydrocarbons in the upstream process lines, such as the natural gas and RFG lines. As such, there was still a possibility for a hazardous energy release. Accordingly, the Court finds that Respondent's employees were exposed to a hazard.

As noted above, members of Respondent's management team were present at the time the valve was being removed. Accordingly, the Court finds that it is proper to impute the knowledge of those managers to Respondent. *See Revoli Const. Co.,* 19 OSHC 1682 (No. 00-0315, 2001) (holding that knowledge of supervisors is generally imputable to employer).

Accordingly, Citation 1 Items 6(a) and 6(b) are AFFIRMED.

viii. Citation 2, Item 1

Complainant alleged a repeat violation of the Act in Citation 2, Item 1 as follows:

> 29 CFR 1910.119(d)(3)(ii): The employer did not document that equipment complies with recognized and generally accepted good engineering practices.
>
> The employer did not document that equipment in the process complies with recognized and generally accepted good engineering practices. In the Zone2/CAT Wickes Boiler Area the employer did not ensure it documented the Wickes boiler burner and gas train equipment complied with recognized and generally accepted good engineering practices such as the National Fire Protection Association (NFPA) Standard 85, Boiler and Combustion Systems Hazard Code, and ASME CSD-1, sections CF-310 & CF-330, and ASME Section VI. These practices include, but are not limited to the following equipment:
>
> 1. Flame scanner/fire eyes.

2. Automatic pilot gas shutoff valve.
3. Automatic double block (positive shutoff) and automatic bleed on gas train to the burner.
4. Burner management system(s) to control firebox purge, pilot ignition, burner starting, and shutdown.

The cited standard provides:

> The employer shall document that equipment complies with recognized and generally accepted good engineering practices.

29 C.F.R. § 1910.119(d)(3)(ii).

Respondent contends that the foregoing citation is duplicative of Citation 1, Item 1, which alleged a violation of 29 C.F.R. § 1910.119(d)(3)(i)(F). The present citation is issued under the same subsection (d)(3), and relates to the process safety information that Respondent is required to keep with respect to PSM-covered processes. *Id.* § 1910.119(d)(3)(iii). A brief comparison of Complainant's allegations illustrate that Complainant essentially replaced the term "design codes and standards" with "recognized and generally accepted good engineering practices" and cited the exact same design codes and standards, such as NFPA 85. According to Complainant, an employer "typically complies with [(d)(3)(iii)] by developing a list of the standards and codes used at the facility and putting it in the PSI file." *Compl't Br.* at 52. This was the exact failure alleged by Complainant in Citation 1, Item 1. *See* Section IV.C.ii, *supra*. If compliance with the standard requires documentation of RAGAGEP, and documentation of RAGAGEP requires developing a list of the standards and codes used at the facility, then the Court sees no meaningful distinction between Citation 1, Item 1 and Citation 2, Item 1. *See Capform, Inc.*, 13 BNA OSHC 2219, 2224 (No. 84-556, 1989) (finding violations duplicative where abatement of one item will necessarily result in abatement of the other item as well).

The Court finds that Citation 2, Item 1 is duplicative of Citation 1, Item 1. Accordingly, Citation 2, Item 1 is VACATED.

ix. Citation 2, Item 2

Complainant alleged a repeat violation of the Act in Citation 2, Item 2 as follows:

29 CFR 1910.119(f)(1)(ii): The employer did not implement written operating procedures that addressed operating limits; including at least the following elements: consequences of deviation and the steps required to correct or avoid deviation.

a) In the Zone 2/CAT Wickes Boiler Area the employer did not ensure the written operating procedures addressed the operating limits of the process such as, but not limited to:

    1. Minimum/Maximum gas pressure to the boiler burner gas train.
    2. Minimum and maximum pressure (PI 721 & PI 711) at the fuel gas inlet to the Wickes.
    3. Minimum and maximum fuel gas flow to the Wickes boiler burner (FI 702).
    4. Minimum and maximum combustion air flow to the Wickes boiler burner (FI-706).
    5. Composition of the gas flow streams to the Wickes boiler burner (fuel gas and purchased gas) including BTU content, lower explosive limits, etc.

b) In the Zone 2/CAT Wickes Boiler Area the employer did not ensure the written operating procedures addressed the consequence of deviation from the safe upper and lower limits of the process such as, but not limited to:

    1. Minimum/Maximum gas pressure to the boiler burner gas train.
    2. Minimum and maximum pressure (PI 721 & PI 711) at the fuel gas inlet to the Wickes.
    3. Minimum and maximum fuel gas flow to the Wickes boiler burner (FI 702).
    4. Minimum and maximum combustion air flow to the Wickes boiler burner (FI-706).
    5. Composition of the gas flow streams to the Wickes boiler burner (fuel gas and purchased gas) including BTU content, lower explosive limits, etc.

c) In the ZONE 2/CAT Wickes Boiler Area the employer did not ensure the written operating procedures addressed the steps to correct or avoid deviation from the safe upper and lower limits of the process such as but not limited to:

    1. Minimum/Maximum gas pressure to the boiler burner gas train.

> 2. Minimum and maximum pressure (PI 731 & PI 711) at the fuel gas inlet to the Wickes.
> 3. Minimum and maximum fuel gas flow to the Wickes boiler burner (FI 702).
> 4. Minimum and maximum combustion air flow to the Wickes boiler burner (FI-706).
> 5. Composition of the gas flow streams to the Wickes boiler burner (fuel gas and purchased gas) including BTU content, lower explosive limits, etc.
>
> Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard provides:

> [O]perating procedures shall address at least the following elements . . . . Consequences of deviation; and Steps required to correct or avoid deviation.

29 C.F.R. § 1910.119(f)(1)(ii).

This citation item addresses the same subject matter as Citation 1, Item 3—Respondent's operating procedures. Citation 1, Item 3 addressed the procedures from the standpoint of initial startup. In this instance, however, Complainant alleges that Respondent's operating procedures were deficient with respect to their discussion of the limits of the process, the consequences of deviation, and the steps required to correct or avoid deviation. As in Citation 1, Item 3, Respondent does not contend that it had procedures that addressed the alleged deficiencies; rather, it argues that: (1) the standard does not apply; (2) this Citation is duplicative of Citation 1, Item 3; (3) the deficiencies alleged are irrelevant to the startup of the boiler; and (4) and there is no meaningful difference between the use of natural gas and RFG.

The Court has already found that the standard applies. *See* Section IV.A, *supra*. The Court has also found that gas pressure and flow are relevant to startup operations, as subsequent data revealed not only typical operating limits, but also consequences of deviation. *See* Section IV.C.iv, *supra*. While that data may not be in the bypass valve operator's line of sight, that does not make such information irrelevant; instead, it merely impacts the manner in which that

information is conveyed/relayed. Presumably, the availability of such information would have a fairly direct impact on the employee who is responsible for operating the valve and the manner in which they "crack the valve a small amount and for a short period of time". *See Resp't Br.* At 61. As to the composition of the gas flow streams, as alleged in Complainant's fifth subpart, the Court has previously found that a meaningful difference exists between the use of RFG (which may be mixed with natural gas) and the use of natural gas alone. As to any other possible iterations of RFG, the Court cannot definitively find that each and every possibility must be accounted for, considering the variability of hydrogen. (Tr. 1712). There was not sufficient evidence to indicate whether accounting for such variability was feasible. However, to the extent that safe outer limits can be imposed, regardless of composition, the fact that RFG can be variable does not absolve Respondent of its responsibility to account for such information and variations in its operating procedures.

Respondent raises a new argument with respect to this item—that it is duplicative of Citation 1, Item 3. While the standard cited is part of the same subsection, and addresses similar subject matter (operating procedures), the citation items address separate parts of the procedures. If Respondent were to abate Citation 1, Item 3 by updating the initial startup procedures, such information would not be sufficient to comply with Respondent's obligations to consider and document the potential consequences of deviation and the steps required to correct or avoid deviation. Thus, the citation items are not duplicative.

With respect to the issues of knowledge and exposure, the Court hereby incorporates its findings on the same issues found in Citation 1, Item 3. *See* Section IV.C.iv. With respect to characterization, the Court has already determined that Respondent is not liable for a repeat violation based on the conduct of GWE-WR. However, given that the hazards alleged in this

citation item are the same as those alleged in Citation 1, Item 3, the findings of which have been incorporated by reference, the Court finds that the violation was serious.

The Court finds that Complainant has established a violation of the cited standard. Accordingly, Citation 2, Item 2 is AFFIRMED as a serious violation of the Act.

x. Citation 2, Item 3

Complainant alleged a repeat violation of the Act in Citation 2, Item 3 as follows:

> 29 CFR 1910.119(g)(2): The employer did not provide refresher training at least every three years to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process.
>
> The employer does not provide refresher training at least every three years to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure refresher training was provided at least every three years to each employee involved in operating the Wickes Boiler to assure that the employee understood and adhered to the current operating procedures. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard provides:

> Refresher training shall be provided at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process.

29 C.F.R. § 1910.119(g)(2).

According to Respondent's training records, within three years of the accident each of the individuals that were involved in starting the boiler received training and was tested with respect to various processes in Zone 2 according to job description. (Exs. C-44 to C-51).[28] According to those documents, Willson, Kellerhall, Operator Sutton, Mann, and Koesler were required to "describe/discuss how to start the Wickes boiler." (*Id.*). The testing for CTs Walker and Sutton

28. Similar exhibits can be found in R-201, R-202, R-204, R-212, R-214, R-219, R-221.

did not include a question regarding the Wickes startup procedure, nor did the testing for Smith, who was manning the sight glass. (*Id.*). The only question involving the Wickes posed to Smith asked for a description of "how to switch the fans on the wickes boiler." (C-44, C-45). CT Sutton testified there is no CT-specific testing related to lighting the boiler. (Tr. 325). Respondent's own Incident Investigation Report determined that the training did not cover the steps discussed in an earlier version of the SOP, which Respondent's investigation team found should have been included in subsequent versions of the SOP. (Ex. C-30 at 13).

Many of the employees involved in the explosion testified they had not seen the 2008 version of the Wickes lighting procedure or the section of the Operations Manual dealing with the Wickes. (Tr. 166–70, 249, 284, 322, 539; Ex. C-35). Those same employees gave differing descriptions of how to operate the bypass valve, which controls the flow of fuel to the Wickes. All of them agreed, however, that the then-current SOPs were deficient because, at the very least, there was no indication as to how much to open the valve, or for how long. (Tr. 164, 355, 549; Ex. C-33). The Court finds there is enough deviation between the various descriptions to suggest that training was inconsistent and deficient.[29] Considering that the bypass valve was characterized as "very touchy" and that slight movements could drastically change the fuel flow rate to the firebox (so much so that Respondent previously attempted installing a smaller valve), Respondent had an obligation to provide more specific training and instruction to its employees. *J.K. Butler Builders, Inc.*, 5 BNA OSHC 1075 (No. 12354, 1977) ("A review of applicable case

29. Koesler stated that he was trained to open the valve "1/4 spoke", that there was no set amount of time to leave open, and that he was told to purge "until you thought it was ok". (Tr. 113, 116, 121). Kellerhall testified that he did not recall specific instructions other than that the valve is "very touchy" and that you "don't want to leave it open very long." (Tr. 219). CT Sutton testified that he told the investigator that you turn the valve about an inch. (Tr. 301). Willson testified that he had not been instructed as to any specific instructions regarding the valve, instead characterizing the process as a "dance". (Tr. 353). McCurtain stated that he was trained to open the valve "slightly" or "just a little bit" and that if you don't achieve ignition "quickly" or "shortly" to close the valve. (Tr. 518, 528). Finally, Howard, who provided training and testing, testified that he trained operators to "[s]lowly open it until you reach one spoke . . . . And if it does light, you move on with the procedure; if it does not, then you close it off." (Tr. 693).

law leads us to define a work rule as an employer directive that requires or proscribes certain conduct, and that is communicated to employees in such a manner that its mandatory nature is made explicit and its scope clearly understood."). Further, nearly all who testified, including supervisory personnel, agreed that the Wickes lighting procedures were deficient and should have included the bolded warnings contained in the 2008 lighting procedure. (Tr. 167–71, 549, 710–11, 714; Ex. C-33, C-35).

Based on the foregoing, the Court finds that Respondent violated the terms of the standard by failing to provide thorough and consistent training to its employees such that they were aware of and could execute the lighting procedure. Respondent knew or should have known of the violation because its managers were responsible for providing training and for updating, reviewing, and approving the procedures. *See Revoli Constr., Co.*, 19 BNA OSHC 1682 (No. 00-0315, 2001) (holding that actual or constructive knowledge of supervisory personnel can be imputed to their employer). Further, due to the failure to properly train its employees, Respondent exposed them to the hazard of fire and explosion, which, as described above, can cause serious injury and/or death. Accordingly, Citation 2, Item 3 is AFFIRMED as a serious violation of the Act.

xi. Citation 2, Item 4

Complainant alleged a repeat violation of the Act in Citation 2, Item 4 as follows:

> 29 CFR 1910.119(j)(2): The employer did not establish and implement written procedures to maintain the on-going mechanical integrity of process equipment:
>
> The employer does not establish and implement written procedures to maintain the on-going mechanical integrity of process equipment. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure written procedures were established and implemented for the testing and inspection of the Low Combustion Air Flow Fuel Gas Shut-off system safeguard. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard provides:

> The employer shall establish and implement written procedures to maintain the on-going integrity of process equipment.

29 C.F.R. § 1910.119(j)(2).

According to CSHO Hartung, Respondent failed to have an established and written procedure to maintain the mechanical integrity of process equipment. (Tr. 1060). Specifically, he noted that the refinery had relied on a breakdown maintenance system, as opposed to a preventative system of maintenance to ensure equipment was kept in working order. (Tr. 1062). Although he noted that management was well-versed in process safety management and the need for such a program, they did not have an established, written procedure in place. (Tr. 1063).

Respondent contends that Complainant failed to prove a violation of this performance-based standard, arguing that it had determined that a procedure to ensure that an air flow switch worked properly was sufficient and that Complainant is attempting to supplant its own determination of how to properly implement the requirements of the standard. Finally, Respondent contends that, insofar as its procedures were not compliant, any violation should be considered *de minimis* because the boiler was inspected annually by the State of Oklahoma. Any deficiency in procedure, therefore, would not create a hazard to employees because the boiler had been deemed safe and functional by a third party.

The Court finds that Complainant has established a violation of the cited standard. The standard requires Respondent to "establish and implement written procedures." 29 C.F.R. § 1910.119(j)(2). The only evidence of a written procedure was a document that was labeled "Draft" in multiple locations throughout the document. (Ex. C-58). In addition, the document contained editing lines, which are associated with the "Track Changes" function in Microsoft Word. (*Id.*). There was no testimony as to whether this draft was established as the proper

procedure, nor, based on the date of the document, does it appear that Respondent was responsible for generating it in the first place. The only indication that a procedure for maintaining mechanical integrity even existed appears in the OSHA 1-B Narrative for this citation item. (Ex. R-16). In that narrative, Howard told CSHO Hartung that he could not remember whether there was a written procedure for testing the airflow interlocks, but that there was a checklist. (*Id.*). No such checklist was introduced into the record.

Based on the foregoing, it does not appear that Respondent had an established and written procedure for maintaining the on-going integrity of process equipment. Although CSHO Hartung noted that Respondent was well-versed in PSM and the necessity of such a program, this does not make up for not having one. Draft procedures, such as the one at issue, can produce confusion, especially, as here, where the procedures have edit marks, leaving the operator to guess at whether the procedure they are attempting to follow is accurate. Without specific procedures, and an established program to ensure that process equipment is functioning properly, Respondent exposed its employees to potential explosion and fire hazards. (Tr. 1158). Contrary to Respondent's argument, it is of little consequence that a third party verified the functionality of the boiler's fuel controls. The obligation to ensure the ongoing mechanical integrity of the process equipment lies with Respondent. The failure to have a thorough procedure to examine the process controls, such as safety interlocks, exposed employees to serious injury because the purpose of those interlocks is to automatically close down fuel valves in a low airflow situation. If those interlocks were to fail, or not work as intended, then the firebox could be flooded, which can lead to an explosion.

Finally, based on the fact that, at the very least, it had a draft procedure for testing the interlocks, Respondent knew or could have known of the violative condition. Accordingly, Citation 2, Item 4 is AFFIRMED as a serious violation of the Act.

xii. Citation 2, Item 5

Complainant alleged a repeat violation of the Act in Citation 2, Item 5 as follows:

> 29 CFR 1910.119(l)(1): The employer did not establish and implement written procedures to manage changes to process chemicals, technology, equipment, and procedures; and, changes to facilities that affect a covered process:
>
> a) In the Zone 2/CAT Wickes Boiler Area the employer did not ensure management of change procedures were implemented to manage changes to the process operating procedures such as, but not limited to:
>
> 1. The amount of time the firebox is purged prior to attempting to light the pilot of after a failed burner lighting attempt.
> 2. The amount that the gas control valve bypass valve is to be opened.
> 3. The time that the gas control valve bypass valve is allowed open before the burner lights.
>
> b) In the Zone 2/CAT Wickes Boiler Area the employer did not ensure management of change procedures were implemented to manage changes to the process equipment, such as the addition of temporary power to operate the Wickes Boiler.
>
> Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard provides:

> The employer shall establish and implement written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and changes to facilities that affect a covered process.

29 C.F.R. § 1910.119(l)(1).

This citation item is a companion to Citation 1, Item 4, which addressed the failure to inform and train employees on the changes to the operating procedure after the 2008 explosion. The only difference is that the standard cited in the present citation item addresses Respondent's obligation to establish and implement written procedures to manage those changes. *Compare* 29

C.F.R. § 1910.119(l)(1), *with id.* § 1910.119(l)(3). As such, the arguments proffered by Complainant and Respondent are virtually the same, as is the Court's ruling.

Complainant asserts that, with respect to instance (a), Respondent failed to implement an MOC in response to changes that were made to the equipment following the 2008 explosion; namely, the introduction of a smaller fuel gas bypass valve. (Tr. 713–14; Ex. C-19). Respondent's employees testified, and the Court agrees, that changes made to the valve size required the implementation of new written procedures as the change impacted the flow rate of fuel. After it was determined that the smaller valve would not work, Respondent reverted back to the original 3-inch valve. (Tr. 312). Notwithstanding the change back to the original, Complainant contends that Respondent's failure to update the SOP to also reflect that change constituted a violation because Respondent failed to update its SOP to reflect this change "for several years." *Compl't Br.* at 63. The problem for Complainant, however, is that the SOPs were updated to reflect the change back to the 3-inch valve in 2010. (Ex. C-36). Complainant asserts that the failure to implement MOC after the 2008 changes is a continuing violation of the standard. This would only be correct if there had been no subsequent changes to the procedure; the moment that the procedures were changed, the violation no longer continued (at least insofar as Respondent was obliged to implement written procedures for a process that no longer existed). Therefore, as to instance (a), the Court does not find a violation of the standard.

However, with respect to instance (b), the Court finds, as it did in Citation 1, Item 4, that Respondent was obligated to implement written procedures regarding the use of temporary power to light the Wickes. *See* Section IV.C.v. Since the Court has already addressed the necessity of implementing MOC with respect to the use of temporary power, it will incorporate

by reference the findings in Section IV.C.v. Based on those findings, Citation 2, Item 5, instance (a) is VACATED, and instance (b) is AFFIRMED as a serious violation of the Act.

xiii. Citation 3, Item 1

> Complainant alleged an other-than-serious violation of the Act in Citation 3, Item 1 as follows:
>
> 29 CFR 1910.147(c)(4)(ii)(A): The energy control procedures did not contain a specific statement on the intended use of the procedure.
>
> The employer does not ensure energy control procedures contain a specific statement on the intended use of the procedure. In the Zone 2/CAT Wickes Boiler Area the employer did not ensure the energy control procedures for the lockout/tagout of the fuel gas and purchase gas supply lines to the Wickes Boiler burner contain a specific statement on the intended use. Employees were exposed to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gasses.

The cited standard provides:

> The procedures shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance including, but not limited to, the following: (A) A specific statement of the intended use of the procedure.

29 C.F.R. § 1910.147(c)(4)(ii)(A).

In his brief, Complainant asserts that, due to the Court's page-limit restrictions, he did not include a discussion of the merits of Citation 3, Item 1, instead opting to rest on the record evidence. *Compl't Br.* at 75. The Court has reviewed the transcript for any mention of Citation 3, Item 1 from Inspection No. 663538, which was issued by CSHO Hartung, and cannot find a single mention of either the citation item itself or 1910.147(c)(4)(ii)(A).[30] Although the OSHA 1-B Narrative was introduced into evidence as a preliminary matter, no subsequent discussion of that document occurs in the transcript. (Ex. R-18). Without testimony or supporting evidence, the Court is not in a position to determine whether a violation of the standard occurred, whether

30. CSHO Rambo also issued a Citation 3, Item 1 in Inspection No. 778042, which was discussed at trial.

Respondent had knowledge of the violation, or whether employees were exposed to a hazardous condition. Without such evidence, the Court finds that Complainant failed meet its burden of proving a violation of the standard. Accordingly, Citation 3, Item 1 is VACATED.

D. The Warehouse Inspection – Docket No. 13-0644 – Inspection No. 778042

i. Citation 1, Item 1

Complainant alleged a serious violation of the Act in Citation 1, Item 1 as follows:

> 29 CFR 1910.23(a)(2): Every ladderway floor opening or platform was not guarded by a standard railing, or swinging gate or so offset that a person cannot walk directly into the opening.
>
> The employer does not ensure every ladderway floor opening or platform was guarded by a standard railing, or swinging gate or so offset that a person cannot walk directly into the opening. This violation was observed on or about November 26, 2012, in the Crude and Alky Units where the employer did not ensure that ladderway floor openings were guarded by standard railing, or equivalent means, exposing employees to fall hazards greater than 4 feet above the ground.

The cited standard provides:

> Every ladderway floor opening or platform shall be guarded by a standard railing with standard toeboard on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.

29 C.F.R. § 1910.23(a)(2).

This citation item is based on CSHO Rambo observing two separate ladderways that were either left unguarded or had the swing gate tied back with chicken wire in the Crude and Alky Units. (Tr. 1426–28, 1492; Ex. C-72). Rambo testified he observed contractor employees working near the missing and/or tied-back swing gates, which exposed them to a fall of roughly 15–30 feet. (Tr. 1430). Because the exposed employees were contractors, Rambo determined that Respondent was liable as the correcting or controlling employer pursuant to OSHA's Mult-

Employer Worksite doctrine. (Tr. 1435). Rambo could not determine who had created the condition or for how long it had lasted. (Tr. 1492–93).

According to David Johnson, who was a safety specialist for Respondent from 1995 to 2013, Respondent instituted a ladderway program, as it were, in response to a previous inspection citation. (Tr. 2129). In addition, Johnson testified that Respondent hired two contractors for this specific turnaround "whose sole job was to go with the safety guy and an operator to every unit, every ladderway in every unit, identify them, and then make sure that there was appropriate guarding on them." (Tr. 2129). Pursuant to this program, Respondent ended up modifying or installing protection on over ***600*** different ladderway openings and placed a priority on all requests to fix such openings. (Tr. 2129–30). According to David Armstrong, Respondent's warehouse technician, swing gates are stored in the warehouse and are issued to supervisors on request. (Tr. 1349–50).

Respondent contends that Complainant did not establish that it failed to exercise reasonable diligence such that it could have known of the violative condition, and the Court agrees. As noted above, there is no evidence indicating how long the cited condition existed. In order to determine whether Respondent could have known of the violation, there must be evidence that Respondent had the opportunity to observe it. *See Cranesville Block Co., Inc./Clark Division*, 23 BNA OSHC 1977 (No. 08-0316 *et al.*, 2012) (holding that complainant's failure to introduce evidence regarding length of time condition existed, respondent's inspection program, or its exercise of reasonable diligence precluded a finding of constructive knowledge). Rambo testified that he based his determination of knowledge on the fact that Dan Looney, Respondent's Safety Manager, told him that he had observed open ladderways in the past. (Tr. 1493). Looney told Rambo that he would direct the contractor to fix or close the ladder if he

observed the conditions described above. (Tr. 1493–94). Rambo also testified that during the turnaround each unit had a supervisor and a safety technician during each shift, intimating that Respondent had the opportunity to observe the conditions. (Tr. 1434).

Whether considering the foregoing under a multi-employer theory, or just the typical employer knowledge analysis, the Court finds that Complainant has failed to prove its *prima facie* case. Whether Looney saw other open ladders at other locations at some point in time does not establish that Respondent was aware of the particular violations at issue in this citation item. In fact, in response to cross-examination, Rambo admitted that Looney told him they direct contractors and employees to close swing gates or replace them if they are open or otherwise in need of repair and that this is what a reasonable employer would do under such circumstances. (Tr. 1493–94). Complainant did not rebut Respondent's claims that it had such a program of inspection and repair in place. Given that there was no indication as to how long these two isolated conditions existed, and considering that Respondent took extensive measures to uncover violations by implementing an inspection and repair program, the Court finds that Complainant failed to establish that Respondent knew or could have known of the condition. Accordingly, Citation 1, Item 1 is VACATED.

ii. Citation 1, Item 2

Complainant alleged a serious violation of the Act in Citation 1, Item 2 as follows:

> 29 CFR 1910.101(b): The in-plant handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks were not in accordance with Compressed Gas Association Pamphlet P-1-1965, which is incorporated by reference as specified in CFR 1910.6:
>
> The employer does not ensure the in-plant handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks is in accordance with Compressed Gas Association Pamphlet P-1-1965, which is incorporated by reference as specified in CFR 1910.6. The violation was observed on or about October 29, 2012, in the welding shop the

> employer did not ensure that compressed gas cylinders were stored with protective caps exposing employees to struck-by hazards.

The cited standard provides:

> The in-plant handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks shall be in accordance with Compressed Gas Association Pamphlet P-1-1965, which is incorporated by reference as specified in § 1910.6.

29 C.F.R. § 1910.101(b).

During Rambo's inspection of the warehouse, he observed a number of compressed gas cylinders that did not have caps on them. (Ex. C-72 at 6–8). This was confirmed by Armstrong, who works in the warehouse. (Tr. 1319). Armstrong testified that the gas cylinders were used by various employees and contractors. (Tr. 1322). According to Rambo, he interviewed the maintenance superintendent, Johnny Reddell, who told him that the cylinders had been left in that condition since a dust disturbance closed down the warehouse for a week and that the caps were only placed back on the cylinders after he brought it to their attention. (Tr. 1386, 1389–90). Based on his observations and interviews, Rambo determined that Respondent violated the standard.

First, the Court rejects Respondent's argument that the cylinders in question were actively being used, rather than stored. Armstrong initially testified that the cylinders were located in the welding shop, which means that they were not in a storage location and were in use. (Tr. 1363–64). However, under cross-examination, Armstrong admitted that he did not know whether the cylinders had been used either in the last 24 hours or on any of the previous shifts. (Tr. 1372). As noted above, however, Reddell told Rambo that they placed the caps back on the cylinders after it had been pointed out to them. If the cylinders were being used, there would have been no need to place the caps on them. Further, the Court rejects the idea that because the cylinders were not in a typical storage location they are not being "stored". Other

than Armstrong's testimony as to the location of the cylinders, there was no indication that they were in use at the time of the inspection. This is supported by the fact that the various tubes and wires associated with the cylinder were neatly wrapped around the cylinder. (Ex. C-72 at 6). Because the cylinders were being stored without caps, the Court finds that Respondent violated the standard.

Second, the Court finds that Respondent knew or could have known of the condition. According to Rambo's testimony, the condition had existed for at least a week. (Tr. 1390). Admittedly, the warehouse had been closed for most of that time due to a dust disturbance that prevented employees from working in the warehouse; however, Rambo testified that there were employees working in the warehouse when he arrived.[31] (Tr. 1389–90). The cylinders were stored in a fairly conspicuous area that could have been observed by anyone passing through. (Tr. 1320; Ex. C-72). Because it is not known who created the condition, Respondent contends that it should not be held liable as a controlling employer.

"[A]n employer with overall supervisory authority at a multi-employer work site, who has hired and entered into contractual relationships with subcontractors who are performing the work at the site, can be found liable for violations created by the subcontractors, as long as the controlling employer 'could reasonably have been expected to prevent or abate by reason of its supervisory capacity.'" *E.P. Guidi, Inc.*, 21 OSHC BNA 1413 (No. 04-1055, 2006) (quoting *Grossman Steel & Aluminum Corp.*, 4 BNA OSHC 1185, 1188 (No. 12775, 1975)). In this case, as opposed to cases like *E.P.Guidi*, the worksite is owned and wholly controlled by Respondent. Further, Respondent's witnesses testified that, during the turnaround, each unit was assigned a Wynnewood Refining Company supervisor and safety technician to ensure compliance with

31. In that respect, the Court rejects Respondent's argument that there were no employees in the facility at the time of the inspection. *See Resp't Br.* at 70 n.22.

safety rules and, therefore, Respondent took responsibility for ensuring the safety of both employees and contractors. (Tr. 2111–2112). *See Grossman*, 4 BNA OSHC at 1188 ("The general contractor is well situated to obtain abatement of hazards, either through its own resources or through its supervisory role with respect to other contractors. It is therefore reasonable to expect the general contractor to assure compliance with the standards insofar as all employees on the site are affected."). Finally, Armstrong testified that at least one of the supervisors was in the warehouse approximately 4–5 times per day, meaning that there was ample opportunity to view the condition, which was located in plain sight. (Tr. 1358). Thus, the Court finds that Respondent knew or could have known of the condition.

Further, the purpose of the standard is to prevent the possibility that a cylinder could become a projectile if the valve at the top is broken off. (Tr. 1388). Because there were Wynnewood employees in the warehouse at the time the violation was observed, the Court finds that they, as well as contractor employees, were exposed to the hazard, and that the violative condition was serious. (Tr. 1388). Complainant has established its *prima facie* case. Accordingly, Citation 1, Item 2 is AFFIRMED.

iii. Citation 1, Item 3

Complainant alleged a serious violation of the Act in Citation 1, Item 3 as follows:

> 29 CFR 1910.119(h)(2)(v): The employer did not periodically evaluate the performance of contract employers in fulfilling their obligations as specified in paragraph 1910.119(h)(3):
>
> Wynnewood does not have a system to periodically evaluate the performance of their contractors in fulfilling their obligations as specified in paragraph 1910.119(h)(3). Wynnewood does not evaluate whether or not each contractor:
>
> a) Trains their employees in the work practices necessary to safely perform their job;
> b) Instructs their employees on the known potential fire, explosion, or toxic release hazards related to their job and the applicable provisions of the emergency action plan;

> c) Documents, records and maintains a record that all their employees have received and understand the training required;
> d) Assures that each employee follows the safety rules of the facility.
>
> Contractor employees were observed exiting various process areas without signing out; not wearing appropriate eye or face protection while mixing and applying refractory products, and working on scaffolds that were not properly designed or erected. No formal process to evaluate contractor performance is in place at the refinery.

The cited standard provides:

> The employer shall periodically evaluate the performance of contract employers in fulfilling their obligations as specified in paragraph (h)(3) of this section.

29 C.F.R. § 1910.119(h)(2)(v).

After conducting interviews with members of Respondent's safety department, CSHO Rambo determined that Respondent had violated the standard requiring periodic monitoring of contract employer's compliance with paragraph (h)(3) of the same standard. Rambo testified that Looney had told him that the safety department conducted self-audits but that they did not maintain documentation of their audits. (Tr. 1457). Rambo also testified that he had never been provided with documentation of contractor performance audits. (Tr. 1457). Shane Stair, a safety specialist, told Rambo that he was unsure whether they had an evaluation process for contractors, and David Johnson, who also testified, told Rambo that they did not evaluate contractors. (Tr. 1458). In light of the fact that all three of those men were a part of the safety department, Rambo testified that "it gave me a sense of no one wanted to take ownership of safety when it came to others outside of Wynnewood working inside the refinery." (Tr. 1458).

According to David Johnson, the turnaround had a significant impact on the operations of the refinery. During a normal workday, Respondent had approximately three to four safety personnel to assess safe work practices. (Tr. 2109). During a turnaround, however, Johnson stated that the safety workforce increased to 40, which included approximately 14 Wynnewood

employees. (Tr. 2110). The rest of the safety crew came from a contractor that specializes in turnarounds, Total Safety. (Tr. 2111). The crew, which was split into two shifts and broken out by zone, would review safety procedures and perform field audits. (Tr. 2113). On cross-examination, Johnson testified that "we had a system in place for our field safety people to go out and evaluate how the contractors were working safely" and included verification of those evaluations through the use of field notes. (Tr. 2149). To the extent that violations were observed, Johnson testified that the violation was abated and the offending contractor/employee was counseled; in some instances, Respondent had to go so far as to remove certain contract employees from the premises. (Tr. 2120). Johnson also testified that Respondent utilized a system known as PICS (Pacific Industrial Contractors Services), which is a third-party contractor that evaluates potential contractors based on a pre-determined set of criteria. (Tr. 2105–06). Those criteria include an evaluation of whether the contractor provides the necessary training and possesses adequate written safety programs to perform the work needed at the refinery. (Tr. 2108). Based on this testimony, Respondent contends that it exercised reasonable diligence in monitoring contractor compliance with (h)(3).

Complainant alleges that Respondent violated the standard in all respects; namely, that it failed to periodically evaluate the performance of contractors with respect to each of the duties listed under (h)(3). However, based on Respondent's use of the PICS system to evaluate contractors, the Court finds that Respondent complied with its obligations as to (a), (b), and (c) as described in the citation item. Complainant did not present evidence to suggest that Respondent's use of the PICS system was insufficient with respect to those issues. Rather, based on Rambo's testimony, Complainant's focus appears to be instance (d), which claims that Respondent failed to ensure that contract employers "assures that each employee follows the

safety rules of the facility." 29 C.F.R. § 1910.119(h)(3)(iv). The primary bases for the allegation are, as mentioned above, the interviews conducted by Rambo and Rambo's discovery of violative conditions around the refinery as recounted in the body of the citation.

As noted above, during the turnaround Respondent was responsible for tracking over 1500 additional contract employees at the refinery per shift. In response, Respondent put together a safety team of 40 people to track, observe, and assist these employees. However, the existence of violations, alone, is not sufficient to establish that Respondent failed to periodically evaluate the performance of its contractors. Further, though Rambo testified that multiple safety employees told him that they did not monitor the performance of contractors, Johnson provided some context for the comments made to Rambo by Looney. Specifically, Johnson said that he disagreed with Looney's purported statement that Respondent "do[es] not oversee contractors as far as safety when they do their job." He explained, instead, that contractor employees are required, as indicated by the standard, to oversee/ensure the safety of their own employees. *See* 29 C.F.R. § 1910.119(h)(3)(iv) ("The contract employer shall assure each contract employee follows the safety rules of the facility . . ."). Johnson then went on to discuss the manner in which Respondent evaluated its contractors from an initial and ongoing perspective. (Tr. 2105, 2109–2115). Complainant did not rebut Johnson's testimony regarding its evaluation process; rather, it merely pointed out that Respondent failed to provide documentation of the evaluations. (Tr. 2147). The cited standard, as compared to other subsections within 1910.119, does not have a written documentation requirement; rather, it only requires Respondent to perform periodic evaluations. Based on the foregoing, the Court finds that Complainant failed to prove a violation of the standard. Accordingly, Citation 1, Item 3 is VACATED.

iv. Citation 1, Item 4

Complainant alleged a serious violation of the Act in Citation 1, Item 4 as follows:

> 29 CFR 1910.157(c)(1): Portable fire extinguishers were not mounted, located and identified so that they were readily accessible without subjecting the employees to injuries:
>
> The employer does not ensure portable fire extinguishers are mounted, located and identified so that they are readily accessible without subjecting the employees to injuries. This violation was observed on or about October 29, 2012, the employer did not ensure fire extinguishers were free from obstruction and readily accessible exposing employees to the hazards of fire, trips and falls:
>
> a) A fire extinguisher in the warehouse was blocked by boxes.
> b) A fire extinguisher in the pump shop was blocked by a large crate and air lines.
> c) Two fire extinguishers in the welding shop were not mounted.

The cited standard provides:

> The employer shall provide portable extinguishers and shall mount, locate and identify them so that they are readily accessible to employees without subjecting the employees to possible injury.

29 C.F.R. § 1910.157(c)(1).

While in the maintenance warehouse, CSHO Rambo observed a number of fire extinguishers that were not properly mounted or were otherwise not readily accessible as required by the standard. (Tr. 1391; Ex. C-72 at 18–20). Respondent contends that, notwithstanding the existence of the conditions, Complainant failed to prove how long the condition lasted or that Respondent knew or could have known of the violations. The Court finds that Complainant has established a violation of the standard.

The testimony was fairly consistent that the warehouse had an issue with blocked fire extinguishers. According to Armstrong, he observed fire extinguishers that were blocked in or were not properly mounted during the turnaround, which he attributed to the constant influx of materials coming into the warehouse to fill work orders. Though he admitted that the turnaround

was not the first time he had observed this condition. (Tr. 1324, 1330). He agreed that the extinguishers identified in Complainant's exhibits were not readily accessible and characterized the issue of blocked extinguishers as an "ongoing hazard". (Tr. 1330). Armstrong also testified that the warehouse manager's office was right next to one of the blocked extinguishers. (Tr. 1327; Ex. C-72 at 18–20). Respondent performed a self-audit at the end of August 2012, not long before Rambo's inspection. (Ex. C-74). The first item of that audit identifies multiple, blocked fire extinguishers, including one "located outside the south door of the office." (Ex. C-74). According to Rambo, Richard McCaulla, the warehouse manager, told him that he was aware that the fire extinguisher outside of his office was blocked and explained that the blockage was the result of an influx of materials and a lack of space.[32] (Tr. 1392).

The Court finds, consistent with the testimony of Armstrong, that the condition of blocked or otherwise improperly mounted fire extinguishers was an "ongoing hazard" in Respondent's warehouse. Respondent's warehouse manager admitted that he was aware of blocked extinguishers and the reasons therefor; one of the blocked extinguishers was right outside his office; and an audit of the warehouse revealed this problem more than a month before CSHO Rambo's inspection in late October. Thus, Respondent knew or could have known of the condition. The Court also finds that Respondent's failure to have readily accessible fire extinguishers exposed its employees to potential fire hazards. (Tr. 1329–30). Respondent's Emergency Action Plan (EAP) indicates that properly trained employees are expected to use fire extinguishers "if the fire can be easily extinguished and you have the proper training." (Ex. C-78). As noted by Armstrong, the first minutes of a fire are critical, and precious time would be wasted in having to remove materials and boxes in order to access a fire extinguisher. (Tr. 1329).

32. The self-audit also identified Mr. McCaulla as the party responsible for correcting the blocked fire extinguishers and that he was to correct the condition by "15 Oct 12". (Ex. C-74). CSHO Rambo's inspection took place on October 29, 2012. (Tr. 1381).

Insofar as employees are expected to participate in putting out minor fires, the Court finds that the failure to have readily accessible extinguishers exposed those employees to potential burn injuries. As such, the Court finds that Complainant has established a serious violation of the cited standard. Accordingly, Citation 1, Item 4 is AFFIRMED as serious.

v. Citation 1, Item 5

Complainant alleged a serious violation of the Act in Citation 1, Item 5 as follows:

> 29 CFR 1910.212(a)(3)(ii): Point of operation guards were not designed and constructed as to prevent the operator from having any part of their body in the danger zone during the operating cycle:
>
> The employer does not ensure point of operation guards are designed and constructed as to prevent the operator from having any part of their body in the danger zone during the operating cycle. This violation was observed on or about October 29, 2012, in the pump shop the employer did not ensure a Johnson horizontal band saw was provided a guard exposing employees to the hazard of contact with the point of operation.

The cited standard provides:

> The point of operation of machines whose operation exposes an employee to injury, shall be guarded. The guarding device shall be in conformity with any appropriate standards therefor, or, in the absence of applicable specific standards, shall be so designed and constructed as to prevent the operator from having any part of his body in the danger zone during the operating cycle.

29 C.F.R. § 1910.212(a)(3)(ii).

CSHO Rambo identified a horizontal band saw in the warehouse that did not have proper guarding to protect against point-of-operation hazards. (Tr. 1395; Ex. C-72 at 21–25). The close-up photographs show two blades that extend lengthwise across the open space of the machine, running parallel to the name "JOHNSON" emblazoned across the top. (Ex. 72 at 23–24). As noted by Rambo, there is nothing to prevent contact with the blades during operation. (Tr. 1396–97). In response to questions about how long the saw had been in the condition observed by Rambo, Calvin Foley, who had been the pump shop supervisor for 15 years, stated that it had

been that way since he had worked there. (Tr. 1398–99). This was echoed by Johnny Reddell, Respondent's maintenance manager. (*Id.*).

Respondent contends that Complainant failed to prove that it knew or could have known of the condition. Although Armstrong testified that there was a guard that could be removed from time to time, he seemed to be somewhat confused as to which guard was being discussed. Initially, Armstrong indicated that the saw depicted in Exhibit C-72 was guarded. (Tr. 1334; Ex. C-72 at 21). In response to questions from the Court, Armstrong testified there was no additional guarding that was removed or replaced during the turnaround, and, insofar as he discussed guarding that had been removed, he was referring to the green piece of metal with the handle, which is located on the left-hand side of the photograph in Exhibit C-72 at 21. (Tr. 1334–35). Later in his testimony, Armstrong said that he thought there was a guard in the open area, but he was not "a hundred percent sure". (Tr. 1339). Notwithstanding that testimony, Armstrong admitted that he observed the saw without the guard, and that the last time he had observed the saw without this purported guard "was before the turnaround." (Tr. 1341).

The Court finds that Respondent violated the standard and that the violation was serious. The saw, as observed by CSHO Rambo, was improperly guarded and exposed its users to point-of-operation hazards, such as lacerations and potential amputations. (Tr. 1396–97). The Court finds that the statements given to CSHO Rambo establish that the saw, as illustrated in Exhibit 72, was in its normal operating condition, had been in that condition for quite some time, and that such condition was known to members of Respondent's management team. Even if the Court were to discount those statements, the Court would still find that Respondent had adequate knowledge of the violation based on Armstrong's testimony that his supervisor's "should've knew" about the saw, because they "walk by the saw as much as I do, and if I've seen it, then

they [sic] seen it." (Tr. 1333). Armstrong testified that the last time he had seen this purported removable guard was before the turnaround, which means that many of his supervisors had the opportunity to observe the unguarded saw, as it was being used by "[j]ust about everyone in that warehouse . . . ." (Tr. 1332). Accordingly, Citation 1, Item 5 is AFFIRMED as serious.

vi. Citation 1, Item 6(a), (b), and (c)

Complainant alleged three serious violations of the Act in Citation 1, Item 6, subparts (a), (b), and (c). Given their similarity, both items shall be addressed together. Complainant's allegations with respect to Item 6(a) are as follows:

> 29 CFR 1910.215(a)(2): Abrasive wheel(s) used on grinding machinery were not provided with safety guard(s) which covered the spindle end, nut, and flange projections:
>
> The employer does not ensure abrasive wheels used on grinding machinery are provided with safety guards which cover the spindle end, nut, and flange projections. This violation was observed on or about October 29, 2012, in the pump shop the employer did not ensure abrasive wheels on a grinding machine were provided with safety guards covering the spindle end, nut, and flange projections exposing employees to the hazard of caught-by.

The cited standard provides that "[t]he safety guard shall cover the spindle end, nut, and flange projections, The safety guard shall be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard . . . ." 29 C.F.R. § 1910.215(a)(2).

Complainant's allegations with respect to Item 6(b) are as follows:

> 29 CFR 1910.215(b)(9): The distance between the grinding wheel periphery and the adjustable tongue or the end of the peripheral member at the top exceeded one-fourth inch:
>
> The employer does not ensure the distance between the grinding wheel periphery and the adjustable tongue or the end of the peripheral member at the top exceeded one-fourth inch. This violation was observe on or about October 27, 2012, in the maintenance shop where the distance between the grinding wheel periphery and the adjustable tongue guard on a Baldor bench grinder exceeded one-fourth inch

> exposing employees to the hazard of caught-by and struck-by flying debris resulting from an exploding grinding wheel.

The cited standard provides:

> Safety guards . . . where the operator stands in front of the opening, shall be constructed so that the peripheral protecting member can be adjusted to the constantly decreasing diameter of the wheel. The maximum angular exposure above the horizontal plane of the wheel spindle . . . shall never be exceeded, and the distance between the wheel periphery and the adjustable tongue or the end of the peripheral member at the top shall never exceed one-fourth inch.

29 C.F.R. § 1910.215(b)(9).

> Complainant's allegations with respect to Item 6(c) are as follows:
>
> 29 CFR 1910.215(d)(3): The contact surface(s) of wheel(s), blotter(s) or flange(s) on grinding machine(s) were not flat and free of foreign matter:
>
> The employer does not ensure the contact surfaces of wheels, blotters or flanges on grinding machines are flat and free of foreign matter. This violation was observed on or about October 27, 2012, in the maintenance shop for a Baldor bench grinder where the contact surface of a grinding wheel was not kept flat and smooth exposing employees to the hazard of struck-by flying debris from an exploding grinding wheel.

The cited standard provides that "[a]ll contact surfaces of wheels, blotters and flanges shall be flat and free of foreign matter." 29 C.F.R. § 1910.215(d)(3).

CSHO Rambo provided ample testimony and evidence to establish a violation of the foregoing standards with respect to the bench grinder, much of which was confirmed by Armstrong and not contradicted by any other witness. (Tr. 1343). According to Rambo, the grinding wheel: (1) did not have adequate guarding to protect against point-of-operation hazards, as well as potential shrapnel hazards from a well-worn grinding disc; (2) measured nearly 2.75 inches between the wheel and the guard, when the required distance is less than one-quarter inch; and (3) was overly worn, full of indentations, and was otherwise unsafe to use. (Tr. 1401–1410; Ex. C-72 at 26–33). Thus, Respondent violated the terms of the standard.

Respondent contends, however, that Complainant cannot prove that it knew or could have known of the condition. Characterizing Armstrong's testimony as speculation, Respondent argues that Complainant failed to show that any member of management was aware of the condition. Similar to his testimony with respect to the band saw, Armstrong stated that members of the management team must have seen the condition of the wheel, considering its location in plain view, the regularity of its use, and due to the obviously non-compliant condition of the wheel itself. (Tr. 1344). The Court has no reason to doubt Armstrong's assessment, and, in light of the condition and size of the grinding wheel itself, it is clear that it had been used in a non-compliant condition for long enough for warehouse management to observe it. The Court credits Armstrong's testimony based on his intimate knowledge of the conditions and operations inside Respondent's warehouse. Thus, the Court finds that Respondent knew or, with the exercise of reasonable diligence, could have known of the condition. This condition exposed the employees, contractors, and managers that used it to point-of-operation hazards and potential struck-by hazards due to the condition of the grinding wheel itself. Both Rambo and Armstrong testified that these hazards could cause serious injury. (Tr. 1403, 1343).

Based on the foregoing, the Court finds that Complainant established a violation of the standard. Accordingly, Citation 1, Items 6(a), (b), and (c) are AFFIRMED as serious violations of the Act.

vii. Citation 1, Item 7

Complainant alleged a serious violation of the Act in Citation 1, Item 7 as follows:

> 29 CFR 1910.303(g)(1): Sufficient access and working space was not provided and maintained about all electric equipment (operating at 600 volts, nominal, or less to ground) to permit ready and safe operation and maintenance of such equipment:
>
> The employer does not provide and maintain sufficient access and working space about all electric equipment (operating at 600 volts, nominal, or less to ground) to

> permit ready and safe operation and maintenance of such equipment. This violation was observed on or about October 27, 2012, in the pump shop where an electrical panel was not accessible exposing employees to fire and electrical hazards.

The cited standard provides:

> Sufficient access and working space shall be provided and maintained about all electric equipment to permit ready and safe operation and maintenance of such equipment.

29 C.F.R. § 1910.303(g)(1).

Rambo testified that the standard applies, and Respondent does not dispute that assertion. (Tr. 1412). The testimony of Rambo and the photographs of the electrical panel show that there was an obstruction in front of the panel, including a shelf and cabinet. (Tr. 1412–13; Ex. C-72 at 35). Respondent contends that Complainant failed to prove that the obstruction, as it were, was large enough to block access. Although the cited standard is couched in terms that are performance-related, the subsections of 1910.303(g)(1) indicate what constitutes sufficient access and working space. *See, e.g.,* 29 C.F.R. § 1910.303(g)(1)(i)(C) ("The work space shall be clear and extend from the grade, floor, or platform to the height required by paragraph (g)(1)(vi) of this section. However, other equipment associated with the electrical installation and located above or below the electric equipment may extend not more than 153 mm (6 in.) beyond the front of the electric equipment."). The Court finds that, based on these parameters, the condition of the electrical panel violated the terms of the standard.

The Court also finds that Respondent knew of the condition and that its employees were exposed to it. According to CSHO Rambo, both Foley and the electrical supervisor, Eric Amparano, were aware of the blocked electrical panel. (Tr. 1414). The Court finds that their knowledge is properly imputed to Respondent. Further, the Court credits Rambo's testimony that two individuals working in the pump shop were exposed to potential tripping hazards or

even burns if employees are not able to access the panel in an emergency. (Tr. 1413). These hazards have the potential to cause serious injuries, such as burns, contusions, or broken bones.

Based on the foregoing, the Court finds that Complainant established a violation of the standard and that the violation was serious. Accordingly, Citation 1, Item 7 is AFFIRMED.

viii. Citation 1, Item 8

Complainant alleged a serious violation of the Act in Citation 1, Item 8 as follows:

> 29 CFR 1910.305(b)(1)(ii): Unused openings in cabinets, boxes, and fittings, were not effectively closed:
>
> The employer does not ensure unused openings in cabinets, boxes, and fittings are effectively closed. This violation was observed on or about October 29, 2012, in the maintenance shop where the employer did not ensure that pre-punched knockout was effectively closed on an electrical panel exposing employees to fire and electrical hazards.

The cited standard provides:

> Unused openings in cabinets, boxes, and fittings shall be effectively closed.

29 C.F.R. § 1910.305(b)(1)(ii).

CSHO Rambo observed an open knockout on the panel box identified in Exhibit C-72. (Ex. C-72 at 36). A knockout is an opening to receive electrical lines into the panel box. (Tr. 1415). Rambo testified that Amparano, Respondent's electrical supervisor, told him he had orchestrated the removal a cord, which was supposed to provide power to a temporary welder. (Tr. 1416). Apparently the cord that was selected was insufficient for the power draw of the welder, so the cord was taken off, and the knockout was left open. (Tr. 1416). On cross-examination, Rambo testified that Amparano told him that the work of changing the cord was carried out by a contractor. (Tr. 1509). Nevertheless, it was still carried out at his direction. (Tr. 1509).

Respondent contends that, due to the fact that the work was performed by a contractor, Respondent had no reason to know of the violation. The Court disagrees. Rambo testified that Amparano directed the work to remove the cord, which took place around the beginning of the turnaround. (Tr. 1416–17). Rambo discovered the condition nearly two months later. (Tr. 1417). The electrical panel was located next to the restroom in a well-traveled area. (Tr. 1349). Given the location of the condition, the fact that the work to remove the cord was done at the direction of one of Respondent's supervisors, and the length of time that the condition existed, the Court finds that Respondent, with the exercise of reasonable diligence, could have known of the condition.

Because the condition was in a well-traveled area, the Court also finds that Respondent's employees were exposed to the hazard, which could cause shocks, burns, and potentially electrocution. (Tr. 1416). Exposure to such hazards could cause serious injury up to and including death. Based on the foregoing, the Court finds that Respondent violated the standard and that the violation was serious. Accordingly, Citation 1, Item 8 is AFFIRMED as a serious violation of the Act.

ix. Citation 1, Item 9

Complainant alleged a serious violation of the Act in Citation 1, Item 9 as follows:

> 29 CFR 1910.305(g)(1)(iv)(A): Flexible cords were used as a substitute for fixed wiring of a structure:
>
> The employer does not ensure flexible cords are not used as a substitute for fixed wiring of a structure. This violation was observed on or about October 29, 2012, in the welding shop where extension cords were used as a substitute for fixed wiring exposing employees to electrical hazards.

The cited standard provides:

> Unless specifically permitted otherwise in paragraph (g)(1)(ii) of this section, flexible cords and cables may not be used . . . [a]s a substitute for the fixed wiring of a structure.

29 C.F.R. § 1910.305(g)(1)(iv)(A).

While in the warehouse, Rambo observed extension cords strung over beams throughout the welding shop, including one cord that was wrapped around a metal cable. (Tr. 1417; Ex. C-72 at 37–40). He discovered that these cords were being used as the primary electrical source for a workstation. (Tr. 1417). In addition to being used as a primary power source, Rambo also observed the cords being used to "store" equipment, which was hung from the ends of the cords. (Tr. 1419; Ex. C-72 at 39–40). Amparano told Rambo that the extension cords had been used like this for years and Armstrong testified that they had been like that for "an extended period of time." (Tr. 1345, 1420).

Respondent argues the citation should be dismissed because it alleges, at best, a *de minimis* violation of the Act. According to Respondent, there was no proof the alleged violation exposed employees to a safety and health risk; in fact, Respondent points out that none of the extension cords showed signs of damage. *See Resp't Br.* At 76 (citing *Dover Elevator*, 15 BNA OSHC 1378 (No. 88-2642, 1991) ("A violation is *de minimis* when a deviation from the standard has no 'direct or immediate' relationship to employee safety.")). The Court disagrees.

In addition to the line quoted by Respondent, the Commission in *Dover* also stated, "[N]ormally, that classification is limited to situations in which the hazard is so trifling that an abatement order would not significantly promote the objectives of the Act." *Id.* Under the facts of this case, the Court is convinced that Complainant has established that the violation in this case has a direct and immediate relationship to employee safety and that abatement of the violation will promote the objectives of the Act. Not only were the cords draped over steel beams and cables, but those same cords were used to suspend equipment, which placed additional strain on the cords. The Act illustrates that OSHA has made the determination that

such a situation does have a direct and immediate relationship to employee safety. *See* 29 C.F.R. § 1910.303(a)(2)(x) ("Flexible cords and cables shall be protected from accidental damage, as might be caused, for example, by sharp corners, projections, and doorways or other pinch points."). Further, Rambo testified that sharp edges, such as the metal cable and the beams, coupled with the additional weight imposed by the hanging objects, could cause a tear in the cord (or "accidental damage"). (Tr. 1419). If a tear occurs, everything that comes into contact with the exposed wiring could be energized, which would include the beams and metal cables over which the electrical cords were draped.

Based on the foregoing, the Court finds that Complainant established a serious violation of the cited standard, that Respondent knew of the condition, and that Respondent's employees were exposed to the possibility of shock, burns, or electrocution. Accordingly, Citation 1, Item 9 is AFFIRMED as serious.

x. Citation 2, Item 1

Complainant alleged a repeat violation of the Act in Citation 2, Item 1 as follows:

> 29 CFR 1910.119(h)(2)(iv): The employer did not develop and implement safe work practices consistent with 29 CFR 1910.119(f)(4), to control the entrance, presence and exit of contract employers and employees in covered process areas:
>
> The employer does not develop and implement safe work practices consistent with 29 CFR 1910.119(f)(4), to control the entrance, presence and exit of contract employers and employees in covered process areas. On or about October 25, 2012, and at times prior thereto, the employer did not ensure contract employees are properly signed in/out process units:
>
> a) Four (4) JV Industrial Companies employees failed to sign out of Zone 3.
> b) Two (2) LOP employees failed to sign out of the FCCU.
> c) One (1) Altair Strickland employee failed to sign out of the FCCU.
> d) One (1) Total Safety employee, two (2) OSR employees, one (1) Strategic Contract Resources employee, and one (1) Wynnewood Refining Company employee failed to sign out of the FCCU.
> e) On October 20, 2012, seven (7) Scaffolding and Erection Company employees, two (2) Strategic Contract Resources employees failed to sign out of the Alkylation Unit.

f) On October 12, 2012, three (3) Koch employees failed to sign out of the SRU 48002 area in the Alkylation Unit.

The cited standard provides:

> The employer shall develop and implement safe work practices consistent with paragraph (f)(4) of this section, to control the entrance, presence and exit of contract employers and contract employees in covered process areas.

29 C.F.R. § 1910.119(h)(2)(iv).

As part of his inspection, CSHO Rambo had to sign-in and sign-out of various units within the refinery. When he signed in, Rambo took the opportunity to review Respondent's log books. (Tr. 1445–46). His examination of the log books in the Alky Unit, the FCCU, and Zone 3 showed 24 instances of a contractor or employee failing to sign out of those areas over the course of roughly 12 days, beginning on October 12, 2012.[33] (Tr. 1449; Ex. C-72 at 9–13, C-76). As a result of his observations, Complainant issued a citation alleging that Respondent failed to enforce its sign-in/sign-out policy and, therefore, failed to adequately implement a safe work practice "to control the entrance, presence and exit of contractor employers and employees in covered process areas." 29 C.F.R. § 1910.119(h)(2)(iv).

Respondent contends that Complainant did not prove that it failed to exercise reasonable diligence to ensure that its contractors complied with applicable safe work practices, such as signing in and out of covered process areas. In support of this proposition, Respondent points to its three-tiered system of signing into and out of process areas, inclusive of its badge process for entering the refinery, its log book for process areas, and its safe work permit process. (Tr. 2102, 2121–23). Respondent also argues that it strictly enforced its sign-in/sign-out policy through auditing work practices of contractors, as well as the sign-in/sign-out sheets for each process area. As such, Respondent argues that it took all reasonable efforts to discover violations and that

33. To clarify, the logs covered a period of approximately 12 days, not CSHO Rambo's inspection. None of the days identified included the day of the Wickes explosion.

Complainant failed to prove that it "should have known of even a single instance where a contractor failed to sign in or out." *Resp't Br.* at 78.

The Court agrees with Complainant. It is clear that Respondent had developed and, to a certain extent, implemented a system to control the entry into and exit from covered process areas. The problem, however, was that the system was ineffective. Respondent contends that Complainant failed to prove that it could have known of even a single instance of a contractor failing to sign out; however, it also claims that it implemented a strict auditing policy, which included reviewing sign-in/sign-out sheets on a daily basis. *Resp't Br.* at 77. Based on the log books introduced by Complainant, the Court finds that the auditing policy was not as strict as Respondent would have it believe. One of the logs showed three contractors that failed to sign out of the SRU on October 12, 2012. (Ex. C-76). Other logs show multiple failures to sign out from the FCCU, all occurring on the same day, October 25, 2012. (Ex. C-72 at 9–13). If Respondent was reviewing the logs and contractor practices as it suggests (and, indeed, as it should have been), then it would have been readily aware of its contractors failing to sign out of covered process units. While the Court is mindful of the fact that the large number of contractors at the refinery during the turnaround makes tracking every single one difficult, that only highlights the importance of ensuring that entry into process areas is properly controlled. Thus, the Court finds that Complainant established a violation of the standard and that Respondent, with the exercise of reasonable diligence, could have known of the violation.

The Court also finds that employees were exposed to potential hazards. According to David Johnson, it is important to track the entry into and exit out of process units because "during an emergency, the most important thing is to make sure everybody is safe." (Tr. 2138–39). Rambo testified similarly, stating that in the event of an evacuation, first responders (and

Wynnewood employees) could be exposed to fire and chemical leak hazards if they needed to enter a process unit to find a non-present subcontractor employee who simply had not signed out. (Tr. 1449). Respondent contends that the violation should not be categorized as serious because the sign-in/sign-out sheets would not be used in the event of a catastrophic release; employees are instructed to immediately leave the unit and gather at designated assembly areas. (Tr. 2123–25). Instead, Respondent states that it uses the entry badge data to determine who is on the premises in an emergency. The Court finds the standard Respondent violated addresses more than that. According to the preamble of the PSM standard, "[T]he objectives of these additional provisions were to insure that those persons operating high hazard processes are cognizant of any non-routine work that is occurring and to insure that those in responsible control of the facility are also in control of non-routine work." (Ex. C-2 at 30). The failure to adequately track contractors and employees, doing non-routine work in covered process areas not only impacts potential rescue efforts, but it also impacts active and future work projects. If it is unclear whether certain non-routine work projects are occurring in process areas, then subsequent entrants into those areas cannot adequately assess the hazards associated with working in, energizing, or de-energizing a particular unit. Without the ability to know with certainty whether individuals are in certain area of the refinery, employees and contractors are subjected to any number of hazards that might be present, including, as is relevant to a refinery, fire and explosion hazards. Thus, the Court finds that the violation was serious.

Based on the foregoing, the Court finds that Respondent violated the standard and that the violation was serious. Accordingly, Citation 2, Item 1 is AFFIRMED.

xi. Citation 3, Item 1

Complainant alleged another-than-serious violation of the Act in Citation 1, Item 1 as follows:

> 29 CFR 1910.22(d)(1): In every building or other structure, or part thereof, used for mercantile, business, industrial, or storage purposes, the loads approved by the building official were not marked on plates of approved design securely affixed by the owner of the building, or his duly authorized agent, in a conspicuous place in each space to which they are related:
>
> In every building or other structure, or part thereof, used for mercantile, business, industrial, or storage purposes, the employer does not ensure the second level storage area is designed, constructed, and maintained to support its maximum intended load. This violation was observed on or about October 29, 2012, in the warehouse the employer did not ensure the second level storage area was designed, constructed, and maintained to support its maximum intended load.

The cited standard provides:

> In every building or other structure, or part thereof, used for mercantile, business, industrial, or storage purposes, the loads approved by the building official shall be marked on plates of approved design which shall be supplied and securely affixed by the owner of the building, or his duly authorized agent, in a conspicuous place in each space to which they relate. Such plates shall not be removed or defaced but, if lost, removed, or defaced, shall be replaced by the owner or his agent.

29 C.F.R. § 1910.22(d)(1).

CSHO Rambo observed a second-level storage area that did not have a posted load rating. (Tr. 1422). This area was used for storing gaskets, electrical parts, and shafts, some of which can weigh up to 150 pounds. (Tr. 1346; Ex. C-72 at 41–42). According to Rambo, McCaulla told him that the second-level storage area had never been load-rated, which was echoed by Armstrong, who testified that he had never seen a load rating for that area. (Tr. 1348).

The Court finds that Complainant established a violation of the standard. The evidence clearly shows that the second-level storage area did not have a load rating to indicate that it was capable of supporting the load of the stored materials. Respondent was clearly aware of this failure, as indicated by McCaulla's statements to Rambo and confirmed by Armstrong's testimony that the storage area had never been rated. The Court also finds that employees, including Armstrong, were exposed to the hazard of falling materials and a potentially the collapse of the storage area—without knowing the load capacity, Respondent could possibly

overload the elevated storage area. Accordingly, Citation 3, Item 1 is AFFIRMED as an other-than-serious violation of the Act.

V. Penalties

In calculating appropriate penalties for affirmed violations, Section 17(j) of the Act requires the Commission give due consideration to four criteria: (1) the size of the employer's business, (2) the gravity of the violation, (3) the good faith of the employer, and (4) the employer's prior history of violations. Gravity is the primary consideration and is determined by the number of employees exposed, the duration of the exposure, the precautions taken against injury, and the likelihood of an actual injury. *J.A. Jones Construction Co.*, 15 BNA OSHC 2201 (No. 87-2059, 1993). It is well established that the Commission and its judges conduct *de novo* penalty determinations and have full discretion to assess penalties based on the facts of each case and the applicable statutory criteria. *Valdak Corp*., 17 BNA OSHC 1135 (No. 93-0239, 1995); *Allied Structural Steel*, 2 BNA OSHC 1457 (No. 1681, 1975).

A. Docket No. 13-0791 – Inspection No. 663538

The citation items resulting from this inspection, although they allege violations of different standards, all involve the same basic hazard in the same area of the refinery: catastrophic releases of highly hazardous chemicals in the start-up and operation of the Wickes boiler. Unfortunately, the facts of this case also illustrate the potential gravity of those violations. Two of Respondent's employees died, and many more were exposed to serious injury, as a result of the explosion that occurred on September 28, 2012. Further, due to the lack of adequate training, procedures, and hazard analysis, Respondent's employees were exposed to those same hazards each time they lit the Wickes. Respondent was aware of previous hard-starts (a colloquial term for "mini-explosion") and failed to adequately address the conditions and

procedures that contributed to them. Although the Court determined that a repeat characterization was not appropriate under the facts of this case, the Court finds that Respondent's knowledge of previous hard-starts, its subsequent failure to address the hazards associated with the process, and the potential for serious injury or death provides a sound basis for the highest penalty available for serious violations. Thus, the Court will assess a $7,000.00 penalty for each of the following violations: Citation 1, Item 1; Citation 1, Items 2(a), (b), and (c); Citation 1, Items 3(a) and (b); Citation 1, Item 4 [allegation b]; Citation 1, Items 5(a) and (b); Citation 1, Items 6(a) and (b); Citation 2, Item 2; Citation 2, Item 3; Citation 2, Item 4; and Citation 2, Item 5 [allegation b].

B. Docket No. 13-0644 – Inspection No. 778042

The citations contained within this docket are sufficiently unique in terms of the violation and potential hazard to warrant more individualized discussion. Inasmuch as the citation items are similar, the Court shall consolidate its discussion of those items.

With respect to Citation 1, Item 2, the Court finds that the uncapped cylinders have the potential to become dangerous projectiles that could cause serious injury to the numerous people that occupied or otherwise used the warehouse during the turnaround. That said, it appears the cylinders were secured, which reduced the likelihood that an accident would occur. In light of these facts, the Court finds that a penalty of $3,300.00, as proposed by Complainant, is appropriate.

With respect to Citation 1, Item 4, it appears that blocked fire extinguishers in the warehouse were an ongoing and pervasive problem. CSHO Rambo identified four different extinguishers in the warehouse that were blocked, not properly mounted, or both. The Court finds that nearly all of the occupants of the warehouse were exposed to a fire hazard, because

Respondent expected its employees to attempt to put out small fires with the provided fire extinguishers. However, considering that Complainant did not identify any imminent fire dangers in the warehouse, the Court finds that the likelihood of injury is low. Accordingly, the Court finds that a penalty of $3,300.00, as proposed by Complainant, is appropriate.

With respect to Citation 1, Item 5 and Citation 1, Items 6(a), (b), and (c), the Court finds that the hazards associated with each and the gravity of the violations are fairly similar. Each of these items deals with point of operation hazards, and the equipment at issue was used by numerous employees and contractors throughout the turnaround. Both the saw and the grinder were improperly guarded and exposed operators to potential lacerations, amputations, and, in the case of the grinder, struck-by injuries due to the worn-down grinding wheel. Given the potential for serious injury, and in consideration of the number of people that used the saw and grinder, the Court finds that a penalty of $5,500.00 is appropriate for Citation 1, Item 5, and a grouped penalty of $5,500.00 is appropriate for Citation 1, Items 6(a), (b), and (c).

With respect to Citation 1, Item 7, the Court finds that the violation was of low gravity. While the electric panel was blocked to some extent, it was not completely inaccessible. To be sure, when it comes to possible electric shock or electrocution, time is of the essence when it comes to shutting down circuits; however, considering that the panel was still relatively accessible, the Court finds that the violation's connection to potential injury was fairly attenuated. Accordingly, the Court finds that a penalty of $3,000.00 is appropriate.

With respect to Citation 1, Item 8, the Court finds that employees were exposed to potential electric shock, burns, or even electrocution as a result of the open knockout on the side of the electrical panel. The panel itself was in a well-traveled area, and the knockout was not properly protected. However, even though it was in a well-traveled area, the Court finds it

would be unlikely that an employee would get close enough to the condition to actually cause injury. Accordingly, the Court finds that a penalty of $1,000.00 is appropriate.

With respect to Citation 1, Item 9, Respondent's employees were exposed to potential burns, shock, and electrocution due to the use of extension cords as a primary power source. There was no indication that the hanging cords were damaged in any way; however, given the fact that the cords were draped over metal beams and cables and Respondent's propensity to use those cords both as power source and as hanging storage, the Court finds that the potential for serious injury was increased. Accordingly, the Court finds that a penalty of $4,400.00 is appropriate.

With respect to Citation 2, Item 1, the Court finds that a lower penalty is appropriate. When viewed in a vacuum, twenty-four instances of contractors and employees failing to sign out of a process area seems excessive. However, more than 1500 contractors were present at the refinery each shift. While the Court agrees with Complainant that such an influx of people on the premises heightens Respondent's responsibility to properly track employees and contractors that are potentially exposed to PSM-related hazards, the Court is also mindful of the challenges associated with such a large, sudden, workforce increase. In light of that fact, and in consideration of the fact that Respondent had a badge-entry system that allowed them to track all entrants onto the property generally, the Court finds that a penalty of $2,000.00 is appropriate.

Finally, with respect to Citation 3, Item 1, the Court finds that Respondent's employees were exposed to a hazard due to Respondent's failure to calculate and post the load rating for the second-level storage area. Without knowing the load capacity, Respondent's employees could have been exposed to a collapse of the structure due to overloading. However, in light of the fact

that Complainant characterized this citation item as other-than-serious, the Court finds that its proposed penalty of $1,000.00 is appropriate.

VI. Order

Based upon the foregoing Findings of Fact and Conclusions of Law, it is ORDERED that:

A. Docket No. 13-0791 – Inspection No. 663538

1. Citation 1, Item 1 is AFFIRMED, and a penalty of $7,000.00 is ASSESSED.
2. Citation 1, Items 2(a), (b), and (c) are AFFIRMED, and a grouped penalty of $7,000.00 is ASSESSED.
3. Citation 1, Items 3(a) and (b) are AFFIRMED, and a penalty of $7,000.00 is ASSESSED.
4. Citation 1, Item 4 [allegation (b)] is AFFIRMED, and a penalty of $7,000.00 is ASSESSED.
5. Citation 1, Items 5(a) and (b) are AFFIRMED, and a penalty of $7,000 is ASSESSED.
6. Citation 1, Items 6(a) and (b) are AFFIRMED, and a penalty of $7,000 is ASSESSED.
7. Citation 2, Item 1 is VACATED.
8. Citation 2, Item 2 is AMENDED to a serious violation, AFFIRMED as amended, and a penalty of $7,000.00 is ASSESSED.
9. Citation 2, Item 3 is AMENDED to a serious violation, AFFIRMED as amended, and a penalty of $7,000.00 is ASSESSED.
10. Citation 2, Item 4 is AMENDED to a serious violation, AFFIRMED as amended, and a penalty of $7,000.00 is ASSESSED.
11. Citation 2, Item 5 [allegation (b)] is AMENDED to a serious violation, AFFIRMED as amended, and a penalty of $7,000.00 is ASSESSED.

12. Citation 3, Item 1 is VACATED.

B. Docket No. 13-0644 – Inspection No. 778042

1. Citation 1, Item 1 is VACATED.
2. Citation 1, Item 2 is AFFIRMED, and a penalty of $3,300.00 is ASSESSED.
3. Citation 1, Item 3 is VACATED.
4. Citation 1, Item 4 is AFFIRMED, and a penalty of $3,300.00 is ASSESSED.
5. Citation 1, Item 5 is AFFIRMED, and a penalty of $5,500.00 is ASSESSED.
6. Citation 1, Items 6(a), (b), and (c) are AFFIRMED, and a grouped penalty of $5,500.00 is ASSESSED.
7. Citation 1, Item 7 is AFFIRMED, and a penalty of $3,000.00 is ASSESSED.
8. Citation 1, Item 8 is AFFIRMED, and a penalty of $1,000.00 is ASSESSED.
9. Citation 1, Item 9 is AFFIRMED, and a penalty of $4,400.00 is ASSESSED.
10. Citation 2, Item 1 is AMENDED to a serious violation, AFFIRMED as amended, and a penalty of $2,000.00 is ASSESSED.
11. Citation 3, Item 1 is AFFIRMED, and a penalty of $1,000 is ASSESSED.

/s/ Brian A. Duncan

Date: February 5, 2016
Denver, Colorado

Judge Brian A. Duncan
U.S. Occupational Safety and Health Review Commission

ATTACHMENT B

Secretary of Labor V. Wynnewood Refining, Co., LLC, OSHRC Docket Nos. 13-0644 and 13-0791

Occupational Safety and Health Review Commission Decision

United States of America
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION
1120 20th Street, N.W., Ninth Floor
Washington, DC 20036-3457

SECRETARY OF LABOR, Complainant, v. WYNNEWOOD REFINING CO., LLC, and its successors, Respondent.	OSHRC Docket Nos. 13-0644 & 13-0791

ON BRIEFS:

Ronald J. Gottlieb, Attorney; Charles F. James, Counsel for Appellate Litigation; Ann Rosenthal, Associate Solicitor of Labor for Occupational Safety and Health; M. Patricia Smith, Solicitor of Labor; U.S. Department of Labor, Washington, DC
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For the Respondent

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For Amici Curiae American Fuel & Petrochemical Manufacturers and American Petroleum Institute

DECISION

Before: MACDOUGALL, Chairman; ATTWOOD and SULLIVAN, Commissioners.

BY THE COMMISSION:

The Occupational Safety and Health Administration cited Wynnewood Refining Company, LLC, for—as relevant here—twelve violations of various provisions of OSHA's Process Safety Management standard, 29 C.F.R. § 1910.119. Eleven of these violations involve the "Wickes" steam boiler at the company's oil refinery in Wynnewood, Oklahoma, and four of those violations are characterized as repeat. The twelfth citation item alleges an additional repeat PSM violation related to the company's alleged failure to develop and implement safe work practices for

contractors. Following a hearing, Administrative Law Judge Brian A. Duncan affirmed all twelve violations as serious and assessed a total penalty of $58,000 for them.

Both parties petitioned for review of the judge's decision. Wynnewood LLC contends that the Wickes boiler-related items should be vacated because the PSM standard does not apply to the boiler.[1] The Secretary contends that the judge erred in rejecting his repeat characterization of five of the PSM items because, although the predicate violations were committed by a different corporate entity when it was owned by a different parent corporation, substantial continuity existed between Wynnewood LLC and the prior entity. For the following reasons, we affirm the judge's decision.[2]

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[1] Wynnewood LLC's petition for discretionary review also asserts that the Secretary's serious characterization of some of the PSM citation items at issue "shows the overreach of the PSM standard." The Commission requested briefing on this issue as well as the applicability of the PSM standard, as a whole, to the Wickes boiler. The company, however, does not address the serious characterization issue in its review brief; so we consider that issue abandoned. *See Am. Sterilizer Co.*, 18 BNA OSHC 1082, 1089 n.15 (No. 91-2494, 1997) ("Under Commission precedent, an issue raised in a petition for review or direction for review but not addressed in the party's brief is treated as abandoned."). The company did, though, include in its review brief challenges to the merits of each of the Wickes boiler-related items that go beyond the issue of applicability and were not raised in its petition. We decline to address these additional issues. *See Charles A. Gaetano Constr. Corp.*, 6 BNA OSHC 1463, 1468 n.7 (No. 14886, 1978) ("[Where a] respondent did not raise [an] argument in its petition for review[,] . . . the . . . issue is not before [the Commission]."); *J.A. Jones Constr. Co.*, 15 BNA OSHC 2201, 2204 (No. 87-2059, 1993) ("It is well-settled that the Commission has discretion to decline to entertain arguments by a party dealing with matters on which we did not request briefs.").

[2] Two motions remain pending before the Commission. The American Fuel & Petrochemical Manufacturers and American Petroleum Institute moved for leave to file an amicus brief. *See* Commission Rule 24, 29 C.F.R. § 2200.24 ("The brief of an amicus curiae may be filed only by leave of the Judge or Commission . . . [and] may be conditionally filed with the motion for leave."). That motion is granted.

Wynnewood LLC moved for leave to file a sur-reply to the Secretary's reply brief. *See* Commission Rule 93(b)(3), 29 C.F.R. § 2200.93(b)(3) ("Additional briefs [other than opening and reply briefs] are otherwise not allowed except by leave of the Commission."). The company's counsel, however, included the sur-reply brief within the motion, which violates Commission Rule 40(a), *see* 29 C.F.R. § 2200.40(a) ("A motion shall not be included in another document, such as a brief . . . , but shall be made in a separate document."). In addition, the motion initially failed to "state . . . if [the Secretary] opposes or does not oppose the motion." *Id.* Finally, the motion was filed almost six weeks after the Secretary filed his reply brief. *Cf.* Commission Rule 93(b)(1), 29 C.F.R. § 2200.93(b)(1) ("Any reply brief permitted by these rules or by order shall be filed within 15 days after the second brief is served."). Accordingly, this motion is denied.

BACKGROUND

Wynnewood LLC's refinery in Oklahoma processes crude oil and on a daily basis produces 70,000 barrels of gasoline, propane, propylene, butane, fuel oils, and solvents. Prior to December 2011, the refinery was owned and operated by Wynnewood Refining Company, a subsidiary of Gary-Williams Energy Corporation. On December 15, 2011, CVR Energy, Inc., acquired all the stock of Gary-Williams Energy Corporation and its subsidiaries, including Wynnewood Inc., which then registered with the State of Delaware as a limited liability corporation—Wynnewood LLC, the respondent here—on February 21, 2012.[3]

The Wickes boiler, located about 100 feet from the reactor column in the refinery's Fluid Catalytic Cracking Unit (FCCU), is one of four boilers in the refinery providing steam to the 225-pound "steam header," which then routes steam for use in various processes throughout the facility. In hearing testimony, the Wickes boiler was described as "a major contributor into that steam header," and "by far the workhorse of the plant for steam," as it provides steam for, among other things, powering turbines and pumps, putting out small fires, "stripping" crude oil of certain substances during the refining process, and clearing the "FCCU riser" of hydrocarbons during emergency shutdowns.

The Wickes boiler is powered by two types of fuel—natural gas, which the refinery purchases, and refinery fuel gas (RFG), which is made from non-condensable, unsaleable, and flammable gas byproducts of the refining process. Natural gas and RFG are mixed in a fuel gas drum and the resulting fuel is then routed through a 4.1-mile-long pipeline network, including through a trunk line to the Wickes boiler. During times when no RFG is produced—such as when the refinery is shut down for maintenance, a period known as a "turnaround"—only natural gas is provided to the drum. On September 28, 2012, the refinery was in the middle of a turnaround, so the Wickes boiler was to be started up using only natural gas. During this start-up, however, too much natural gas was allowed into the boiler's "firebox"—where fuel is burned to produce a flame—and shortly thereafter the boiler exploded, immediately killing one Wynnewood LLC employee and critically injuring another, who died twenty-eight days later.

[3] While it appears that Wynnewood Refining Company, when it was owned by Gary-Williams Energy Corporation, was a Delaware corporation, the record in this case is not entirely clear on this point. Nevertheless, we will refer to the entity that existed before February 2012 as "Wynnewood Inc.," to distinguish it from Wynnewood LLC, the respondent here.

The day after the explosion, OSHA began an inspection of the refinery, which resulted in the issuance of three citations to Wynnewood LLC (Docket No. 13-0791), with all items relating to the Wickes boiler—twelve of these citation items allege violations of the PSM standard; five of which are alleged as repeat violations. One month after the start of this first inspection, OSHA initiated a second inspection of the refinery, which resulted in the issuance of three more citations to Wynnewood LLC (Docket No. 13-0644), addressing various conditions in the refinery; one of the citation items is alleged as a repeat violation of the PSM standard.

Under Docket No. 13-0791, as relevant here, the judge affirmed eleven of the twelve citation items alleging violations of the PSM standard; four of which he characterized as serious instead of repeat.[4] Under Docket No. 13-0644, as relevant here, the judge affirmed the one citation item alleging a violation of the PSM standard but characterized it as serious instead of repeat.[5] In rejecting the Secretary's repeat characterization of these affirmed items, the judge concluded that, because the predicate PSM violations were committed by Wynnewood Inc. while it was a subsidiary of Gary-Williams Energy Corporation, those violations could not be attributed to Wynnewood LLC.

For the following reasons, we agree with the judge that the PSM standard applies to the Wickes boiler and therefore affirm the eleven items at issue on review that allege PSM violations

[4] Under Docket No. 13-0791, the seven PSM items in Serious Citation 1 at issue on review allege violations of: § 1910.119(d)(3)(i)(F), asserting that the Wickes boiler's process safety information did not include design codes and standards (Item 1); § 1910.119(e)(3)(i), (e)(3)(iii), and (e)(3)(iv), based on two allegedly deficient process hazard analyses (Items 2a, 2b, and 2c); § 1910.119(f)(1)(i)(A) and (f)(3), for having inadequate operating procedures and failing to review such procedures (Items 3a and 3b); and § 1910.119(ℓ)(3), for failing to inform employees of a process change related to the Wickes boiler (Item 4). The four items in Repeat Citation 2 at issue on review allege violations of: § 1910.119(f)(1)(ii), in that the operating procedures for the Wickes boiler did not address the operating limits of the equipment (Item 2); § 1910.119(g)(2), for failing to provide refresher training to employees on operation of the Wickes boiler (Item 3); § 1910.119(j)(2), for failing to implement written procedures related to the Wickes boiler (Item 4); and § 1910.119(ℓ)(1), for failing to implement procedures to manage changes related to the Wickes boiler (Item 5).

[5] The additional PSM item that was cited as a repeat violation under Docket No. 13-0644 alleges a violation of § 1910.119(h)(2)(iv), for failing to implement safe work practices to control the entrance, presence, and exit of contract employers and employees near the Wickes boiler (Repeat Citation 2, Item 1).

relating to the boiler. We also agree that a repeat characterization is unwarranted for the five items on review.

DISCUSSION

I. Applicability of the PSM Standard

The PSM standard "applies to . . . [a] process which involves a Category 1 flammable gas . . . or a flammable liquid with a flashpoint below 100 °F . . . on site in one location, in a quantity of 10,000 pounds . . . or more." 29 C.F.R. § 1910.119(a)(1)(ii). "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," and "[f]or 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." 29 C.F.R. § 1910.119(b). As such, the definition of "process" has two prongs—a vessel may be part of a covered "process" via interconnection or location.

The Secretary asserts that the Wickes boiler fits both prongs, alleging that the FCCU is a covered process and the boiler is both interconnected with it and located such that a catastrophic event could affect it. The judge agreed, finding that the Wickes boiler is interconnected with the Alkylation Unit and FCCU through the RFG pipeline, as well as interconnected with virtually all the refinery's processes through the steam header, and concluding that the boiler was centrally located in the FCCU such that an event like the explosion in this case could result in a catastrophic release of a highly hazardous chemical (HHC). The judge also rejected Wynnewood LLC's contention that the Wickes boiler qualifies for the PSM standard's workplace fuel exemption, which provides that "[h]ydrocarbon fuels used solely for workplace consumption as a fuel" are exempted from coverage "if such fuels are not a part of a process containing another [HHC] covered by this standard." 29 C.F.R. § 1910.119(a)(1)(ii)(A).

Wynnewood LLC asserts that the judge erred in several ways, arguing that: (1) a mere physical connection between vessels is insufficient to make them a single process absent evidence that the cited vessel could cause a catastrophic HHC release—a showing the company contends the Secretary failed to make; (2) in any event, the Wickes boiler was not in fact "interconnected" to a PSM-covered process because neither the RFG pipeline nor the steam header are sufficient connections under the standard; (3) the Wickes boiler was not situated such that it could cause a

catastrophic release from nearby covered processes; and (4) the Wickes boiler's use of RFG falls within the workplace fuel exemption because the only HHC or flammable gas that contacts the boiler is a small quantity of refinery and/or natural gas, all of which the boiler uses only as a fuel. We begin with the company's first contention, which raises an interpretation issue.

"Interconnected" Vessels and Proof of Risk of Catastrophic Release

Wynnewood LLC contends that interconnected vessels do not form a single "process" unless each vessel is shown to pose a risk of catastrophic HHC release. The company argues that because there are no commas on either side of the following phrase in the standard's definition of "process"—"and separate vessels which are located such that a highly hazardous chemical could be involved in a potential release"—the "such that" phrase in the definition modifies "interconnected" as well as "located." 29 C.F.R. § 1910.119(b) (defining "process" as "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"). The company therefore asserts that to prove interconnection, the Secretary must show that the cited vessel is connected to a covered process *and* could cause or contribute to a catastrophic release of HHCs.

Even without the commas, the definition's repeated use of the word "which" sets up a parallel structure that on its face indicates two separate and complete conditions. This meaning is reinforced by the fact that while the phrase "which are located" cannot stand alone as a complete concept—to be meaningful, it needs the modifying phrase "such that a highly hazardous chemical could be involved in a potential release"—the phrase "which are interconnected" can stand alone. Accordingly, we find that the plain meaning of the definition is that a single process consists of either "any group of vessels which are interconnected" or "separate vessels which are located such that a highly hazardous chemical could be involved in a potential release."[6] *See, e.g., Cent. Fla.*

[6] Wynnewood LLC argues that the purpose of the standard—"to prevent or mitigate against the consequences of a catastrophic release of HHCs," 29 C.F.R. § 1910.119 ("Purpose" statement)—would not be served by what the company characterizes as an "expansive" reading of the "process" definition. Courts, however, "cannot use . . . general statements of . . . purpose to override the plain meaning of specific provisions . . . ." *Reeves v. Astrue*, 526 F.3d 732, 737 (11th Cir. 2008). In addition, as the judge noted, "[t]here is nothing patently . . . unreasonable about considering vessels that are physically connected by pipeline to be part of the same process, nor is it

Equip. Rentals, Inc., 25 BNA OSHC 2147, 2150 (No. 08-1656, 2016) ("Most OSHA standards regulate a particular condition and, therefore, presume the existence of a hazard."); *Oberdorfer Indus., Inc.*, 20 BNA OSHC 1321, 1330 (No. 97-0469, 2003) (consolidated) (29 C.F.R. § 1910.219(c)(2)(i) "presumes a hazard" where "horizontal shafting [is] no more than 7 feet . . . from the floor," so "the Secretary is not obligated to show that the conditions in question are themselves hazardous in order to prove a violation").[7]

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unreasonable to presume that vessels connected in such a way could be involved in a potential release of HHCs."

We also reject the company's contention that OSHA failed to give the company notice that the Wickes boiler was to be treated as a PSM-covered process. The plain meaning of the provision provided sufficient notice of OSHA's position in this case. *See Ohio Cast Prods., Inc.*, 18 BNA OSHC 1912, 1915 (No. 96-0774, 1999) ("[I]n view of our conclusion that the standard's . . . plain meaning would be 'ascertainably certain' to an employer[,] . . . we conclude that [the employer] had fair notice of the means by which the cited standard provides for determining silica overexposure."). In addition, we note that OSHA published an interpretation of the PSM standard in 2007, more than five years prior to the inspections at issue here, stating that "the definition establishes two distinct burdens of proof when considering the applicability of PSM to an interconnected or a co-located process," with OSHA "presum[ing] that all aspects of a physically connected process can be expected to participate in a catastrophic release." Interpretation of OSHA's Standard for Process Safety Management of Highly Hazardous Chemicals, 72 Fed. Reg. 31,453, 31,456-57 (June 7, 2007).

[7] Chairman MacDougall does not join her colleagues in finding a plain meaning of the "process" definition, due to the definition's grammatically incorrect use of "which." When "which" is properly used, it is preceded by a comma and introduces a "nonrestrictive relative clause"; that clause "contains extra information that could be left out of the sentence without affecting the meaning." Oxford Living Dictionaries, *"That" or "which"?*, Oxford University Press, https://en.oxforddictionaries.com/usage/that-or-which (last visited Mar. 21, 2019). By contrast, "that" introduces, without a comma preceding it, a "restrictive relative clause" containing "essential information about the noun that comes before it." *Id.* Here, the "process" definition uses "which" without a comma, so any attempt to interpret the definition based on its plain language is guesswork at best, and impossible at worst.

To illustrate the confusion created by the drafters' construction of this provision, if the sentence is read as a true "which"—i.e., unnecessary, extra information—it nullifies most of the words of the sentence:

> [A]ny 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.

Interconnection of Vessels

We turn next to whether the Secretary has shown that the Wickes boiler is interconnected with other vessels such that it is part of a PSM-covered process. It is undisputed that the FCCU and Alkylation Unit are PSM-covered processes by virtue of the flammables contained in each and as the judge found, the Wickes boiler is physically connected to both units through the RFG pipeline and to virtually all the refinery's processes via the steam header. Indeed, Wynnewood LLC acknowledges that the Wickes boiler was, at least indirectly, physically connected to the FCCU and Alkylation Unit. Nevertheless, the company argues that interconnection may be established only where multiple *vessels* are involved, and that the Secretary has failed to show that the boiler's firebox is a "vessel" covered by the standard because it does not contain an amount of HHCs that exceeds the threshold quantity specified in § 1910.119(a)(1)(ii).

Wynnewood LLC is correct that there is no evidence in the record that RFG—the only hydrocarbon handled by the Wickes boiler—exists anywhere in the refinery in an amount that exceeds the PSM standard's threshold quantity, but the company's focus on the boiler's firebox and fuel is misplaced. The PSM standard does not require that an interconnected vessel itself contain the threshold quantity of HHCs—indeed, it does not even require that each vessel in an interconnected group contain HHCs at all. *See* 29 C.F.R. § 1910.119(b) (defining "process" as "any activity involving a highly hazardous chemical"). Thus, because the record shows that the Wickes boiler held water, it constitutes a "vessel," and the status of the firebox has no bearing on the issue here. *See* WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE, UNABRIDGED 2547 (3d ed. 1986) (defining "vessel" as "a hollow and usu[ally] cylindrical or concave utensil . . . for holding something and esp[ecially] a liquid"); *United States*

However, if the sentence is read as using a "that"—i.e., essential information—then the statutory interpretation would be that of her colleagues. Unfortunately, the drafters chose "which" and thus, Chairman MacDougall would conclude that, due to poor drafting, the definition is ambiguous.

Nevertheless, Chairman MacDougall finds that the Secretary's interpretation of the "process" definition is reasonable and entitled to weight based on the entirety of the circumstances, including the consistency of the Secretary's interpretation. *See, e.g.*, 72 Fed. Reg. at 31,456-57. *See also Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944) ("The weight of [an interpretation] in a particular case will depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control.").

v. Sherburne, 249 F.3d 1121, 1126 (9th Cir. 2001) ("turn[ing] to the dictionary for guidance" in absence of statutory definition).

Wynnewood LLC also argues that the two, indirect connections between the Wickes boiler and the FCCU and Alkylation Unit—namely, the RFG and steam systems—are insufficient to constitute interconnection under the standard because neither played a direct role in these processes. The judge, citing the Commission's decision in *Delek Refining, Ltd.*, 25 BNA OSHC 1365 (No. 08-1386, 2015), *aff'd in relevant part*, 845 F.3d 170 (5th Cir. 2016), rejected this argument, concluding that the link between the Wickes boiler and the FCCU is even more concrete than the equipment found to be part of the single process in *Delek*. The company contends that the judge's reliance on *Delek* was error, and we agree—*Delek* is inapposite to the "interconnection" issue here. In *Delek*, the issue was whether the positive pressurization unit, which kept hazardous vapors from entering the FCCU control room at Delek's refinery, was "process equipment" under § 1910.119(j)(4)(i). *Delek Refining*, 25 BNA OSHC at 1370. Thus, while *Delek* did address the PSM standard's "process" definition, it focused on the first sentence and whether the positive pressurization unit was involved in the "manufacturing, handling [and] on-site movement" of HHCs, *id.* at 1371, not whether vessels were interconnected pursuant to the definition's second sentence.

We find, however, that the indirect, physical link between the Wickes boiler and the FCCU and Alkylation unit is sufficient for PSM coverage. "Interconnect," which the standard does not define, commonly means "to connect mutually or with one another," and "interconnection" means "connection between two or more." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE, UNABRIDGED 1177 (3d ed. 1986); *see Crawford v. Metro. Gov't of Nashville & Davidson Cty.*, 555 U.S. 271, 276 (2009) (undefined term "carries its ordinary meaning"). These definitions contemplate the linking together of multiple objects, which necessarily includes an indirect link between some of them. This is in contrast with the word "connect," a term the standard does not use, which describes a direct link—"to join, fasten, or link together usu[ally] by means of something intervening," for example, "a bus line connects the two towns," or "connect a garden hose to the faucet." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE, UNABRIDGED 480 (3d ed. 1986). In short, the PSM standard's use of the term "interconnected" makes it irrelevant whether the Wickes boiler is directly connected to, or involved with, the processes of the FCCU and Alkylation Unit. The main point is that RFG

generated by the FCCU and the Alkylation Unit is piped to the Wickes boiler, and steam from the boiler is piped to the FCCU and Alkylation Unit; the Wickes boiler is therefore one of a "group of vessels which are interconnected," 29 C.F.R. § 1910.119(b), and therefore covered as part of a "process" by the PSM standard. 29 C.F.R. § 1910.119(a)(1)(ii).

Location of Wickes Boiler

Alternatively, the Secretary asserts that the Wickes boiler was covered by the PSM standard because it was "located such that a highly hazardous chemical could be involved in a potential release." 29 C.F.R. § 1910.119(b). Before the judge, Wynnewood LLC argued that the Secretary failed to make this showing because the Wickes boiler's 100-foot distance from the FCCU reactor column, the closest part of the process containing HHCs, has not been shown to have been close enough to cause a catastrophic release of HHCs. In this regard the company asserted that there was no damage to any process equipment as a result of the explosion in this case, the nearby exhaust line carrying combustion byproducts does not contain any HHCs, and the testimony of the compliance officer and the Secretary's expert is speculative regarding the explosion hazard. The judge rejected the company's arguments as too heavily based on the particular explosion here and found that the boiler's central location in the FCCU, coupled with the fact that debris from the boiler (such as a ladder, a platform, and pieces of the boiler's brick-like lining) was propelled across the street toward an operator shelter, was sufficient to establish that the boiler's location made it such that an HHC could be involved in a potential release. On review, the company contends that the judge's ruling is based on speculation. We disagree.

Wynnewood LLC asserts that to establish the location prong of the definition, the Secretary must prove that the potential for a catastrophic release was probable, but this is not the test. The standard itself states that vessels must be "located such that a highly hazardous chemical *could be involved* in a potential release." 29 C.F.R. § 1910.119(b). The record here shows that the Wickes boiler was located centrally in the FCCU and confirms that the explosion in this case was strong enough to propel a ladder and platform forty feet into an operator shelter.[8] Also, the Secretary's

[8] The parties argue over what this operator shelter was, as well as the significance of it. The Secretary—citing the testimony of the refinery's process safety manager—asserts that the operator shelter was another name for the FCCU control room. Wynnewood LLC contends that there is a distinction between the control room and the operator shelter, the latter of which was within 40 feet of the Wickes boiler but housed no controls related to the Wickes boiler, FCCU, or any other PSM-covered process. The precise identification of the operator shelter, however, is immaterial

expert testified that the explosion could have been worse—"if they would have been producing steam [at that time], and if that boiler would have been under pressure, not only would you have had the firebox explode, as we saw, with shrapnel and walkways and all sorts of stuff flying all over the place, but you would have had a steam boiler explosion." As such, the explosion here was not the worst-case scenario, and in the expert's opinion, "an incident here at the boiler could definitely cause damage to other equipment, whether it be pipes or vessels in that facility." Wynnewood LLC points out that the Secretary did not proffer evidence concerning the construction specifications of the FCCU, but the FCCU's structural integrity is of no relevance, especially in light of testimony from Wynnewood's own expert that he was "surprised maybe that the [fuel] lines [to the Wickes boiler] weren't on fire" after the explosion. This acknowledgement that a fire hazard was present, along with the evidence discussed above, is sufficient to show that the Wickes boiler was "located such that a highly hazardous chemical could be involved in a potential release." 29 C.F.R. § 1910.119(b).

Workplace Fuel Consumption Exemption

The final issue with regard to applicability of the PSM standard to the Wickes boiler concerns Wynnewood LLC's contention that the boiler qualifies for the standard's workplace fuel consumption exemption. The PSM standard does not apply to "[h]ydrocarbon fuels used solely for workplace consumption as a fuel (e.g., propane used for comfort heating, gasoline for vehicle refueling), if such fuels are not a part of a process containing another highly hazardous chemical covered by this standard." 29 C.F.R. § 1910.119(a)(1)(ii)(A). The company argues that the Wickes boiler qualifies for this exemption because the only HHC that contacts the boiler is RFG produced at the refinery, which is used solely for fueling purposes. In rejecting this argument, the judge concluded that the exemption has a very limited scope and was not intended to cover process-related applications such as the Wickes boiler.[9] We agree.

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to the issue at hand. Given the testimony of the Secretary's expert regarding the potential for damage to equipment, vessels, and piping resulting from a boiler explosion, the significance of the operator shelter was to show the strength of the blast (given that the shelter was 40 feet away), not that damage to the shelter, in particular, would compromise FCCU processes.

[9] While the judge did not address which party bears the burden of proof with regard to the exemption, it is phrased as an exception, *see* § 1910.119(a)(1)(ii) ("This section applies to . . . [a] process which involves a Category 1 flammable gas . . . *except for* . . . ."), so Wynnewood LLC must show that it applies. *See C.J. Hughes Constr., Inc.*, 17 BNA OSHC 1753, 1756 (No. 93-

The plain language of the exemption makes clear that fuels used for non-process-related uses—like "comfort heating" and for "vehicle[s]"—are not covered by the PSM standard. 29 C.F.R. § 1910.119(a)(1)(ii)(A). Put another way, the Secretary cannot base PSM coverage on the mere presence of such a fuel in a workplace. Here, however, the PSM standard's applicability is not based on either the RFG or the natural gas that is used to fuel the boiler; rather, it is based on the boiler itself, and its interconnection and location, as discussed above. Therefore, whether the RFG and natural gas used to fire the boiler could independently serve as a basis for applying the PSM standard—that is, whether this fuel is "used solely for workplace consumption"—is irrelevant in this case.[10] For these reasons, we conclude that the PSM standard applies to the Wickes boiler.

II. Repeat Characterization

The Secretary contends that the judge erred in rejecting his repeat characterization of five items—Docket No. 13-0791, Citation 2, Items 2 through 5, and Docket No. 13-0644, Citation 2, Item 1. The citations for the prior violations underlying these repeat items were issued to Wynnewood Inc.; they became final orders of the Commission in the fall of 2008, when the refinery was owned and operated by Wynnewood Inc., then a subsidiary of Gary-Williams Energy Corporation. The judge rejected the Secretary's repeat characterization based on his finding that "holding [Wynnewood LLC], a separate and distinct . . . entity, responsible for what [Wynnewood Inc.] did in the past . . . expands repeat liability beyond what the Commission envisioned in" *Sharon & Walter Construction, Inc.*, 23 BNA OSHC 1286 (No. 00-1402, 2010). We agree.[11]

3177, 1996) ("A party seeking the benefit of an exception to a legal requirement has the burden of proof to show that it qualifies for that exception.").

[10] We note that even if the PSM standard's applicability here depended on the mere presence of RFG or natural gas, the exemption would still not be met. The preamble "clarif[ies] [OSHA's] intent not to exclude from coverage hydrocarbon fuels used for process[-]related applications such as furnaces, heat exchangers and the like," and that is exactly how the RFG and natural gas were being used here—to heat the Wickes boiler. 57 Fed. Reg. at 6367. Rather, the intent, as explained by the American Petroleum Institute in commenting on the proposed rule, was in part "to exclude the enormous number of small business locations across the nation which would not be covered by the . . . rule, except for their on-site storage of hydrocarbon fuels for low-risk applications such as heating, drying, and the like," which "are not the subject of" the standard. *Id.*

[11] On review, Wynnewood LLC renews an additional argument that was rejected by the judge—that OSHA failed to comply with its own internal citation policy given that the underlying citations became final orders more than five years prior to the ones at issue here. As we have consistently

In *Sharon & Walter*, the Commission concluded that "in appropriate circumstances, [the Secretary may apply] a 'repeat' characterization to cases where the cited employer has altered its legal identity from that of the predecessor employer whose citation history forms the basis of that characterization." *Id.* at 1293. In "consider[ing] . . . the circumstances under which a predecessor's citation history may be attributed to a cited successor employer," the "focus is on whether there is 'substantial continuity' between the two enterprises," which depends on factors falling into three categories: (1) the nature of the business, because "continuity in the type of business, products/services offered and customers served indicates that there has been no substantive change in the enterprise"; (2) the jobs and working conditions, because these have a "close correlation with particular safety and health hazards"; and (3) continuity of the personnel who specifically control decisions related to safety and health," because "the decisions of such personnel relate directly to the extent to which the employer complies with the statute's requirements." *Id.* at 1294-95.

As the judge found, the issue here comes down to the third category given that the refinery's business, products, jobs, and working conditions were the same under both entities. Indeed, the Commission recognized in *Sharon & Walter* the particular importance of continuity of personnel, stating that the same "control over decision-making in both companies . . . weighs heavily in favor of attributing . . . [the prior employer's] citation history to [the cited employer]."[12] *Id.* at 1295-96. Here, several of the day-to-day managers were in the same positions under Wynnewood Inc. and Wynnewood LLC, including the refinery's vice president of refining, safety manager, PSM manager, operations manager, and two supervisors in Zone 2, where the Wickes boiler is located. The record also shows, however, that high-level executives of Wynnewood LLC's current parent company, CVR Energy—such as the executive vice president for operations

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held, however, OSHA's citation policy is "only a guide for OSHA personnel to promote efficiency and uniformity, [is] not binding on OSHA or the Commission, and do[es] not create any substantive rights for employers." *Hackensack Steel Corp.*, 20 BNA OSHC 1387, 1392 (No. 97-0755, 2003). In other words, "there are no statutory limitations upon the length of time that a citation may serve as the basis for a repeated violation." *Id. See also Triumph Constr. Corp. v. Sec'y of Labor*, 885 F.3d 95, 99 (2d Cir. 2018) ("[T]he Commission did not abuse its discretion by relying on previous violations more than three years old, because neither the [OSHA Field Operations] Manual nor the Commission's precedent limits OSHA to a three-year look back period.").

[12] In *Sharon & Walter*, Walter Jensen was the sole proprietor of both the predecessor and successor. 23 BNA OSHC at 1288.

and the vice president of environmental health and safety—took an increased role in day-to-day operations at the refinery, and they were present frequently to oversee the transition from Wynnewood Inc. under Gary-Williams Energy Corporation to Wynnewood LLC under CVR Energy. This new management focused on improving safety, health, and the proper implementation of PSM at the refinery. Moreover, as the judge noted: the number of refinery safety personnel was nearly doubled, including four new assistant operations supervisors responsible for occupational safety compliance; $130 million of equipment upgrades were made; more formalized training programs were developed and implemented; and there was a renewed emphasis on management of change procedures. These leadership changes resulted in a safety culture shift at the refinery.[13]

In light of the foregoing, we find these are not the appropriate circumstances to affirm a repeat characterization. This is not a case where "the cited employer has altered its legal identity

[13] We note that our dissenting colleague lists nine individuals employed by both Wynnewood LLC and Wynnewood Inc. with titles indicating safety and health responsibilities, and she asserts that it is inappropriate to consider management changes above their level following the purchase by CVR Energy because the new parent company is a distinct corporate entity. The record, however, shows that safety *policy* at the refinery was not controlled by these managers, either before or after the purchase. Regardless of whether as a matter of corporate law the managers our colleague references had the right to refuse instructions from either of their parent entities, the record shows that these managers merely implemented the safety policies set by the previous parent company and then by CVR Energy. Consequently, after the refinery was purchased, the safety policies *at the refinery* changed significantly as a direct result of the different attitude toward safety CVR Energy brought to bear. As operations manager Darin Rains testified, "[t]he refinery went through some pretty drastic changes as a result of the purchase by CVR Energy," including increasing the number of safety personnel. Indeed, David Johnson, a safety specialist at the refinery, described how Chris Swanberg, CVR Energy's Vice President for Safety, Health, and Environment, told managers "very clearly and very emphatically that, under his watch . . . safety was the highest priority at the refinery," and that this resulted in specific safety-related changes:

> Safety training was a priority. Our budget for safety was pretty open. If there was a safety issue, it was addressed immediately. If we couldn't resolve it, then . . . it kept going up to the next level to get resolution. You know, *it was a very dramatic change*.

(Emphasis added.) In short, a rote application of the "continuity of personnel" prong that considers only the management personnel working for each Wynnewood entity paints an inaccurate picture of how safety policy was set and how safety decisions were made at the refinery. As such, unlike our dissenting colleague, we conclude that Wynnewood LLC's changeover in ownership resulted in changes in management practices, procedures, and culture significant enough to break the chain of liability stemming from Wynnewood Inc.'s previous actions.

from that of the predecessor employer . . . [simply to] avoid a repeat characterization." *Id.* at 1293. On the contrary, the record does not support the Secretary's contention that there was sufficient continuity in the safety personnel at the cited entity such that "there was a Commission final order against the *same employer* for a substantially similar violation."[14] *Hackensack Steel Corp.*, 20

[14] While we agree that the last prong of the three-part "substantial continuity" test (continuity of personnel) was not met in this case—and that Wynnewood Inc. and Wynnewood LLC are therefore not the same employer for repeat characterization purposes under *Sharon & Walter*—in our view this may not even be the appropriate test for determining whether successor liability should be imposed for purposes of the Occupational Safety and Health Act. We are in favor of revisiting *Sharon & Walter*, because the view expressed by Commissioner Thompson in that case seems persuasive—that the substantial continuity test is not appropriate in determining whether a violation has been properly characterized as repeat. *See* 23 BNA OSHC at 1296 n.19.

In addition, we see no rationale here for imposing the OSHA violation history of Wynnewood Inc. upon Wynnewood LLC, a separate legal entity not created to avoid responsibilities under the Act. *See id.* at 1293 (repeat characterization appropriate "where the cited employer has altered its legal identity from that of the predecessor employer whose citation history forms the basis of that characterization"). This is particularly true here where the new management focused on improving safety, health, and the proper implementation of PSM at the refinery. Nonetheless, given that the Secretary's repeat characterization has been rejected pursuant to *Sharon & Walter*, and in light of the parties' failure to ask the Commission to revisit that case (and the lack of briefing on this particular issue), this question will have to wait for another day.

Chairman MacDougall notes on this issue, however, as she did in *Delek Refining, Ltd*., 25 BNA OSHC 1365 (No. 08-1386, 2015), *aff'd in part*, 845 F.3d 170 (5th Cir. 2016), that the "general rule that a purchasing entity does not have successor liability applies, such that a corporation that purchases another corporation 'is not responsible for the seller's debts or liabilities, except where (1) the purchaser expressly or impliedly agrees to assume the obligations; (2) the purchaser is merely a continuation of the selling corporation; or (3) the transaction is entered into to escape liability.' " *Id.* at 1378 (MacDougall, Comm'r, concurring and dissenting) (quoting *Golden State Bottling Co. v. NLRB*, 414 U.S. 168, 182 n.5 (1973)). As she observed in *Delek*, "[t]he Supreme Court has referred to the 'free transfer of capital' and the concern of placing restrictions on successor employers, which might reduce the incentives purchasers have to take over failing businesses, as factors to be considered in shaping successorship doctrine." *Id.* n.6 (citing *Howard Johnson Co. v. Detroit Local Joint Exec. Bd., Hotel & Rest. Emps. & Bartenders Int'l Union*, 417 U.S. 249, 255 (1974); *NLRB v. Burns Int'l Sec. Servs., Inc.*, 406 U.S. 272, 287-89 (1972)).

Commissioner Sullivan notes, as did Commissioner Thompson in *Sharon & Walter*, that the substantial continuity test was developed and adopted from cases decided by the National Labor Relations Board in evaluating "the continuing obligations of a successor toward a majority union under the National Labor Relations Act." 23 BNA OSHC at 1296 n.19. The OSH Act does not serve this purpose, so the doctrine appears particularly inappropriate when deciding whether a predecessor entity's prior violations should be attributed to a successor. Commissioner Sullivan agrees with Commissioner Thompson that under the OSH Act, "common law master-servant

BNA OSHC 1387, 1392 (No. 97-0755, 2003) (emphasis added). Accordingly, we find that a repeat characterization is not warranted here.[15]

CONCLUSION

For all the foregoing reasons, we affirm, under Docket No. 13-0791, Citation 1, Items 1, 2a, 2b, 2c, 3a, 3b, and 4, and Citation 2, Items 2, 3, 4, and 5, as serious violations. We also affirm, under Docket No. 13-0644, Citation 2, Item 1, as a serious violation.

Given that Wynnewood LLC does not contest the penalty amounts on review, we assess the penalties for these items that the judge assessed—for Docket No. 13-0791, Citation 1, Item 1, a penalty of $7,000; for Items 2a, 2b, and 2c, a grouped penalty of $7,000; for Items 3a and 3b, a grouped penalty of $7,000; for Item 4, a penalty of $7,000; for Citation 2, Items 2, 3, 4, and 5, a penalty of $7,000 each; and for Docket No. 13-0644, Citation 2, Item 1, a penalty of $2,000—for a total penalty of $58,000. *See KS Energy Servs., Inc.*, 22 BNA OSHC 1261, 1268 n.11 (No. 06-1416, 2008) (assessing proposed penalty where penalty not in dispute).

SO ORDERED.

/s/
Heather L. MacDougall
Chairman

/s/
James J. Sullivan, Jr.
Commissioner

Dated: March 28, 2019

principles apply, including the 'alter ego,' doctrine, which is reflected in the federal common law." *Id.* Further, "the Commission has the authority to apply this common law equitable remedy to examine the violation history of a predecessor because denial to the Commission of veil piercing authority in appropriate circumstances would not be consistent with *United States v. Bestfoods*, 524 U.S. 51 (1998)." *Id.* In short, Commissioner Sullivan believes the common law speaks more directly to successor liability with respect to the OSH Act and to the question of whether a violation is properly characterized as repeat. The substantial continuity test, on the other hand, while appropriate for collective bargaining agreements, creates in his view a disincentive for employers when it comes to hiring or keeping employees of the predecessor entity if applied in the repeat characterization context.

[15] Chairman MacDougall notes that, given the Commission's conclusion that Wynnewood Inc. and Wynnewood LLC are not the same employer, there is no need to reach the issue of whether there is substantial similarity between the prior and current violations; therefore, there is no reason to address Commissioner Attwood's discussion of *Angelica Textile Servs., Inc.*, No. 08-1774, 2018 WL 3655794 (OSHRC June 24, 2018), *appeal docketed*, No. 18-2831 (2d Cir. Sept. 21, 2018).

ATTWOOD, Commissioner, concurring and dissenting in part:

I agree with my colleagues' conclusions in Part I of their opinion, in which they find that the PSM standard applies to the Wickes boiler under both "interconnect[ion]" and "locat[ion]," 29 C.F.R. § 1910.119(b), and that Wynnewood LLC has failed to show that the standard's workplace fuel consumption exemption applies, *see* 29 C.F.R. § 1910.119(a)(1)(ii)(A). Accordingly, I join my colleagues in affirming the Wickes boiler-related items at issue. I do not, however, join Part II of their opinion, which rejects the Secretary's repeat characterization of five of the violations we affirm.

Longstanding Commission precedent holds that a "violation is repeated under section 17(a) of the [Occupational Safety and Health] Act if, at the time of the alleged repeated violation, there was a Commission final order against the same employer for a substantially similar violation." *Potlatch Corp.*, 7 BNA OSHC 1061, 1063 (No. 16183, 1979). For the reasons that follow, I would conclude that under this precedent: (1) Wynnewood Inc. (the recipient of the prior citations) and Wynnewood LLC (the respondent here) are the same employer for purposes of a repeat characterization; and (2) the prior and instant violations are substantially similar and therefore must be characterized as repeat. Accordingly, I would affirm Docket No. 13-0791, Citation 2, Items 2 through 5, and Docket No. 13-0644, Citation 2, Item 1 as repeat violations.

I. Substantial Continuity of Corporate Entities

The Commission held in *Sharon & Walter Construction, Inc.*, 23 BNA OSHC 1286 (No. 00-1402, 2010), that a repeat characterization may be appropriate "where the cited employer has altered its legal identity from that of the predecessor employer whose citation history forms the basis of that characterization." *Id.* at 1293. In deciding whether "a predecessor's citation history may be attributed to a cited successor employer," the Commission must determine "whether there is 'substantial continuity' between the two enterprises," which requires the consideration of "factors that essentially fall into three categories"—(1) the nature of the business; (2) the jobs and working conditions; and (3) the continuity of personnel who "specifically control decisions related to safety and health." *Id.* at 1294-95. It is undisputed that the facts relevant to the first two categories of factors weigh in favor of substantial continuity of the two entities. My colleagues' analysis of the third category of factors, however, is problematic.

The majority decision concedes that "several of the day-to-day managers were in the same positions under Wynnewood Inc. and Wynnewood LLC." Nevertheless, my colleagues decline to

find substantial continuity between these entities because two executives of Wynnewood LLC's new parent company— CVR Energy, Inc.—"took an increased role in day-to-day operations at the refinery." This focus on high-level executives (here, CVR Energy's executive vice president for operations and vice president of environmental health and safety) of a *different* corporate entity than the cited employer is misplaced. As noted, the issue is whether there is substantial continuity of safety and health personnel "*between the two enterprises*"—the entity that was issued the prior citation and the entity that was issued the instant one. *See id.* at 1294 (emphasis added). The executives for CVR Energy would only be relevant to this inquiry if the record established that the entity cited here (Wynnewood LLC) and CVR Energy were a "single employer," an issue that was neither alleged by either party nor litigated. *See N.L.R.B. v. Greater Kansas City Roofing*, 2 F.3d 1047, 1051 (10th Cir. 1993) ("[T]he corporate form will be disregarded" only "[i]n extreme circumstances," and "the corporate veil should be pierced only reluctantly and cautiously."); *see also Advance Specialty Co.*, 3 BNA OSHC 2072, 2076 (No. 2279, 1976) ("[W]hen . . . two companies share a common worksite such that the employees of both have access to the same hazardous conditions, have interrelated and integrated operations, and share a common president, management, supervision or ownership, the purposes of the [OSH] Act are best effectuated by the two being treated as one."); *C.T. Taylor Co.*, 20 BNA OSHC 1083 (No. 94-3241, 2003) (consolidated) (prohibiting Secretary from citing employers separately for willful violations where both companies were owned by the same individual, and one company was "fully in charge of [the other's] operations" and "assumed the responsibility for employee safety on the [combined] job[site]"). The issue in this case, therefore, turns on the extent of the continuity of personnel between Wynnewood LLC and Wynnewood Inc.

The record shows that most of Wynnewood LLC's supervisors, PSM managers, and safety officials responsible for OSH Act compliance held the same or similar positions for Wynnewood Inc.:

- Wayne Leiker was Vice President of Refining for both Wynnewood Inc. and Wynnewood LLC.
- Dan Looney was the refinery's safety manager for both Wynnewood Inc. and Wynnewood LLC.
- Dick Jackson was the refinery's process safety manager for both Wynnewood Inc. and Wynnewood LLC.
- Darin Rains was operations manager for both Wynnewood Inc. and Wynnewood LLC.

- Mitch Underwood and Troy Stephenson were supervisors in Zone 2 of the refinery (where the Wickes boiler was located) under both Wynnewood Inc. and Wynnewood LLC.
- Kyle McCurtain was a technician in Zone 2 for Wynnewood Inc., and he was promoted to supervisor by Wynnewood LLC.
- Paul Howard was a technician in Zone 2 and a member of the refinery's supervision for both Wynnewood Inc. and Wynnewood LLC.
- David Johnson, a safety specialist, worked for the two entities for a total of eighteen years.

Given this extensive overlap in supervisory personnel, I would find that substantial continuity has been established under *Sharon & Walter*. *Cf.* 23 BNA OSHC at 1296 ("[C]ontinuity of nonsupervisory employees among the two companies is not significant . . . because those employees are not responsible for OSH Act compliance and would not have supervised its implementation."). Indeed, the supervisors working for both Wynnewood Inc. and Wynnewood LLC were officials responsible for OSH Act and PSM compliance. Leiker and Looney headed, for both Wynnewood Inc. and Wynnewood LLC, the certification of abatement efforts in connection with prior settlements with OSHA. And Jackson managed the PSM program for both entities, in particular relating to process hazard analyses, pre-startup safety reviews, and management of change. *See* 29 C.F.R. § 1910.119(e) ("Process hazard analysis"), (i) ("Pre-startup safety review"), (ℓ) ("Management of change"). In addition, Rains was responsible for the entirety of the operations department for both Wynnewood Inc. and Wynnewood LLC, and Underwood was responsible for reviewing and updating standard operating procedures for various pieces of refinery equipment, including the Wickes boiler. *See* 29 C.F.R. § 1910.119(f) ("Operating procedures"). Finally, Howard assisted Stephenson in implementing PSM requirements for the FCCU. Thus, while parent company executives may have changed, the personnel who, as a practical matter, actually controlled refinery safety on a daily basis *for the pertinent entities* remained the same under both Wynnewood Inc. and Wynnewood LLC. As such, I would attribute the prior Wynnewood Inc. violations to Wynnewood LLC for purposes of a repeat characterization.

II. Substantial Similarity of Violations

To establish a repeat violation, the Secretary must also show that "at the time of the alleged repeated violation, there was a Commission final order . . . for a substantially similar violation." *Potlatch Corp.*, 7 BNA OSHC at 1063. "[P]roof that an employer has committed a prior violation

of the same standard constitutes a prima facie showing by the Secretary of substantially similar violations." *FMC Corp.*, 7 BNA OSHC 1419, 1421 (No. 12311, 1979). Here, the Secretary has made such a showing—the repeat characterization of each of the five violations at issue is based on a prior violation of the very same standard. The Commission has recently stated, however, that "[t]his prima facie showing . . . may be rebutted by evidence of the disparate conditions and hazards associated with these violations," and "[a]lthough the principle factor in assessing repeat liability is whether the two violations resulted in substantially similar *hazards*, this assessment may also take into consideration other factors that bear on the similarity of the two violations." *Angelica Textile Servs., Inc.*, 27 BNA OSHC 1246, 1255 (No. 08-1774, 2018) (emphasis in original) (citations omitted), *appeal docketed*, No. 18-2831 (2d Cir. Sept. 21, 2018).

In *Angelica*, a Commission majority concluded that the Secretary's prima facie showing was rebutted by evidence demonstrating that the cited violations were minor compared with the prior ones. Specifically, the majority found that the prior violations involved deficiencies in the employer's confined space and lockout/tagout procedures "that were significant enough to render [them] substantially ineffective," while "the Secretary established only minimal deficiencies" with regard to the cited violations, "reflecting that after those prior violations, Angelica took affirmative steps to achieve compliance and avoid similar violations in the future." *Id.* at 1256, 1257. In short, given that the cited provisions were "performance-oriented, which means that employers have flexibility in meeting their requirements," the Commission held that Angelica's efforts and resulting substantial compliance rendered the cited violations "stark[ly] differen[t]" from the prior ones. *Id.* at 1258.

I dissented on the characterization issue in *Angelica* in part because the majority's focus on compliance efforts between the prior and instant violations injected into the repeat analysis "an element of good faith or state of mind [that] blurs the statutory distinction between a willful and repeated violation." *Id.* at 1262 (Attwood, Comm'r, concurring and dissenting in part). I reiterate my view here that *Angelica* was wrongly decided in this regard. In any event, *Angelica* is distinguishable from the present case. Wynnewood LLC frames its rebuttal argument in the context of the successor liability issue and claims that "upon Wynnewood's acquisition by CVR Energy in 2011, safety, health, and PSM protections greatly improved." In my view, this general assertion regarding Wynnewood LLC's "overall safety culture" falls short of proving that it made the type of specific improvements, relevant to the specific standards that were cited, that the

Commission deemed sufficient to rebut the Secretary's prima facie showing in *Angelica*. Even the improvements the majority cites here in the context of its successorship analysis—additional refinery safety personnel, equipment upgrades, more formalized training programs, and a "renewed emphasis" at the facility on management of change—are vague generalizations that are not specific to the particular standards cited.

Wynnewood LLC further argues that the prior citations addressed equipment and processes clearly covered by the PSM standard, which the company views as distinct from the Wickes boiler. While it is true that the prior citations addressed different equipment than that at issue here, the Commission has declined to "distinguish between various subcategories of . . . equipment on the basis of its function and location" in affirming a repeat characterization—"[t]hat the equipment which was the subject of the present citation is of a different type than that previously cited is of little moment." *Potlatch Corp.*, 7 BNA OSHC at 1065; *see also Willamette Iron & Steel Co.*, 9 BNA OSHC 1128, 1131 (No. 15317, 1980) (finding substantial similarity where "the same hazard—a tripping hazard—is the subject of both violations," despite the fact that "the present violation also includes additional materials in the clutter" that caused the hazard); *FMC Corp.*, 7 BNA OSHC at 1421 (finding "that a difference in the location of violations at the same worksite is not a relevant consideration" in deciding whether the violations are substantially similar).

Finally, Wynnewood LLC argues that the hazards at issue in the prior citations were different from the hazard posed by the Wickes boiler in this case, such that the violations are not substantially similar. More specifically, the company asserts that the prior citations addressed equipment and vessels involving HHCs and/or flammables above threshold quantities, and so the hazards there included toxic fire and explosions, self-contained hazardous vapor clouds, and employee exposure to toxic chemicals. Wynnewood LLC contends that the Wickes boiler does not handle any HHCs or flammables in a threshold quantity, so the only potential hazards here are struck-by/crushing hazards as a result of a boiler explosion. A closer look at the prior and instant violations, however, shows the following substantial similarities:

- Docket No. 13-0791, Citation 2, Item 2, alleges a violation of § 1910.119(f)(1)(ii),[1] based on Wynnewood LLC's failure to "ensure the written operating procedures addressed the operating limits of the process such

[1] This provision requires "written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address . . . operating limits." 29 C.F.R. § 1910.119(f)(1)(ii).

as . . . Minimum/Maximum gas pressure to the boiler burner gas train [and] Minimum and maximum pressure . . . at the fuel gas inlet to the Wickes," which "exposed [employees] to fire and explosion hazards from potential releases of fuel gas and other flammable liquids or gases." The prior violation also related to operating procedures that address excessive pressure posing an explosion hazard; it was based on a failure to "develop and implement a high limit for the Depropanizer Accumulator pressure," given that the "operations manual for the unit stated the high limit was not applicable."

- Docket No. 13-0791, Citation 2, Item 3, alleges a violation of § 1910.119(g)(2),[2] based on Wynnewood LLC's failure to "ensure refresher training was provided . . . to each employee involved in operating the Wickes." The prior violation also involved a lack of refresher training for operators, specifically a failure to "ensure that refresher training [was] provided to process operators."
- Docket No. 13-0791, Citation 2, Item 4, alleges a violation of § 1910.119(j)(2),[3] based on Wynnewood LLC's failure to "ensure that written procedures were established and implemented for the testing and inspection of the Low Combustion Air Flow Fuel Gas Shut-Off system safeguard." The prior violation also dealt with written procedures for a shutdown system; it was based on a failure to "develop written procedures to maintain the ongoing integrity of controls, pumps, and emergency shutdown systems in the HF Alkylation Unit."
- Docket No. 13-0791, Citation 2, Item 5, alleges a violation of § 1910.119(l)(1),[4] based on Wynnewood LLC's failure to "ensure management of change procedures were implemented [for] . . . [t]he amount of time the firebox is purged prior to attempting to light the pilot[,] . . . [t]he amount that the gas control valve bypass valve is to be opened[,] . . . [and] the addition of temporary power to operate the Wickes." The prior violation also related to the implementation of management of change procedures; it was based on the company's failure to "follow its own written procedures for management of change regarding changes to procedures, piping and drains in the [alkylation] unit."

[2] This provision states that "[r]efresher training shall be provided at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process." 29 C.F.R. § 1910.119(g)(2).

[3] This provision states that "[t]he employer shall establish and implement written procedures to maintain the on-going integrity of process equipment." 29 C.F.R. § 1910.119(j)(2).

[4] This provision states that "[t]he employer shall establish and implement written procedures to manage changes (except for 'replacements in kind') to process chemicals, technology, equipment, and procedures; and, changes to facilities that affect a covered process." 29 C.F.R. § 1910.119(*l*)(1).

- Docket No. 13-0644, Citation 2, Item 1, alleges a violation of § 1910.119(h)(2)(iv),[5] based on Wynnewood LLC's failure to "develop and implement safe work practices . . . to control the entrance, presence and exit of contract employers and employees . . . [in] the FCCU [and] . . . Alkylation Unit." Specifically, the Secretary asserted in his post-hearing brief that while "WRC developed a sign[-]in sign[-]out process," there were "numerous sign-out logs where employees failed to sign out of various areas," and the sign-in/sign-out "rule was not being consistently enforced." The prior violation also related to keeping track of onsite contractor employees who were present in the same areas of WRC's facility; it was based on a failure to "ensure that individual contractor employees are accounted for . . . in the event of an emergency . . . at the FCC and Alkylation Units."

In short, each of these items addresses the same type of condition involved in the prior violation, and the hazards addressed in the prior citations were, generally, fire and explosion risks caused by a failure to comply with the same PSM standards cited here. More to the point, there is no support in the record for the company's contention that the only potential hazards associated with the Wickes boiler were struck-by and crushing hazards, particularly in light of testimony from the company's own expert acknowledging that there was a fire risk associated with the boiler. Accordingly, I would find that Wynnewood LLC has failed to rebut the Secretary's prima facie case of substantial similarity, and I would characterize the violations noted above as repeat.[6]

/s/
Cynthia L. Attwood
Commissioner

Dated: March 28, 2019

[5] This provision states that "[t]he employer shall develop and implement safe work practices consistent with paragraph (f)(4) of this section, to control the entrance, presence and exit of contract employers and contract employees in covered process areas." 29 C.F.R. § 1910.119(h)(2)(iv).

[6] I agree with my colleagues' rejection of Wynnewood LLC's argument that a repeat characterization is inappropriate here because OSHA failed to comply with its internal citation policy in relying on prior violations that were more than five years old. As the majority aptly notes, "there are no statutory limitations upon the length of time that a citation may serve as the basis for a repeated violation." *Hackensack Steel Corp.*, 20 BNA OSHC 1387, 1392 (No. 97-0755, 2003).

ADDENDUM

interconnect, *v.*

Pronunciation: /ɪntəkəˈnɛkt/

Frequency (in current use):

Etymology: INTER- *prefix* 1a(d).

transitive. To connect each with the other; to connect by reciprocal links.
Chiefly in *past participle*.

1865 D. MASSON *Recent Brit. Philos.* 27 The different departments of speculative inquiry are obviously interconnected.

1889 *Minutes Congr. Council U.S.* 64 Among the ancients religion and the state were closely interconnected and dependent on each other.

1895 *Atlantic Monthly* Aug. 225 These are all interconnected by a network of canals.

This entry has not yet been fully updated (first published 1900).

can, *v.1*

Pronunciation: Brit. /kan/, U.S. /kæn/

Inflections: Present 1st, 2nd, 3rd singular and plural *can*; negative *cannot* Brit. /ˈkanɒt/, /ˈkanət/, /kaˈnɒt/, /kəˈnɒt/, U.S. /kəˈnɑt/, /ˈkæˌnɑt/, *can't* Brit. /kɑːnt/, U.S. /kænt/; 2nd singular (*archaic*) *canst* Brit. /kanst/, U.S. /kænst/; past 1st, 2nd, 3rd singular and plural *could* Brit. /kʊd/, /kəd/, U.S. /kʊd/, /kəd/; negative *couldn't* Brit. /ˈkʊdnt/, U.S. /ˈkʊdnt/; 2nd singular (*archaic*) *couldst* Brit. /kʊdst/, U.S. /kʊdst/;

Forms: **1.** Infinitive.

α. OE **cunenne** (inflected, *rare*), OE **cunnan**, eME **cumen** (transmission error), eME **cunnenn** (*Ormulum*), ME **cun**, ME **cune**, ME **cunne**, ME **kun**, ME **kunne**.

OE *Andreas* (1932) 341 Ic sceal hraðe cunnan hwæt ðu us to dugudum [*read* duguðum] gedon wille.

?*c*1250 (▸ ?*c*1175) *Poema Morale* (Egerton) 332 in R. Morris *Old Eng. Homilies* (1868) 1st Ser. 179 He sceal him cunne sculde wel.

*c*1300 (▸ *c*1250) *Floris & Blauncheflur* (Cambr.) (1966) l. 521 He moste kunne muchel of art.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 9290 Wel sal he cun knau quilk es quilk.

*a*1425 (▸ ?*a*1400) *Cloud of Unknowing* (Harl. 674) (1944) 67 I trow þat þou schalt cun betir lerne me þen I þee.

1494 W. Hilton *Scala Perfeccionis* (de Worde) I. lxviii. sig. fvii^{v} It is a grete maistry a man to cun [1533 can] loue his euen crysten in charyte.

*a*1500 (▸ *c*1340) R. Rolle *Psalter* (Univ. Oxf. 64) (1884) iii. §7. 14 Than thai sall noght cun say ill agayns rightwismen.

β. ME **cone**, ME **kon**, ME **kone**, ME **konne**, ME–15 **con**, ME–15 **conne**.

1340 *Ayenbite* (1866) 158 Hit is wel sotil þing..to conne distincti betuene þe þo3tes.

*c*1390 *Castle of Love* (Vernon) (1967) 1073 He scholde konnen al þat God con.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Fairf. 14) 2570 Na mare saltow ham con [*Gött.* kon, *Vesp.* cun] rede þen sternes of heyuen.

*a*1413 (▸ *c*1385) G. Cha.... *Troilus & Criseyde* (Pierpont Morgan) (1882) v. l. 1404 Criseyde shal nought konne [*c*1430 *Gg.4.27* cunne] knowe me.

1445 A. Paston in *Paston Lett. & Papers* (2004) I. 27 Ho so euer schuld dwelle at Paston schulde have nede to conne defende hymselfe.

*a*1475 *Revelations St. Birgitta* (Garrett) (1929) 35 He oweth fyrst to conne [L. *scire*] with-stonde þe desyris of the flesh.

1483 W. Caxton tr. A. Chartier *Curial* sig. iij He shal neuer conne [Fr. *scet*] trotte.

1490 W. Caxton tr. *Foure Sonnes of Aymon* (1885) iv. 127 I sholde not conne telle the harme..that he hath doon.

1510 A. Chertsey tr. *Floure Commaundementes of God* (de Worde) I. iii. f. viii For to con expounde this dyleccyon a man ought to knowe that god hath loued vs in many maners.

γ. lME **kanne**, lME–15 **canne**, lME–16 (18– *English regional* (chiefly *north-eastern*), *U.S. regional* (*southern*), *Irish English* (*northern*), and *Caribbean*) **can**; *Scottish* 17– **can**, 19– **kin**. See also kin *v.*

?*a*1425 (▸ *c*1385) G. Chaucer *Troilus & Criseyde* (Harl. 3943) (1883) v. l. 1404 Cresseide shal nat kanne knowe me.

*a*1475 (▸ 1450) S. Scrope tr. *Dicts & Sayings Philosophers* (Bodl. 943) (1999) 34 He schal not canne delyuer hym of thayme.

?1483 W. Caxton tr. *Caton* II. sig. fiij^{v} It is souerayn prudence for to can dyssymule folye.

1528 T. More *Dialogue Heresyes* I, in *Wks*. 111/1 He laboured..to can many textes thereof by harte.

1555 R. Eden in tr. Peter Martyr of Angleria *Decades of Newe Worlde* Pref. sig. bj^{v} To wyl to doo hurte and can not.

1612 F. Bacon *Ess.* (new ed.) viii. 40 In evill the best condition is, not to will; the second not to can.

1656 J. Shirley *Rudim. Gram.* 65 *Posse* to can or to be able.

1756 M. Calderwood *Journey in Eng. & Low Countries* (1884) 215 Not one of us will can speak to him.

1817 W. Scott *Rob Roy* I. ix. 202 How do ye ken but we may can pick up some speerings of your valise?

1847 F. A. Kemble *Let.* in *Rec. Later Life* (1882) III. 165 Lady Macbeth, which I never could, and cannot, and never *shall can* act.

1980 A. Hamilton *Gallus & Other Stories* (1982) 27 Mibbe thill kin get fingirprint sur sumhin.

1980 M. Thelwell *Harder they Come* (1988) xviii. 365 De lawyerman say we might can get it back.

1994 R. Hendrickson *Happy Trails* 158 She may can go.

2015 T. Hubbard in *Lallans* **86** 12 Check oot..*Scotsman* obituary, forby ithers ye'll can find online.

2. Present indicative. **a.** 1st and 3rd singular. **(i).**

α. OE–16 **cann**, OE– **can**, lOE **ceæn** (*Kentish*), eME **cani** (with (1st singular, subjective) personal pronoun affixed), eME **cæn**, eME **cænn**, eME **chan** (perhaps transmission error), eME **cune**, eME (15 in Phrases 1) **gan**, eME 19 (*regional* and *nonstandard*)– **cun**, ME **kan**, ME **kann**, ME **kanne**, ME–15 **cane**, ME–15 **canne**, 15–16 **can't** (with (3rd singular, subjective) personal pronoun *it* affixed); *English regional* 18 **kan**, 19– **cin**, 20– **canna** (with (1st singular, subjective) personal pronoun affixed); *U.S. regional* 19 **ken**, 19– **kin**; also *Scottish* pre-17 **kan**, pre-17 **kane**, 19– **cin**, 19– **kin**.

OE *Christ & Satan* 248 Ic can eow læran langsumne ræd.

*a*1325 (▸ *c*1250) *Gen. & Exod.* (1968) l. 309 Ic wene I can a red.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 20358 O me-self can [*Trin. Cambr.* con, *c*1460 *Laud* canne] i na rede.

1467 in J. T. Smith & L. T. Smith *Eng. Gilds* (1870) 407 The craft that he canne.

1542 N. Udall tr. Erasmus *Apophthegmes* f. 110^{v} I allowe hym and gan hym thanke.

1584 E. Paget tr. J. Calvin *Harmonie vpon Three Euangelists* 146 No excuse canne serue our slouth.

1682 J. Flamsteed *Let.* 8 Dec. in *Corr.* (1997) II. 68 I cann allow onely the three first to be sound.

1756 T. Amory *Life John Buncle* I. 222 It can be of no concern.

1887 *Sci. Amer.* 28 May 344/3 It can be easily rendered impermeable.

1933 M. K. Rawlings *South Moon Under* 14 A man kin step over a split-rail fence.

1985 L. Lochhead tr. Molière *Tartuffe* 17 Mibbe Ah cin restore his fortunes.

2011 *Wall St. Jrnl.* 16 Apr. c6/5 Unless she can find some kind of counter-magic.

β. OE **conn**, OE–ME **con**, ME **cone**, ME **conne**, ME **kon**, ME **kone**; *English regional* (*Lancashire* and *north-west midlands*) 16–18 **con**. In Middle English chiefly *west midlands*

OE (Northumbrian) *Lindisf. Gospels: Matt.* xxvi. 72 *Non noui hominem* : ic ne conn ðone monno.

OE *Christ & Satan* 627 Nu ic eow ne con.

*a*1225 (▸ *?*OE) *MS Lamb.* in R. Morris *Old Eng. Homilies* (1868) 1st Ser. 35 Nis nan sunne þet he ne con.

?*c*1225 (▸ *?a*1200) *Ancrene Riwle* (Cleo. C.vi) (1972) 153 Mare uuel þenne ha con.

*c*1390 *Castle of Love* (Vernon) (1967) 555 Hose þis forbysene con.

*c*1450 in C. Brown *Relig. Lyrics 15th Cent.* (1939) 283 Who-so kone suffer.., May haue hys wyll ofte tyme y-doo.

*c*1475 (▸ *?c*1425) *Avowing of King Arthur* (1984) l. 518 I conne notte say.

1634 T. Heywood & R. Brome *Late Lancashire Witches* I. sig. C3 Con I see yeou idler then my selve.

1682 T. Shadwell *Lancashire-witches* III. 41 What con Ay do naw.

*a*1730 *Robin an's Gonny* (Folger Library MS V.a. 308) I con poo no moor.

1879 G. F. Jackson *Shropshire Word-bk.* p. lxxvi I con, or can.

1884 R. Holland *Gloss. Words County of Chester* (1886) 77 Ay, that aw con.

γ. lME **cannethe**, 15 **canneth**, 15 **canth**. Compare con *v.*[1] and see discussion in etymology section below.

*a*1475 (▸ 1450) S. Scrope tr. *Dicts & Sayings Philosophers* (Bodl. 943) (1999) 238 He cannethe theym no thanke.

*c*1523 Earl of Northumberland *Let.* Dec. in *Camden Misc.* (1992) XXXI. 92 That I should send upp as lait as I canth.

1529 T. More *Supplyc. Soulys* I. f. xii He neyther canneth eny skyll therof, nor neuer cam in the house.

δ. 15 **cannes**, 18 **cans**. The analysis of the use in quot. 1566 is not certain.

1566 T. Drant tr. Horace *Medicinable Morall* sig. Evij[v] Sithe causeles all mystrust them selues, and cannes [L. *odit*] me litle thankes.

1837 T. Carlyle *French Revol.* III. III. iv. 191 What a man *kens* he *cans*.

(ii). With negative particle affixed. ME **cannat**, ME **cannatte**, ME **cannou3t**, ME **connat**, ME **connott**, ME **conot**, ME **conott**, ME 16 **cannote**, ME–16 **connot**, ME–17 **cannott**, ME– **cannot**, 16 **con't**, 16–17 **cann't**, 16–17 **canna**, 16–17 **canot**, 16–17 (18– *nonstandard*) **cant**, 16– **can't**, 18– **caan't** (*regional* and *nonstandard*), 19– **caunt** (*Welsh English*); *English regional* 16–18 **conno** (*west midlands* and *Lancashire*), 16 18 **connot** (*Lancashire* and *Cheshire*), 18 **caint**, 18 **canna'**, 18 **cannut** (*northern*), 18 **conna** (*west midlands*), 18 **conna'** (*Derbyshire*), 18 **conner** (*Cheshire*), 18 **conno'** (*Lancashire*), 18 **connoh** (*Cheshire*), 18 **cornd** (*Lancashire*), 18 **kaint**, 18– **canna** (chiefly *northern*), 19– **caant**; *U.S. regional* 18 **cayn't**, 18 **kain't**, 18– **cain't**, 18– **caint**, 19 **keint**; also *Scottish* pre-17 17– **canna**, 17– **cannae**, 19– **cannie**, 19– **canno** (*Orkney*), 19– **canny**; *Irish English* (*northern*) 18 **canney**, 19– **canna**, 19– **cannae**, 19– **canny**, 19– **cawney**.

?1387 T. Wimbledon *Serm.* (Corpus Cambr.) (1967) 94 Þe erþe..cannou3t close wiþ us oure possessionis in þe sepulcre.

*a*1425 J. Wyclif *Sel. Eng. Wks.* (1869) I. 10 God..cannot worche but 3if he worche by mercy.

?1482 W. Mydwynter *Let.* 20 Sept. in *Cely Lett.* (1975) 177 Y connat bey ther woll hondor xiiij s...a tod.

1588 in *Paisley Mag.* (1828) **1** 382 I wald remove sir, 3it I canna.

*c*1613 (▸ *a*1525) in T. Stapleton *Plumpton Corr.* (1839) 72 I canot get my money.

1615 T. Evans *Oedipus* sig. C1 Shunning a fault, I can't a fault diuert.

*a*1627 T. Middleton & W. Rowley *Old Law* (1656) III. 39 Nay and I should bee hangd I can't leave it, pup.

1682 T. Shadwell *Lancashire-witches* I. 14 I conno see my hont.

1705 T. Walker *Wit of Woman* III. 29 I conno believe 'tis true.

1721 A. Ramsay *Poems* (1877) II. 267 He disna live that canna link The glass about.

1740 S. Richardson *Pamela* I. 56 If he..as you say can't help it.

1827 J. Keble *Christian Year* I. ii. 6 Without Thee I cannot live.

1877 E. Leigh *Gloss. Words Dial. Cheshire* 148 Oi conna tell how, oim sure.

1926 P. Green *In Abraham's Bosom* in K. C. Cordell & W. H. Cordell *Pulitzer Prize Plays 1918–34* (1935) 398/2 Cain't make ends meet, cain't.

1998 A. Warner *Sopranos* 274 She cannie get in.

2015 *Forever Sports* Aug. 68/2 He can't not be on top of his game.

b. 2nd singular. **(i).**

α. OE (ME chiefly *west midlands*) **const**, OE–ME **cans**, OE–16 (17– *archaic* or *regional*) **canst**, eME **cannst** (*Ormulum*), eME **conest** (*west midlands*), eME **connest** (*Essex*), eME **cost** (*west midlands*, perhaps transmission error), eME **kannst** (*Ormulum*), ME **canste**, ME **cones**, ME **kans**, ME **kanst**, ME **kanste**, ME **konst** (*west*

midlands), ME–16 **cannest**, 15–16 **canest**; *English regional* 16 18 **const** (*Lancashire* and *Cheshire*), 18 **ca'st**, 18 **cost** (*Staffordshire*), 18 **kiss** (*Devon*), 18– **cust** (*Cornwall*), 20– **cast** (*south-western*).

OE *Andreas* (1932) 68 Þu ana canst ealra gehygdo.

*c*1225 (▸ *?c*1200) *St. Juliana* (Royal) 500 Greiðe hwet so þu const grimliche biþenchen.

*a*1250 (▸ *?a*1200) *Ancrene Riwle* (Titus) (1963) 35 ȝif þu hit conest [*c*1230 *Corpus Cambr.* const] þolien.

*a*1425 (▸ *c*1300) *Assumption of Virgin* (BL Add.) (1901) l. 824 Ynow þou canst fynde.

1510 *Lytell Geste how Plowman Lerned Pater Noster* (de Worde) Canst thou thy byleue.

1535 *Bible (*Coverdale*)* Mark i. D Yf thou wilt, thou canst make me cleane.

1598 W. Shakespeare *Henry IV, Pt. 1* II. ii. 32 List if thou canst [1623 can] heare the treade.

1600 T. Heywood *Edward IV* I. II. iii Thou cannest bear me witness.

*a*1616 W. Shakespeare *Tempest* (1623) III. ii. 59 Canst thou bring me to the party?

1682 T. Shadwell *Lancashire-witches* III. 44 What a Pox ail'st thou? Const a tell?

1782 J. Elphinston tr. Martial *Epigrams* I. lxx. 61 Thou canst redoubt no pride.

*a*1897 T. Pinnock in *Eng. Dial. Dict.* (1898) I. 501/2 [Staffordshire] Thee cost goo now.

1975 K. Tynan *Diary* 30 Sept. (2001) 276 A pantomime Dick Whittington..asked a peasant..: 'Canst tell me how many miles to London?'

2000 *Cornish World* Oct. 10/3 Theese cust see the other wemen in a gubby.

2005 S. Elmes *Talking for Brit.* ii. 44 (Gloss.) *Cast, cassn't:* 'can you?', 'you can't'. Bristol dialect.

β. ME **canne**, ME **kan**, ME **kanne**, ME–16 **can**; *English regional* 18 **can** (*Lancashire* and *Cheshire*), 18 **con** (*Lancashire* and *Shropshire*); *Scottish* pre-17 **can**, pre-17 **cane**. For examples with *ye* or *you* see Forms 2c and compare note at that section.

*c*1330 (▸ *?a*1300) *Sir Tristrem* (1886) l. 1828 Harpi hou þou can.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 12121 I can þe ken þat þou ne can.

*a*1400 (▸ *c*1300) *Northern Homily: Serm. on Gospels* (Coll. Phys.) in *Middle Eng. Dict.* at *Craft* Thou that al craftes kanne.

*a*1500 in C. Brown *Relig. Lyrics 15th Cent.* (1939) 16 Yf þu can not wepe for my perplexed heuynesse.

?1523 J. Fitzherbert *Bk. Husbandry* f. xliᵛ Get as many rotes with them as thou can.

1609 S. Grahame *Anat. Humors* f. 13 Without them thou can not stand.

*a*1693 M. Bruce *Good News in Evil Times* (1708) 4 As long as thou thinks it spoken in the General,..thou can get no good of it.

1879 G. F. Jackson *Shropshire Word-bk.* p. lxxvi Dosta think thou con do it?

1886 B. Brierley *Cast upon World* 46 Thou can be pikin' rowler-ends.

(ii). With (subjective) personal pronoun affixed. ME **canestow**, ME **canstou** (in a late copy), ME **canstow**, ME **canstu**, ME **constou**, ME **constu**, ME **kanstow**, ME **konstow**.

*c*1225 (▸ *?c*1200) *St. Katherine* (Royal) (1981) l. 762 Constu bulden abur inwið iþin heorte?

*c*1275 (▸ *?c*1250) *Owl & Nightingale* (Calig.) (1935) l. 1321 Hwat canstu, wrecche þing, of storre?

*c*1330 (▸ *?a*1300) *Sir Tristrem* (1886) l. 3054 Falsly canestow fayt.

*c*1400 (▸ 1391) G. Chaucer *Treat. Astrolabe* (Cambr. Dd.3.53) (1872) Prol. 2 For latyn ne kanstow yit but smal, my lite sone.

*a*1450 (▸ *c*1412) T. Hoccleve *De Regimine Principum* (Harl. 4866) (1897) 1789 Canstow no weyes fynden in þi wyt?

*c*1600 (▸ *?c*1395) *Pierce Ploughman's Crede* (Trin. Cambr. R.3.15) (1873) 99 Canstou no bote?

(iii). With negative particle affixed. lME 16 18 **cannot**; *English regional* 17 **cassent** (*Devon*), 18 **ca's** (*Somerset*), 18 **ca'sna** (*west midlands*), 18 **cans** (*Devon*), 18 **canta** (*Westmorland*), 18 **cas** (*Devon*), 18 **cas'** (*Devon*), 18 **cas'n**

(*Devon*), 18 **cas'n't**, 18 **cas'nt**, 18 **casn** (*Herefordshire*), 18 **casn'st** (*Herefordshire*), 18 **casn't**, 18 **casna** (*west midlands*), 18 **cass'n** (*south-western*), 18 **cass'net** (*Gloucestershire*), 18 **cassen** (*Dorset*), 18 **cassunt** (*Dorset*), 18 **cast** (*south-western*), 18 **cat** (*Gloucestershire*), 18 **conna** (*Cheshire*), 18 **conner** (*Cheshire*), 18 **connot** (*Cheshire*), 18 **cosna** (*Shropshire*), 18 **cossent** (*Staffordshire*), 18 **cussn't** (*Cornwall*), 18 **kisn't** (*Devon*), 18 **kiss'n** (*Devon*), 19– **ca'stn't** (*south-western*), 20– **cassn't** (*south-western*).

*a*1500 (▸ *c*1280) *Southern Passion* (Vesp.) l. 105 in R. Morris *Cursor Mundi* (1876) II. 959 And þou þat he deed fore cannot sorus be.

1606 W. Arthur & H. Charteris *Rollock's Lect. 1st & 2nd Epist. Paul to Thessalonians* (2 Thess.) ix. 114 In thy lownry thou cannot haue an eye to God.

1782 *Exmoor Courtship* (ed. 9) 36 Tha cassent tell what may happen to tha.

1828 W. Carr *Dial. Craven* (ed. 2) at *Nail* Thou cannot say black's my nail.

1866 in 'N. Hogg' *Lett. Devonshire Dial.* (ed. 4) 5 Now kiss'n thee zee ware thee bee'st a gwayn.

2005 S. Elmes *Talking for Brit.* ii. 44 (Gloss.) *Cast, cassn't:* 'can you?', 'you can't'. Bristol dialect.

c. Plural.Since the Middle English period also used for the 2nd singular with *ye* or *you* (originally polite forms); see esp. section (i)γ. (*can* is now the standard form). **(i).**

α. OE **cunan** (*rare*), OE **cunna** (*Northumbrian*), OE **cunni** (*Northumbrian*, before personal pronoun), OE **cunno** (*Northumbrian*, before personal pronoun), OE **cunnun**, OE **cunun** (*Mercian*), OE–eME **cunnan**, OE–eME **cunnon**, OE–ME **cunnen**, eME **cunnenn** (*Ormulum*), eME **cynnon**, ME **cone**, ME **conen**, ME **conne**, ME **connen**, ME **connyn**, ME **counne**, ME **counnen**, ME **cune**, ME **cunen**, ME **cunne**, ME **cunnyn**, ME **kon**, ME **kone**, ME **konne**, ME **konnen**, ME **koun**, ME **kun**, ME **kune**, ME **kunnen**, ME (16 *Lancashire*) **con**, ME (19– *regional* and *nonstandard*) **cun**, ME–15 **kunne**. In recent instances the spelling *cun* reflects a reduced vowel continuing the γ. forms.

OE (Northumbrian) *Lindisf. Gospels: Mark* iv. 13 *Quomodo omnes parabolas cognoscetis* : huu alle bispello gie gecunnas *uel* gie cunna gie magon.

OE *Beowulf* (2008) 162 Men ne cunnon.

*a*1225 *MS Lamb.* in R. Morris *Old Eng. Homilies* (1868) 1st Ser. 75 Alle ȝe kunnen leste..ower credo.

*c*1275 (▸ *?a*1200) Laȝamon *Brut* (Calig.) (1978) l. 11507 Ne cunne we demen [*c*1300 *Otho* ne con we telle].

*a*1375 (▸ *c*1350) *William of Palerne* (1867) l. 4184 As wel as we kunne.

*c*1405 (▸ *c*1395) G. Chaucer *Merchant/Franklin Link* (Hengwrt) (2003) l. 25 Sey vs a tale, for certes ye Konnen [*c*1415 *Lansd.* konne, *c*1425 *Petworth* can] ther on as muche as any man.

?1536 *Jack vp Lande* sig. Bviii^{v} If freres cunne not or mow not excuse him of these questions asked of hem, it semeth that they be horrible gylty against god.

1634 T. Heywood & R. Brome *Late Lancashire Witches* I. sig. C2 What is the matter con yeow tell?

1976 *Punch* 11 Aug. 231/1 (*advt.*) More'n yew cun say about Bronwen.

2014 C. Goodwins *Lettus tuh tha Boy Jarn* i. 7 Yew cun dew wotya lyke wi um.

β. OE **cunnað** (*Mercian*, *rare*), OE (*Mercian*, *rare*)–eME **cunneþ**, eME **kunneð**, ME **conneȝ**, ME **conneth**, ME **conneþ**, ME **cunneth**, ME **kunneth**, ME **kunneþ**.

OE (Mercian) *Rushw. Gospels: Matt.* vii. 11 *Nostis bona dare filis uestris* : cunneþ god sellan beaearnum eowrum.

OE (Mercian) *Rushw. Gospels: Matt.* xvi. 3 *Faciem ergo caeli uos iudicare nostis* : ondwliotu soþlice heofun doeme cunnað *uel* cunnað gedoeme.

*a*1250 (▸ *?a*1200) *Ancrene Riwle* (Nero) (1952) 18 Leteð writen on one scrouwe hwat se ȝe ne kunneð [*?c*1225 *Cleo.* cunnen, *c*1230 *Corpus Cambr.* kunnen] nout.

1340 *Ayenbite* (1866) 249 Þo þet conneþ..onderstonde.

▸ *a*1387 J. Trevisa tr. R. Higden *Polychron.* (St. John's Cambr.) (1869) II. 169 Þese men..kunneþ wel i-now telle.

*c*1400 (▸ *?c*1390) *Sir Gawain & Green Knight* (1940) l. 1267 Hit is þe worchyp of your-self þat noȝt bot wel conneȝ.

*a*1450 (▸ 1408) tr. Vegetius *De Re Militari* (Douce) f. 7, in *Middle Eng. Dict.* at *Dichen* The whiche..conneþ bere þe yren, dike and delue diches.

γ. ME **kan**, ME **kannen**, ME–15 **cane**, ME–16 **canne**, ME (18 *Lancashire* and *west midlands*) **con**, ME– **can**, lME **kann** (in a late copy), 19– **kin** (*Scottish* and *U.S. regional*).

*a*1325 (▸ *?c*1300) *Northern Passion* (Cambr. Gg.1.1) l. 1832 Goth3 and loked him, if ye can.

*c*1330 (▸ *?c*1300) *Amis & Amiloun* (Auch.) (1937) l. 804 Þai can nou3t say nay.

?*c*1335 in W. Heuser *Kildare-Gedichte* (1904) 94 In holi boke as we can rede.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 9065 Quat rede can [*Fairf.* con] we.

*a*1500 (▸ *c*1340) R. Rolle *Psalter* (Univ. Oxf. 64) (1884) ix. §11. 33 Other that kan thaim noght.

*a*1555 H. Latimer *27 Serm.* (1562) I. f. 111^{v} Al that canne it not may learne.

1659 J. Jones *Let.* 1 Dec. in J. Mayer *Inedited Lett. Cromwell & Other Regicides* (1861) 112 Before wee canne have any regimental meetings.

1728 E. Chambers *Cycl.* at *Air* We can actually weigh Air.

1835 R. Browning *Paracelsus* IV. 139 *You* Can see the root of the matter.

1864 B. Brierley *Layrock of Langley-side* 111 What con friends do for him?

1935 M. Sandoz *Old Jules* 13 Lots of things kin happen.

2015 *Guardian* 25 Feb. 11/1 A handful of odd things to which no words can do justice.

(ii). With negative particle affixed. lME– **cannot**, 15 **cannote**, 16 **canot**, 16 **con't**, 16 **connot**, 16–17 **cann't**, 16–17 **cannott**, 16–17 (18– *nonstandard*) **cant**, 16– **can't**, 17 **canna**, 18– **caan't** (*regional* and *nonstandard*), 19– **caunt** (*Welsh English*); *English regional* 18 **caint**, 18 **canna'**, 18 **cannut** (*northern*), 18 **cawt** (*Staffordshire*), 18 **conna** (*west midlands*), 18 **conner** (*Cheshire*), 18 **conno** (*west midlands* and *Lancashire*), 18 **connoh** (*Cheshire*), 18 **connot** (*Cheshire*), 18 **cornd** (*Lancashire*), 18– **canna** (chiefly *northern*), 19– **caant**, 19– **cayn't**; *U.S. regional* 19 **kain't**, 19 **keint**, 19– **cain'**, 19– **cain't**; also *Scottish* 17– **canna**, 19– **cannae**, 19– **cannin** (*Aberdeen*), 19– **canno** (*Orkney*); *Irish English* (*northern*) 18 **canney**, 19– **canna**, 19– **cannae**, 19– **canny**, 19– **cawney**.

*a*1425 *Of Mynystris in Chirche* (Bodl. 788) in T. Arnold *Sel. Eng. Wks. J. Wyclif* (1871) II. 413 Alle þes cheseris cannot telle wheþer þei han chose a fend.

*c*1450 *Treat. Fishing* in J. McDonald et al. *Origins of Angling* (1963) 169 Ye cannot brynge a hoke to a fyche mouthe but yf þer be mete ther on.

1526 *Bible (*Tyndale*)* John viii. f. cxxxiij Ye cannot abyde the hearynge off my wordes.

1618 B. Holyday *Τεχνογαμια* II. iv. sig. D4 Can't you endure to heare the name of your dearest Astronomia?

*a*1668 W. Davenant *Wits* I. 169 in *Wks.* (1673) We can't unpawn the Oaths We left at the Bar for the last Reckoning.

1706 S. Centlivre *Basset-table* v. 59 We cann't wait all Day.

1882 E. L. Chamberlain *Gloss. W. Worcs. Words* p. xxviii Conna us?

1951 S. H. Bell *December Bride* (1974) III. ii. 230 Ye canna afford to miss any more schooling.

1967 S. Marshall *Fenland Chron.* (1998) I. iv. 43 We ain't done nothink as we cayn't roightle.

1980 *New Statesman* 8 Aug. 15/1 Why can't your writers make up their minds whether organisations such as British rail..are singular or plural?

(iii). With negative particle and (subjective) personal pronoun affixed. (*nonstandard*) 19– **can't-cha**, 19– **can'tcha**, 19– **can'tcher**, 19– **cancha**, 19– **cancher**, 19– **cantcha**, 19– **cantcher**; *English regional* 18 **cannad-a**; *U.S. regional* 19– **cain'cha**, 19– **cain'tcha**, 19– **caincher**, 19– **caintcha**.

1879 G. F. Jackson *Shropshire Word-bk.* p. lxi Cannad-a, or canna they?

1932 *Everybody's Weekly* 31 Dec. 21/1 Stan back, Stinkpot, cancher?

1934 F. Loesser *Doesn't That mean Anything to You?* in R. Kimball & S. Nelson *Compl. Lyrics F. Loesser* (2003) 12/3 Don'tcha know? Can'tcha see?

1977 *Time* 1 Aug. 42/2 Hey, Supraman, why cantcha get the cat?

2006 C. B. Pontius *Ilona's Mountain* 321 Cain'tcha unnerstan' English?

3. Present subjunctive. **a.** Singular.

α. OE **cunnae** (*rare*), OE–ME **cunne**, eME **cune**, ME **cone**, ME **conne**, ME **counne**, ME **cun**, ME **konne**, ME **kunne**.

OE *Christ & Satan* 701 Grip wið þæs grundes; gang þonne swa oððæt þu þone ymbhwyrft alne cunne.

?*c*1225 (▸ ?*a*1200) *Ancrene Riwle* (Cleo. C.vi) (1972) 205 Hwat turn his fere ne cunne naut.

*c*1275 (▸ ?*c*1250) *Owl & Nightingale* (Calig.) (1935) l. 47 West þu þat ich ne cunne singe?

*c*1300 (▸ ?*c*1225) *King Horn* (Cambr.) (1901) l. 568 Þer nis non betere anonder sunne Þat eni man of telle cunne.

▸ *a*1393 J. Gower *Confessio Amantis* (Fairf.) I. l. 264 Thogh I ne conne bot a lyte.

*a*1425 (▸ *c*1395) *Bible (*Wycliffite, L.V.*)* (Royal) (1850) Baruch iii. 9 That thou kunne [*E.V.* *a*1382 *Bodl. 959* wite] prudence.

*c*1450 (▸ 1410) J. Walton tr. Boethius *De Consol. Philos.* (Linc. Cathedral 103) 187 This souereyn light..Beholde it well and kepe it if þou kunne.

*a*1475 *Sidrak & Bokkus* (Lansd.) (1999) II. 9622 Answhere noo dele, But ȝif þou woote þou conne right wele.

β. lME **can**, lME **cane**. It is unclear whether these examples show distinct subjunctive forms, or levelling of indicative forms to positions where the subjunctive formerly occurred. In later use not distinguished from the indicative (see Forms 2a(i)α. and 2b(i)β.).

*c*1425 Edward, Duke of York *Master of Game* (Vesp. B.xii) (1904) 97 If the lymer ouershete or cane not put it forthe, euery hunter..aught for to goo somdele abrood.

1469 J. Paston in *Paston Lett. & Papers* (2004) I. 544 Thow thou can begyll the Dwk of Norffolk, and bryng hym abow[t] the thombe as thow lyst, I let the wet thow shalt not do me so.

b. Plural OE **cunnen**. In later use not distinguished from the indicative (see Forms 2c(i)γ.).

OE Cynewulf *Elene* 376 Nu geraþe gangaþ ond findaþgen..þæt me ondsware þurh sidne sefan secgan cunnen.

4. Imperative. **a.** Singular ME **con**, ME **cone**, ME **cune**, ME **kon**, ME **konne**, 16 **can**.

*a*1200 *MS Trin. Cambr.* in R. Morris *Old Eng. Homilies* (1873) 2nd Ser. 29 Cune sume meðe þenne þu almesse makest.

*a*1300 (▸ *c*1275) *Physiologus* (1991) 131 Oc walke wið ðe erðe mildelike among men. No mod ðu ne cune.

?*a*1400 (▸ *a*1338) R. Mannyng *Chron.* (Petyt) (1996) I. 957 No maugre þou þam con [*a*1450 *Lamb.* cone] þat þe wille in fredom won.

*c*1400 (▸ 1391) G. Chaucer *Treat. Astrolabe* (Brussels) (1940) Introd. f. 75^{v} ȝif it so be that I schewe the..trewe conclusions..konne [*c*1400 *Cambr. Dd.3.53* kon] me the more thank.

1616 T. Adams *Divine Herball* v. 140 But can them no thankes; they would, if they could.

b. Plural eME **cunneð**, eME **cunnis**, ME **conneþ**.

?*c*1225 (▸ ?*a*1200) *Ancrene Riwle* (Cleo. C.vi) (1972) 101 Cunneð [*a*1250 *Titus* cunnis, *c*1390 *Vernon* conneþ] þis ansample.

5. Past indicative (and subjunctive). **a.** 1st and 3rd singular. **(i).**Already in Old English the subjunctive is no longer formally distinct from the indicative (cf. quot. eOE at α. forms).

α. eOE **cuðæ**, OE **cuðę** (*Northumbrian*), OE–eME **cuðe**, OE–ME **cuþe**, eME **cuðe** (with (3rd singular, subjective) personal pronoun affixed), eME **euðe** (transmission error), eME **kuðe**, ME **cothe**, ME **couȝthe**, ME **couȝþe**, ME **couþ**, ME **couþe**, ME **covth**, ME **covthe**, ME **covþe**, ME **cowȝthe**, ME **cowth**, ME **cowthe**, ME **cowþe**, ME **cuth**, ME **cuthe**, ME **cutht**, ME **kouth**, ME **kouthe**, ME **kouþ**, ME **kouþe**, ME **kowth**, ME **kowthe**, ME **kuthe**, ME **kuþe**, ME–15 **couthe**, ME–15 (16 *archaic*) **couth**; *Scottish* pre-17 **coucht**, pre-17 **cought**, pre-17 **couth**, pre-17

couthe, pre-17 **coutht**, pre-17 **couyth**, pre-17 **cowth**, pre-17 **cowthe**, pre-17 **cuth**, pre-17 **cuthe**, pre-17 **cutht**, pre-17 **kowth**, pre-17 **qwoth**, pre-17 **qwth**; *N.E.D.* (1888) also records the forms ME **coth**, ME **coþe**.

eOE King Ælfred tr. Boethius *De Consol. Philos.* (Otho) (2009) I. v. 395 [Ic wende þæt ic þe] geo gelæred hæfde [þæt þu hi oncnawa]n cuðe.

OE tr. Orosius *Hist.* (Tiber.) (1980) I. ii. 22 He Ninus Soroastrem Bactriana cyning, se cuðe manna ærest drycræftas, he hine oferwann.

?*c*1250 in C. Brown *Eng. Lyrics 13th Cent.* (1932) 10 Ar ne kuthe ich sorghe non.

*c*1325 (▸ *c*1300) *Chron. Robert of Gloucester* (Calig.) 672 He was iflowe an hei, & ne couþe [*c*1425 *Harl.* cowþe] no3t ali3te.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) 438 If he cuth [*Gött.* couth, *Trin. Cambr.* couþe, *Fairf.* coude] hafe born it wele.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 20024 Þof..i cothe loue naman sa wele.

*a*1450 *St. Edith* (Faust.) (1883) l. 2218 As he welle cou3the & ou3te to do.

?*c*1450 tr. *Bk. Knight of La Tour Landry* (1906) 75 He took fro them all that he couthe.

1519 in J. T. Fowler *Memorials Church SS. Peter & Wilfrid, Ripon* (1882) I. 315 In as convenient hast as I couthe.

1559 D. Lindsay *Test. Papyngo* l. 875 in *Wks.* (1931) I In Inglande couthe scho get none ordinance.

1579 E. Spenser *Shepheardes Cal.* Jan. 10 Well couth he tune his pipe.

1586 J. Ferne *Lacies Nobilitie* 11 I had rather..my daughter Alice couth karoll a lay so lustilie.

1607 T. Walkington *Optick Glasse* 18 Ne any couth his wit so hiely straine.

1652 C. B. Stapylton tr. Herodian *Imperiall Hist.* v. 37 So well his leere he Couth [*rhyme* South].

1655 in J. Mennes & J. Smith *Musarum Deliciæ* 72 He couth some termes of art Logick.

β. ME **code**, ME **cou3de**, ME **covd**, ME **covde**, ME **cowoud**, ME **cowyd**, ME **cude**, ME **kod**, ME **koud**, ME **koude**, ME **kou3de**, ME **kowd**, ME **kowde**, ME **kude**, ME–15 **coude**, ME–15 **cowd**, ME–15 **cowde**, ME–17 **coud**, 15 **cowed**, 16 (17– *English regional* (chiefly *northern*)) **cud**, 16–17 (18 *regional* and *nonstandard*) **cou'd**, 17–18 **cood** (*U.S. regional*), 18 **cou** (*Irish English* (*Wexford*)), 18 **ked** (*English regional* and *U.S. regional*); *Scottish* pre-17 **coit**, pre-17 **coude**, pre-17 **cowd**, pre-17 **cwd**, pre-17 **cwde**, pre-17 17– **cud**, pre-17 18– **coud**, pre-17 18– **cuid**, 17 **cou'd**, 18– **cood**, 19– **cwid**; *Irish English* (*northern*) 19– **cod**, 19– **cud**, 19– **kid**, 19– **kwid**.

*c*1330 *Seven Sages* (Auch.) (1933) 1832 Uirgil was whilom a clerk Þat coude of nigramancie werk.

1372 in C. Brown *Relig. Lyrics 14th Cent.* (1924) 72 If i koude, fawen wold i To don al at þi pay.

*a*1375 (▸ *c*1350) *William of Palerne* (1867) l. 4378 As he coude.

*c*1405 (▸ *c*1395) G. Chaucer *Squire's Tale* (Hengwrt) (2003) l. 31 A Rethor excellent That koude [*c*1415 *Corpus Oxf.* couþe, *c*1425 *Petworth* kouþe, *c*1430 *Cambr. Gg.4.27* coude] his colours.

*c*1450 (▸ *a*1375) *Octavian* (Calig.) (1979) l. 111 The emperour, cou3de noman kyþe Hys ioye.

?*c*1450 (▸ *?a*1400) J. Wyclif *Eng. Wks.* (1880) 382 No leyser to telle, all 3if I kou3de.

1478 J. Paston in *Paston Lett. & Papers* (2004) I. 613 He koud get the good wyll.

1508 J. Fisher *Treat. Penyt. Psalmes* sig. qq.ii^{v} So yf he coude fynde .x. good & ryghtwyse persones.

1510 *Lytell Geste how Plowman Lerned Pater Noster* (de Worde) Yet coude he neyther pater noster nor aue.

*c*1515 Ld. Berners tr. *Bk. Duke Huon of Burdeux* (1882–7) clxvi. 654 Al preuely as he coude.

1668 G. Etherege (*title*) She wou'd if she cou'd.

1697 J. Dryden tr. Virgil *Georgics* IV, in tr. Virgil *Wks.* 143 Were Lovers Judges, or cou'd Hell forgive.

1762 *Gentleman's Mag.* Mar. 137/2 [Will] cou'd his fears impart.

1764 D. Hume *Let.* 30 Sept. (1932) I. 472 More than I coud have imagind.

1783 in *Amer. Hist. Rev.* (1872) **1** 338/1 I should be glad I cood come Rite home with my slaves.

*a*1827 J. Poole *Gloss.* in T. P. Dolan & D. Ó Muirithe *Dial. Forth & Bargy* (1996) 42 Aamezil cou no stoane.

1858 *Southern Lit. Messenger* **26** 388/1 All I cood doo I coodin taik no mo ingziety in it.

*a*1861 T. Winthrop *John Brent* (1864) vii. 75 Ye see, boys, I ked rake down yer dimes, ef I chose.

1948 A. Jobson *This Suffolk* iv. 65 I cud tell his end wur near.

1975 A. Deyell *My Shetland* 53 I..did da best I cood.

2015 E. Buchanan in *New Writing Scotl.* **33** 14 He cuid see she wis fell conflummixt.

γ. lME–16 **coulde**, lME– **could**, 15–16 **cold**, 15–16 **colde**, 15–16 **coold**, 15–16 **cowld**, 15–16 **cowlde**, 16 **coulld**; *Scottish* pre-17 **cold**, pre-17 **cowld**, pre-17 **cuild**, pre-17 **cwld**, pre-17 17– **could**, pre-17 18 **culd**, 19– **coold**.

*c*1450 J. Capgrave *Solace of Pilgrims* (Bodl. 423) (1911) 13 As fer forth as I could aspie.

1476 in C. L. Kingsford *Stonor Lett. & Papers* (1919) II. 19 I coulde not answere that mateer without yow.

1477 W. Caxton tr. R. Le Fèvre *Hist. Jason* (1913) 5 The broder of kyng Eson..could not holde ne kepe his mayntening.

1530 *Myroure Oure Ladye* (Fawkes) (1873) I. 20 The same Alphonse..coulde nothynge of her language.

1549 in W. Fraser *Bk. Carlaverock* (1873) II. 475 With my hand at the pen, becaus I could nocht writ my seall.

?1578 W. Patten *Let. Entertainm. Killingwoorth* 86 I coold my rulez, coold conster & pars.

1584 H. Llwyd & D. Powel *Hist. Cambria* 315 [He] cold doo no good.

1588 A. King tr. P. Canisius *Cathechisme or Schort Instr.* 114 He culd nocht be præiudiciable to y^e^ kirk.

1590 E. Spenser *Faerie Queene* I. II. sig. B3^v^ He could not rest.

*c*1620 A. Hume *Of Orthogr. Britan Tongue* (1870) I. vii. §8 Of this I cold reckon armies.

*a*1629 T. Wilson tr. J. de Montemayor *Diana* in *Revue Hispanique* (1920) **50** 404 Strayning my self as much as I colde.

1722 D. Defoe *Moll Flanders* 44 Tho' I would have spoke, I could not.

1849 T. B. Macaulay *Hist. Eng.* II. 265 He could not consent.

1897 *Scots Mag.* Nov. 454 Naebody..culd help liken him.

1953 E. Simon *Past Masters* III. 196 If I coold have it run through somewhere and have another luke at it.

1959 L. S. Penrose in *New Biol.* **28** 98 It could be a 'synapton'.

2015 *Prospect* Aug. 60/1 There should not—could not—be any traction.

δ. 15 **canned** (in Phrases 3).

1564 T. Harding *Answere to Iuelles Chalenge* xv. f. 157 S. Antony..canned the scriptures by hart with hearing.

(ii). With negative particle affixed. 15 **covdnot**, 16 **could'nt**, 16–17 **cou'dn't**, 17– **couldn't**, 17– **couldnt** (*nonstandard*); *English regional* 17 **coudent** (*Devon*), 17– **coud'n** (*south-western*), 18 **chudd'nt** (*Devon*), 18 **cou'dn't**, 18 **couldna**; *U.S. regional* 18 **coodin**, 18 **cudn't**, 19 **couldn**; *Scottish* 17–18 **cou'dna**, 17– **couldn't**, 17– **couldna**, 17– **cudna**, 18 **coudna**, 18– **coodna**, 18– **couldnae**, 18– **cudnae**, 18– **cuidna**, 19 **cudeny'a** (*Aberdeen*, with (subjective) personal pronoun affixed), 19– **couldnie**, 19– **couldny**, 19– **cwidna**; *Irish English* (*northern*) 19– **couldnae**, 19– **cudnae**.

1525 in B. Cusack *Everyday Eng. 1500–1700* (1998) 197 I covdnot macke no fferder seerche.

1674 T. Flatman *Poems & Songs* 10 Yet could'nt I believe such storms could be.

1694 L. Echard tr. Plautus *Amphitryon* IV. v, in tr. Plautus *Comedies* 53 I cou'dn't ha' came sooner.

1713 H. Carey *Poems* 7 His Love he couldn't conceal.

*a*1794 M. Palmer *Dialogue Devonshire Dial.* (1837) 6 I coud'n abide her vather.

1882 'L. Keith' *Alasnam's Lady* III. 201 He really couldn't say where.

*a*1903 M. A. Courtney in *Eng. Dial. Dict.* (1903) IV. 206/1 [W. Cornwall] I coud'n eat the strawberries.

1979 J. J. Graham *Shetland Dict.* at *Nyivvel* I coodna help laachin.

2015 *N.Y. Rev. Bks.* 4 June 46/2 I couldn't agree more.

b. 2nd singular. **(i).**

α. eOE **cuðas** (*Mercian*), OE **cuþest**, OE **cuðast**, OE (chiefly *Northumbrian*)–eME **cuðes**, OE–eME **cuðest**, lOE **cuðost**, eME **kuðest**, ME **couthest**, ME **couthiste**, ME **couþest**, ME **couþist**, ME **cowthest**, ME **cowþeȝ**, ME **cowþist**, ME **kouþist**.

eOE (Mercian) *Vespasian Psalter: Canticles & Hymns* (1965) vi. 3 [2] *In medio duorum animalium innotesceris* : in midle twoega netna cuðas.

OE *West Saxon Gospels: John* (Corpus Cambr.) i. 48 Hwanon cuðest [OE *Lindisf. Gospels* cuðes; L. *nosti*] ðu me ?

*c*1230 (▸ *?a*1200) *Ancrene Riwle* (Corpus Cambr.) (1962) 144 Ich schal do þe a turn þet tu ne cuðest [*a*1250 *Nero* kuðest, *a*1250 *Titus* cuðes, *c*1390 *Vernon* couþest] neauer.

*c*1400 (▸ *c*1378) W. Langland *Piers Plowman* (Laud 581) (1869) B. viii. l. 76 Þow couthest me wisse.

*a*1500 (▸ *?a*1450) *Gesta Romanorum* (BL Add. 9066) (1879) 362 If thou couthiste peynte.

β. ME **coudestou** (with (subjective) personal pronoun affixed), ME **coudestow** (with (subjective) personal pronoun affixed), ME **coudist**, ME **couste**, ME **cowdist**, ME **koudest**, ME **koudestow** (with (subjective) personal pronoun affixed), ME–15 **coudest**, 16–17 **coud'st**; *English regional* 18 **coos** (*Somerset*), 18 **coose** (*Somerset*), 18 **coost** (*Berkshire*), 18 **cou'st** (*Shropshire*), 18 **cust** (*Cornwall*).

*c*1350 (▸ *a*1333) William of Shoreham *Poems* (1902) 78 Lord, þat coudest maky open Þet no man coude ounschette.

*c*1400 (▸ *c*1378) W. Langland *Piers Plowman* (Laud 581) (1869) B. v. l. 540 Coudestow auȝte wissen vs þe weye.

*a*1425 *Body & Soul* (BL Add.) in N. S. Baugh *Worcs. Misc.* (1956) l. 157 Euer seþen þat þou couste go.

1526 *Bible (*Tyndale*)* Mark xiv. f. lxvij Coudest not thou watche with me one houre?

1668 T. Shadwell *Sullen Lovers* iv. 72 How the Devil coud'st thou find me out in that.

1703 C. Gildon *Patriot* iii. i. 27 Had'st thou The Spirit of a weak, and puling Girle, Thou coud'st not bear it.

1842 G. P. R. Pulman *Rustic Sketches* 90 *Coos*, could [*ed. 3* Coose do et eef oo'st].

1879 G. F. Jackson *Shropshire Word-bk.* p. lxi Thee cou'st..Cou'st 'ee?

γ. ME **cuth**, ME **kouth**.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 4555 Bot cuth þou tel me quat it ware.

*a*1425 (▸ *?c*1375) *N. Homily Legendary* (Harl.) in C. Horstmann *Altengl. Legenden* (1881) 2nd Ser. 4 And þou kouth klerely knaw and se Þe vertu of þat ilk haly tre..Þan wald þou wit and vnderstand.

δ. ME **coud**, ME **cowde**. For examples with *ye* or *you* see Forms 5c and compare note at that section.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Gött.) l. 4555 Coud þu [*Vesp.* cuth þou, *Fairf.* cowde þou, *Trin. Cambr.* coudestou] tell me quat it ware.

ε. lME **couldist**, 15–16 **couldest**, 15–19 **could'st**, 15– **couldst** (now *archaic*).

?*a*1475 (▸ *a*1396) W. Hilton *Scale of Perfection* (Harl. 6579) i. lxxxiii. f. 57 If þou couldist wel lufen þin euencristen, it schulde nouȝt hyndre þe for to speken wiþ þem discretli.

1526 *Bible (*Tyndale*)* Mark xiv. 37 Couldest not thou watche [1582 *Rheims* couldst].

1630 Bp. J. Hall *Occas. Medit.* v. 14 Oh that thou couldst.

1667 J. Milton *Paradise Lost* iv. 950 And couldst thou faithful add?.. Faithful to whom?

1747 S. Richardson *Clarissa* I. xxxi. 197 But could'st thou have thought that I..could adopt those over-tender lines of Otway?

1868 W. Morris *Earthly Paradise* i. 393 If thou couldst forget, And live unholpen.

1905 P. W. MacKaye *Fenris, Wolf* Prol. 6 Yet could'st thou show some genesis of good.

1953 G. Willans *Down with Skool!* vi, in *Molesworth* (1999) 84 Thou couldst not tuough up a flea ha-ha-hee.

ζ. 15–18 20– **could**. For examples with *ye* or *you* see Forms 5c and compare note at that section.

1567 A. Golding tr. Ovid *Metamorphosis* (new ed.) xv. f. 187^{v} Thou could not stawnche The hunger of thy greedye gut.

1593 B. Barnes *Parthenophil & Parthenophe* 76 Thou could not be perswaded that my wittes Could once retire so farre from sence asondred.

*a*1649 W. Drummond *Wks.* (1711) 54/2 With full plum'd Wing thou Faulkon-like could fly.

1786 R. Burns *Poems* 118 Thou could hae gaen like ony staggie Out owre the lay.

1837 *Tait's Mag.* Sept. 573 When their yokins thou could see, Thou skailt the byke.

2000 R. Topping *Kevin & Perry go Large* i. 2 Why chop off my head when thou could lift up my dress and look at my front bottom?

(ii). With negative particle affixed. *English regional* (chiefly *south-western*) 18 **coodnst**, 18 **coodsn't**, 18 **coos'nt**, 18 **coos-nt**, 18 **coossen**, 18 **couldsna** (*Shropshire*), 18–19 **coos'n**, 19 **coosint**.

1844 W. Barnes *Poems Rural Life in Dorset Dial.* 49 Dost mind how oonce thee coossen zit.

1888 B. Lowsley *Gloss. Berks. Words & Phrases* 65 If I dwoant do't I be zure thee coos'nt.

1913 J. Wilson *Dial. New Forest* 42 *Coos'n*, or *coosint*,..couldst not.

c. Plural. **(i).**In Old English the past subjunctive plural was originally formally distinct (showing the inflectional ending *-en*), but by late Old English the endings of the indicative and subjunctive had become homophonous in all dialects.

Since the Middle English period the plural form has also been used for the 2nd singular with *ye* or *you* (originally as polite forms); *could* is now the standard form.

α. eOE **coðon** (probably transmission error), OE **cuþan**, OE **cuþon**, OE **cuþun**, OE **cuðu** (*Northumbrian*), OE **cuðun**, OE–eME **cuðan**, OE–eME **cuðen**, OE–eME **cuðon**, OE–ME **cuþen**, eME **cuþæn**, eME **cuþenn** (*Ormulum*), eME **cuðe**, eME **cyðen**, ME **coþen**, ME **couthen**, ME **cowth**, ME **cowthe**, ME **cowthen**, ME **cowþe**, ME **cowþen**, ME **cuth**, ME **cuthe**, ME **cuþe**, ME **kouþ**, ME **kouþe**, ME **kouþen**, ME **kowth**, ME **kuth**, ME **kuþe**, ME **kuþen**, ME–15 **couth**, ME–15 **couthe**; *Scottish* pre-17 **couith**, pre-17 **couth**, pre-17 **cwth**.

OE *Guthlac A* 751 Hwylc wæs fægerra willa geworden in wera life, þara þe yldran usse gemunde, oþþe we selfe siþþan cuþen?

OE *Daniel* 257 Bliðe wæron eorlas Ebrea, ofestum heredon drihten on dreame, dydon swa hie cuðon ofne on innan, aldre generede.

OE Ælfric *Catholic Homilies: 1st Ser.* (Cambr. Gg.3.28) i. 183 Hi..cuðon ægðer ge god ge yfel.

*c*1225 (‣ *?c*1200) *St. Katherine* (Royal) (1981) 616 Ant tah we cuðen.

‣ *c*1300 *Havelok* (Laud) (1868) 369 Hwo micte yeme hise children yunge, Til þat he kouþen speken.

*a*1375 (‣ *c*1350) *William of Palerne* (1867) l. 1033 Alle þe surgyens of salerne..ne couþen haue ȝour langoures a-legget.

*a*1400 (‣ *a*1325) *Cursor Mundi* (Vesp.) l. 12344 Wele þai couthe þaire lorde knaw.

‣ *c*1449 R. Pecock *Repressor* (1860) 28 As othere men miȝten and couthen do.

1483 (‣ 1413) tr. G. Deguileville *Pilgrimage of Soul* (Caxton) iii. iii. f. lj^{v} Ye, that more good couthe.

*c*1518 R. Pace in H. Ellis *Orig. Lett. Eng. Hist.* (1846) 3rd Ser. I. 186 They couith goodde skele in byldyngs.

1537 in R. Pitcairn *Criminal Trials Scotl.* (1833) I. 180 All that we had, and couth get to borrow.

*a*1586 Sir P. Sidney *Arcadia* (1590) i. sig. N2 Well my pipe they couthe.

β. ME **cewed**, ME **couden**, ME **couȝde**, ME **covd**, ME **covde**, ME **cowd**, ME **cowden**, ME **cuden**, ME **koude**, ME **kouden**, ME **kowde**, ME **kowden**, ME **kuden**, ME–15 **coude**, ME–15 **cowde**, ME–15 **kowd**, ME–17 **coud**, 16–17 (18 *regional* and *nonstandard*) **cou'd**, 17– **cud** (*English regional* (chiefly *northern*) and *nonstandard*); *English*

regional 18 **cud'n**; *Scottish* pre-17 **coit**, pre-17 **cowd**, pre-17 18– **coud**, 17–18 **cou'd**, 17– **cud**, 18– **cood**, 18– **cuid**, 19– **caud**; *Irish English* (*northern*) 18 **cud**.

*a*1375 (▸ *c*1350) *William of Palerne* (1867) l. 4810 Þe grettest lordes of þat land þat..kowden fairest speke.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Fairf. 14) l. 14716 Þai cowd a-gayn him finde resoun nane.

*a*1425 (▸ *?a*1400) G. Chaucer *Romaunt Rose* (Hunterian) (1891) l. 789 Well koude they the gise.

1494 *Love's Speculum Vite Cristi* (Pynson) viii. sig. dii They coude the langage of Ebrewe.

*c*1515 Ld. Berners tr. *Bk. Duke Huon of Burdeux* (1882–7) vii. 16 The ii. brethern kowd not.

1697 J. Dryden tr. Virgil *Georgics* iii, in tr. Virgil *Wks*. 118 Th'..Entrails, cou'd no Fates foretel.

1790 A. Wheeler *Westmorland Dial*. 24 When awrs an I wor wed we cud but meaak neen Shilin between us.

1814 J. Monro *Carmen Caledoniæ Musæ* 30 Suppose we cou'd the length of Luna gaung.

1954 S. Grapes *Boy John Lett*. (1974) 72 If only we cud git a little titty bit wi' berries on ter stick inter tha top o' tha pudden.

1975 A. Deyell *My Shetland* 56 We cood hear dem squeekin an rinnin aboot.

2008 D. Crystal *Txtng* ii. 30 Even if they cud communic8 wivout a mobile fone how cud they flirt or get 2 kno each uvver.

γ. lME– **could**, 15 **colde**, 15 **coulld**, 15 **cowlde**, 15–16 **coulde**, 15–16 **cowld**, 15–17 **cold**, 18 **coulden** (*English regional* (*Shropshire*)); also *Scottish* pre-17 **coold**, pre-17 **culd**.

1485 *Croniclis of Englonde* (St. Albans) iii. sig. eiiij They..shuld help it in all yᵗ they could.

1589 W. Warner *Pan his Syrinx* xxvii. sig. M Riding as nere to the vnknown ship as they cold.

1611 *Bible (*King James*)* 2 Cor. xi. 1 Would to God ye could bear with me.

1646 E. Fisher *Marrow Mod. Divin.* (ed. 2) 237 They could skill to say.

1714 E. Freke *Remembrances* (2001) 60 The ships and boys which we cold nott see.

1879 G. F. Jackson *Shropshire Word-bk*. 427 Two or three on our chaps tooken the room at Clar's, an' then we coulden tabor away theer.

1978 J. Carroll *Mortal Friends* iii. iii. 281 They could care less.

2015 *PC Pro* Feb. 24/3 Snazzy new video formats could be viewed on older devices.

(ii). With negative particle affixed. 16–17 **cou'dn't**, 17 **coud'n**, 17– **couldn't**, 18– **couldnt** (*nonstandard*), 19– **coulden** (*Caribbean*); *English regional* 17 **coudent** (*Devon*), 18 **coulden**, 18 **coulden'**, 18 **couldna**, 18 **couldnad-a** (*Shropshire*, with (3rd plural, subjective) personal pronoun affixed); *Scottish* 17– **cudna**, 18 **cou'dna**, 18 **coudna**, 18 **cudnin** (*Aberdeen*), 18– **coodna**, 18– **couldna**, 18– **couldnae**, 18– **cudnae**, 18– **cuidna**, 19– **cwidna**; *Irish English* (*northern*) 19 **cuddent**, 19– **couldnae**, 19– **cudnae**.

1694 L. Echard tr. Plautus *Epidicus* v. i, in tr. Plautus *Comedies* 116 They cou'dn't save poor Pilgarlick from going to Pot.

1703 J. Oldmixon *Governour of Cyprus* iii. 23 You coud'n hurt Her By seeing in her Looks her Brother's Likeness.

1718 *Double captive* 55 They couldn't, in some time, recover their former Deportment.

1775 R. Cumberland *Choleric Man* iii. i. 39 You couldn't think me such a fool.

1782 *Exmoor Scolding* (ed. 9) 22 Why es thort you coudent a vort zo.

1843 J. Nicholson *Hist. & Tradit. Tales* 129 The English cou'dna mak' out the preceese meaning o' the words perqueerly.

1980 M. Thelwell *Harder they Come* (1988) xv. 308 In fack you coulden pay me I fe know more.

1984 J. Kelman *Busconductor Hines* (1992) ii. 51 In case they couldnt get one later.

2004 J. Law *Recorded Interview* (SCOTS transcript) in *www.scottishcorpus.ac.uk* Interview 5 Settin oot tae teach a language that they cudnae even speak theirsel.

2014 *New Scientist* 20 Sept. 39/1 We couldn't see or study it until our telescopes became powerful enough.

6. Present participle.

α. OE **cunnende**, ME **cunnyng**; see also CUNNING *adj*.

OE *Lambeth Psalter* lxxxvi. 4 *Memor ero raab et babylonis scientium me* : ic gemune cunnendum.

▸ *a*1382 *Prefatory Epist. St. Jerome* in *Bible (*Wycliffite, E.V.*)* (Bodl. 959) (1959) v. l. 23 ȝif þou ȝeue [the book] to aman cunnyng lettrez þat he rede.

▸ ?*a*1439 J. LYDGATE *Fall of Princes* (Bodl. 263) VII. 1346 Quakyng in þer dreede, Cunnyng no recour in so streit a neede.

β. 15 **canning**, 15 **gannyng** (in Phrases 1).

1542 N. UDALL tr. Erasmus *Apophthegmes* f. 248 Augustus..after gannyng hym thanke, commaunded, etc.

1570 J. FOXE *Actes & Monumentes* (rev. ed.) II. 1346/1 In canning the text of the whole new Testament..without booke.

1598 J. MARSTON *Scourge of Villanie* II. v. sig. E3 O, brawnie strength is an all-canning charme!

7. Past participle.

α. OE **cunnen** (in prefixed forms), eME **icvn**, ME **conne**, ME **kunne**, ME **kunnen**.

[OE tr. Bede *Eccl. Hist.* (Corpus Oxf.) v. xvii. 460 Æfter fif gearum eft he wæs oncunnen fram þam ylcan cyninge.]

?*c*1250 in C. Brown *Eng. Lyrics 13th Cent.* (1932) 112 Þe sunnes þat ich habbe i-cvn, heo rewweþ me ful sore.

?1473 W. CAXTON tr. R. Le Fèvre *Recuyell Hist. Troye* (1894) II. lf. 225^{v} Thou haste more achieuyd than..all the assemblees and men of armes of ytalyens sholde haue conne doo.

1474 W. CAXTON tr. *Game & Playe of Chesse* (1883) IV. viii. 183 I haue put in this present chapitre all y^{e} thynges abouesayd as shortly as I haue conne.

*c*1475 (▸ *c*1445) R. PECOCK *Donet* (1921) 146 Þat goddis comaundementis be not forȝeten, but euer wel kunnen...Whi goddis comaundementis ben so yuel kunne of þe peple as þei ben.

1481 W. CAXTON tr. *Siege & Conqueste Jerusalem* (1893) cv. 162 They shold haue ben so enfebled of men that with payne shold they haue conne holden and kept the toun ayenst oure men.

1483 (▸ 1413) tr. G. Deguileville *Pilgrimage of Soul* (Caxton) (1859) I. ii. 3 Yf thou haddest ony good conne.

1483 W. CAXTON tr. J. de Voragine *Golden Legende* f. cclxxv/1 I haue not conne gete pardon ne foryeuenesse for them.

β. ME **coud**, ME **coude**, ME **kowd**, ME **kowde**; *Scottish* 18 **cuid**, 19 **cood**.

▸ *c*1384 *Bible (*Wycliffite, E.V.*)* (Douce 369(2)) (1850) 1 Cor. xiv. 7 How schal it be kowd [*a*1425 *Magdalene Coll. Cambr.* cunde; *New Coll. Oxf.* knowen] that is songun [L. *quomodo scietur id quod canitur*].

1477 W. CAXTON tr. R. Le Fèvre *Hist. Jason* (1913) 63 I haue not seruid yow in suche wise as I haue coude best doo.

*a*1500 (▸ 1413) *Pilgrimage of Soul* (Spencer) I. iii. f. 4 If thu haddest kowde ony good, suche maner [of malice] had neuere be purposed.

*a*1500 *St. Brendan's Confession* (Lamb.) l. 21 in *Geibun-Kenkyu* (1968) **25** 6 I haue not worschipid þee..as I myȝte, ouȝte, coude, or myȝte haue coud.

1873 J. A. H. MURRAY *Dial. S. Counties Scotl.* 216 Thay haena cuid geate eane.

*a*1917 E. C. SMITH *Mang Howes & Knowes* (1925) 12 It'll no hev cood gar ends meet this bittie back, nih, A'se warran!

γ. 15 **coulde**, 15–16 (18– *English regional* (chiefly *north-eastern*), *Scottish*, and (in sense 24) *U.S. regional* (chiefly *southern*)) **could**.

1533 T. MORE *Debellacyon Salem & Bizance* II. xv. f. xxii^{v} If he had coulde, he wold not haue fayled to haue done the tone.

1562 P. WHITEHORNE tr. N. Machiavelli *Arte of Warre* III. f. xlviii^{v} I would not haue suffered the enemie to haue shot at al, if I had could.

1631 C. SIBTHORPE *Friendly Advt. to Pretended Catholickes of Ireland* III. ii. 284 To the end hee might falsifie (if he had could) the Prophecie.

*a*1663 J. SHERMAN *Infallibility Holy Script.* (1664) 882 He would surely if he had could.

1888 *N.E.D.* at *Can* v.[1] *Mod. Sc.* He has not could come. If I had could find it.

1896 F. M. T. PALSGRAVE *List Words & Phrases Hetton-le-Hole* (at cited word) I haven't could get across the doors.

1981 in A. R. Warner *Eng. Auxiliaries* (1993) ix. 222 [Newcastle] I haven't could sleep.

δ. 15 **cand**, 15 **canned**.

*a*1535 T. MORE *Dialoge of Comfort* (1553) II. xix. sig. M.vii^{v} Els woulde Christe haue canned her muche more thanke.

1563 W. BALDWIN et al. *Myrrour for Magistrates* (new ed.) Blacke Smyth xviii. 7 So fare they all that have not vertue cand.

1577 R. HOLINSHED *Chron.* II. 1618/2 They had cand theyr lesson.

See also CON *v.*[1]

Frequency (in current use):

Origin: A word inherited from Germanic.

Etymology: Cognate with Old Frisian *kunna* , *konna* (West Frisian *kinne*), Old Dutch *kunnan* (Middle Dutch *connen* , Dutch *kunnen*), Old Saxon *kunnan* (Middle Low German *künnen* , *können*), Old High German *kunnan* (Middle High German *kunnen* , *künnen* , German *können*), Old Icelandic *kunna* , Old Swedish, Swedish *kunna* , Old Danish, Danish *kunne* , Gothic *kunnan* , all in senses 'to know, to understand, to know how, (as auxiliary) to be able to, to have ability or opportunity' < a Germanic preterite-present verb (of Class III) < the same Indo-European base as Sanskrit *janati* knows, Avestan *zan-* to recognize, Early Irish *-gnin* (in e.g. *ad-gnin* , *con-gnin* , both in sense 'knows, recognizes'), Old Prussian *-sinnat* (in *ersinnat* to recognize, to get to know, *posinnat* to acknowledge, to confess), Lithuanian *žinoti* to know, Latvian *zināt* to know; a variant of the same Indo-European base is shown by KNOW *v.*

For other verbs of the preterite-present class in English compare DARE *v.*[1], DOW *v.*[1], MAY *v.*[1], MONE *v.*, MOTE *v.*[1], OWE *v.*, SHALL *v.*, THARF *v.*, UNNE *v.*, WIT *v.*[1]

Forms of the past tense.

Past tense forms with *-d-* (see Forms 5a(i)β. , 5b(i)β. and δ. , 5c(i)β.) are apparently due to the influence of *-d-* in the regular past tense inflection of weak verbs. (The development did not affect COUTH *adj.* (see below), but occasionally extended to the past participle of the verb: see Forms 7β. .) The original forms with *-th-* (see Forms 5a(i)α. , 5b(i)α. and γ. , 5c(i)α.) become rare by the second half of the 15th cent. and archaic by the second half of the 16th.

Past tense forms with *-l-* (see Forms 5a(i)γ. , 5b(i)ε. and ζ. , 5c(i)γ.) appear in the second half of the 15th cent. by analogy with *should* and *would* , prompted by an increasingly frequent loss of *-l-* in those words (see forms at SHALL *v.* and WILL *v.*[1]). The *-l-* in *could* (as well as in *should* and *would*) is always recorded as pronounced by 16th-cent. orthoepists, reflecting the variant preferred in more formal use, and gradually disappears from pronunciation over the course of the 17th cent.

Past participle.

For a past participial formation of considerable antiquity (going back to an Indo-European base and reflecting a formation with a dental suffix), recorded in adjectival use (both attributively and predicatively) in all the major Germanic languages, see COUTH *adj.* Predicative uses of Old English *cūþ* , Middle English *couþ* (which have sometimes alternatively been interpreted as showing past participles of this verb,

corresponding to weak past tense forms like *cūþe* , *couþe*) are treated at that entry. Compare also past participle forms of the *coud* type (see Forms 7β.), which are new formations based on the past tense (compare e.g. Forms 5a(i)β. and 5c(i)β.).

The (strong) past participial formation in *-en* of the type expected in a West Germanic preterite-present verb is shown by Forms 7α. ; in Old English this type is attested only in prefixed forms. Whether this strong form or the weak formation represented by COUTH *adj.* reflects the original Proto-Germanic past participle is uncertain and disputed (see further R. M. Hogg & R. D. Fulk *Gram. Old Eng.* (2011) II. §6.143).

The frequent use of *have conne* in Caxton (compare quots. ?1473, 1474, etc. at Forms 7α.) is probably partly after Middle Dutch *hebben geconnen*.

Forms of the imperative.

Forms of the imperative singular attested in early Middle English (compare quots. *a*1200, *a*1300 at Forms 4a) show the influence of the subjunctive; compare discussion at UNNE *v.*

Development of regular inflections.

From the earlier 14th cent. to the later 16th cent. there was a tendency for CAN *v.*[1] to develop occasional regular (historically weak) inflections in its uses as a full verb (compare branch I.) and in phrases like *to can thanks* at Phrases 1 or *to can by heart* at Phrases 3. Regular forms based on *cunn-* , *conn-* , the historical stem of the infinitive (see Forms 1α. and β.), came to be distinguished as CON *v.*[1] (see discussion at that entry). In the latter part of the 15th and in the 16th cent. regular forms were occasionally based on *can-* , historically the stem of the singular present indicative (and, in the relevant period, of the infinitive: see Forms 1γ.); see Forms 2a(i)γ. and δ. , 5a(i)δ. , 7δ. .

Regular forms are not normally found in uses of the verb as an auxiliary (compare, however, quot. *c*1523 at Forms 2a(i)γ.), except in the plural present indicative, where levelling of the plural ending *-aþ* is found already in the Old English (Mercian) interlinear gloss to the Rushworth Gospels, with its reflex attested relatively frequently until the 15th cent. (see Forms 2c(i)β.).

Relationship with CAN *v.*[2] *and* GIN *v.*[1]

The form *gan* (compare quots. 1542[1] and 1542[2] at Phrases 1) shows an alteration after *gan*, the past tense form of GIN *v.*[1] That verb overlapped with CAN *v.*[2] in the function of a periphrastic auxiliary of the past tense, with the latter verb often perceived, particularly in the 16th cent., as a special use of CAN *v.*[1] Compare the Older Scots use of the past tense forms of this verb as a periphrastic auxiliary of the past tense: see CAN *v.*[2] II. and the discussion at that entry.

Prefixed forms.

In Old English the prefixed form *acunnan* to accuse, to excuse (compare A- *prefix*[1]) is also attested; compare also *oncunnan* to know, to reproach, to accuse, to excuse (compare ON- *prefix*).

I. As a full verb.

†**1.** *transitive*. To know or be acquainted with (a person). *Obsolete*.

OE *West Saxon Gospels: Matt.* (Corpus Cambr.) xxv. 12 Ne cann [*c*1200 *Hatton* can] ic eow.

lOE *St. Nicholas* (Corpus Cambr.) (1997) 99 Cunne ge ænigne mann þe hatte Nicolaus?

*c*1175 (▸ OE) ÆLFRIC *Homily* (Bodl. 343) in S. Irvine *Old Eng. Homilies* (1993) 64 We witen þæt Moyses spæc to þone Almihtiȝa Gode, ac we ne cunnon þisne mon ne hwanon he icumen is.

*c*1175 *Ormulum* (Burchfield transcript) l. 12629 Þatt cristess follc..Wel cunnenn shollde. & cnawenn. Þatt hallȝhe lamb. þatt haffde hemm bohht.

2.

a. *transitive*. To know or have learned (a thing); to have practical knowledge of (a language, art, etc.). Cf. CON *v.*[1] **2**. Now *rare* (*Welsh English* (*Pembrokeshire*)).

OE *Beowulf* (2008) 1377 Eard git ne const , ðær þu findan miht felasinnigne secg.

OE ÆLFRIC *Catholic Homilies: 2nd Ser.* (Cambr. Gg.3.28) iii. 23 Hi cuðon ælc gereord þe on middanearde is.

lOE *St. Giles* (Corpus Cambr. 303) (1980) 103 Se eadiga Egidius hire andwyrde and cwæð þæt he nawiht eorðlices læcecræftes ne cuðe.

*c*1175 *Ormulum* (Burchfield transcript) l. 13933 Nollde he chesenn nan off þa. Þatt cuþenn mikell lare.

*a*1200 *MS Trin. Cambr.* in R. Morris *Old Eng. Homilies* (1873) 2nd Ser. 29 Cune sume meðe þenne þu almesse makest.

*a*1225 (▸ ?OE) *MS Lamb.* in R. Morris *Old Eng. Homilies* (1868) 1st Ser. 35 For nis nan sunne þet he ne con.

*c*1325 (▸ *c*1300) *Chron. Robert of Gloucester* (Calig.) 9121 Alas alas of engelond ne can ich nanne red.

▸ *c*1384 *Bible (*Wycliffite, E.V.*)* (Douce 369(2)) (1850) 1 Cor. xiv. 7 How schal it be kowd[*a*1425 *Magdalene Coll. Cambr.* cunde; *New Coll. Oxf.* knowen] that is songun.

▸ *a*1387 J. TREVISA tr. R. Higden *Polychron.* (St. John's Cambr.) (1871) III. 281 I can nou3t but þat I can nou3t.

*c*1405 (▸ *c*1390) G. CHAUCER *Miller's Tale* (Hengwrt) (2003) Prol. l. 18 I kan [*c*1410 *Cambr. Dd.4.24* can] a noble tale for the nones.

*a*1425 *Comm.* in H. R. Bramley *Rolle's Psalter* (1884) 1 The lord that all thing can.

*a*1450 (▸ *a*1387) W. LANGLAND *Piers Plowman* (Rawl.) (1960) A. XII. l. 7 Þou woldest konne þat I can and carpen hit after.

1509 H. WATSON tr. S. Brant *Shyppe of Fooles* (de Worde) i. sig. A.ii[v] It were more propyce for suche folkes for to bere asses eeres, than for to bere the names of doctours and can nothynge of cunnynge.

*a*1529 J. SKELTON *Magnyfycence* (?1530) sig. Biii[v] Can you a remedy for a tysyke.

1529 T. MORE *Supplyc. Soulys* I. f. xii But than he speketh so sauorly herof: that yt well apperyth of hys wyse wordes he neyther canneth eny skyll therof, nor neuer cam in the house.

1538 *Bible (*Coverdale*)* Ded. To..instruct such as can but English.

*c*1540 (▸ *?a*1400) *Gest Historiale Destr. Troy* (2002) f. 21[v] For sleght þat he couth.

1570 J. FOXE *Actes & Monumentes* (rev. ed.) II. 1249/2 Vnlearned men that can no letters.

1600 E. FAIRFAX tr. T. Tasso *Godfrey of Bulloigne* x. iv. 180 The way right well he could.

1602 R. CAREW *Surv. Cornwall* i. f. 56 Most of the Inhabitants can no word of Cornish.

*a*1637 B. JONSON *Magnetick Lady* I. v. 37 in *Wks.* (1640) III She could the Bible in the holy tongue.

1649 R. LOVELACE *Poems* (1659) 120 Yet can I Musick too; but such As is beyond all Voice or Touch.

1982 B. G. CHARLES *Eng. Dial. South Pembrokeshire* *Can*, 'to know'. 'Thou canst ought, (you know nought [*sic*])'.

†**b.** *intransitive*. To have knowledge, to know *of* (also *on*). Also: to know *much* (or *little*) *of*. *Obsolete* (*archaic* in later use).

OE WULFSTAN *Sermo ad Anglos* (Nero) (1957) 269 And þæs we habbað ealle þurh Godes yrre bysmor gelome, gecnawe se ðe cunne.

OE Ælfric *Lives of Saints* (Julius) (1900) II. 400 Gundoforus asende his gerefan to Sirian lande to secenne sumne wyrhtan þe wel cunne on cræfte.

*c*1275 (▸ *?c*1250) *Owl & Nightingale* (Calig.) (1935) 560 Bute þu canst of chateringe.

*c*1300 (▸ *?a*1200) Laȝamon *Brut* (Otho) (1963) l. 3639 Lokeþ me tweie wise men þat wel conne of speche.

▸ *a*1393 J. Gower *Confessio Amantis* (Fairf.) v. l. 928 (*MED*) He feignede him to conne arede Of thing which after scholde falle.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) 740 Þat mast kan bath on crok and craft.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Gött.) l. 7408 He coude of harpe mekil bi rote.

*c*1475 (▸ *?c*1425) *Avowing of King Arthur* (1984) l. 257 Þe king couthe of venery.

*a*1525 *Robin Hood & Potter* in F. J. Child *Eng. & Sc. Pop. Ballads* (1888) III. v. 111 The potter cowed of corteysey.

*c*1540 (▸ *?a*1400) *Gest Historiale Destr. Troy* (2002) f. 41 A mad preste That neuer colde of no knighthode but in a kirke chyde.

1589 W. Warner *Albions Eng.* (new ed.) v. xxiv. 107 The holie Theeues..Could much of Scripture, and in deede did hartelie repent.

1602 S. Rowlands *Greenes Ghost* (1860) 70 I neuer was there (that I can of).

1686 in J. Playford *Second Bk. Pleasant Musical Compan.* (ed. 2) sig. L4^{v}/1 John Dory could well of his courtesie, But fell down in a Trance.

1825 W. Scott *Talisman* xii, in *Tales Crusaders* IV. 246 Thou canst well of wood-craft.

1864 C. Kingsley *Little Baltung* in *Fraser's Mag.* Mar. 313 That cunning Kaiser was a scholar wise, And could of gramarye.

*a*1909 A. C. Swinburne *Compl. Wks.* (1925) III. 393 She can well of witches' work, She maketh baith mirth and meen.

†**c.** *transitive*. To experience (an emotion, trouble, etc.), to know from experience. Also: to manifest or exhibit (an attitude, disposition, etc.) *Obsolete*.

OE *Genesis A* (1931) 74 Heo helltregum werige wunodon and wean cuðon, sar and sorge.

OE Wulfstan *Sermo ad Anglos* (Corpus Cambr. 201) (1957) 264 Oft twegen sæmen..drifað þa drafe cristenra manna fram sæ to sæ.., us eallum to worldscame, gif we on earnost ænige scame cuðe.

?*c*1250 in C. Brown *Eng. Lyrics 13th Cent.* (1932) 112 (*MED*) Þe sunnes þat ich habbe i-cvn, heo rewweþ me ful sore.

*a*1300 (▸ *c*1275) *Physiologus* (1991) 131 Oc walke wið ðe erðe mildelike among men. No mod ðu ne cune.

*c*1350 *Psalter* (BL Add. 17376) in K. D. Bülbring *Earliest Compl. Eng. Prose Psalter* (1891) lxxxviii. 15 (*MED*) Blisced be þe folk þat conen gladyng.

*a*1400 *Cursor Mundi* (Vesp.) l. 20091 (*MED*) Ne cuth ic ar o soru noght!

*c*1460 (▸ *?c*1400) *Tale of Beryn* l. 4005 (*MED*) Isope coude no chere when Beryn was absent.

?*a*1475 *Ludus Coventriae* (1922) 31 (*MED*) With all þe mekenesse þat I kan or may This lombe xal I offre.

†**3.** *transitive*. To get to know; to learn, study. Cf. con *v.*[1] 3a. *Obsolete*.

1496 (▸ *c*1410) *Dives & Pauper* (de Worde) vii. iii. sig. r.i^{v}/2 They withdrawe goddes worde & the truthe to goddes lawe þ^{t} longeth to men of holy chirche to teche, & to the people to can & to knowe.

1496 *Rote or Myrour Consolacyon & Conforte* (de Worde) sig. Cv^{v} The stroke of the rodde maketh the scoler to bowe his necke & loke wel on his boke & to can wel his lesson.

1528 T. More *Dialogue Heresyes* I, in *Wks.* 111/1 He laboured..to can many textes thereof by harte.

1530 J. Palsgrave *Lesclarcissement* 93 If the lernar can perfitly these two exemples.

1563 W. Baldwin et al. *Myrrour for Magistrates* (new ed.) Blacke Smyth xviii. 7 So fare they all that have not vertue cand.

1577 R. Holinshed *Chron.* II. 1618/2 They had cand theyr lesson.

1583 J. Foxe *Actes & Monuments* (ed. 4) II. 1789/2 But Peter had an other lesson inwardly taught him, and because he could his lesson, Christ gaue him a new name.

II. As an auxiliary verb, with a following bare infinitive.

The principal uses as an auxiliary verb are:

With present tense *can* or past tense *could* with temporal function: 'know how (to do something)', (hence) 'be able to' (see senses 4, 5, 9, 10); expressing objective possibility, 'be permitted or enabled by the conditions of the case' (senses 6, 11); expressing permission or sanction, 'be allowed to' (senses 7, 12); and expressing a possible contingency, 'it is possible that I did or was' (senses 8 and 13, used only in negative and interrogative contexts in the present);

Additionally, with past tense *could* with non-temporal function: in the subordinate clause (protasis) of a conditional sentence, or a clause resembling this, 'were able to' (see sense 15); in the main clause (apodosis) of a conditional sentence, or clause equivalent to this, 'would be able to' (sense 16); expressing an inclination in a conditional form, with a verb denoting inclination, 'would be able to (wish, desire, etc.)', and (hence) with other verbs (expressed or understood), 'have an inclination to, feel that one is able to' (sense 17); in requests (sense 18, as a more polite equivalent of *can*, sense 7a); and in expressing a possible contingency, i.e. the subjective likelihood of an action or state of affairs, 'it is possible that I do or am' (sense 19).

[The use of the infinitive of *can* (e.g. with preceding modal verbs) becomes rare after Middle English, being increasingly replaced in standard English by *to be able* ; however, it survives strongly in modern Scots: see Forms 1γ. . Compare also sense 22.

In Old English chiefly with connotations of the senses of the full verb, which are gradually lost in subsequent use.

For discussion of the development of the modal verb, see H. Narrog *Modality, Subjectivity, & Semantic Change* (2012) 118-122 and J. L. Bybee *Lang. Change* (2015) 127–8.]

* The present tense *can*.

†**4.** Expressing the possession of understanding or skill: have learned to, be intellectually able to, know how to. *Obsolete* except as merged in sense 5.

In Old English sometimes a construction of the full verb with bare infinitive but shading into use as auxiliary.

OE Ælfric *Catholic Homilies: 2nd Ser.* (Cambr. Gg.3.28) xl. 336 Forgif me wisdom, þæt ic mage þin miccle folc gewissian, and ic cunne tocnawan betwux god and yfel.

OE *Homily: Sermo Bone Praedicatio* (Otho B.x) in A. S. Napier *Wulfstan* (1883) 301 Tæce man him sona eallra þinga ærest his paternoster and his credan, and þæt hit cunne hit sylf bletsian rihtlice.

OE Ælfric *1st Let. to Wulfstan* (Corpus Cambr. 190) in B. Fehr *Die Hirtenbriefe Ælfrics* (1914) 68 Ge ealle ne cunnon þæt leden understandan.

*c*1175 (▸ OE) *Homily* in A. O. Belfour *12th Cent. Homilies in MS Bodl. 343* (1909) 56 Þe þe reden cunne, þe ræde; þe þe nan ne cunne he lyste þam redendan.

*c*1175 *Ormulum* (Burchfield transcript) l. 2958 Drihhtin me ȝifeþ witt. & mihht...Þatt I shall cunnenn cwemenn godd.

1340 *Ayenbite* (1866) 249 (*MED*) Þo þet conneþ þe writinge onderstonde.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 14692 Your aun bok yee can noght spell.

*c*1450 (▸ *a*1400) *Orologium Sapientiæ* in *Anglia* (1888) **10** 358 For a man to knowe þat hee schale dye, þat is comun to alle men... But þou schalte fynde fulfewe pat hauen þis kunnynge to kunne dye.

1485 W. Caxton tr. *Paris & Vienne* (1957) 55 In al the maners that ye shal conne demaunde.

1530 *Myroure Oure Ladye* (Fawkes) (1873) II. 148 Prelates..oughte to haue..dyscrecion to canne kepe peace, on all partyes.

5.

a. Expressing physical or mental ability: be able to, know how to; have the power, ability, or capacity to.

eOE *Metrical Dialogue of Solomon & Saturn* (Corpus Cambr. 422) ii. 420 Hit [*sc.* leoht] bið eallenga eorl to gesihðe, ðam ðe gedælan can dryhtnes ðecelan.

OE *Anglo-Saxon Chron.* (Parker) anno 1001 Forbærndon Tegntun & eac fela oðra godra hama þe we genemnan ne cunnan.

?*a*1160 *Anglo-Saxon Chron.* (Laud) (Peterborough contin.) anno 1137 Suilc & mare þanne we cunnen sæin we þolenden XIX wintre for ure sinnes.

*c*1175 *Ormulum* (Burchfield transcript) l. 9809 Þatt ma33. & cann. & wile himm 3eorne clennsenn.

*a*1225 (▸ OE) *Rule St. Benet* (Winteney) (1888) i. 13 Þare þe þurh langsumere fandunge munstrelicere drohnunge habboð geleornod, þat hi..ongean þane deofol & heoræs fleascæs leahtres & heore gefele [*read* yfele] geþanc winnan cunnan [OE *Corpus Cambr.* magan; L. *suffitiunt*].

*c*1225 (▸ *?c*1200) *St. Katherine* (Royal) (1981) l. 762 Constu bulden abur inwið iþin heorte?

*c*1475 (▸ *?c*1451) *Bk. Noblesse* (Royal) (1860) 76 To can renne withe speer.

1528 T. PAYNELL tr. Arnaldus de Villa Nova in Joannes de Mediolano *Regimen Sanitatis Salerni* sig. K.iij^{v} One gyue an olde man as moche wyne to drynke as he can beare without hurt.

1561 T. NORTON tr. J. Calvin *Inst. Christian Relig.* I. f. 6 Thou canest not with one view peruse the wide compasse of it.

1605 R. F. tr. F. Dedekind *Schoole of Slovenrie* III. ii. 94 They are so drunke, that they no pots can hold.

1667 J. MILTON *Paradise Lost* I. 117 This Empyreal substance cannot fail.

1709 R. STEELE *Tatler* No. 11. ¶3 The whole Company..take Hands; then, at a certain sharp Note, they move round, and kick as kick can.

1732 H. FIELDING *Lottery* ii. 12 I'll take two Lessons to-morrow tho'—for they tell me one is not qualify'd for any Company, till one can play at Quadrille.

1811 J. G. MILLINGEN *Bee-hive* I. i. 1 All want to go to town..—four horses, three mules, and a jack ass—can't carry 'em all.

1833 A. C. CARMICHAEL *Domest. Manners W. Indies* I. iv. 111 It is regularly and neatly packed, until the house can hold no more.

1883 J. PARKER *Apostolic Life* II. 174 The war-horse will paw when he can no longer stand.

1920 *Pioneer Mail* 2 July 6/3 Mr. Gandhi's scheme of non-co-operation..can do no good, and may do an infinity of harm.

1967 *Skiing* Dec. 159 W/1 So she's pretty, but can she ski?

1977 *Flying* Sept. 370/3 Those who can't hack it must be weeded out.

2003 *Sun* (Nexis) 13 Mar. A Para can run ten miles carrying 60lbs of equipment in under two hours.

b. Expressing the ascription of a property to some members of a set or to an individual at particular times: have the capacity to.

1533 T. MORE *Apologye* iii. f. 12^{v} Some tyme they can vse such a compendyouse kynde of eloquence, that they conuay and couche vp to gether, with a wonderfull breuyte, four folyes and fiue lyes in lesse then as many lynes.

1592 *Arden of Feversham* III. v. 146 How you women can insinuate, And cleare a trespasse with your sweete set tongue!

1682 J. BUNYAN *Holy War* 203 Mr. Pride can when need is, call himself Mr. Neat, Mr. Handsome, or the like.

1698 T. GIPPS *Remarks on Remarks* 7 These Sober and Charitable Men can be intemperately Angry, when they apprehend themselves touch'd to the quick.

1786 A. MURPHY *Way to keep Him* (rev. ed.) II. 35 in *Wks.* III. 58 She can give you a sharp turn in a moment.

*a*1816 R. B. SHERIDAN *School for Scandal* (rev. ed.) II. ii, in *Wks.* (1821) II. 46 Very well, Lady Teazle; I see you can be a little severe [1780 you appear to be a little severe].

1894 T. HARDY *Life's Little Ironies* 189 It was as wet and chilly as an English June day can occasionally be.

1975 R. P. JHABVALA *Heat & Dust* (1976) 102 You know how he can be when he doesn't want to answer something.

2013 *Church Times* 20 Dec. 30/3 It can be a bit impersonal and frankly sometimes a bit cold.

c. *colloquial* (originally *U.S.*) With inversion of subject and verb, in an exclamatory clause.

1918 *Seventh Regiment Gaz.* Apr. 391/1 Our team is small and so is a rabbit, but 'Oh my, can he run'.

1931 *Boys' Life* Dec. 3/2 Boy, can they catch ducks!

1942 *Princeton Alumni Weekly* 16 Jan. 22/1 Boy, can he take it!

1952 *Chambers's Jrnl.* May 299/2 This dope is for strength. It's made me feel as strong as Hercules, and can I hit my drives!

1994 *Kiplinger's Personal Finance Mag.* Dec. 36 (*advt.*) But—wow!—can they pay off when you're right!

2007 F. SHAYNE *If that's what it Takes* xxxvi. 560 Wow, can she fly that baby or what?

6.

a. Expressing objective possibility, opportunity, or absence of prohibitive conditions: be permitted or enabled by the conditions of the case.

When used with verbs of perception, such as *hear*, *see*, or *smell*, sometimes equivalent to the simple tense of the verb.

(a) *can*, with reference to the present or future.

In early use chiefly with verbs of knowing and discernment; cf. quots. OE, *a*1325.

OE *Seven Sleepers* (Julius) (1994) 53 Hwær synt þonne þine magas ðe þe afeddon, and þe gecnawan cunnon?

*a*1325 (▸ *c*1250) *Gen. & Exod.* (1968) l. 2872 Ic am sonder-man, Egipte folc me knowen can for ic am ðat ilc moyses, ðe egypte folc of sorge les.

*c*1405 (▸ *c*1390) G. CHAUCER *Reeve's Tale* (Hengwrt) (2003) Prol. l. 21 We olde men..Til we be roten kan we noght be rype.

*a*1425 (▸ *?a*1400) G. CHAUCER *Romaunt Rose* (Hunterian) (1891) l. 6677 It can hym no thyng profit They lese the yift and the meryte.

1542 N. UDALL tr. Erasmus *Apophthegmes* f. 299 Thou cannest not haue of Phocion a frende & a flaterer bothe to gether.

1600 T. HEYWOOD *Edward IV* I. II. iii Thou cannest bear me witness.

1611 *Bible (*King James*)* 1 Cor. x. 21 Ye cannot drink the cup of the Lord, and the cup of devils.

1667 J. MILTON *Paradise Lost* III. 735 Thy way thou canst not miss.

1691 J. EVELYN *Kalendarium Hortense* (ed. 8) 33 You can hardly over-water your Strawberry-Beds.

1709 R. STEELE *Tatler* No. 45 The best Sort of Companion that can be.

1776 J. Greenman *Jrnl.* Feb. in *Diary of Common Soldier* (1978) 26 We can see..a small breast work thay have heft up.

1840 H. W. Longfellow *Village Blacksmith* in *Knickerbocker* Nov. 419 You can hear him swing his heavy sledge, With measured beat and slow.

1921 W. E. Heitland *Agricola* xlvii. 348 A valuable piece of evidence, if it can be trusted.

1956 *Time-Bull.* (Van Wert, Ohio) 2 July 4/8 By 1960 we can have an anti-missile missile.

1971 *N.Y. Mag.* 16 Aug. 30/3 No corruption can exist on a widespread basis without fellow officers being aware of it.

1992 S. Sontag *Volcano Lover* iii. 369 I can smell its hot sulphurous breath.

2001 T. McGehee *Whoosh* II. v. 76 I can not overstate the importance of dealing with real facts.

(b) *can have*, with reference to the past.

1692 R. Bentley *Confut. Atheism from Origin of World: Pt. I* 30 Neither Matter..nor Motion can have endured a past Eternity.

1800 J. Austen *Let.* 8 Nov. (1995) 55 The Tables are come... I had not expected..that we should so well agree in the disposition of them; but nothing except their own surface can have been smoother.

1807 T. Young *Course Lect. Nat. Philos.* I. vii. 59 An interval of time must elapse after the removal of the opposite force, before the first force can have caused any actual motion.

1856 F. J. A. Hort *Coleridge* in *Cambr. Ess.* 327 The moral monstrosity of supposing that God can have given us lying faculties.

1913 L. Mills *Our own Relig. Anc. Persia* viii. 128 Few can have failed to see that Heaven's light, where it is at all believed in, reflects redeeming beams on us and ours.

1979 *Antiquaries Jrnl.* **59** 462 An activity in which music can have played no part.

2010 *Observer* 28 Mar. (Kids Suppl.) 8/3 No one familiar with Saturday evening light entertainment can have failed to notice the appeal of ballroom dance for younger viewers.

b. Used emphatically in rhetorical questions.

(a) *can*, with reference to the present or future.

?*c*1422 T. Hoccleve *Ars Sciendi Mori* l. 275 in *Minor Poems* (1970) I. 188 Myn hertes woful waymentacions, Who can hem telle, who can hem expresse?

1583 P. Stubbes *Second Pt. Anat. Abuses* sig. F5 And can you blame them?

1598 W. Shakespeare *Love's Labour's Lost* v. ii. 427 How can this be true, That you stand forfait, being those that sue.

*a*1624 Bp. M. Smith *Serm.* (1632) 94 Who can impeach or blemish Gods bounty and liberality, with the least note of mercinarinesse.

1721 T. Odell *Chimera* I. i. 9 What can I have done with my Papers?..Highty-tighty! I can't have left 'em at home.

1828 S. Owen *Let.* 30 Mar. in C. Darwin *Corr.* (1985) I. 55 What *can* you mean by saying you have not *set your eyes* on Muslin since you left Shropshire.

1835 H. M. Jones *Vilage Scandal* xi. 244 But where can these children have got to?

1896 'M. Twain' in *Harper's Mag.* Aug. 346/1 What *can* be the matter of him, do you reckon?

1934 D. Thomas *Let.* 2 May (1987) 124 Oh, my dear, their 'hairy nudity'. How *can* you speak of such things.

2003 B. Trapido *Frankie & Stankie* x. 260 What can be the matter with her?

(b) *can have*, with reference to the past.

1762 L. STERNE *Life Tristram Shandy* V. xxxvii. 128 What can have got into that precious noddle of thine?

1795 R. CUMBERLAND *Wheel of Fortune* v. 71 I will congratulate you rather on those exquisite sensations, which must far outvalue any price you can have paid for them.

1829 in K. Laybourn *Brit. Trade Unionism* (1991) 34 To give up in the very first struggle shows plainly that the money has been decamped, and who can have taken it?

1836 C. DICKENS *Sketches by Boz* 1st Ser. II. 173 You wonder what on earth the booking-office clerks can have been before they were booking-office clerks.

1905 *Secret Service* 10 Nov. 27/2 Where do you suppose they can have gone to?

1951 G. HEYER *Quiet Gentleman* xxi. 314 My dear Gervase, what can have possessed you to behave with such imprudence?

2001 *Independent* 7 July II. 1 (*heading*) What can have caused such trouble and strife?

7.

a. Expressing permission or sanction: be allowed to, be given permission to; = MAY *v.*[1] 6a. Frequently in requests.

For long regarded by grammarians as at best *colloquial*, and discouraged in favour of *may*. Cf. also sense 18.

1489 W. CAXTON tr. C. de Pisan *Bk. Fayttes of Armes* III. xxii. sig. Ovi Þe lawe saithe suche a man can not make noo testament nor mary himself nor entre in to religyon.

1567 T. STAPLETON *Counterblast* IV. ix. f. 480 They that be vnder their fathers rule, by ciuill Lawe can not marrye withowt their Fathers consent.

1677 G. MIEGE *New Dict. French & Eng.* I. sig. Eee3/1 *Y a-t-il moien que je lui parle?* can I speak with him?

1680 T. SAMSON *Narr. Late Popish Plot* 6 Said the Major to me, Can I speak with you in private?

1782 R. GRIFFITH *Variety* 10 Pray can I see Miss Temple this Morning? I have a message to deliver to her.

1859 *Harper's New Monthly Mag.* Nov. 782/1 Please, can I have two or three of your flowers, aunty, for my old woman?

1893 O. WILDE *Lady Windermere's Fan* III. 92 *Cecil Graham* You'll play, of course, Tuppy? *Lord Augustus* Can't, dear boy. Promised Mrs. Erlynne never to play or drink again.

1894 T. B. REED *Dog with Bad Name* xv. 156 Father says you can come.

1905 *Church Times* 3 Feb. 136/3 No one can play the organ during service time without the consent of the Vicar.

1953 *Sat. Evening Post* 21 Mar. 151 You can eat up the rest of the brownies.

2014 V. WOOD *Every Mother's Son* (2015) xxxvi. 331 'Oh, Papa. Can I go to Genoa too?' Calypso pleaded.

b. Expressing a virtual command, esp. in imprecations.

1847 C. DICKENS *Dombey & Son* (1848) xiii. 123 'You can leave the room, Sir!' said Mr. Dombey, haughtily.

1879 *Lippincott's Monthly Mag.* Sept. 370/2 They can go hang and welcome.

1895 *Overland Monthly* Mar. 324/1 You can go to blazes.

1911 R. A. WASON *Knight-errant* xxxiii. 360 'I guess you know where you can stick those two dollars,' flashed the boy angrily.

1928 J. P. MCEVOY *Show Girl* xiii. 193 You can tell that to my Aunt Fanny I says to him.

1954 J. B. PRIESTLEY *Magicians* vi. 120 The public can take a running jump at itself.

1982 F. MCGUINNESS *Factory Girls* iii, in *Plays: 1* (1996) 31 *Vera* You definitely don't think Rohan part owns it? *Ellen* You can forget that rumour.

2004 G. WOODWARD *I'll go to Bed at Noon* xi. 215 Well you can get stuffed, then.

8. Expressing a possible contingency. Only in negative and interrogative contexts.

a. *can*, with reference to the present or future (*I cannot do* or *be* = 'it is not possible that I do or am, I may not possibly do or be').

1567 G. TURBERVILLE tr. Ovid *Heroycall Epist.* f. 7^{v} I thought thy teares had bene of trouth: can they be forged too?

1609 *Bible (*Douay*)* I. Num. xxxii. 17 Whatsoever we can have, shal be in walled cities.

1722 W. WOLLASTON *Relig. of Nature* v. 51 They must be either of the same, or of different natures. Of the same they cannot be.

1755 T. SMOLLETT tr. M. de Cervantes *Don Quixote* II. II. ix. 166 This cannot be Melisendra, but must be one of her waiting-women.

1816 J. WILSON *City of Plague* I. i. 138 Dost think My mother can be living?

1833 C. WILLIAMS *Vegetable World* 199 'Then it cannot be alive,' said Emma. 'You are mistaken, love,' replied her father, 'for it actually has life.'

1950 R. GRAVES *Transformations Lucius* xii. 206 The poor beast can't still be mad, surely? I'm certain the virus must have worked itself out by now.

2004 P. FERGUSON *It so Happens* 159 I sort of thought, well, she can't still be in hospital, not after three weeks.

b. *can have*, with reference to the past (*I cannot have done* or *been* = 'it is not possible that I did or was, I may not possibly have done or been').

1738 T. CHUBB *Short Diss. Providence* in *True Gospel Jesus Christ* 204 Were the case to have been otherwise, God must have acted unworthy of himself.., which cannot have been the case.

1873 B. TAYLOR *Poet. Wks.* (1907) 266 Can he have climbed The Evil Pass, and crossed the thundering foss, His nearest way?

1886 *Encycl. Brit.* XXI. 244/1 Before that time Samaritanism cannot have existed in a form at all similar to that which we know.

1908 *Secret Service* 6 Mar. 19/2 Do you think they can have gone, Ray?

1961 J. STUBBLEFIELD *Davies's Introd. Palaeontol.* (ed. 3) vi. 158 The Dipnoi..cannot have included the actual ancestors of the land-vertebrates, which must have been Crossopterygians.

1992 J. M. KELLY *Short Hist. Western Legal Theory* iii. 106 No stigma can have attached to continuing ownership of slaves, as Christian bishops themselves might have servants of slave condition.

2000 *Independent on Sunday* 6 Aug. (Culture section) 3/1 Such a thing can't have happened—if it has ever happened at all, which I seriously doubt—since the halcyon heyday of the *nouvelle vague*.

** The past tense *could* with temporal function.

Senses 9, 10, 11, 12, 13 function as the past tense of senses 4, 5, 6, 7, 8 respectively.

†**9.** Expressing the possession of understanding or skill: had learned to, was intellectually able to, knew how to. *Obsolete* except as merged in sense 10a.

In Old English sometimes a construction of the full verb with bare infinitive.

OE *Order of World* 13 Geara iu, gliwes cræfte, mid gieddingum guman oft wrecan, rincas rædfæste; cuþon ryht sprecan.

*c*1275 (▸ *?a*1200) LA3AMON *Brut* (Calig.) (1978) l. 8468 Men þat cuðen hæuwen stan.

*a*1325 (▸ *c*1250) *Gen. & Exod.* (1968) l. 2114 Ne was non so wis man..Đe kude vn-don ðis dremes bond.

*a*1425 (▸ *?a*1400) G. CHAUCER *Romaunt Rose* (Hunterian) (1891) l. 176 Wel coude he peynte I vndirtake That sich ymage coude make.

1579 E. SPENSER *Shepheardes Cal.* Jan. 10 Well couth hee tune his pipe.

1615 E. GRIMESTON tr. P. d'Avity *Estates* 904 He asked him if he could play at chesse, the other answered yea.

*a*1732 J. GAY *Fables* (1738) II. vi. 50 We country-folks..Could ope our gracious monarch's eyes.

10.

a. Expressing physical or mental ability: was able to, knew how to; had the power, ability, or capacity to.

When expressing the ability to do something that actually took place, *to be able* (see ABLE *adj.* 1b) is now more usual than *could*; e.g. 'We were delighted when the National Trust *was able to* purchase the house'.

eOE tr. Bede *Eccl. Hist.* (Tanner) IV. xxv. 342 Ne con [L. *nescio*] ic noht singan; & ic forþon of þeossum gebeorscipe ut eode, & hider gewat, forþon ic naht singan ne cuðe [L. *poteram*].

OE *Beowulf* (2008) 1445 Scolde herebyrne..sund cunnian, seo ðe bancofan beorgan cuþe, þæt him hildegrap hreþre ne mihte, eorres inwitfeng, aldre gesceþðan.

OE ÆLFRIC *Lives of Saints* (Julius) (1881) I. 220 And he leop sona cunnigende his feðes, hwæðer he cuðe gan.

lOE *Anglo-Saxon Chron.* (Laud) (Peterborough contin.) anno 1123 Swa mycel hearm..swa nan man hit cuðe oþer secgen.

▸ *c*1300 *Havelok* (Laud) (1868) 112 So yung þat sho ne couþe Gon on fote.

1489 (▸ *a*1380) J. BARBOUR *Bruce* (Adv.) III. 431 Sum off yaim couth swome full weill.

1526 *Bible (*Tyndale*)* Mark xiv. f. lxvij Coudest not thou watche with me one houre?

1611 *Bible (*King James*)* Exod. vii. 21 The Egyptians could not drink of the water.

1650 T. BAYLY *Worcesters Apophthegmes* 22 I..cold not come to the speech of any of them.

1697 J. DRYDEN tr. Virgil *Georgics* IV, in tr. Virgil *Wks.* 141 What madness cou'd provoke A Mortal Man t' invade a sleeping God?

1752 *Adventures of Valet* I. II. i. 58 Her Leg so small that I wondered how it could support her.

1819 *London Med. Repository* **11** 3 I desired him..to endeavour at that time to move the limb, for he said he felt as if he could do any thing with it.

1875 W. S. JEVONS *Money* (1878) 2 [She] could not consume any considerable portion of the receipts herself.

1933 *Crisis* Apr. 82/1 If he could drive a tractor he would be promised $1.50 or, in rare cases, $2.00 a day.

1960 *New Scientist* 3 Nov. 1172/1 He could not tolerate the contact lens for any useful period of time.

2010 J. C. ERLICK *Gringa in Bogotá* 26 The Olimpia..could hold up to five thousand people, and I don't ever remember it being full.

b. Expressing ascription of a property to some members of a set or to an individual at particular times: had the capacity to.

1605 W. CAMDEN *Remaines* II. King Henry the first..had this flatterng [*sic*] Epitaph, as Poets could flatter in all ages.

1651 N. Bacon *Contin. Hist. Disc. Govt. Eng.* 184 When displeasure was like to ensue, he could speak faire, and feast, and if need was, kisse away all discontent.

1771 R. Hurd *Moral & Polit. Dialogues* (ed. 4) III. 326 Though Chaucer could be as pleasant on the other fooleries of Romance, as any modern critic, he let the *marvelous* of it escape his ridicule.

1849 C. Brontë *Shirley* I. iii. 57 He could be polite and affable, and he could be blunt and rough.

1875 J. Timbs *Eng. Eccentrics & Eccentricities* 432 Irony was Porson's chief weapon, though he could be sarcastic enough when he chose.

1932 E. V. Lucas *Reading, Writing & Remembering* xii. 198 When he was caustic, as he could be, with infinite roguishness, about other writers.

1964 L. van der Post *Journey into Russia* x. 152 It could be cold enough at Odessa to freeze the sea.

2003 J. Drury *Ian Dury & Blockheads* v. 118 Ian could be very difficult, particularly if he'd had a couple of drinks.

11. Expressing objective possibility, opportunity, or absence of prohibitive conditions: was permitted or enabled by the conditions of the case.

In quot. **OE** with a verb of knowing.

When used with verbs of perception, such as *hear*, *see*, or *smell*, sometimes equivalent to the simple tense of the verb.

OE *Seven Sleepers* (Julius) (1994) 48 He nan þincg þære byrig ne cuþe gecnawan þe ma þe se man þe hi næfre ne geseah mid his eagan.

?1473 W. Caxton tr. R. Le Fèvre *Recuyell Hist. Troye* (1894) II. lf. 160^{v} At the departyng fro the porte was made the moste aspre doeill & sorowe that coude be.

1509 H. Watson tr. S. Brant *Shyppe of Fooles* (de Worde) iii. sig. B.ii He that had so moche rychesse, threwe all his goodes in to the see, in suche wyse that no body coude blame hym.

?1552 T. Churchyard *Playn & Fynall Confutacion* f. 2^{v} We were here in quyet all, vntyll you came to towne: sence that we could not liue in reast, for suche a contrey clowne.

1573 J. Bridges *Supremacie Christian Princes* 1064 He could be no traitor to the King, beyng his superior.

1621 M. Wroth *Countesse of Mountgomeries Urania* 536 Hee could not thinke of imparting her to any other.

1625 J. Phillips *Way to Heaven* Ep. Ded. sig. A4^{v} Could he be a greater enemie to me, then Saul was to Dauid?

1756 C. Lennox tr. P. M. de L'Écluse des Loges *Mem. Maximilian de Bethune* I. viii. 398 Knowing so well as I did the dispositions of this society, I could not serve them and the state at the same time.

1779 T. Forrest *Voy. New Guinea* 49 We could see within the straits a hill with a flat top.

1849 T. B. Macaulay *Hist. Eng.* II. 221 Even if it could be believed that the court was sincere.

1895 *Argosy* Sept. 505/2 He dashed out of the room, and Charlie could hear him banging bureau drawers.

1937 *Boys' Life* Dec. 53/2 In olden days you could always find a man's initials on his cuffs.

*a*1961 E. Hemingway in *Life* (1964) 10 Apr. 71/2 You could not go further toward the river without passing shops.

2010 J. Leary *Klara* 123 From my bedroom I could see the spires of St. Mary's church across the Square.

12. Expressing permission or sanction: was allowed to, was given permission to; = **may** *v.*[1] 17.

For long regarded by grammarians as at best *colloquial*, and discouraged in favour of *might*.

1539 J. Gough tr. J. Le Maire *Abbreuyacyon Gen. Councellys* sig. G.iiv At that tyme no bysshop coulde be in Rome, without the ful consent & confyrmacyon of themperour.

1651 W. G. tr. J. Cowell *Inst. Lawes Eng.* II. xii. 124 An Heretick by our ancient Law could not make a will.

1730 *Compl. Coll. State-trials* (ed. 2) VI. Table sig. *K2/2 The Jury desire some Wine before they withdraw, but are told they could have no Refreshment in Capital Cases.

1836 *Times* 15 Feb. 3/3 No one could vote at an election unless his name had been inscribed on the register-sheet.

1863 H. M. Waddell *Twenty-nine Years in W. Indies & Central Afr.* xx. 402 They could not play on Sundays, and now I wanted to prevent them playing on other days too.

1913 *Mich. Alumnus* Apr. 326 The spirit of the Conference was to interfere very arbitrarily in the conduct of each other's home management of athletics; to say to each member how many games could be played, and with what teams.

1968 B. Cleary *Ramona the Pest* vi. 133 Her mother insisted she could not go to the Halloween parade on an empty stomach.

1996 T. Janowitz *By Shores of Gitchee Gumee* (1998) 247 Pierce, did you tell Bethany she could come with us?

13. Expressing a possible contingency (*I could do* or *be* = 'it was possible that I did or was, I might possibly have done or been').

1710 tr. P. Bayle *Hist. & Crit. Dict.* II. 1291 Having made so long a Profession of the true Faith, could he still be imbued with the Heathen Superstitions?

1866 *Routledge's Every Boy's Ann.* 262 Was he asleep—or, dreadful thought! could he be dead?

1902 Baroness Orczy in *Royal Mag.* May 15/2 As the day wore on and witness after witness was called up, suspicion ripened in the minds of all those present that the murderer could be no other than Lord Arthur Skelmerton himself.

1931 F. L. Allen *Only Yesterday* iii. 70 Some of his sedate fellow-members..wondered if such a good Republican could be becoming a parlor pink.

1952 M. Kennedy *Troy Chimneys* 22 He says that Harding was asking after me and said that I could not be in town.

1989 S. Chinodya *Harvest of Thorns* (1990) xxxiii. 226 But he had to be careful. The soldier could be hiding or leading him into a trap.

*** The past tense *could* with non-temporal function.

14. In the subordinate clause (protasis) of a conditional sentence.

a. *could* with infinitive, used in relation to the present or future: were able to (*if I could do* = 'if I were able to do; if it were possible for me to do').

?*c*1225 (▸ *?a*1200) *Ancrene Riwle* (Cleo. C.vi) (1972) 210 Þe caliz þe wes þrin imalt..walde he ȝef he cuðe speoken awarien..his wruchte honden.

▸ *c*1300 *Havelok* (Laud) (1868) l. 126 Mi douhter..Yif scho couþe on horse ride.

*c*1390 (▸ *a*1376) W. Langland *Piers Plowman* (Vernon) (1867) A. v. l. 112 (*MED*) But ȝif a lous couþe lepe, I con hit not I-leue Heo scholde wandre on þat walk, hit was so þred-bare.

*c*1405 (▸ *c*1390) G. Chaucer *Miller's Tale* (Hengwrt) (2003) l. 113 A clerc hadde lutherly biset his while But if he koude a Carpenter bigyle.

1530 J. Palsgrave *Lesclarcissement* 691/1 If I coulde convenyently rydde me of this felowe, I wolde go with you with all my herte.

1556 J. Heywood *Dialogue Prouerbs Eng. Tounge* (rev. ed.) i. xi. sig. Bviii[v] Jacke wold be a gentleman if he could speke frenche.

1604 W. Shakespeare *Hamlet* iii. ii. 235 I could interpret betweene you and your loue If I could see the puppets dallying.

1651 Ld. Orrery *Parthenissa* I. i. i. 81 If any thing could mak me offended with Artabbanes, 'twould be this unnecessary interceding.

1746 J. Wesley *Let.* 17 June (1931) II. 270 If you could prove that the Methodists were in general very wicked people before they followed you..you would stop the mouths of all adversaries at once.

1794 R. J. Sulivan *View of Nature* II. 17 If Mont Blanc could be transported to the foot of Chimboraço, Chimboraço..would appear of very insignificant dimensions.

1850 C. Brontë *Let.* 13 Dec. (2000) II. 533 If I *could* go and be with you for a week..in such a quiet south-country house..I should like it much.

1872 E. A. Hart *Runaway* ii. 40 Oh, if you could see him in Highland costume!

1915 J. Conrad *Victory* (1962) i. 3 Now, if a coalmine could be put into one's pocket—but it can't.

2012 *Guardian* 16 May (G2 section) 2/4 If I could have one wish from God it would be that Twitter would be uninvented.

b. *could have* with past participle, used in relation to the past: had been able to (*if I could have done* = 'if I had been able to do; if it had been possible for me to do').

*c*1400 (▸ *c*1378) W. Langland *Piers Plowman* (Laud 581) (1869) B. xv. l. 296 Noyther bere, ne bor..Þat ne fel to her feet and fauned with þe tailles. And if þei couth han ycarped..Þei wolde haue fedde þat folke bifor wilde foules.

1447 O. Bokenham *Lives of Saints* (1938) l. 10359 If ony lyf of more despecteuousnesse She coude han fondyn..She hyt wold han chosyn.

*a*1450 (▸ *a*1338) R. Mannyng *Chron.* (Lamb.) (1887) i. 13615 ȝyf þey hem self couþe haue meþed & als þer strokes couþe haue leþed..Gret prowesse of þem had ben told, & saued þer bodies, þat sone were cold.

1587 Sir P. Sidney & A. Golding tr. P. de Mornay *Trewnesse Christian Relig.* v. 63 If they could haue had any beginning, the Sonne had bin formost in that case.

1607 'W. S.' *Puritaine* iv. sig. G3 Sirrah if wee could ha conuoide hether cleanly a cracker or a fire-wheele t'ad beene admirable.

1645 T. Juxon *Jrnl.* (1999) 80 If that he could have given them a blow now..it would not only have rendered him master of the field but..might have hindered them from recruiting again.

1697 in W. S. Perry *Hist. Coll. Amer. Colonial Church: Virginia* (1870) I. 39 I was very unwilling to take a Scotch Schoolmaster if I could have holpen it.

1745 Earl of Chesterfield *Private Corr. Chesterfield & Newcastle 1744–46* (1930) 6 To say to all three..what, if I could have writt to 'em myself to-night, I should have said.

1883 R. Broughton *Belinda* I. ii. 26 Well, you know.., one would not have been human if one could have stood calmly by, and looked on.

1949 E. Goudge *Gentian Hill* i. i. 14 It would have been easier if he could have got some proper sleep.

2003 *Daily Tel.* 11 Apr. 22/7 I would have put large amounts on Iraqi defeat, if I could have found a taker.

15.

a. In a clause resembling the main clause of a conditional sentence, expressing the hypothetical objective possibility, opportunity, or absence of prohibitive conditions: would be permitted or enabled by the conditions of the case.

(a) *could have* with past participle, used in relation to the past.

*c*1300 *St. Michael* (Laud) l. 150 in C. Horstmann *Early S.-Eng. Legendary* (1887) 304 Nis nouþe no man aliue þat hire couþe habbe i-wust so wel, Ne so hire i-fed and hire child.

*a*1375 (▸ *c*1350) *William of Palerne* (1867) l. 1033 Alle þe surgyens of salerne..ne couþen haue ȝour langoures a-legget.

1530 W. Tyndale *Wks.* (Parker Soc.) 343 I could more deeply have entered into the practice of our cardinal, but I spare for divers considerations.

1614 S. Latham *Falconry* To Rdr. I could haue vsed a more mountebanque preface.

1652 T. Urquhart *Εκσκυβαλαυρον* 278 I could have introduced,..Exargastick, and Palilogetick Elucidations.

1709 J. Swift *Let. conc. Sacramental Test* 7 The most Serviceable Treatise that could have been Published at such a juncture.

1854 G. Gilfillan *Life Blair* in J. Beattie *Poet. Wks.* 127 We could have conceived of him treating the subject more reconditely.

1869 'M. Twain' *Innocents Abroad* lviii. 631 I do not think much of that—I could have done it myself.

1936 J. Buchan *Island of Sheep* ii. 31 His first glance at me... I could have sworn that it was alarm.

2010 *Independent* 17 Mar. 21/2 There were a lot of things I could have done but now I'm no good for anything else.

(b) *could* with infinitive, used in relation to the present or future.

*c*1330 (▸ *c*1250) *Floris & Blauncheflur* (Auch.) (1966) l. 138 He miȝte make min herte glad, Þat couþe me telle whider ȝhe was lad.

*a*1375 (▸ *c*1350) *William of Palerne* (1867) l. 5005 (*MED*) Alle þe clerkes vnder god couþe nouȝt descriue..þe realte of þat day.

*a*1425 (▸ *?c*1350) *Ywain & Gawain* (1964) l. 902 Þare es no man olive, Þat kowth hir bewtese wele descrive.

*c*1430 (▸ *c*1386) G. Chaucer *Legend Good Women* (Cambr. Gg.4.27) (1879) l. 1002 I coude folwe word for word Virgile, But it schule lastyn al the longe while.

1483 W. Caxton tr. J. de Voragine *Golden Legende* f. ccccxxviijv/1 Who that coude recounte alle the myracles doon by hym.

?1529 *Proper Dyaloge Gentillman & Husbandman* sig. B ij Sythe that tyme I could recken mo Whom they caused to be dispached so.

1607 B. Jonson *Volpone* iii. i. sig. F3 I could skip Out of my skinne, now, like a subtill snake, I am so limber.

1682 T. Otway *Venice Preserv'd* iii. 32 Oh! I could tell a story Would rowse thy Lyon Heart out of its Den.

1702 *Eng. Theophrastus* 342 We do sometimes out of vanity or decency what we could do out of inclination and duty.

1785 R. Price *Let.* 26 Aug. in *Corr.* (1991) II. 304 Nothing could make me happier than any service or labour by which I could advance their best interests.

1815 W. Scott *Guy Mannering* II. v. 61 Ay, at the risk of all our own necks—we could do that without you.

1881 *Dundee Courier & Argus* 17 May 3/2 He was sentenced to sixty days in prison. 'I could do that standing on my head,' he remarked, as he left the Court.

1898 G. B. Shaw *Mrs. Warren's Profession* ii. 177 I could do with a whisky and soda now very well.

1923 *Pop. Sci. Monthly* Oct. 30/1 They could be designed to carry a regiment of troops, and a fleet of them could transport an army to the ends of the earth... Imagination—but not too much of it.

1974 *Times* 7 Oct. 1/3 A significant part of Britain's future energy requirements could come from cheap, pollution-free wave power.

2004 *N.Y. Times* (National ed.) 29 Aug. I. 13/6 The Iran nuclear program is so ambitious that after producing a first bomb, they could produce 20 bombs a year.

b. Used emphatically in rhetorical questions.

(a) *could*, with reference to present or future time.

c1405 (▸ c1395) G. CHAUCER *Franklin's Tale* (Hengwrt) (2003) l. 95 Who koude telle, but he hadde wedded be The ioye..That is bitwix an housbonde and his wyf?

*a*1535 T. MORE *Treat. Memorare Nouissima* in *Wks.* (1557) I. 88/1 Who coulde be angry for yᵉ losse of goodes.

1602 R. PARSONS *Warn-word* I. xiv. f. 96 Who could answere with fewer words?

1709 R. STEELE *Tatler* No. 46. ¶11 Who could be the Author of a Piece so martially written.

1782 J. PRIESTLEY *Hist. Corruptions Christianity* I. I. 8 What could this be but the proper unitarian doctrine?

1839 in S. Miller *Presbyterian Church Case* 509 The idea..implies..the power of searching into the hearts of men; for, without it, who could tell the consequences of such an union?

1921 E. VON ARNIM *Vera* xx. 217 But where could she go? Where in the whole house was any refuge, any comfort?

2013 M. LAWSON *Deaths* x. 293 What could an old man want with wank mags?

(b) *could have*, with reference to past time.

*c*1560 Q. KENNEDY *Litil Breif Tracteit* i, in C. H. Kuipers *Two Eucharistic Tracts* (1964) 114 Quhat planar vordis culd our saluiour hef said to certify ws?

1645 J. MILTON *Colasterion* 23 Who could have beleevd so much insolence durst vent it self from out the hide of a varlet?

1735 VISCT. BOLINGBROKE *Diss. upon Parties* (ed. 2) Ded. p. xxi Who could have expected that Attempts to revive the Doctrines of old Whiggism, and the Principles and Spirit of the Revolution,..would give any Umbrage, or cause any Alarm, among Men, who still affect to call Themselves Whigs?

1856 W. B. BAIKIE *Narr. Exploring Voy. Rivers Kwora & Binue* vii. 209 What could have become of her, or where could she have gone?

1931 E. LINKLATER *Juan in Amer.* II. xvi. 171 Who could have guessed that such an order meant egg-sandwiches?

1991 J. KENTISH tr. F. Dostoevsky *Gambler* xv, in *Notes from Underground & Gambler* 250 She left me just now, about ten minutes ago; where could she have got to?

16. In the main clause (apodosis) of a conditional sentence, or a clause equivalent to this.

a. *could* with infinitive, used in relation to the present or future: would be able to. Formerly also in relation to the past: †would have been able to (= sense 16b).

*c*1390 in C. Brown *Relig. Lyrics 14th Cent.* (1924) 130 Al-þau3 I couþe 3if þat I wolde.

?*a*1475 (▸ *a*1396) W. Hilton *Scale of Perfection* (Harl. 6579) I. lxviii. f. 46 (*MED*) For if a man hadde moralli alle þe vertues of all philosophres, he koude nouȝt don þis.

1524 R. Pace *Let. Hen. VIII* in J. Strype *Eccl. Mem.* (1721) I. App. xi. 20 Without great forcement to go bolt upright, wee could not avoide to fal down headlyng.

1529 T. More *Dialogue Heresyes* I. xxx. f. xlvi/2 Were yt not for the spyryte of god keping ye trouth therof in hys chyrch who could be sure whych were the very gospels?

1545 R. Ascham *Toxophilus* I. f. 6ᵛ If I shuld rehearse the statutes made of noble princes of Englande in parliamentes for the settyng forwarde of shoting,..I could be very long.

1694 R. Burthogge *Ess. Reason* 4 If a person had never seen but one thing..he could not be sensible or conscious he did see it.

1725 A. Ramsay *Gentle Shepherd* i. ii The maist thrifty man could never get A well-stor'd room, unless his wife wad let.

1742 H. Fielding *Joseph Andrews* II. iii. xii. 166 Where could I possibly, without I had stole it, acquire such a Treasure?

1794 R. J. Sulivan *View of Nature* I. 342 We could have no rain, unless the air were supersaturated with water.

1800 P. Duigenan *Speech Incorporating Union between Great-Brit. & Ireland* 47 Whatever trade Ireland would enjoy, and it could be very little, its western ports would engross it.

1807 T. Young *Course Lect. Nat. Philos.* I. xxxi. 376 Which could not happen if..sound in all cases tended to spread equally in all directions.

1882 *Cent. Mag.* Dec. 212/1 I could laugh, if you didn't make me so mad, at the wild absurdity and the cheek of you!

1949 P. Frankau *Willow Cabin* 19 You could say, if you liked, that my integrity has been taking a wallop.

2012 J. Fagan *Panopticon* (2013) v. 68 I could get that open if I had my metal card.

b. *could have* with past participle, used in relation to the past: would have been able to.

*c*1400 (▸ *?c*1390) *Sir Gawain & Green Knight* (1940) l. 1299 So god as Gawayn gaynly is halden..Couth not lyȝtly haf lenged so long wyth a lady, Bot he had craued a cosse bi his courtaysye.

*a*1522 G. Douglas in tr. Virgil *Æneid* (1957) I. Prol. 294 Gif I had nocht be to a boundis constrenyt, Of my bad wyt perchance I couth haue fenyt, In ryme a ragment twyss als curyus.

1604 Abp. G. Abbot *Reasons Dr. Hill Vnmasked* iii. 102 If your brevity..had beene turned into one yeeres or seaven yeeres longity, you could not have shewed, that in substantiall points of faith there was variance among vs.

1698 *Philos. Trans.* (Royal Soc.) **20** 174 If the Fly had been Dead for some while..I could have observed none of this Wrinkling.

1749 H. Fielding *Tom Jones* III. viii. xi. 248 I could have gladly embraced Death,..if it had offered itself to my Choice unattended by Shame.

1756 H. Laurens *Let.* 2 Dec. in *Papers* (1970) II. 365 The sheathing nails were as unsaleable articles as could have been imported.

1777 J. Priestley *Matter & Spirit* (1782) I. v. 54 Could we have had any idea..of smell without the nostrils, and the olfactory nerves?

1828 I. D'Israeli *Comm. Life Charles I* II. v. 130 He could have vindicated himself, if his enemies had chosen to be his listeners.

1915 W. S. Maugham *Of Human Bondage* lxviii. 348 What fortunes he could have made if he had bought certain stock at certain times.

2005 *Wired* Oct. 120/1 We could have gone public if we wanted to.

17. Expressing an inclination in a conditional form. Chiefly in the first person, or in narrative implying first-person use.

a. With main verbs denoting inclination.

(a) *could* with infinitive, used in relation to the present or future: would be able to (wish, desire, etc.).

1481 (▸ *a*1470) J. Tiptoft tr. *Buonaccorso da Montemagno's Declam. Honoure* in tr. Cicero *De Amicicia* (Caxton) sig. f5ᵛ I haue had as moche worship of knyghtly lawde..as I coude desyre or coueyte.

1530 J. Palsgrave *Lesclarcissement* f. ccccviii/2 For seuen yeres togyther I lyued in gret payne, but nowe I lyue as well as I coulde wysshe.

1591 H. Barrow *Plaine Refut. Giffardes Bk.* 224 I could like well to here some man to perswade to repentance, or to cast out the obstinat by due order.

1651 E. Elcock *Animadversions on Plea for Non-subscribers* To Rdr. sig. A2 I could like that Writers might be bound to the same conditions, that they were who pleaded before the Areopagites.

1711 J. Addison *Spectator* No. 121. ¶8 I could wish our Royal Society would compile a body of Natural History.

1788 E. Inchbald *Such Things Are* I. i. 6 I cou'd not think of leaving you so soon.

1835 *Fraser's Mag.* Dec. 640/1 Oh, I could like if the priest that married us..were here to say the prayer over me when I am dead.

1855 D. G. Rossetti *Let.* 25 June (1965) I. 257 Ruskin..says he could wish no better than to ink your pencil-marks as his criticisms.

1967 *Amer. Notes & Queries* Oct. 30/1 One could wish that the index were as comprehensive as the bibliography.

1985 *Washington Post* 31 Mar. E8/4 The snows of the Utah back country seem as peaceful a final resting place as I could desire.

2005 P. D. James *Lighthouse* I. vii. 62 I could wish we killed our food more humanely but I eat it without compunction.

(b) *could have* with past participle, used in relation to the past: would have been able to (wish, desire, etc.).

*a*1586 Sir P. Sidney *Arcadia* (1590) III. viii. sig. Mm6ᵛ Philanax himselfe could haue wished the blow vngiuen, when he saw him fall.

1639 R. Baillie *Let.* 25 Sept. (1841) I. 221 Of this symptome..more dinn was made by our people than I could have wished.

1660 in E. Nicholas *Nicholas Papers* (1920) IV. 243 I could haue wisht Mr. Munson or some other here had beene appointed to conduct him thither.

1717 W. Sutherland *Prices Labour in Ship-building* Ep. Ded. sig. A2 I could have wished to have had more Leisure to compleat such an unrepeated Observation.

1762 O. Goldsmith *Citizen of World* II. 194 I could have wished..the author..had added notes.

*a*1817 J. Austen *Persuasion* (1818) IV. xi. 256 Though we could have wished it different, yet altogether we did not think it fair to stand out any longer.

1828 W. Scott *Fair Maid of Perth* xi, in *Chron. Canongate* 2nd Ser. II. 325 My Lord High Constable,..Since I am to lie in ward, I could not have desired a kinder or more courteous warden.

1880 L. Stephen *Alexander Pope* iii. 79 We could have wished that he had been a little more liberal with his share of the plunder.

1998 *Times* 25 June 27/5 Her interventions..kept her more in the public eye than she could have wished.

b. With other verbs, expressed or understood.

(a) *could* with infinitive, used in relation to the present or future: have an inclination to, feel that one is able to.

1668 E. Howard *Usurper* sig. H I could kiss thee for't, Thou hast done A Service never to be sufficiently Rewarded.

1671 T. Shadwell *Humorists* iii. 41 What's the matter Briske? are you Planet struck. Crazy, I could hugge thee for this.

1789 *New Lady's Mag.* Nov. 604/2 The rest of my days, O my love! With thee I could happily spend.

1796 R. Bage *Hermsprong* III. iii. 25 So far..from wishing you to abbreviate such communications, I could listen with pleasure to more.

1828 W. Scott *Fair Maid of Perth* vi, in *Chron. Canongate* 2nd Ser. I. 157 I wish to hear reading, and could listen to your sweet voice for ever.

1840 C. Dickens *Sketches Young Couples* 28 'Sing some little ballad, darling,'..'I couldn't, indeed, dearest.'..'Do, my dove.'..'I couldn't possibly, my love;..and it's very naughty of you to ask me.'

1918 R. Cohen *Out of Shadow* 225 'I want one kiss,' he said. I felt panic-stricken. 'Oh, I couldn't!' I said, 'I couldn't possibly.'

1967 *Listener* 19 Jan. 90/3 How *could* you?.. How *could* you be so careless with it?

1993 *Playboy* Jan. 152/3 I appreciate that offer, Miss Ohara, but I really couldn't impose.

2013 R. D'Ambrosia *Why has Music Gone?* i. 6 What a wonderful-sounding voice he has, I thought, as we shook hands, I could listen to him forever!

(b) *could have* with past participle, used in relation to the past: had an inclination to, felt that one would be able to.

1677 T. D'Urfey *Madam Fickle* ii. 14 I could have beaten the Woman into a Jelly.

1681 R. Baxter *Poet. Fragm.* 23 The speech and sight of Holy men was sweet; I honour'd them, and could have kist their feet.

1786 W. Cowper *Let.* 4–5 June (1981) II. 561 I could have hugged him for his liberality, and freedom from bigotry.

1841 C. Dickens *Barnaby Rudge* lxxxi. 411 His wrath so stirred within him, that he could have struck him dead.

1860 *Once a Week* 18 Feb. 160/2 She could have slapped Rose for appearing so reserved and cold.

1922 H. S. Walpole *Cathedral* 261 I could have shouted for joy last night when I heard what your young hopeful had done.

1973 A. Holden *Girl on Beach* 37 I could have killed Dick when he..said he'd asked these two men to dinner.

2001 A. Taylor *Death's Own Door* (2002) xxvi. 187 He was down-to-earth about it, so obliging, that she could have kissed him.

18. In requests, as a more tentative and polite equivalent of *can* (see sense 7a).

1748 Ld. Chesterfield *Let.* 23 Dec. (1932) (modernized text) IV. 1282 Could you send me..some seed of the right Cantelupe melons?

1763 T. Percy *Let.* 3 Jan. in *Percy Lett.* (1951) III. 80 Could you introduce me to the knowledge of any Gentleman, who has access to that Library.

1822 E. H. MacLeod *Tales of Ton* 3rd Ser. III. 244 'Could I see Miss Hurdis?' said her ladyship, falteringly.

1873 *Young Englishwoman* Mar. 154/2 Could you..give me the words in full of 'Oranges and Lemons'?

1924 H. Welles in B. C. Williams *O. Henry Prize Stories of 1924* (1925) 244 Could I bring you a hot bologna, ma'am?

1964 L. Deighton *Funeral in Berlin* iv. 281 Could you find us a little cup of real coffee?

2003 *Metro* (London ed.) 27 Oct. 13/4 Could someone explain the difference between one's wedding finger and one's engagement finger?

19. Expressing a possible contingency, i.e. the subjective likelihood of an action or a state of affairs.

a. *could have* with past participle, used in relation to the past: (*I could have done* or *been* = 'it is possible that I did or was, I may possibly have done or been').

1903 *Amer. Naturalist* **37** 859 With their necessarily slow and clumsy movements, the ostracoderms could not have been rapacious animals.

1907 in *Affray at Brownsville: Hearings Comm. Mil. Affairs U.S. Senate* (1908) (60th Congr., 1st Sess. Senate Doc. 402, Pt. 4) I. 81 Of course it might have been that they could have been out on the range and got those cartridges.

1924 D. Hammett in *Black Mask* Sept. 75/1 Central could have been ringing the wrong number.

1930 *Boys' Life* May 8/1 Do you suppose he could have landed in Spider Lake?

1982 D. Wiltse *Wedding Guest* ix. 113 He was an Arab, but he could have been anything from Moroccan to Yemenite.

1999 J. Fiorito *Closer we are to Dying* xi. 112 After a time I saw an old man..he seemed to be heading in my direction; he could have been on his way to the washroom.

2010 J. Powell *Breaking of Eggs* (2011) i. 10 She had the key to my apartment... She could have been reletting the rooms for six months of every year.

b. *could* with infinitive, used in relation to the present or future: (*I could do* or *be* = 'it is possible that I do or am, I may possibly do or be').

1942 *Internat. Stereotypers & Electrotypers Union Jrnl.* Feb. 47/1 Of course the picture could be fake and the free press of America honest, but it requires something more than tribute money, a fertile imagination and a mixture of lampblack and coal oil to produce legible images on photographic films.

1949 R. Macdonald *Moving Target* (1998) xii. 87 'Plenty, but we won't go into that. You could be doing a little exaggerating, you know.' 'Why should I be pitching curves?'

1965 C. D. B. Bryan *P. S. Wilkinson* I. ii.15 Of course it could be serious. They could be moving armor up for an attack.

1987 *Boys' Life* Mar. 42/3 Monroe could be lying and Conway could be telling the truth. Monroe could be the thief or Conway could be the thief.

1988 J. Gillis & T. Kelly *Armchair Mechanic* v. 103 The problem may be in the starter... The slightest looseness at any point could be causing the problem.

1998 A. McHugh *Hollyoaks* (Mersey TV transmission script) (O.E.D. Archive) Episode 254. 9 Lucy could be in all sorts of bother and all you can do is harp on about Lewis-flamin'-Richardson.

2014 *Yorks. Post* 7 Nov. 3/3 Climate change could be throwing bees out of sync with plants.

III. With ellipsis of the dependent infinitive clause.

20. *intransitive*. With implied infinitive taken from the context (usually a preceding clause), corresponding in meaning to any of the senses in branch II.

*c*1175 *Ormulum* (Burchfield transcript) l. 5282 Nu birrþ me shæwenn ȝiff I kann. O whillkess kinness wise [etc.].

*a*1375 (▸ *c*1350) *William of Palerne* (1867) l. 4184 We wol worche ȝour wille as wel as we kunne.

*c*1390 (▸ *a*1376) W. Langland *Piers Plowman* (Vernon) (1867) A. Prol. 33 And summe Murþhes to maken as Munstrals cunne.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Coll. Phys.) l. 23945 I wald spek if I cuþe.

*c*1405 (▸ *c*1387–95) G. Chaucer *Canterbury Tales Prol.* (Hengwrt) (2003) l. 732 Who so shal telle a tale after a man He moot reherce as neigh as euere he kan Euerich a word.

1474 W. Caxton in tr. *Game & Playe of Chesse* (1883) 2 The right good wylle that I haue had to make this lityll werk in the best wyse I can, ought to be reputed for the fayte and dede.

1542 R. Taverner *Epist. & Gospelles* (new ed.) f. clxix The deuell doth all he can to turne vs from the good waye.

1640 tr. D. Sauter *Pract. Banckrupts* II. 38 Ready to catch, rake, and snatch what ever they can.

1715 D. Defoe *Family Instructor* I. I. iii. 75 I will do all I can with them.

1850 *Vegetarian Advocate* May 105/1 Are we to..eat at hap-hazard, guided by no rules—except to eat, if possible, everything we can?

1899 *Secret Service* 4 Aug. 9/2 You would hang me if you could.

1915 J. Conrad *Victory* i. 3 Now, if a coal-mine could be put into one's waistcoat pocket—but it can't!

1930 *Boys' Life* Mar. 5/3 He's going to make the best he can out of what he's got.

1939 W. S. Maugham *Christmas Holiday* iv. 89 I'll make the beds, or the maid can while I'm having a bath.

2012 A. Monaghan *Soldier's Farewell* i. 12 Well, I did what I could for the blighter with cold compresses and so forth. By a stroke of pure luck, I managed to save his life.

21. *transitive* and *intransitive* with *do*, *make*, *come*, *get*, etc., understood: to be able to do, etc.

can or *cannot away with*: see **away** *adv.* 12. *cannot but*: see **but** *conj.* 5b.

In quot. 1494 perhaps intended (in a close rendering of a biblical passage) as a full verb, with the meaning ‘to have strength’.

1494 W. Hilton *Scala Perfeccionis* (de Worde) I. lxxii. sig. giiii^{v} I can wyth plente and I can wyth pouerte, I maye all in hym that strenghthith me.

*a*1500 (▸ *?a*1450) *Gesta Romanorum* (Harl. 7333) (1879) 38 I am a seruaunt of yourys in all þat I can and may.

*c*1525 *Bk. Mayd Emlyn* sig. B.iii He coude well awaye With her lusty playe.

*a*1536 W. Tyndale *Pathway Holy Script.* in *Wks.* (1573) I. 27 The more tangled art thou therein, and canst nowhere through.

1611 T. Heywood *Golden Age* ii. sig. C4 What cannot womens wits? they wonders can When they intend to blinde the eyes of man.

1678 J. Dryden *All for Love* i. i. 3 *Mecænas* and Agrippa, who can most With *Cæsar*, are his Foes.

1718 A. Pope tr. Homer *Iliad* IV. xiii. 987 What with this Arm I can, prepare to know.

1719 E. Young *Busiris* iii. 38 What cou'd your Malice more?

1807 Sir R. Wilson in *Life Gen. R. Wilson* (1862) II. viii. 374 I could no more. I was really exhausted.

1869 J. Martineau *Ess. Philos. & Theol.* 2nd Ser. 394. Whoever can and will may join the procession.

1916 C. A. Wynschenk tr. J. van Ruysbroeck *Adornm. Spiritual Marriage* i. vi. 18 A good man takes his stand upon his own littleness, in the most lowly part of himself, and confesses and knows that he has nothing, and is nothing, and can nothing, of himself.

1947 J. R. R. Tolkien *Let.* 31 July (1995) 122 But forgive me! It is written in my life-blood, such as that is, thick or thin; and I can no other.

1970 *Generation* **21** 75 My fingers were raw and torn, and I could no more.

†**22.** In the infinitive: to be able to do something; to have the ability or power to act. *Obsolete* (*rare* after 17th cent.).

1555 R. Eden in tr. Peter Martyr of Angleria *Decades of Newe Worlde* Pref. sig. bj^{v} To wyl to doo hurte and can not.

1566 T. Drant tr. Horace *Medicinable Morall* sig. Bvij The wyse, can rule: To can, is, full as muche, As, though he did.

1612 F. Bacon *Ess.* (new ed.) viii. 40 In euill the best condition is, not to wil; the second not to can.

1633 P. Fletcher *Piscatory Ecl.* vi. xxvi If from this love thy will thou canst unbind, To will is here to can.

1694 W. Cross *Expos. 2nd Verse 4th Chapter Epist. Romans* 61 To *will* and to *can* are two different things; a Man may *will* what he *cannot*, and then the Will hath not this Freedom.

1862 F. Ahn *Man. French Conversat.* 165 *Vouloir c'est pouvoir*. To will is to can.

IV. Special uses of the past participle.

23. Forming the perfect with *have*: been able to. Now *English regional* (*northern*) and *Scottish*.

In early modern use, apparently chiefly in *if*-clauses.

1477 W. Caxton tr. R. Le Fèvre *Hist. Jason* (1913) 63 I haue not seruid yow in suche wise as I haue coude best doo.

1483 W. Caxton in tr. J. de Voragine *Golden Legende* Pref. I..haue enprynted it in the moost best wyse that I haue coude or myght.

*a*1500 *St. Brendan's Confession* (Lamb.) l. 21 in *Geibun-Kenkyu* (1968) **25** 6 (*MED*) I haue not worschipid þee..as I myȝte, ouȝte, coude, or myȝte haue coud.

1533 T. More *Debellacyon Salem & Bizance* ii. xv. f. xxii^{v} And sure maye you be that if he had coulde, he wold not haue fayled to haue done the tone.

1587 Sir P. Sidney & A. Golding tr. P. de Mornay *Trewnesse Christian Relig.* xxx. 545 The Scribes would willingly haue verified the contrarie, if they had could.

1631 C. Sibthorpe *Friendly Advt. to Pretended Catholickes of Ireland* iii. ii. 284 To the end hee might falsifie (if he had could) the Prophecie, and preaching of Christ.

*a*1663 J. Sherman *Infallibility Holy Script.* (1664) 882 Bellarmin in the place quoted by him, saith he had seen one copy (he speaks of no more, as he would surely if he had could).

1873 J. A. H. Murray *Dial. S. Counties Scotl.* 216 'Thay haena cuid geate eane', they have not been able to get one.

1901–7 in H. Wentworth *Amer. Dial. Dict.* (1944) at *Could* Ah might a could found aout.

*a*1917 E. C. Smith *Mang Howes & Knowes* (1925) 12 It'll no hev cood gar ends meet this bittie back, nih, A'se warran!

1981 in A. R. Warner *Eng. Auxiliaries* (1993) ix. 222 [Newcastle] I haven't could sleep.

24. Following a modal verb in the past tense, in the sense 'be able to'.

On the use of the infinitive of *can* with preceding modals, see note at branch II.

Such constructions are often referred to as 'double modals' and in some analyses *could* is regarded as the finite past tense. For further discussion see S. J. Nagle in *Diachronica* **11** (1994) 199–212 and B. A. Fennell & R. R. Butters 'Historical and contemporary distribution of double modals in English' in E. Schneider *Focus on USA* (1996) 265–88.

a. *U.S. regional* (chiefly *southern*), *English regional*, and *Scottish*. ***used to could***: used to be able to.

1823 J. F. Cooper *Pioneers* I. i. 25 Following the hounds, as I once used to could.

1836 *Southern Lit. Messenger* Nov. 734/1 These modern fellows cannot shave as Kippin 'used to could'.

1848 A. B. Evans *Leicestershire Words* 103 '*I had used to could.*' I used to be able.

1875 *Evening Hours* **2** 79/2 I can't see as well as I used to could, but I sees the angels sometimes of a night, agoin' up and agoin' down..past the winder.

1899 *Leeds Mercury Weekly Suppl.* 16 Sept. He use to could lift a fifty-six ower his heead wi' one hand, but he can't nah.

1904 'H. Foulis' *Erchie* i. 3 They used to could do't wi' the least wee bit touch.

1940 *Sat. Evening Post (*Philadelphia*)* 6 Jan. 15/2 She used to could smell that old goat of yours from here to yonder.

1985 A. Blair *Tea at Miss Cranston's* xvi. 134 D'you mind them sweeties you used to could buy..readin'-sweeties wi' words on them.

2004 W. St. John *Rammer Jammer Yellow Hammer* 51 'We used to could park over there,' he says, pointing toward a patch of grass near the stadium.

b. *U.S. regional* (chiefly *southern*). ***ought to could***: should be able to.

1848 G. F. A. Ruxton *Life in Far West* vi, in *Blackwood's Edinb. Mag.* Nov. 575/2 If thar's game afoot, this child know 'bull' from 'cow', and ought to could.

1921 *Bookman* Sept. 53/2 Seems to me like anyone oughta could spell *cat*.

1933 A. Bontemps in *Opportunity* June 174/1 You oughta could do a heap mo' wid a thing like that 'n me'.

1938 in G. P. Rawick *Amer. Slave* (1972) II. 23 I ought to could fech back more to speak to you bout.

1958 J. H. Latham *Meskin Hound* 47 He ought to could locate a deer feeding on that tender rescue grass.

1981 L. A. Pederson et al. *Ling. Atlas Gulf States* 0593/058 You ought to could see God.

c. *U.S. regional* (chiefly *southern*) and *Scottish*. ***might could***: might be able to.

1859 in N. E. Eliason *Tarheel Talk* (1956) vi. 245 I know I might could & should enjoy myself.

*a*1917 E. C. Smith *Mang Howes & Knowes* (1925) 13 Yince an A'd wun there, A thocht, A micht mebbies cood geet a hurl the lenth o Hawick.

1923 'H. Foulis' *Hurricane Jack* xvii. 88 They might could put up a bit o' a deck-house where a body could get a cup o' tea and a penny thing at tuppence.

1946 L. Lenski *Blue Ridge Billy* i. 10 You might could grub yarbs.

1987 C. Edgerton *Walking across Egypt* iv. 98 If Lamar'd give me a place to live I might could get out of here.

2000 P. Beatty *Tuff* viii. 116 This might could work.

2016 G. Falconer in *Lallans* **88** 109 Plowterin throu a wark o leeteratur in sic a fickle form is nae fun for the reader, whit micht coud mean that it bides unfeenisht.

Phrases

†P1. *to can thanks* (also *†thank*): (originally) to acknowledge or recognize one's gratitude; (subsequently) to express or offer thanks, to thank. Cf. *to con thanks* at con *v.*[1] 1a. *Obsolete*.

Also with regular inflections, and in form *gan* (by association with gin *v.*[1]; compare the converse development at can *v.*[2]).

[Compare Old Icelandic *kunna þǫkk* . A similar phrase is attested in most Germanic languages with cognates of wit *v.*[1]: compare Old English *þanc witan* (early Middle English *witen (un)þank*), Middle Dutch *danc weten* (Dutch (now *archaic*) *dank weten*), Old Saxon *thank witan*, Old High German *thank wizan* (Middle High German *danc wizzen*, German *Dank wissen*), Old Swedish *veta þak* (Swedish *veta tack*), Old Danish (Danish) *vide tak*. Compare also Anglo-Norman *saver gre* (1139 or earlier), Old French *saveir gre* (12th cent.; Middle French, French *savoir gré*), Italian *saper grado*, classical Latin *grātias meminisse*, ancient Greek *χάριν εἰδέναι*.]

OE *Crist III* 1092 Þæt þeah to teonum [geteod] weorþeð, þeodum to þrea, þam þe þonc gode womwyrcende wita [*perh. read* wihte] ne cuþun.

*a*1225 (▸ *?*OE) *MS Lamb.* in R. Morris *Old Eng. Homilies* (1868) 1st Ser. 31 Ne con crist him nenne þonc.

?*c*1225 (▸ *?a*1200) *Ancrene Riwle* (Cleo. C.vi) (1972) 101 Nalde he cunne god þonc.

*a*1325 (▸ *c*1280) *Southern Passion* (Pepys 2344) (1927) l. 1271 (*MED*) Blame habbe, þat him þonk conne!

▸ *a*1387 J. Trevisa tr. R. Higden *Polychron.* (St. John's Cambr.) (1879) VII. 7 (*MED*) Þerfore I kan þe ful evel þonk at þis tyme.

▸ *a*1393 J. Gower *Confessio Amantis* (Fairf.) II. l. 1007 (*MED*) Feignende as thogh sche cowthe him thonk.

*a*1400 (▸ *a*1325) *Cursor Mundi* (Vesp.) l. 14065 I can hir mikel thank.

?*a*1400 (▸ *a*1338) R. Mannyng *Chron.* (Petyt) (1996) II. 1052 Eilred sent tille Inglond Sir Edward, his sonne, with his letter sealed & þanke wild he þam conne.

?*c*1450 tr. *Bk. Knight of La Tour Landry* (1906) 26 Yef he canne ani good thanne he will[e] cunne her moche thanke.

*a*1475 (▸ 1450) S. Scrope tr. *Dicts & Sayings Philosophers* (Bodl. 943) (1999) 238 If men yeue him, he cannethe theym no thanke.

1483 W. Caxton tr. J. de Voragine *Golden Legende* f. ccclxiiiiv/2 The ladyes..couthe her moche thanke.

1483 *Vulgaria abs Terencio* (T. Rood & T. Hunte) sig. oi My maistere cowde me grete thanke.

*a*1525 (▸ 1480) *Coventry Leet Bk.* (1908) II. 428 We shall þerfore can you hereaftur our full goode thankes.

1533 T. More *Apol.* xii, in *Wks.* 871/2 No man hath any cause to can him ani thank.

*a*1535 T. More *Dialoge of Comfort* (1553) II. xix. sig. M.vii[v] Els woulde Christe haue canned her muche more thanke.

1542 N. Udall tr. Erasmus *Apophthegmes* f. 110[v] I allowe hym and gan hym thanke.

1542 N. Udall tr. Erasmus *Apophthegmes* f. 248 Augustus..after gannyng hym thanke, commaunded, etc.

1545 R. Ascham *Toxophilus* i. f. 4v Not onelye I..but many other mo..wyll can you very moche thanke.

1566 T. Drant tr. Horace *Medicinable Morall* sig. Evijv And cannes me litle thankes.

1584 R. Scot *Discouerie Witchcraft* xii. xiv. 249 The smiths will canne them small thankes for this praier.

1616 T. Adams *Divine Herball* v. 140 But can them no thankes; they would, if they could.

P2. *to can maugre*: see maugre *n.* 2.

†**P3. *to can by heart***: to know by heart. Also ***to can by rote***. *Obsolete.*

Occasionally with regular inflections.

*c*1405 (▸ *c*1387–95) G. Chaucer *Canterbury Tales Prol.* (Hengwrt) (2003) l. 329 Euery statut koude he pleyn by roote.

*a*1425 (▸ *?a*1400) G. Chaucer *Romaunt Rose* (Hunterian) (1891) l. 6334 And kan by herte euery langage.

*a*1450 (▸ *a*1401) *Chastising of God's Children* (Bodl.) (1957) 224 He can it neuer so well bi herte.

*c*1450 (▸ *c*1400) *Cuckoo & Nightingale* (Fairf.) (1975) l. 71 They coude that seruise alle bye rote; Ther was mony a lovely strange note.

*a*1500 (▸ *?a*1400) *Tale King Edward & Shepherd* (Cambr.) (1930) l. 249 (*MED*) I shalle tech þe a gamme; I can hit wel be rote.

1541 T. Paynell tr. Felicius *Conspiracie of Catiline* l. f. 74 He coulde it by hart.

*c*1560 T. Becon *Relikes of Rome* sig. F.vijv Whan in olde time the canon was said openly and with a loude voyce, all in a maner by the reason of that vse coulde it by harte, and songe it in streates and hye wayes.

1564 T. Harding *Answere to Iuelles Chalenge* xv. f. 157 S. Antony..canned the scriptures by hart with hearing.

1595 A. Golding tr. J. Hurault *Politicke, Moral, & Martial Disc.* i. vii. 37 To strengthen his voice, which was small and feeble, he vsed to run vp against rough hils, pronouncing some verses which he could by hearte.

1609 T. Robinson *New Citharen Lessons* sig. A4v Write downe your rules, and god willing I will not touch my Citharen, vntill I can them perfectly by heart.

P4. *to can one's good*: see good *adj.*, *n.*, *adv.*, and *int.* Phrases 2b(b).

P5. *can be able*: can have the means, capacity, or qualifications, or sufficient power *to* do something; can be in such a position that it is possible *to* do something. Now chiefly *South African* and *West African*.

could with non-temporal function (esp. in senses **15**, **19**) sometimes occurs in this phrase in general use.

?1526 G. Hervet in tr. Erasmus *De Immensa Dei Misericordia* Ep. Ded. sig. A.ij I knowe ye tendernes of my wyt moche more sklender than yt I can be able to beare ye weyght of suche an enterprise.

1551 T. Wilson *Rule of Reason* sig. Ei Neither can any Lawe be able violentlye to force the inward thought of man.

1631 R. Bolton *Instr. Right Comf. Affl. Consciences* 31 An aspersion..that not all the bloud of that rope of Popes, which constitute Antichrist, could ever be able to expiate.

1686 F. Philipps *Investigatio Jurium Antiquorum* xxiv. 403 If the Houses of Peers and Commons in Parliament should disagree who but their King and Superior can or could be able to reconcile their discording Votes, Opinions or Resolves.

1718 J. CHAMBERLAYNE tr. B. Nieuwentyt *Relig. Philosopher* I. 241 Ask..whether he can be able to make a dark Chamber, that can be turned which way one will as readily and easily as the Eye.

*a*1781 R. WATSON *Hist. Reign Philip III* (1783) I. 78 No army..could be able to contend alone with the English forces.

1839 *Drake's Road Bk. London & Birmingham Railway* ix. 99 Yet, whatever may be the first emotions to which it gives rise, few, we think, can be able to gaze upon it long without feeling elevated and ennobled.

1877 *Pennsylvania Mag. Hist. & Biogr.* **1** 62 Nor is it improbable..that Whalley could be able to make such a journey.

1967 *Jrnl. Risk & Insurance* **34** 498/1 So that he can be able to use it as a source of reference.

1985 K. SARO-WIWA *Sozaboy* (2003) i. 3 Then the people begin to say that now wey soza and police be government, nobody can be able to arrest traffic when they chop bribe.

2012 in P. Alexander et al. *Marikana* (2013) 65 We want to get decent wages so that we can be able to support our families.

†**P6.** *Cards*. ***can you (also ye)?***: (in long whist) (expressing) a call enquiring whether one's partner's hand contains an honour. In later use more fully ***can you (also ye) one?*** *Obsolete*.

When one side has already scored eight ('ten' being the game), and a new hand is dealt, if a player on the winning side has two honours in their hand, they may thus ask their partner if they also have one, in which case, counting the majority of honours, their side would score two and win.

1674 C. COTTON *Compl. Gamester* xi. 116 If either side are at eight Groats he hath the benefit of calling Can-ye, if he hath two Honours in his hand, and if the other answers one, the Game is up, which is nine in all, but if he hath more than two he shows them, and then it is one and the same thing; but if he forgets to call after playing a trick, he loseth the advantage of Can-ye for that deal.

1709 *Brit. Apollo* 27–29 July The first are 8 Groats, which is generally call'd *Can-you*, the last are 6 Groats, which is generally call'd long *Can-you*.

1754 A. MURPHY *Gray's Inn Jrnl.* 2 Mar. (1756) II. 130 The Men no longer mind how a Lady looks, but how she plays; instead of observing the Delicacy of her Shape.., they only consider how many Trumps she holds, how often she makes a Finesse, and 'can ye one?'

*a*1755 W. HAY *Wks.* (1794) II. 261 Playing at whist, and calling, Can ye.

1770 *Lady's Mag.* Nov. 171/1 The countess de Barré, who held three in her own hand, asked her partner the duke, as is usual in such cases, 'can you one?'

1836 C. DICKENS *Pickwick Papers* (1837) vi. 53 Another hand. 'Can you one?' inquired the old lady. 'I can,' replied Mr. Pickwick.

1898 B. LOWSLEY *Whist of Future* v. 68 The present generation can have no memories of the glory of *Long Whist*, how with the score arrived at eight the partners would, when each holding an honour, look for the welcome '*Can ye one*?'

1922 G. SAINTSBURY *Scrap Bk.* xxii. 99 I never was *quite* sure about 'calling for trumps': while it must have been very pleasant to ask, 'Can you one?'

P7. *colloquial* (originally in representations of Chinese pidgin English). ***can do***: it is possible, it is within the power of (the speaker). Cf. NO CAN DO *phr.*, CAN-DO *n.* and *adj.*

[Originally after Chinese *kěyi*ˇ, auxiliary verb expressing possibility, also used as an affirmative and in expressions like *kěyi*ˇ*-bùkěyi*ˇ , lit. 'is that possible or not?' (see NO CAN DO *phr.*).]

1845 J. R. Peters *Guide Chinese Museum Boston* 72 Hab litty pidgeon, haf dollar can do.

1863 *Knickerbocker Monthly* May 471/2 Can do, you catchee Alla ploppa you wantee.

1876 C. G. Leland *Pidgin-Eng. Sing-song* 17 Wang-ti he take t'hat Me*l*ican—he ve*ll*y good can do.

1903 R. Kipling in *Collier's Weekly* 3 Oct. 16/3 'Four hundred and twenty knots'... 'Can do,' said Moorshed.

1951 'E. Crispin' *Long Divorce* iii. 29 'Can do, sir,' said Mogridge with watery affability.

1980 F. Muir in F. Muir & D. Norden *Oh, My Word!* 34 Can do, Skipper.

1992 J. Deaver *Mistress of Justice* v. 46 'Can do, dude,' he said at last.

2011 G. Cardone *10X Rule* xxii. 161 Get yourself and your colleagues to the point where responses like 'Can do, no problem—we will handle it!' become the norm.

P8. ***those who can, do; those who can't, teach*** and variants: used to imply that those who have the ability, drive, etc., to achieve success in their chosen field will do so, while only those who lack such ability, drive, etc., will pursue a career teaching in that field. Also in shortened form ***those who can't, teach***.

After George Bernard Shaw's ***He who can, does. He who cannot, teaches.*** (see quot. 1903). There are many variations on the basic theme which specify particular fields or subjects, or substitute other activities for teaching.

1903 G. B. Shaw *Revolutionist's Handbk.* in *Man & Superman* 230 He who can, does. He who cannot, teaches.

1927 *Lowell (*Mass.*) Sun* 9 Apr. 10/4 Those who can, do; those who can't, teach; those who can't teach, teach teachers.

1948 *Times* 13 Feb. 7/4 The wicked old gibe must be further amended: Those who can, do; those who cannot, teach, criticize, or administer.

1973 E. C. Luwaso *City Kid* i. 12 As someone said: 'Those who can, do; but those who can't, teach.'

2005 *Time Out N.Y.* 13 Jan. 76/1 Some of the P. I. T.'s top improv teachers debunk that old saw about how those who can't, teach.

P9. *colloquial*. ***could be***: it could be (that); it is possible; your suggestion may be correct.

1938 M. K. Rawlings *Yearling* vii. 68 Yes, Lem. Could be I was wrong.

1938 M. K. Rawlings *Yearling* viii. 71 If you'll fill my wood-box this evenin', could be we'd eat liver tonight.

1949 *Boys' Life* Apr. 23/2 'The old tub is stepping out to-day,' he said... 'Could be,' I agreed.

1951 J. B. Priestley *Festival at Farbridge* I. ii. 83 'Something in that, isn't there?'.. 'Could be.'

1960 L. Meynell *Bandaberry* iii. 57 'Before you realised it you would have signed away..the rights...' 'Could be,' I agreed.

2011 J. Rush *Due Diligence* xxv. 183 'What do you think's going on?' Rob asked... 'No idea,' said Cynthia. 'Could be the deal's still on. By tomorrow, could be it's off.'

Compounds

C1. Compounds with the base form of a verb, forming nouns denoting persons who can perform an action, as ***can-have***, ***can-pay***, etc. Earliest in

CAN-DO *n.* 2.

1842 J. AITON *Clerical Econ.* iv. 204 Let me have a first-rate goer, a good 'can do',—not that I mean in general to ride fast.

1905 *Census of Philippine Islands 1903* II. 83 As a rule the 'can reads' ranged from twice to three times the 'can writes'.

1930 *Jrnl. Amer. Statist. Assoc.* **25** 117 The problem of census taking when it touches unemployment must differentiate between the 'will works' and the 'won't works'; between the 'can works' and the 'can't works.'

1989 T. A. SULLIVAN et al. *As we forgive our Debtors* (1999) 238 The simple economic model promises a way to sort debtors who can pay from those who cannot, encouraging the can-pays to select..repayment.

2006 G. RUITERS in M. J. Murray & G. A. Myers *Cities in Contemp. Afr.* (2007) III. xiii. 296 Harsher cost recovery and disconnections would be reserved only for the can-pays.

C2. Compounds with the negative form *can't* prefixed to the base form of a verb, forming nouns denoting persons who cannot perform an action or (occasionally) actions that are impossible, as ***can't-eat***, ***can't-work***, etc. Also ***can't-doing***: inability to perform an action.

1849 *New Eng. Farmer* 28 Apr. 149/1 A period which to most men, and especially the can't do's and can't waits of the world, look [*sic*] in the retrospect as a dream, a period of which they have an indefinite recollection.

1886 *Parl. Deb.* 3rd. Ser. **309** 1139 Member for Cork to show how the Land Court is to distinguish between what he calls the 'can't pays' from the 'won't pays'?

1889 *Home-maker* Feb. 370/2 A spare-room closet in our flat must be reckoned among the 'can't-haves'.

1900 *Westm. Gaz.* 15 Dec. 2/1 Can't-eat, when applied, say, to lobster, is one thing; can't-eat, when relating to bread, is quite another.

1900 *Westm. Gaz.* 15 Dec. 1/3 Achievement..is open to fewer persons than can't-doing.

1904 *Daily Chron.* 24 Feb. 6/5 We have then the 'Can't Works'.

1954 J. THOMPSON *Hell of Woman* (1990) XII. 99 There were a couple of these punks that were always kicking, hinting maybe that I was crapping them on the can't-confirms.

1979 *Princeton Alumni Weekly* 21 May 26/1 The 'can't comes' number 64, and the 'no answers' 79.

2008 D. A. MCDONALD *World City Syndrome* II. vii. 229 National and municipal authorities going to great lengths to separate out the 'can't pays' from the 'won't pays'.

This entry has been updated (OED Third Edition, March 2017).