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**BOARD OF INDUSTRIAL INSURANCE APPEALS
OF THE STATE OF WASHINGTON**

In Re: AMAZON COM SERVICES
LLC DBA AMAZON COM

Citation & Notice No. 317965723

Docket No. 22 W0121

DEPARTMENT'S OPPOSITION TO
MOTION TO STAY ABATEMENT

I. INTRODUCTION

In this appeal of a WISHA Citation and Notice (Citation) issued by the Department of Labor and Industries (Department) to AMAZON COM SERVICES LLC DBA AMAZON COM (Amazon), Amazon has requested that the Board grant a stay of abatement of the alleged violations. The Board should deny Amazon's motion because they have not met their statutory burden of proof to obtain a stay of abatement.

This appeal follows an inspection of Amazon's warehouse in Kent, Washington, in response to an employee complaint. Like the Amazon Dupont warehouse, where the Board denied a near-identical Motion for Stay of Abatement in July 2021 (Docket No. 21W0156). The Kent warehouse has some of the highest injury rates of any warehouse in the U.S.¹ And, like the citation in Dupont, this citation alleges ergonomic violations under the safe place

¹ Declaration of Adamson, Harrison and Rempel at 2-3.

1 standard/general duty clause of WISHA relating to the both the pace of work expected of
2 Amazon employees, and the almost total absence of engineering and administrative controls
3 typically found in other warehouses to protect workers from work-related musculoskeletal
4 disorders (WMSDs) such as back and shoulder injuries.

5
6 Amazon is requesting that it be allowed to do almost nothing to lower its injury rates
7 over the course of the several years this matter is likely to be in the court system. This matter is
8 currently set for hearing for most of January and February 2023 (it has been consolidated with
9 three other similar citations). Because of the national media attention these cases have received
10 and the nature of the issues, it is probable that, if these cases are litigated, they will ultimately
11 be resolved by the Washington Supreme Court. Therefore, there is unlikely to be a final order
12 requiring abatement for at least four years. Thus, the Board is being asked to decide whether
13 Amazon's employees will be given any additional protections from serious injuries over the
14 next four or more years.

15
16 Amazon also claims (Memorandum at 2, and elsewhere) that it is already implementing
17 many of the Department's suggested methods of abatement. Putting aside the fact that the
18 Department disputes this statement because it is inconsistent with what the Department
19 observed, if true, Amazon cannot meet its burden to demonstrate good cause because they are
20 arguing that they should not continue doing what they claim they are already doing.

21
22 Amazon also argues that the 2011 amendments to the WISHA that establish the Stay of
23 Abatement process are unconstitutional as a violation of due process (Memorandum at 2-3, and
24 elsewhere). As the Board knows, it lacks jurisdiction to invalidate a statute. And, all statutes
25 are presumed be constitutional.

1 At several points in its memorandum Amazon alleges that the violations do not exist
2 and there are no ergonomic violations at this warehouse. Amazon has apparently forgotten that
3 the issues in this appeal are being argued nationally in the media as well as before the Board.
4 When talking to their shareholders or arguing that there is no need for their workers to join a
5 union, Amazon has repeatedly made public statements over the past year acknowledging an
6 unacceptably high injury rate at its warehouses, and, specifically the type of ergonomic injuries
7 at issue in this matter.²

9 What is most striking about Amazon's motion is what it does not contain:

10 1. Amazon does not (and cannot) deny that the Kent warehouse has an extremely high
11 number of MSD (ergonomic) injuries every year.

12 2. Amazon has not provided any evidence from medical or ergonomic experts either
13 that the alleged violations in this citation do not exist, or that there will not be serious injuries
14 while this litigation is pending. This is especially striking because Amazon insisted that its
15 team of ergonomists and attorneys accompany the Department's inspection team during this
16 inspection.

17 3. Last year, in its Motion for Stay of Abatement for the Dupont warehouse, Amazon
18 told the Board that it is was in the process of testing various methods of abatement at other
19 warehouses, and would be implementing them as applicable soon. Obviously, if they had
20 successfully abated some of the alleged violations in the Citation at the Kent warehouse, there
21 would be declarations to that effect.
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26 ² The Board can take judicial notice of the many media stories both about this citation and the Dupont
citation, and Amazon's public response to both these citations and media and other governmental and stockholder
inquiries regarding the high number of ergonomic injuries in their warehouses across the U.S.

1 In contrast, while not required to do so at this stage of the proceedings, the Department
2 has provided declarations from both medical and ergonomic experts supporting each of the
3 alleged violations in this matter.

4 As explained below in more detail, for these reasons, Amazon has not met its statutory
5 burden of proof by demonstrating good cause and that there will not be serious injuries at this
6 worksite if its Motion to Stay Abatement is granted.
7

8 II. FACTUAL SUMMARY AND BACKGROUND

9 This WISHA appeal is one of four appeals currently pending at the Board relating to
10 ergonomic inspections at Amazon warehouses. Two of the inspections are of a warehouse in
11 Dupont, and the third is of a warehouse in Sumner. In July 2021, the Board denied Amazon's
12 Motion for stay of abatement at the Dupont warehouse. No stay was sought for the Sumner
13 warehouse. No stay was sought for the Sumner
14 warehouse.

15 In this inspection of the Kent warehouse, the Department conducted three site visits.
16 The first was in September and consisted mainly of a walk-around to determine which areas
17 should be inspected and to interview employees. The second visit in December followed
18 negotiations with Amazon regarding the scope of the inspection, who would be present, what
19 type of data would be collected, and the date of the inspection. The third visit in early January
20 followed the Department obtaining a King County Superior Court order ordering Amazon not
21 to interfere with the inspection and specifically allowing the Department and its experts to
22 collect data documenting the ergonomic violations at issue in this matter.
23

24 The Department has collected more data to document these violations than in any
25 previous ergonomics inspection. In addition to collection injury data, videotaping, interviewing
26 and observing workers, lumbar motion monitors were attached to workers which, as their name

1 implies, provide detailed data regarding the impact on the low back of the lifting and twisting
2 required in many of the jobs at this worksite.

3 4 **III. ARGUMENT**

5 When the Department issues a citation, an appeal does not automatically stay an
6 employer's obligation to abate the violations. RCW 49.17.120(1). Rather, an employer must
7 move to stay the abatement requirement pending the outcome of the appeal. The standard for
8 granting a stay is set forth in RCW 49.17.140(4)(e):

9 The Board shall grant a stay of abatement for a serious, willful, repeated serious
10 violation, or failure to abate a serious violation where there is *good cause* for a
11 stay *unless* based on the preliminary evidence it is more likely than not that a stay
would result in death or serious physical harm to a worker.

12 (emphasis added). The statute sets forth a two-prong test. An employer must first demonstrate
13 there is good cause to grant a stay. If the employer fails to demonstrate good cause, the stay
14 request must be denied. If the employer demonstrates that good cause exists to grant the stay,
15 then it must next demonstrate that death or serious physical harm to a worker is not more likely
16 to actually occur should the stay be granted. For the reasons expressed below, Amazon has
17 failed to meet its burden to demonstrate either statutory prong.

18 **A. Amazon Has Not Shown Good Cause Exists To Grant a Stay of Abatement.**

19 Good cause is not established here because Amazon's main arguments are that they
20 already have an ergonomics program in place and the following "over the top" statement:
21

22 Instead, what the Division seeks is nothing short of a fundamental redesign and retrofit
23 of most aspects of a roughly 1.1 million square foot facility before it ever proves any of
24 its allegations and without any consideration to the feasibility, effectiveness, or
potential consequences of the proposed changes.³

25
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³ Amazon's Memorandum at 3-4.

1 The fact that Amazon felt that it was necessary to describe the Department's abatement
2 requests in such an obviously false manner speaks volumes as to their lack of an ability to meet
3 their burden of demonstrating good cause. The attached Declaration of Richard Goggins
4 describes in detail the type of interim abatement requested by the Department while this
5 litigation is pending. It does not remotely resemble a "fundamental redesign and retrofit" of the
6 Kent warehouse. Nor has produced any evidence that the Department has made unreasonable
7 demands regarding abatement of this citation. Significantly, Amazon is already required to
8 abate near-identical violations at the Kent and Sumner warehouses. Yet, they do not allege that
9 the Department has made unreasonable demands in the ten months since the Board's order in
10 Dupont.
11

12 Amazon also attacks the citation and alleged violations as unsubstantiated.⁴ Of course,
13 all WISHA citations, by their nature, contain unsubstantiated allegations. The Department is
14 expected to substantiate the allegations in the citation at hearing, not in the body of the
15 Citation. The citation provides the employer with notice of the alleged violations. Neither
16 RCW 49.17 nor this Board has require the Department to prove the alleged violations to defeat
17 a Motion for Stay of Abatement.
18

19 Nor do Amazon's pleadings otherwise meet their burden to demonstrate good cause.
20 The Department's WISHA citation to Amazon alleges violations of the general duty
21 clause/safe place standard. Specifically, these are ergonomic violations based on the extremely
22 high workplace musculoskeletal disorders (WMSD) injury rates suffered by Amazon's
23 employees at this warehouse. Amazon's workers have a substantially higher incidence of
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⁴ Amazon Memorandum 2-3 and elsewhere.

1 WMSD injuries than other warehouse employers. Declaration of Adamson, Harrison and
2 Rempel at 2-3.

3 In describing the WMSD injury rates at the Kent warehouse, L&I ergonomist Richard
4 Goggins noted:

5
6 On page 3 of their Memorandum, Amazon states that “ergonomic injury rates” at Kent have been
7 “substantially reduced over the past five years.” While Amazon has seen a recent decrease in
8 injuries at Kent, I would not characterize it as a substantial reduction. Soon after the facility
9 opened in 2016, the injury rate there grew to be much higher than the rate for the warehousing
10 industry in Washington State. Their musculoskeletal disorder (ergonomic injury) rate was up
11 and down between 2017 and 2021, rather than a steady decline that one would expect with a
12 concerted effort to fix hazards. Worryingly, musculoskeletal disorders (MSDs) have been the
13 single largest category of injuries over the past several years, accounting for almost 2 out of
14 every 3 workers compensation claims in most years.

11 **In 2021 alone, there were 119 MSDs at the Kent warehouse** resulting in 4,644 days of time
12 loss, the equivalent of losing 13 full time workers for an entire year. Several individual claims
13 were for injuries so severe that the affected workers lost more than a year’s worth of working
14 days.... The strongest predictor of future musculoskeletal injuries is past musculoskeletal
15 injuries, since damage to muscles, tendons, ligaments and nerves is slow to heal and can often
16 become chronic. (emphasis added).⁵

15 Violation 1-1 alleges a violation of the general duty clause (WAC 296-800-11005)
16 (also known as the safeplace standard). Because alleged violation 1-1 is of the general duty
17 clause, and neither RCW 49.17 nor the WAC specify abatement, the abatement obligations are
18 set by case law and the citation. The case law under the general duty clause requires that
19 employers abate violations by taking measures that will materially reduce the hazard.⁶ The
20 Citation gives Amazon a great deal of freedom in developing an abatement plan and
21 implementing it. It requires Amazon to evaluate what engineering and administrative controls
22 are feasible to address this issue and to report its findings to the Department. The Department
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⁵ Declaration of Goggins at 8.

⁶ Rothstein, Occupational Safety and Health Law, 2015 Edition, Section § 6.9 pp. 295-296.

1 recognizes the unique situations in ergonomic cases that require employers to carefully
2 determine the best methods to abate these hazards.

3 Amazon also argues in several places that it is already doing what the Department is
4 requesting (which the Department disputes). If true, this would be the opposite of “good cause”
5 because an employer cannot object to being ordered to continue doing what they are already
6 doing.
7

8 Most of Amazon’s pleadings describe their ergonomics program, the people they have
9 hired to address this issue, and how they are implementing their program. The glaring omission
10 in their pleadings is any refutation of either the data gathered by the Department and its experts
11 or any argument as to why the conclusions drawn from data are incorrect. The Department has
12 presented overwhelming evidence that demonstrates that the Kent warehouse has an extremely
13 high injury rate, and that it is a certainty that there will be many serious injuries during the
14 course of this litigation if Amazon’s motion is granted. Yet, Amazon’s only response to the
15 citation is a description of its process.
16

17 The lack of refutation of the Department’s data is especially striking in this matter.
18 Amazon insisted that its ergonomists and attorneys accompany the Department’s experts and
19 inspectors. They watched as every measurement was taken. Yet, there is not one sentence in
20 their pleadings criticizing the methodology used by the Department in collecting or analyzing
21 data. Further, the Kent inspections took place in September, December, and early January.
22 Amazon has had several months to gather its own data, analyze it, and form conclusions.
23

24 **1. Amazon’s criticisms of the Department’s inspection are both incorrect, and**
25 **do not establish “good cause.”**
26

1 Amazon alleges at page 5 (and elsewhere) that the Department did not ask Amazon
2 about their current safety practices and what steps they have taken to address its MSD injuries.
3 This is simply not true; and turns what really happened during this inspection on its head. As
4 noted in Richard Goggins' declaration, he asked for this information and Amazon refused, in
5 writing, to produce it, arguing that it was "overly broad."
6

7 Additionally, during the course of this inspection the Department and its experts were
8 constantly accompanied by a team of Amazon's attorneys, ergonomists, and management.
9 And, because the Amazon representatives were interfering with almost every aspect of the
10 inspection and refused to allow the Department to collect necessary data, the Department had
11 to obtain a superior court order enjoining Amazon from further interference with the
12 inspection, and ordering Amazon to allow the Department and its experts to collect data.
13

14 At no point during this inspection did any of the Amazon representatives who were
15 present at every work process that was inspected say anything like "This employee is not
16 lifting this package in the manner in which they were trained to do so." Nor did anyone from
17 Amazon ever say "You are not getting an accurate picture of how this job is supposed to be
18 performed. We have a stepstool (or other equipment) right here that we expect employees to
19 use when accessing this shelf" or similar comments. Nor did Amazon ever state that they had
20 reconsidered, and were now willing to provide the information about their safety efforts they
21 had previously refused to provide. And, this is consistent with the declarations provided by
22 Amazon. They focus on process and policy, and do not give examples of where Amazon has
23 abated hazards.
24

25 Further, at the closing conference in this matter, the Department made the offer it
26 always makes at closing conferences of encouraging the employer to provide more information

1 that could change the proposed citation which was given to Amazon at the closing
2 conference. Amazon followed up on this opportunity and provided new information regarding
3 the Covid violation which is not part of this motion. However, it did not provide any additional
4 information regarding the ergonomic violations.

5
6 Amazon also makes several other specific criticisms of the Department's inspection
7 (i.e. they criticize a recommendation regarding pallet transfer stations and argue that the
8 Department copied and pasted from abatement suggestions from the Dupont citation that are
9 not applicable to the Kent warehouse). All of these criticisms are specifically responded to in
10 Mr. Goggins' declaration, and will not be repeated here.

11 For all of the above reasons, Amazon's criticisms of the Department's inspection
12 process should be disregarded by the Board, and does not constitute good cause to grant their
13 motion.
14

15 **2. Amazon does not have good cause to refuse to address the impact of the pace**
16 **of work required of its warehouse employees.**

17 On page 9 of their brief and elsewhere, Amazon argues that the required high pace of
18 work does not contribute to WMSD injuries, and claims that the Department is merely making
19 conclusory statements without proof. Again, this is simply not true. In the Department's
20 response to Amazon's near-identical motion last June for the Dupont warehouse, the
21 Department submitted a declaration from Drs. Rempel and Harrison explaining the link
22 between the high pace of work and injuries because it does not allow sufficient muscle
23 recovery time. Amazon has had almost a year to obtain expert medical opinions refuting this
24 argument. Apparently, they cannot find medical experts who disagree with Drs. Rempel and
25 Harrison. Regardless, in their current Declaration, Drs. Rempel, Harrison, and Adamson note:
26

1 Amazon's assertions regarding efforts to reduce the high rate of injuries do not touch
2 on the issues of the pace of work required of its employees; the role of the quota
3 system; the hours worked (especially over-time); and provision of breaks. These factors
4 are very important contributors to muscle fatigue and injury. When the muscles of the
5 shoulders, arms, back or legs are fatigued, and a worker is compelled to continue
6 working, they are at increased risk of injury. When muscles are fatigued and the worker
7 continues performing the same task, they will modify their work postures and motions,
8 and load other muscles to compensate - muscles that are not appropriate for the loads
9 handled.

10 Contrary to Amazon's argument that they maintain a safe work environment at BFI4,
11 our quantitative risk assessments throughout the facility identified repetition and
12 frequency as hazards in the models, with inadequate recovery time based on the pace of
13 work for the loads handled. Indeed, we have documented that excessive pace with
14 consequent excessive repetition and frequency of tasks pose a serious risk of WRMSDs
15 at BFI4. Most tellingly, the high injury rates at BFI4 bely Amazon's assertion that
16 "productivity measurements allow associates to work comfortably and safely." If this
17 were the case, we would expect an average (or lower) injury rate at BFI4. We find it
18 curious that Amazon has not acknowledged the high injury rate at BFI4, as a simple
19 and logical inference would be that their "productivity" measurements are not
20 protecting employees from the risk of serious harm.

21 The hours of work shift (10) and requirement for mandatory overtime for some work
22 practices exceeds the norm for the standard risk assessment tool that we employed.
23 Amazon safety and ergonomic experts should be aware of this important risk factor;
24 obviously the more time employees are exposed to an ergonomic hazard, the greater the
25 risk of WRMSDs. Amazon's statement that this is a "comfortable work environment"
26 suggests lack of awareness of injury rates, fatigue, and pain experienced by workers.⁷

Amazon's refusal to address the pace of work at the Kent warehouse is especially
disturbing because the Department noted that the pace of work at Kent was even higher than at
the Dupont warehouse.⁸ Goggins also noted that:

In combination with the high pace of work and physical demands of many of the jobs,
10-hour shifts and mandatory overtime increase the risk for injury. Shorter duration shifts
and making overtime optional could help to reduce risk by allowing workers more
recovery time. Recent media reports have pointed out that Amazon now has a surplus of
employees who were hired to meet the increase in demand during the pandemic.
Improving working conditions could help Amazon to retain enough of these employees
to be able to offer shorter shifts and avoid overtime.⁹

⁷ Declaration of Harrison, Rempel and Adamson at 9.

⁸ Goggins Declaration at 2.

⁹ Goggins Declaration at 7.

1 It is especially troublesome that, for some jobs at Kent, the pace of work was so fast
2 that the NIOSH Lifting Standards that Amazon, OSHA and the Department all use, could not
3 be used. Harrison, Rempel and Adamson noted several times that “The Revised NIOSH Lift
4 Index could not be calculated because the average lift rate of 15.6 lifts per minute exceeded the
5 allowable lift rate for any duration of time; thus, the lift is considered unsafe.”¹⁰
6

7 The Board can also take judicial notice of the fact that the issues surrounding the
8 required pace of work at Amazon’s warehouses and their link to injuries has become the
9 subject of a national debate over the last few years. Yet, despite this national attention,
10 Amazon has yet to produce any medical evidence refuting the arguments presented here
11 regarding the links between Amazon’s required pace of work and WMSD injuries.
12

13 **3. Amazon’s proposal to address WMSD injuries is woefully inadequate and**
14 **does not demonstrate “good cause.”**

15 If Amazon had data and analysis to demonstrate that the conclusions drawn by the
16 Department in issuing this citation were incorrect, surely they would have provided the Board
17 with this information, and it would be their primary argument regarding “good cause.” Instead,
18 all Amazon provides is conclusory statements that the violations do not exist, that they will
19 prevail at hearing, and a description of their internal ergonomic process.
20

21 “Good cause” would typically involve claims of economic or technical infeasibility,
22 neither of which Amazon alleges (nor could they). Instead, Amazon alleges it has already
23 instituted a comprehensive ergonomics program. As noted in the Declaration of Harrison,
24
25
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¹⁰ Harrison, Rempel and Adamson at 6.

1 Rempel, and Adamson, most of what Amazon has done is encourage behavioral changes by its
2 employees such as stretching and improving their lifting techniques:

3 The May 5, 2022 declaration of Mr. Brown outlines their “ergonomics program” to
4 address the high injury rate. But the program as described is primarily a body
5 mechanics program and not a well-developed ergonomics program. The DOSH
6 investigation (Case File) reports that management’s focus at BFI4 is on lifting
7 techniques and stretching. These are not components of a well-developed ergonomics
8 program and do not address the hazards at BFI4. Although the program described by
9 Mr. Brown refers to a review of injury rates to identify and target high risk jobs, the
10 response appears to be more coaching. Although Mr. Brown refers to basing
11 interventions on the well-known, standard occupational health and safety understanding
12 of hierarchy of interventions (elimination of risk, engineering controls, administrative
13 controls, then behavioral controls such as worker training and PPE), it does not appear
14 to be followed in the list of interventions that he provides which includes the “Safety
15 School”, the “Working Well Program” and Athletic Trainers who “coach” the
16 employees while they work.

17 Review of the monthly safety meeting notes at the Kent warehouse reveals that at each
18 meeting the primary method of preventing musculoskeletal disorders was to educate
19 workers on body mechanics and there was very little attention to engineering controls.
20 Training workers on body mechanics, e.g., gripping method and lifting techniques, such
21 as lift with your shoulder back or lift with your legs and don’t bend your back, have not
22 been shown to decrease musculoskeletal disorders. The body mechanics approach shifts
23 the responsibility for preventing musculoskeletal injuries to workers.¹¹

24 Amazon’s above statements in their current declarations are consistent with what they

25 told the media they were going to do following the Dupont warehouse inspection last year.

26 They said they are going to encourage more exercise by workers and “coach” them to be safer.

[https://www.seattletimes.com/business/amazon/amazons-relentless-pace-is-violating-the-law-](https://www.seattletimes.com/business/amazon/amazons-relentless-pace-is-violating-the-law-and-injuring-warehouse-workers-washington-state-regulator-says/)

[and-injuring-warehouse-workers-washington-state-regulator-says/](https://www.seattletimes.com/business/amazon/amazon-to-maintain-pace-of-warehouse-work-despite-regulators-citation/) . They have not bought

standard equipment such as lifts; and they have specifically stated they are not going to alter

the pace of work expected of employees or their discipline program if workers are not working

fast enough. See: [https://www.seattletimes.com/business/amazon/amazon-to-maintain-pace-of-](https://www.seattletimes.com/business/amazon/amazon-to-maintain-pace-of-warehouse-work-despite-regulators-citation/)

[warehouse-work-despite-regulators-citation/](https://www.seattletimes.com/business/amazon/amazon-to-maintain-pace-of-warehouse-work-despite-regulators-citation/) .

¹¹ Declaration of Harrison, Rempel and Adamson at 4.

1 Nor can Amazon argue that there is uncertainty as to how to reduce these injuries. In
2 addition to the sources cited in the attached declarations, there is a great deal of published
3 guidance that provide detailed recommendations as to how to reduce musculoskeletal disorders
4 in similar workplaces.

5 Amazon's refusal to abate while this matter is pending is the behavior the Legislature
6 was attempting to stop when it enacted this statutory amendment following Tesoro's 2011
7 refusal to institute any changes at its Anacortes refinery while its appeal was pending following
8 the death of seven employees. If this case goes to hearing, it will be the first ergonomics case
9 ever heard by the Board. It will probably be several years before there is a final order from an
10 appellate court.

11
12 It is important that the Board only grant Stays of Abatement when the employer meets
13 their statutory burden of demonstrating both "good cause" and that, "based on the preliminary
14 evidence, it is more likely than not that a stay" will not "result in death or serious physical
15 harm to a worker." Stays of abatement should be granted only in those rare situations where an
16 employer can truly demonstrate "good cause" by producing evidence that the abatement
17 required by the Department is financially onerous or would otherwise create a great hardship
18 for the employer. Here, "good cause" has not been established, and the request for a Stay of
19 Abatement should be denied.
20
21

22 **4. The Board does not have jurisdiction to address Amazon's arguments that**
23 **the Stay of Abatement statutory amendments to RCW 49.17 are**
24 **unconstitutional.**

25 In a tacit admission that they cannot meet either element of their burden of proof, a
26 large percentage of Amazon's memorandum argues that the Stay of Amendments to the

1 WISHA are both unconstitutional and unfair.¹² They specifically argue that the statute violates
2 their due process rights and the unfairness of requiring abatement in ergonomic/general duty
3 citations. In denying motions for stay of abatement of similar ergonomic general duty clause
4 violations, the Board has implicitly previously rejected near-identical arguments by McGee
5 Aviation and United Parcel Service (UPS) (coincidentally, both of those cases also involved
6 allegations regarding the pace of work). As the Board has long held, quasi-judicial agencies
7 lack jurisdiction to invalidate statutes as requested by Amazon.
8

9 While the Department is not going to respond in any detail on the merits of arguments
10 not before the Board, it notes that Amazon's due process arguments are flawed because the
11 Board's Stay of Abatement process provides due process to employers by allowing them to
12 provide evidence and legal argument before they have to abate the violations.
13

14 **B. The Preliminary Evidence Establishes That It Is More Likely Than Not That A Stay**
15 **Would Result In Serious Injury or Death to Employees.**

16 Even if the Board determines that Amazon has demonstrated that "good cause" exists
17 to grant a stay of abatement, the stay should still be denied because Amazon cannot meet its
18 burden to demonstrate it is more likely than not that a stay would not result in serious injury or
19 death to employees. Pursuant to RCW 49.17.140(4), the Board must determine whether the
20 preliminary evidence submitted here establishes that it is more likely than not the granting of a
21 stay will result in serious injury or death to employees.
22

23 Amazon's pleadings do not refute or deny the Department's findings that the Kent
24 warehouse has some of the highest WMSD injury rates in the U.S. Adamson, Rempel and
25 Harrison at 2. Because their injury rates are so high, it is undisputable that, if their motion is
26

¹² Memorandum, pages 12-16 and elsewhere.

1 granted, there will be hundreds of serious injuries at this worksite while this litigation is
2 pending.

3 To put Amazon's ergonomic injury rate in perspective, if the Department ever found a
4 large construction company with this rate of falls from elevation per month, or minor
5 amputations per month, orders of immediate restraint shutting down the company would be
6 issued as well as willful violations.
7

8 The fact that the Department has found a history of past serious injuries makes this case
9 different from the typical Motion for Stay of Abatement in WISHA cases. In many other cases,
10 such as where the citation requires guarding of a piece of equipment or that a respirator be
11 worn when workers are exposed to certain toxins, there may not be proof of prior injuries
12 related to the alleged violations. But, here, where there is a large amount of proof of prior
13 serious injuries, and the employer has addressed the cause of the violations, it will always be
14 close to impossible for the employer to meet their burden to demonstrate that there will not be
15 serious injuries while the appeal is pending.
16

17 Here, there will undoubtedly be many serious injuries while this case is pending at the
18 Board, and, possibly, in the appellate courts. The attached declarations of Goggins, Harrison,
19 Adamson, and Rempel respond in detail to the Declarations and arguments submitted by
20 Amazon as to what abatement is required, why it is feasible, and they spend several pages
21 explaining why there will likely be serious injuries if this matter is not stayed. Those
22 declarations are incorporated herein, and will not be further repeated here.
23

24 In contrast to the declarations of Adamson, Harrison, Rempel, and Goggins, Amazon
25 has not submitted any medical or expert ergonomic testimony to support its argument that there
26

1 will not be serious injuries if their motion is granted. For this reason alone, their motion for
2 stay of abatement fails.

3 Because they cannot dispute their high level of serious injuries, Amazon appears to
4 argue that low back, shoulder and other WMSDs injuries are not “serious injuries.”¹³ Amazon
5 is apparently unaware of the thousands of industrial insurance cases this Board has heard
6 involving workers who have incurred these injuries. And, for these reasons, over the last few
7 years, the Board has denied most requests for stay of abatement in ergonomic cases.

9 Most significantly, in a citation issued to Alaska Airlines’ wholly owned subsidiary,
10 McGee Air Services, in June 2018, the Board denied McGee’s motion for stay of abatement
11 (see, *McGee Air Services*, Docket No. 18 W0029). The Department’s arguments in *McGee*
12 were the same as in this matter, namely that their rate of lifting injuries was both unacceptably
13 high and much higher than the average in their industry. Mc Gee argued that it would cost
14 them \$4 million to abate the alleged violations. The Board’s Order in *McGee* specifically
15 rejected Amazon’s argument that lifting and other WMSD injuries are not “serious” injuries
16 for purposes of stays of abatement.

18 Amazon also makes a cynical argument based on the Department’s ability to issue an
19 Order of Immediate Restraint under RCW 49.17.130. “In addition, if the Division believed that
20 there is “a substantial probability that death or serious physical harm” will occur at BFI4, it has
21 separate authority under RCW 49.17.130 to issue an order of “immediate restraint.”¹⁴

23 The Department only utilizes this statutory authority when there is an immediate threat
24 of severe bodily harm and the employer refuses to comply with the relevant WAC rule (i.e. a
25

26 ¹³ Memorandum at 17.

¹⁴ Memorandum at 17.

1 refusal to move a tower crane away from overhead energized power lines). The Department
2 has never issued an Order of Immediate Restraint for ergonomic violations. These orders are
3 usually only issued when there is an imminent threat of hospitalization or death.

4 Finally, in assessing the likelihood of serious injury, the Board must consider the fact
5 that this matter may be pending both at the Board and in the appellate courts for several years
6 based on the history of ergonomic litigation at the federal level. Avoiding abatement for years
7 while a case is on appeal is the harm the Legislature attempted to prevent in passing this
8 amendment to RCW 49.17.
9

10 For all of the above reasons, Amazon has failed to demonstrate it is unlikely that a
11 serious injury will occur during the pendency of its appeal if a stay is granted.
12

13 **IV. CONCLUSION AND RELIEF REQUESTED**

14 In July 2021, this Board correctly rejected near-identical arguments for a Stay of
15 Abatement at Amazon's Dupont warehouse. And, the Board has previously rejected near-
16 identical arguments by Alaska Airlines/Menzies Aviation and United Parcel Service. In the 11
17 months since the Department has briefed this issue, Amazon has made many public statements
18 regarding improvements they plan to make to improve safety at their warehouses. Yet, in their
19 Motion for Stay of Abatement all they can describe is their process; and they cannot point to
20 substantive changes. The Department is asking them to make simple feasible changes that will
21 reduce their injury rate.
22

23 Amazon has not met its two-prong burden to establish that good cause exists to grant a
24 stay of abatement, and that serious injury is not more likely to occur should a stay be granted.
25 And, it has become clear they will not take substantive steps to address these injuries unless
26

1 ordered to do so by this Board. Therefore, for the foregoing reasons, the Department
2 respectfully requests that the Board deny Amazon's Motion for Stay of Abatement.

3 For purposes of insuring that there is some lessening of the injury rate during the years
4 this matter may be in litigation, the Department is willing to accept interim actions by Amazon
5 that may not fully satisfy the standard of abatement of a general duty clause violation as
6 defined by the federal courts, but will likely result in a meaningful reduction in serious
7 WMSD-related injuries. Put simply, partial abatement is better than no abatement.
8

9 The Department is requesting that Amazon be ordered to abate these violations as
10 required on the citation and described in the Declarations, and take reasonable feasible steps to
11 lessen the number of serious injuries that will otherwise occur before a final order is entered in
12 this matter.
13

14 DATED this 16th day of May, 2022.

15 ROBERT W. FERGUSON
16 Attorney General



17 ELLIOTT S FURST, WSBA #12026
18 Senior Counsel
19 Attorneys for Department
20 (206) 389-3998
21
22
23
24
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26

1 **CERTIFICATE OF SERVICE**

2 I certify that I caused a copy of this document to be served or placed in the mail for
3 service on all parties or their counsel of record on the date below as follows:

4 Filed electronically:

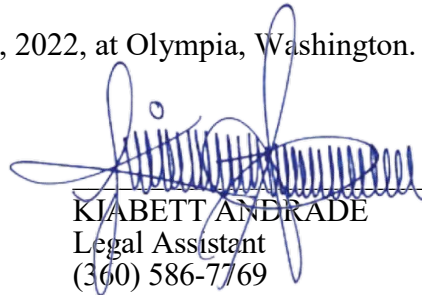
5 Executive Secretary
6 Board of Industrial Insurance Appeals
<https://fortress.wa.gov/biia/efiling>

7 US Mail Postage Prepaid via Consolidated Mail Service

8 Jason Mills
9 Morgan, Lewis & Bockius LLP
300 S. Grand Ave, Ste 2200
Los Angeles, CA 90071-3132

10 I certify under penalty of perjury under the laws of the state of Washington that the
11 foregoing is true and correct.

12 DATED this 16th day of May, 2022, at Olympia, Washington.

13
14 
15 KLABETT ANDRADE
16 Legal Assistant
(360) 586-7769

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**BOARD OF INDUSTRIAL INSURANCE APPEALS
STATE OF WASHINGTON**

In Re: Amazon.com Services LLC
dba Amazon.com

Citation & Notice No. 317965723

Docket No. 22 W0121

DECLARATION OF RICHARD
GOGGINS IN SUPPORT OF
DEPARTMENT'S RESPONSE TO
MOTION FOR STAY OF
ABATEMENT

Richard Goggins declares as follows:

I am over the age of eighteen, a citizen of the United States, and I am otherwise competent to testify. I make these statements based on personal knowledge and belief.

I work for the Department of Labor & Industries as an ergonomist. I am an authorized representative of the Director of the Department of Labor and Industries. I have read the pleadings filed by Amazon on May 2nd requesting a stay of abatement for the Kent warehouse.

I am the lead ergonomist in a series of inspections that were conducted around the State following complaints by employees regarding working conditions in Amazon's warehouses. I have completed inspections of an Amazon fulfillment center in DuPont, a delivery station in Sumner,

1 and, most recently, a fulfillment center in Kent based on a worker complaint that Labor and
2 Industries received in August 2021. The inspection of the Kent facility opened on September 14,
3 2021, on which date I accompanied the lead inspector, Laura Rascon-Padilla.

4
5 During our initial walk-through of the Kent facility, I observed a number of work processes with
6 known risk factors for musculoskeletal disorders. Combined with my knowledge from prior
7 inspections of Amazon warehouses and injury data from this facility, I was able to identify a
8 number of jobs that required further analysis. In my DuPont inspection I noted the fast pace of
9 work. In Kent, I immediately noted that the pace of work was faster than at DuPont. Even though
10 the size and weight of items handled in Kent are smaller than those at DuPont, the speed of
11 movement, frequent grasping motions, and moving in and out of awkward positions all
12 contributed to identifying many of the processes as at-risk jobs.

13
14 Labor and Industries retained the services of three nationally recognized experts in ergonomics,
15 Dr. David Rempel, Dr. Robert Harrison, and Dr. Carisa Adamson. These experts, along with
16 other Labor and Industries ergonomists, inspectors, and myself, conducted a very thorough
17 inspection of the Kent fulfillment center in December 2021 and early January 2022. Our
18 inspection team observed and collected data for the processes initially selected for review, and
19 then analyzed the data to determine hazard levels.

20
21 As part of our inspection, I reviewed Amazon's ergonomics program "WHS Ergonomics
22 Procedure NA version 10.0." The program describes a number of ergonomics assessments that
23 each warehouse should conduct as part of the program implementation. "Phase 1" assessments
24 use a screening tool that covers multiple risk factors such as lifting, gripping, repetitive motions,
25 and working in awkward postures. Processes that are found to have risks based on the screening
26

1 tool are then to be analyzed using a “Phase 2” tool that is specific to a hazard or part of the body
2 at risk.

3
4 Amazon states on page 5-6 (and elsewhere) of their Memorandum that the Department did not
5 inquire as to what ergonomics work they had already performed at the Kent facility. This is not
6 true. As part of a document request to Amazon early in the inspection process, we asked for
7 copies of any of their ergonomics analyses. This is a standard practice during these types of
8 inspections, since it gives us a better idea of steps the employer has taken to address injury risks.
9 With the exception of evaluations for one job, Amazon refused this request, stating: “a request
10 for all ‘ergonomic evaluations’ that ever occurred at BFI4 is overbroad, including as to temporal
11 scope, and unduly burdensome.” The one analysis provided by Amazon for the Pick job showed
12 it to be high risk for shoulder/elbow and hand/wrist injuries based on their Phase 1 screening
13 tool. The Phase 2 analysis used another screening tool, the Rapid Upper Limb Analysis (RULA).
14 This is primarily a posture-based analysis that is not well suited for assessing jobs that involve
15 repetitive reaching and grasping motions.

16
17 Lacking documentation from Amazon on the extent of their implementation of their program,
18 we were forced to perform our own assessments of at-risk jobs. We used some of the same tools
19 that Amazon lists as Phase 2 tools in their program, including the NIOSH Lifting Equation and
20 the ACGIH Hand Activity Level Threshold Limit Value (HAL TLV). These tools revealed that
21 most of the at-risk jobs that we initially identified did reach hazard levels, and therefore should
22 have been candidates for further measures to reduce the risk.

23
24 In describing the methods of abatement that I have recommended, Amazon states:
25
26

1 Instead, what the Division seeks is nothing short of a fundamental redesign and retrofit
2 of most aspects of a roughly 1.1 million square foot facility before it ever proves any of
3 its allegations and without any consideration to the feasibility, effectiveness, or potential
consequences of the proposed changes.

4 This is simply not true. In this case, as in all of the ergonomic Stay of Abatement cases I have
5 previously been involved in (Alaska Airlines/Menzies Aviation, United Parcel Service, Amazon-
6 DuPont), I have always agreed to work with the employer in coming up with reasonable and
7 feasible interim abatement measures; and I will do so here.

8 Further, as part of our inspection report and the citation provided to Amazon, the team of
9 ergonomists identified a number of feasible means of abatement for each of the processes that
10 reached hazard levels. The most effective solutions are engineering controls – changes to the
11 physical workplace, tools and equipment that will help to design out risk. The types of equipment
12 that we recommended are common in the warehousing industry, and are not overly burdensome
13 for a large employer to purchase and implement.

14
15 One example of a piece of equipment already in limited use at Amazon is a height adjustable
16 platform that can attach to an extendable conveyor to help reduce awkward reaching and bending
17 while loading and unloading packages on trailers. While this device does help to reduce some
18 awkward postures, the analysis of its use at Amazon showed that it increased twisting motions
19 due to the small size of the platform on which workers stood. Workers also used a much faster
20 pace of lifting while using the device compared to using a step stool, and the speed of lifting also
21 contributed to a higher risk for back injury.

22
23 With a larger platform that allows workers to move their feet instead of twisting, and a more
24 reasonable pace of lifting, the device would reduce the injury risk. While a better solution is to
25 unitize packages using pallets, slip sheets or gaylords; the height-adjustable conveyor could still
26

1 be useful in cases where Amazon does not have control over the way that trailers are loaded at
2 their source.

3
4 In many of the other processes we saw very little evidence of engineering controls beyond basic
5 workstation design and the use of step stools for accessing higher locations. We have learned as
6 the result of earlier inspections of Amazon facilities that they are testing devices at another
7 facility, such as vacuum lifts for palletizing boxes. Since some evaluation of devices has already
8 been conducted, Amazon should be able to bring any equipment that proves feasible to the Kent
9 location without too much delay.

10
11 Amazon's objections to other individual control measures that were proposed in the citation
12 ignores the fact that those measures are not specifically mandated. Amazon has the option of
13 purchasing, modifying or developing their own engineering controls, as long as they
14 substantially reduce the risk to workers' health and well-being. In addition to equipment and
15 workstation design, Amazon needs to consider the overall design of the jobs themselves. The
16 increased risk of lower back injury with the height-adjustable conveyor is just one example of
17 the impact that the pace of work can have even when other ergonomic factors are improved.

18
19 Amazon also asserts that we copied and pasted control measures from previous citations that are
20 not applicable at the Kent facility. I found a lot of similarities between the Kent and DuPont
21 warehouses. Where processes were substantially similar between DuPont and Kent, we did
22 repeat the same possible control measures. Again, these are suggested options and are not
23 mandated. If a recommended control is not feasible or appropriate, Amazon can offer an
24 alternative that results in an equivalent reduction in injury risk.

1 That said, I note that on page 18 of their Memorandum, Amazon fairly criticizes our
2 recommendation of pallet transfer stations. Upon review, I realized that none of us analyzed any
3 repalletizing operations at Kent, although we did do so at DuPont. The inclusion of pallet transfer
4 was an error; and I apologize for any confusion caused by this mistake.

5
6 Amazon states on page 11 that they are “assessing whether it is feasible to develop and
7 implement a formalized job rotation program.” Successful job rotation programs depend on the
8 ability to move workers to jobs that place substantially different physical demands on them. This
9 could include moving from a standing job to one that allows sitting, or moving from a highly
10 repetitive job to one with more variety.

11
12 Job rotation may have limited effectiveness at Amazon, where so many of the jobs involve
13 similar demands. For example, we did not see any chairs or other forms of seating out on the
14 warehouse floor, even for workers at computer stations. It’s also important to address jobs with
15 very high physical demands before rotating workers into them. For example, unloading and
16 loading trailers are physically demanding to the point that rotating more workers into that
17 position will simply expose more workers to a high risk of injury.

18
19 Most of the engineering controls that Amazon lists as proof of their attention to ergonomics
20 include small changes to the design of conveyors and workstations to reduce awkward postures.
21 While reducing awkward reaches does provide some benefit to workers, these changes don’t
22 address the primary risk factors that we found during analysis, namely repetitive motions
23 combined with gripping and lifting. There were many times that I noted while analyzing videos
24 of the work being done at Kent where employees did not take the time to fully climb ladders, or
25 take a few extra steps to get closer to their work.

1
2 Designing workstations to reduce awkward postures and training workers to work close to their
3 bodies are not as effective when the pace of work pushes them to take shortcuts and use the
4 fastest motions possible. Amazon’s approach of having workers wear devices that vibrate to alert
5 them when they’re working in awkward postures is just another way of making employees
6 believe it is their fault when they can’t both work safely and keep up with the pace of work.
7

8 Pace of work issues:

9 Based on our inspection at Kent and at other Amazon facilities, I believe that addressing the risks
10 due to the pace of work will be critical to successfully reducing injury rates, especially at their
11 fulfillment centers. The constant pressure to “make rate” was frequently mentioned during
12 employee interviews as one of the factors that led to fatigue and symptoms of injury. One
13 employee even broke down crying during our interview while recounting the toll that the
14 physical demands of the work had placed on their body.
15

16 I am assuming that some of Amazon’s arguments that the Department is asking them to
17 completely re-design their work processes relates to our concerns about the extremely fast pace
18 of work. However, the Department has never asked Amazon to recalculate their algorithms that
19 determine the pace of work required each work process. For purposes of interim abatement while
20 this matter is pending at the Board, it would be acceptable if Amazon were to make it clear to
21 all employees at the Kent warehouse that they will not be disciplined if they do not “make rate.”
22

23 I know that Amazon denies all of the media stories that employees are disciplined for not
24 working fast enough. Therefore, they should be willing to put in writing and tell their employees
25 what they tell the media.
26

1 In combination with the high pace of work and physical demands of many of the jobs, 10-hour
2 shifts and mandatory overtime increase the risk for injury. Shorter duration shifts and making
3 overtime optional could help to reduce risk by allowing workers more recovery time. Recent
4 media reports have pointed out that Amazon now has a surplus of employees who were hired to
5 meet the increase in demand during the pandemic. Improving working conditions could help
6 Amazon to retain enough of these employees to be able to offer shorter shifts and avoid overtime.
7

8 Injury Rates at the Kent warehouse:

9 On page 3 of their Memorandum, Amazon states that “ergonomic injury rates” at Kent have been
10 “substantially reduced over the past five years.” While Amazon has seen a recent decrease in
11 injuries at Kent, I would not characterize it as a substantial reduction. Soon after the facility
12 opened in 2016, the injury rate there grew to be much higher than the rate for the warehousing
13 industry in Washington State. Their musculoskeletal disorder (ergonomic injury) rate was up
14 and down between 2017 and 2021, rather than a steady decline that one would expect with a
15 concerted effort to fix hazards. Worryingly, musculoskeletal disorders (MSDs) have been the
16 single largest category of injuries over the past several years, accounting for almost 2 out of
17 every 3 workers compensation claims in most years.
18

19 In 2021 alone, there were 119 MSDs at the Kent warehouse resulting in 4,644 days of time loss,
20 the equivalent of losing 13 full time workers for an entire year. Several individual claims were
21 for injuries so severe that the affected workers lost more than a year’s worth of working days.
22 While Amazon must cover the costs of these claims through their workers compensation
23 premiums, injured workers incur uninsured costs on their own. The strongest predictor of future
24 musculoskeletal injuries is past musculoskeletal injuries, since damage to muscles, tendons,
25 ligaments and nerves is slow to heal and can often become chronic. Workers who stay with
26

1 Amazon post injury risk re-injury if they continue to do the type of work that injured them
2 initially. Workers who leave Amazon bring their injury history with them.
3

4 In the media, Amazon frames their high injury rates as a recent problem with new employees
5 hired during the pandemic, but here in Washington State the injury rate for all of their
6 warehouses started climbing from 2015 to 2017, and their WMSD rate has been much higher
7 than the rate for the warehousing industry since at least 2015.

8 Based on the level of the hazards that we cited at Kent, the hundreds of employees that are
9 injured there every year, and the lasting toll that the work can take on their bodies, I firmly
10 believe that Amazon should not delay any further in addressing the hazards in their warehouses.

11 And, for all of the reasons I have stated above, I strongly believe that there will be serious injuries
12 at this facility while this litigation is pending if Amazon's Motion to Stay Abatement is granted.
13

14 My qualifications to express the above opinions are as follows:
15

- 16 • Board Certified Professional Ergonomist accredited by the Board of Certification in
17 Professional Ergonomics. Certificate No. 1033, 2000.
- 18 • Master of Science degree in Human Factors and Ergonomics. Institute for Safety and
19 Systems Management, University of Southern California, 1994.
- 20 • Worked as an ergonomist in aerospace.
- 21 • Work as a Division of Occupational Safety and Health (DOSH) ergonomist at the
22 Department of Labor & Industries since 1995--providing services in a wide range of
23 industries including: manufacturing, warehousing, transportation, healthcare,
24 agriculture, and more.
25
26

1 As an ergonomist, I provide a range of services to DOSH customers. For cases in which I go to
2 employers' job sites to evaluate the work, I look for risk factors that can lead to work-related
3 musculoskeletal disorders (WMSDs). A typical sequence of work that I do after conducting a
4 walk-through of the work process includes: use analysis tools to determine the likelihood that
5 risk factors will result in injury, research and identify appropriate solutions for WMSD risk
6 factors, and offer recommendations to employers to reduce or abate hazardous levels of risk
7 factor exposures. I may review information from epidemiological and other ergonomics research
8 to identify hazards in specific industries or types of work. I also review employer injury data
9 looking for patterns of WMSDs. Additionally, as an ergonomist I provide other types of services
10 such as developing and delivering presentations or training in ergonomics.

11
12 This declaration applies to AMAZON BFI4's Motion for Stay of Abatement.

13
14 I declare under penalty of perjury of the laws of the State of Washington the foregoing is true
15 and correct.

16 DATED this 12th day of May, 2022, in Olympia, Washington.

17
18 

19
20 _____
21 Richard Goggins

DECLARATION

Background

DR. ROBERT HARRISON, DR. DAVID REMPEL, AND. DR CARISA HARRIS ADAMSON jointly declare as follows: We are all over the age of eighteen, citizens of the United States, and otherwise competent to testify. We make these statements based on personal knowledge and belief. We have been retained by the State of Washington as expert witnesses in the above matter. We decided that submitting a joint declaration would reduce overlap in opinions and be more efficient for the parties and the Board. Our respective qualifications include:

Robert Harrison, MD, MPH has authored or co-authored more than 40 medical and scientific articles in peer-reviewed journals, more than 35 other publications, including book chapters, contributed articles, and letters to journal editors, and more than 25 governmental and other reports. I am the co-editor of the major textbook in the field of occupational medicine (*Ladou and Harrison, Eds. Current Diagnosis and Treatment: Occupational and Environmental Medicine, McGraw-Hill, 2021*). In the course of my clinical work at the University of California San Francisco, I have examined and treated thousands of patients with occupational and environmental injuries and diseases. In my work as a physician and internal medicine specialist, I have treated and consulted with patients who have work-related musculoskeletal disorders (WRMSDs). As an occupational medicine physician, and as an Independent Medical Examiner and Qualified Medical Examiner for the State of California, I have evaluated the cause of patients' WRMSDs. In so doing, I have prepared reports concluding that WRMSDs in workers were caused by occupational exposure to ergonomic hazards. These reports have been accepted and relied upon by the Workers' Compensation Appeals Board in awarding California workers benefits for such work-related injuries. Over the past 30 years, I have consulted with, prepared reports, and testified for Federal OSHA on citations involving companies with hundreds of workers with WRMSDs. With my colleagues Carisa Harris-Adamson, PhD, I conducted a site visit to the Amazon BFI4 warehouse on January 4, 2022. Attached please find my recent *curriculum vitae*.

David Rempel, MD, MPH, CPE is an Occupational Medicine Physician and Certified Professional Ergonomist with greater than 30 years of consulting and research experience in industrial and office ergonomics and occupational medicine. I am board certified in internal medicine, occupational medicine, and ergonomics. I am a licensed physician in the State of California. I was a public health medical officer for the State of California from 1985 to 1990, where one of my responsibilities was to serve as consultant to Cal-OSHA on various projects including warehouse work. I founded the University of California Ergonomics Program at UC Berkeley in 1990 where I was responsible for research and the training of ergonomics to occupational medicine physicians, occupational health nurses, and industrial engineering, industrial hygiene, and ergonomics graduate students. I was also responsible for the clinical training of Occupational Medicine Fellows on the diagnosis, treatment and prevention of work-related musculoskeletal disorders. I provided continuing education in ergonomics and the medical management of work-related musculoskeletal disorders to health and safety professionals throughout North America. I was a Qualified Medical Examiner for the State of California and evaluated patients with MSDs and made determinations on whether the conditions were work-related and how they should be treated. I retired from the University of California in 2015 but continue to conduct ergonomics consulting with government agencies and international companies. I remain on faculty as Professor Emeritus in the Department of Bioengineering at the UC at Berkeley and in the Department of Medicine, Division of Occupational Medicine at the UC at San Francisco. I have published and presented over 500 peer-reviewed scientific papers, book chapters and abstracts on issues related to ergonomics and work-related musculoskeletal disorders. I served on a Board and Panel on human factors, ergonomics, and musculoskeletal disorders for the National Academy of Sciences and continue to serve on the Physical Agents Committee of the ACGIH. I conducted detailed job analyses with Carisa Harris Adamson, PhD at the Kent warehouse on December 15, 2021. Attached please find my recent *curriculum vitae*.

Carisa Harris Adamson, PhD, CPE is an Associate Professor in the Department of Medicine at the University of California at San Francisco (UCSF) with a secondary appointment at the University of California at Berkeley in the Division of Environmental Health Sciences. I have authored/co-authored more than 40 peer reviewed publications, 4 book chapters, and co-authored a report for the International Labor Organization on Principles & guidelines for human

factors/ergonomics design and management of work systems. I am the Director of the UCSF/UC Berkeley Ergonomics Research & Graduate Training Program located at the Richmond Field Station, an annex of the UC Berkeley School of Engineering. Additionally, I am the Director of the Northern California Center of Occupational and Environmental Health (COEH) at UC Berkeley and the Northern California NIOSH Education and Research Center (ERC). I received a PhD in Environmental Health Sciences with an emphasis in Ergonomics from UC Berkeley and hold three Master's Degrees in related fields. I have worked in Occupational Health and Ergonomics for about 20 years; my experience ranges from treating occupational health injuries as a prior Physical Therapist to managing an R&D team for a national providers of injury prevention and treatment services. As head of R&D, I consulted for large Fortune 500 businesses, most of whom were self-insured and were interested in implementing robust injury prevention programs. I conducted detailed job analyses at the Kent warehouse on December 15, 2021 and on January 4-5, 2022. Attached please find my recent *curriculum vitae*.

We have reviewed the following data and documents:

- L&I WIN Enforcement Case File Information #20340782 (3/22/21);
- WA DOSH Inspection #317961850;
- WIN_WISH-CNN_317961850;
- 2022-05-02 AMA (BFI4) MPA ISO Request for Stay of Abatement ;
- 2022-05-02 AMA (BFI4) Mills Declaration ISO Amazon's Motion to Stay Abatement, compressed ;
- 2022-05-02 AMA (BFI4) Racco Declaration ISO Amazon's Motion to Stay Abatement;
- Declaration of G Brown
- Amazon Safety Committee (ASC) Meeting Minutes (#18) from January to September 2021
- Amazon Documents
- Attachment E – Safer Start
- Attachment B – WHS Ergonomics Program Procedures NA
- Attachment K – Biomechanical Assessment of Pick
- Attachment D – Safety Rodeo
- Attachment F – Safer Start Training Records
- Attachment A – Amazon BFI4 Injury and Illness Prevention Program
- Attachment G – Safety Rodeo Training Records
- Attachment J – AR Pick Job Hazards Analysis 2021

Based on that review, it is our opinion, on a more probable than not basis, that there will be many more serious musculoskeletal injuries to Amazon employees at its Kent warehouse if Amazon's duty to abate the alleged violations is stayed while this matter is in litigation. We have reached this conclusion for the following reasons:

Injury Rates at Kent are High Relative to All Other Warehouses.

The OSHA 300A data for the Kent (BFI4) warehouse records are summarized in the table below. The number of injuries and rates of injuries (DART rate) changed from year to year with a reduction in DART rates between 2019 and 2020 when there was a large increase in reported total work hours. However, the number of cases and number of days of job transfer or restrictions have steadily increased from year to year. Most OSHA 300 recordable injuries and illnesses and workers compensation cases are musculoskeletal injuries. It should be noted that work related musculoskeletal disorders are classified differently over time, with most classified as injuries in 2016-2019 but in 2020 there was a shift to classifying more cases as illnesses.

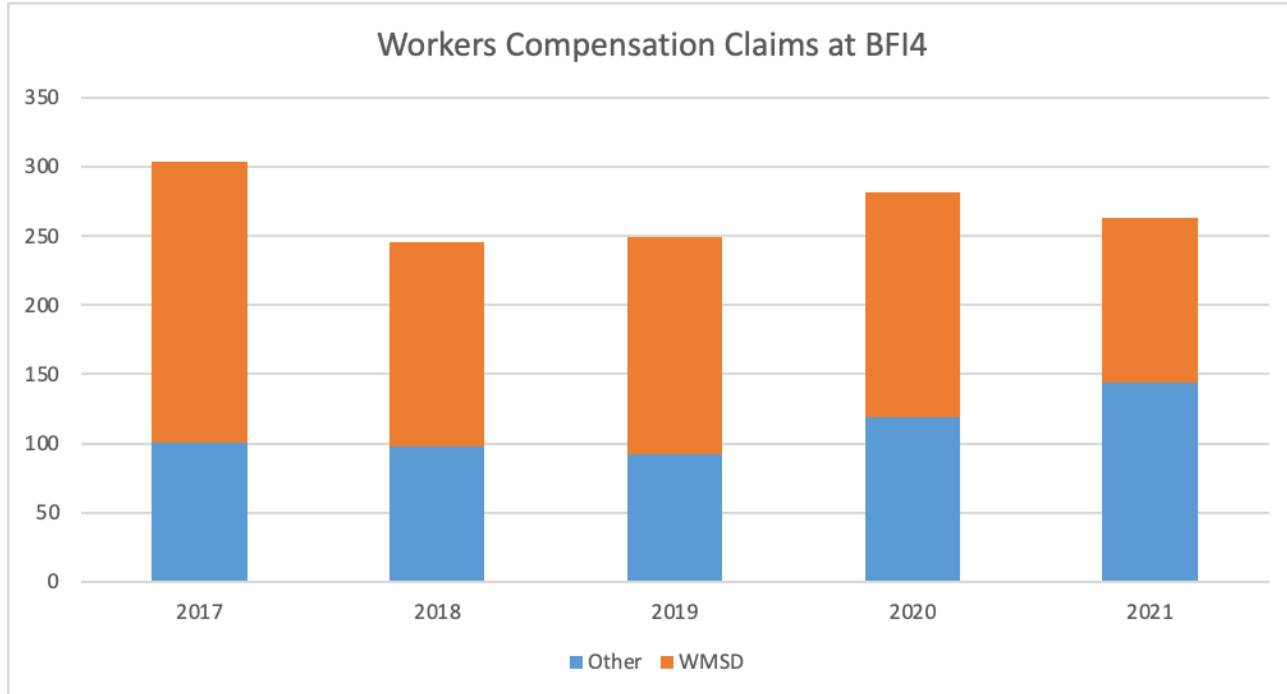
While the DART rates at the Kent warehouse dropped between 2019 and 2020, the rates were still well above the average 2020 DART rate of 6.3 for all Amazon warehouses in the US. Furthermore, in 2020, 2019, and 2018 the DART rates for all warehouses in the US were 4.0, 3.9, and 4.0, respectively (https://www.bls.gov/web/osh/summ1_00.htm (accessed 04 24 2022); NAICS code 49311). Using Federal OSHA data, which has 300A data for 2020 for every enterprise in the US with 100 or more workers, the DART rate, for all warehouses, except Amazon, was 1.9 (<https://www.osha.gov/Establishment-Specific-Injury-and-Illness-Data>). In 2020, for Amazon warehouses with 100 or more workers, the DART rate was 9.0.

2016 – 2020 Summary of Kent BF14 OSHA 300A Log Reports.

	2016	2017	2018	2019	2020	2021
Total hours worked by all employees	3,783,797	5,080,214	4,397,107	4,407,907	6,498,400	5,892,153
No. of cases with days away from work	189	265	228	176	175	145
No. of cases with job transfer or restrictions	77	104	54	131	165	164
No. of other recordable cases	27	58	34	17	12	38
No. of days away from work	10,689	12,699	9,894	6,191	5,798	4,421
No. of days of job transfer or restrictions	7,112	9,141	7,349	12,282	13,591	16,471
No. of injuries	286	415	307	324	352	347
No. of other Illnesses	7	10	9	23	153	66
DART Rate	14.1	14.5	12.8	13.9	10.5	10.5

The figure below summaries of the number of workers’ compensation cases by year for WMSDs and other injuries. As can be seen there is little change in serious injury numbers over the past 5 years.

Number of WMSD and other workers’ compensation injuries at the Kent warehouse by year.



This evidence clearly shows that the manual materials handling tasks at the BF14 warehouse expose Amazon employees to hazards that are well known to cause serious and disabling MSDs. If Amazon does not take the necessary steps to

immediately correct these hazards, employees will continue to be exposed to these hazards and will experience serious physical harm while this matter is pending at the Board.

The Safety Interventions Used at BFI4 to Prevent Musculoskeletal Injuries are Limited to Coaching Workers on Ways to Lift and Handle Material, Stretching, and other Behavioral Based Methods. This Approach is Not an Ergonomics Program and it Will Not Reduce Risk.

The Amazon Corporate Ergonomic Procedures standard (WHS Ergonomics Procedures, March 20, 2020, Version 10.0, 44 pages) provides a well-designed standard for ergonomics program requirements. The document outlines the responsibilities of the leadership, safety teams, and associates, required training on ergonomics processes, work design guidelines, reporting and record keeping requirements, and recommendations for risk assessment tools to use for assessing risks for musculoskeletal disorders and muscle fatigue. Ten risk assessment tools are recommended in the standard including the Revised NIOSH Lifting Equation (RNLE) and the ACGIH Hand Activity TLV. An Ergonomic Analysis Report Template is described for summarizing the risk methods used, findings, and recommendations. The standard also lists examples of engineering solutions for reducing biomechanical risk factors in Appendix K - General Engineering Controls Guideline Document.

Unfortunately, it does not appear that management at the Kent (BFI4) warehouse followed this standard. Furthermore, there was no evidence that standard ergonomics risk assessment tools, that are widely used in North America, such as the Revised NIOSH lifting equation, the ACGIH Hand Activity TLV, the ACGIH Upper Limb Localized Fatigue TLV, the Strain Index, or the Ohio State Push/pull Guidelines were used for risk assessment at these warehouses.

The Kent warehouse written Injury and Illness Prevention Program (05/04/2021) focuses primarily on identifying employee behavioral problems for reducing risks for injuries and there is almost no mention of identifying engineering interventions. For example, to prevent musculoskeletal disorders the document lists training on “proper lifting technique” (p14). In each of the Kent warehouse monthly Amazon Safety Committee (ASC) meeting notes (January to September 2021, Days and Nights), the high rates of injuries/musculoskeletal disorders are reviewed along with their associated biomechanical risk factors, such as repetitive motions; overreaching; handling and lifting heavy cases; lifting & twisting; unlabeled items above 50 lbs.; reaching above shoulder height; etc. However, almost all solutions recommended are behavioral, e.g., huddle engagements; avoid awkward postures; take time to recover from exertions; engage your core when lifting; take short bursts of frequent microbreaks to perform stretches; use a handshake wrist position; shoulders back when lifting; activate the hip muscles when lifting; mind & body moments; take 10 seconds every half hour to shake out the hands/arms; etc. The 2020 BFI4 (Kent) Safety Rodeo slides on Ergonomics (v 2.45) only discuss “appropriate” postures during movements – there is nothing about standard ergonomic processes. Working Safely – AR, V3 17.05.21 discusses body mechanics (e.g., power zone, the C-grip for the hand not the L-grip, never twist your back, bend at hips and knees never at your waist, etc.) and stretching – again nothing about standard ergonomic processes.

While Amazon claims that BFI4 is successfully implementing an ergonomics program by hiring Injury Prevention Specialists (“IPS”), the focus of this intervention is on “coaching” workers on how to perform work more safely. Based on Mr. Brown’s declaration, there is substantial focus on coaching workers and expecting them to prevent injury using stretching, wellness knowledge, and safe lifting techniques while performing jobs that are inherently hazardous by design.

- “... monitor weekly injury reports and reviews trends monthly. If we identify patterns indicative of ergonomic risk in certain process paths, we prioritize these processes for individual assessment and coaching with the associates.”
- “Proper body mechanics and individualized assessments are reinforced daily by BFI4’s IPSs, who are required to complete individual supportive coaching encounters with associates during their shifts as a part of their daily standard work.”
- “BFI4 has also implemented the WorkingWell Program, which uses academic research and Certified Athletic Trainers to educate new employees about their bodies, health... Associates are required to participate in monthly WorkingWell Huddles where they meet with an Area Manager or Site Lead in small groups to learn proper body mechanics, proactive wellness, and safety.”

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- “WorkingWell also includes a stretching program where a manager or “Lead” guides associates through preventative stretching exercises at least once per shift.”

The May 5, 2022 declaration of Mr. Brown outlines their “ergonomics program” to address the high injury rate. But the program as described is primarily a body mechanics program and not an ergonomics program. The DOSH investigation (Case File) reports that management’s focus at BFI4 is on lifting techniques and stretching. These are not components of an effective ergonomics program and do not address the musculoskeletal hazards at BFI4. Although Mr. Brown refers to basing interventions on the well-known, standard occupational health and safety understanding of hierarchy of interventions (elimination of risk, engineering controls, administrative controls, then behavioral controls such as worker training and PPE), this hierarchy is not followed in the list of interventions that he provides which includes the “Safety School”, the “Working Well Program” and Athletic Trainers who “coach” the employees while they work. Further, the one engineering control that Mr. Brown did refer to (the destuffer) could not have been evaluated properly since its implementation; although the destuffer reduced some awkward posture it increased other awkward postures and dramatically increased the rate of work. Because of the way this engineering control was implemented, it was ineffective in reducing risk of injury.

Comments on ASC February 2021 Nights meeting minutes note, that when recommended stretches pop up on employees’ screens, employees reported that the time counts against them and can affect their work rates or penalize them by giving them TOT (time off task). There is a note that stretching should not count against their time. There is a note (ASC Meeting Minutes, April 2021 Days) that site safety resources include (1) Onsite Medical Representatives (OMRs) who are EMTs, (2) Injury Prevention Specialists (IPs) are “Nationally and state certified Athletic Trainers” who “improve setup and body mechanics”, and (3) Safety Specialists. There is no evidence that these resources have training or experience with ergonomic procedures. A note from ASC Meeting Minutes July 2021 Nights suggests creating a plan to use pallet lifts, which is an effective engineering intervention. However, no pallet lifts were observed during our site visits.

The physical demands of the work processes at BFI4 are so high that only engineering abatements, reduced work hours, or reduced pace of work will lower the risk of injury. There are feasible engineering interventions for abatement, that, if immediately and properly implemented, would reduce the risk of serious physical injury. It is well understood in the medical and scientific literature that the early reporting and identification of musculoskeletal symptoms and immediate correction of the ergonomic hazards can reduce the risk of serious, disabling work-related MSDs. Consistent with scientific literature, the behavioral training provided at the Kent warehouse has little or no effect on reducing injuries.

Risk Assessments of Work Processes at BFI4 Identify Serious Hazards.

The tools described by Mr. Brown for evaluating job risks, RULA and REBA, are useful for initial screening, but the high-risk jobs observed at BFI4 should be evaluated with more detailed risk assessment tools that are commonly used by industry in North America, such as the Revised NIOSH Lifting Equation. A well-developed ergonomics program uses management methods that identifies and tracks high risk jobs, identifies and designs engineering interventions to reduce those risks, assigns responsibility for executing the interventions, tracks completion dates, and re-evaluates risks.

The initial Washington L&I inspections were triggered by complaints from BFI4 workers. Usual practices for identifying hazards were used during the walkthroughs while accompanied by Amazon Managers and/or Safety personnel. Ultimately, jobs (also referred to as “process paths”) were selected for detailed analyses based on the walkthroughs, the review of injury data from the warehouse, and past experience or knowledge of evaluating risks of warehouse jobs. The exposure assessment methods we used are those commonly used by ergonomists in North America that assess physical exposures associated with regional body pain, musculoskeletal fatigue, and musculoskeletal disorders. The methods included employee surveys, videos of jobs, measurements of workstations and body postures, measurements of applied forces, measurement of weights of objects handled, and the use of other measurement devices.

Because there are no Washington State workplace standards that limits physical exposures at work, such as repeated lifting or repetitive use of the hands, the standard risk assessment tools widely used by U.S. industry and by ergonomics practitioners, were used to identify hazardous jobs and tasks. These were the Revised NIOSH Lift Equation, the Ohio Bureau of Workers’ Compensation (OBWC) Guidelines for Pushing and Pulling, the Liberty Mutual tables, the 2020 ACGIH Hand Activity TLV (HA TLV), and the 2020 ACGIH Upper Limb Localized Fatigue TLV (ULLF-TLV). Data

for the risk calculations were collected using video, survey assessments, workstation measurements, force measurements, scales to measure the weights of boxes and objects handled, and other instruments (e.g., Lumbar Motion Monitor). The methods used to quantify the hand forces applied by workers were the worker-rated BORG CR-10 scale and a biomechanical calculation based on the weights of the objects handled.

Based on the detailed exposure measurements and risk assessments, the risk of injury for the following jobs (process paths) analyzed at the Kent Warehouse can be summarized as:

- (1) The Inbound Unloading process performed manually poses a **hazardous risk** for low back musculoskeletal disorders. The Lumbar Motion Monitor indicated that workers have a moderate to high probability of being at risk for low back disorders when handling loads 28.9lbs or higher; 25% of loads handled during this process exceeded 28.9lbs. The Revised NIOSH Lift Index threshold limit value of 1.0 was exceeded when handling loads more than 5lbs; 79% of the items we weighed exceeded 5lbs. Additionally, the high stacks and stairs pose additional safety hazards of getting struck by objects or falling.
- (2) The Inbound Unloading process performed using the destuffer poses a **hazardous risk** for low back musculoskeletal disorders. The Lumbar Motion Monitor findings indicated that workers have a moderate to high probability of being at risk for low back disorders when handling loads above 13.9lbs and 28.9lbs, respectively. Fifty percent of loads measured were above 13.9lbs and 25% of loads measured were above 18.9lbs. The Revised NIOSH Lift Index could not be calculated because the average lift rate of 15.6lifts per minute exceeded the allowable lift rate for any duration of time; thus, the lift is considered unsafe.
- (3) The Inbound Palletizer process poses a **hazardous risk** for low back musculoskeletal disorders. The Lumbar Motion Monitor findings indicated that workers have a moderate to high probability of being at risk for low back disorders when handling loads above 8.9lbs and 28.9lbs, respectively. Seventy-five percent of loads measured were above 8.9lbs and 25% of loads measured were above 28.9lbs. Based on the Revised NIOSH Lift Equation and given the characteristics of the lifts, the frequency for items weighing 2.5lbs or less should be 8 lifts or fewer per minute; for items weighing 7.5 pounds or less, the frequency of lifts should be 3 lifts per minute or less. The average lift rate measured was 10.6 lifts per minute.
- (4) The Inbound/Outbound Waterspider requires pulling loaded pallets with a pallet jack which poses a **hazardous risk** for low back musculoskeletal disorders. Based on the OSU OBWC Guidelines, at this handle height, if the pull force exceeds 44 lbs then the task is a moderate-risk hazard, and if it exceeds 53 lbs it is high-risk hazard. Based on the Liberty Mutual equations and considering pulling a cart for 194' (average of measured distances), with an average pull force of 29.9 lbs, then to accommodate the 25th percentile female, the maximum frequency of pulls would be one every 2 minutes.
- (5) The Stow process poses a **hazardous risk** for upper extremity musculoskeletal disorders. Based on the ACGIH Hand Activity TLV and the ACGIH Upper Limb Localized Fatigue (ULLF) TLV, the average item weight was well above the maximum loads calculated to be acceptable to accommodate the 25th% female.
- (6) The Pick process poses a **hazardous risk** for upper extremity musculoskeletal disorders. Based on the ACGIH Hand Activity TLV and the ACGIH Upper Limb Localized Fatigue (ULLF) TLV, the average item weight was well above the maximum loads calculated to be acceptable to accommodate the 25th% female.
- (7) The Pack Singles process poses a **hazardous risk** for upper extremities musculoskeletal disorders. Based on the ACGIH Hand Activity TLV and the ACGIH Upper Limb Localized Fatigue (ULLF) TLV, the average item weight was well above the maximum loads calculated to be acceptable to accommodate the 25th% female.
- (8) The AFE Rebin process poses a **hazardous risk** for low back musculoskeletal disorders. The Lumbar Motion Monitor indicated that handling weights in every weight category yielded a high probability of workers being at risk for low back disorders.
- (9) The Outbound Scanner process poses a **hazardous risk** for low back musculoskeletal disorders. The Lumbar Motion Monitor findings indicated that handling weights in every weight category yielded a moderate or high probability of workers being at risk for low back disorders when handling loads above 2.3lbs and 39.8lbs,

respectively. Seventy-five percent of loads measured were above 2.3lbs and the maximum weight measured was 39.8lbs. The average lift rate of 19 lifts/minute exceeded the maximum allowable frequency limit of 15 lifts/minute, which assumes that all other characteristics of the lifts are ideal, for any duration of time.

- (10) The Outbound Trailer Loading process poses a **hazardous risk** for low back musculoskeletal disorders. The Lumbar Motion Monitor findings indicated that handling weights in every weight category yielded a moderate or high probability of workers being at risk for low back disorders. Seventy-five percent of loads measured were above 2.3lbs and the maximum weight measured was 39.8lbs. Based on the Revised NIOSH Lift Equation (RNLE), the observed frequency of 12-15 lifts per minute is not safe for any loads handled greater than 1 hour. Thus, the frequency of lifts and the duration of lifting exceed safe limits. Additionally, multiple characteristics of the lifts exceeded any safe load amount. Specifically, the horizontal distance of 25” and vertical distance of 82” both exceed safe lifts for any load.

Many Engineering Interventions are Available that will Reduce Risks for Musculoskeletal Injuries, but these Have Not Been Adopted at BFI4.

The elements of a proper ergonomics program for warehouses and other similar work are well described in the literature and in Amazon’s own material. The Amazon Corporate Ergonomic Procedures standard (WHS Ergonomics Procedures, March 20, 2020, Version 10.0, 44 pages) provides a well-designed standard for ergonomics program requirements (see above for details). Other examples from the literature are: A Best Practices Guide for the Reduction of Musculoskeletal Disorders in Food Distribution Centers by William Marras et al., Institute for Ergonomics, The Ohio State University, 2005. Also, Industrial Ergonomics, A Practitioner’s Guide, by David Alexander et al., Institute for Industrial Engineers, 1985. Also, Grocery Warehousing eTool. OSHA, Occupational Safety and Health Administration, U.S. Department of Labor, n.d. Web, <https://www.osha.gov/etools/grocery-warehousing>.

In addition, there are many ergonomics experts in the U.S. who are experienced with establishing well-designed ergonomics programs for warehouse work. There are some among the health and safety staff at Amazon headquarters. There are also experts at large health and safety consulting companies, such as Velocity EHS. Despite Amazon’s own materials on good ergonomic practices, and the well-known ergonomic practices listed in this and other literature, the safety program at BFI4 is focused on behavioral interventions, that are known to be ineffective in preventing musculoskeletal injuries.

A well-developed ergonomics program systematically identifies biomechanical risks for processes, workstations, and tools and implements engineering interventions to reduce those risks, followed by re-assessments to ensure that new risks are not introduced. Many such widely available interventions were identified for each of the work processes at BFI4:

- (1) For the Inbound/Outbound Unloading/Loading & Waterspider processes:
 - a. Eliminate manual unloading/loading of floor stacked boxes altogether.
 - b. Use forklifts, motorized pallet jacks, or manual pulled Go Carts to move boxes in and out of the trailer rather than floor loading/unloading of boxes.
 - i. The pull and push forces involved in manually moving pallet jacks and Go Carts should be within the yellow or green zone of forces listed in “An Objective Set of Guidelines for Pushing and Pulling” that is published by the Ohio Bureau of Workers’ Compensation and Ohio State University.
 - c. If the trailer must be floor stacked, the loading/unloading of boxes should be performed using a destuffer modified to reduce twisting, plus the pace of work should be set using appropriate risk assessment tools to identify safe frequency of lifts.
 - d. A system should be developed to train workers to identify and sideline Go Carts or pallet jacks with stiff/defective wheels so that those devices are not used until the wheels are repaired.

- (2) For the manual Palletizing process:

- a. Improve the characteristics of the lift by using a cart that has a height adjustable bottom.
- b. Reduce the frequency of lifts per minute
- c. Eliminate lifts by replacing them with slides
- d. Provide vacuum lifts to move heavy boxes
- e. Provide pallet lifts that also rotate

(3) For the Stow and Pick processes:

- a. The pace of work should be set using the results of modeling and ergonomics analysis methods such as the ACGIH TLVs.
- b. Heavy items should be programmed to be placed in the robot racks that are near optimal height (e.g., 30” above the floor); they should not be stored in the upper or lower racks. The upper and lower racks should be programmed for storage of lightweight items.

(4) For the Pack Singles process:

- a. Modify the process to eliminate or reduce the duration of the pinch, gripping, and lifting of items weighing more than 0.5 lbs.
- b. Reduce the frequency and duration of item and box handling so that the task does not exceed the ACGIH Hand Activity TLV or the ACGIH Upper Limb Localized Fatigue TLV.
- c. Modify the scanner support device so that the scanner can be easily removed and returned when hand scanning.
- d. Adjust the bench height and the height of frequently handled items, especially heavier items, to a more optimal height for material handling (between the waist and shoulder).

(5) For the AFE Rebin process:

- a. Eliminate the use of the lowest height shelf.
- b. Heavy items should be programmed to be set in the AFE racks at near optimal height (e.g., 30” above the floor). In addition, heavy items should be programmed to be set in racks to reduce their carrying distance. Light weight items should be programmed to go to the low or high shelves.
- c. The maximum lift rate should be reduced so that the Lift Index of the Revised NIOSH Lifting Equation does not exceed 1.0 based on the weights of items handled, the vertical height of the cubby, and the frequency of lifting.

(6) For the Outbound Scan & Cart Loading process:

- a. Reduce bending or overhead reaching when filling a cart by using carts that have a height adjustable bottom.
- b. Reduce the frequency of lifts per minute
- c. Eliminating lifts by replacing a lift with a slides
- d. Providing vacuum lift systems for lifting heavier boxes.

The pace of work at Amazon poses a serious risk of WRMSDs to Amazon Kent warehouse employees.

Amazon’s assertions regarding efforts to reduce the high rate of injuries do not touch on the issues of the pace of work required of its employees; the role of the quota system; the hours worked (especially over-time); and provision of breaks. These factors are very important contributors to muscle fatigue and injury. When the muscles of the shoulders, arms, back or legs are fatigued, and a worker is compelled to continue working, they are at increased risk of injury. When muscles are

fatigued and the worker continues performing the same task, they will modify their work postures and motions, and load other muscles to compensate - muscles that are not appropriate for the loads handled.

The pace of work at BFI4 poses a serious risk of WRMSDs to employees. In describing their productivity goals, Amazon claims that “In reality, Amazon, like most businesses, sets achievable quality and productivity expectations. These include, for example, expectations for the amount of product that associates move during their work shifts. Amazon measures associate performance by comparing each employee’s performance against the actual performance of their peers.” Brown Decl., “Only when that performance falls below 95% of an employees’ peers does Amazon provide training and support to individual associates. Id. BFI4’s productivity measurements allow associates to work comfortably and safely, and the Division offers nothing but conclusory statements to the contrary.” In fact, if the pace of work is not reduced or breaks are not provided, or mandatory over-time is not discontinued, serious injuries will occur. Training in “proper biomechanics” of lifting or load handling will not mitigate the risk of fatigue.

Contrary to Amazon’s argument that they maintain a safe work environment at BFI4, our quantitative risk assessments, applied throughout the facility, identified repetition and frequency of material handling as hazards, with inadequate recovery time based on the pace of work for the loads handled. Indeed, we have documented that excessive work pace, with consequent excessive repetition and frequency rate of work, without adequate time for recovery, poses a serious risk of WRMSDs at BFI4. Most tellingly, the high injury rates at BFI4 bely Amazon’s assertion that “productivity measurements allow associates to work comfortably and safely.” If this was the case, we would expect injury rates at BFI4 that were similar or lower than injury rates at other warehouses.

The hours of the work shifts (10 hours) and requirement for mandatory overtime for some jobs exceeds the norm for the standard risk assessment tools that we employed. Amazon safety and ergonomic experts should be aware of this important risk factor – total hours worked per day or week. Obviously, the more time employees are exposed to an ergonomic hazard, the greater the risk of WRMSDs. Amazon’s statement that this is a “comfortable work environment” suggests a lack of awareness of injury rates, fatigue, and pain experienced by workers. We surveyed 51 workers during our site visits. Workers who performed a wide range of processes were surveyed. Approximately half (53%) of the workers rated their perceived exertion between somewhat hard to maximal exertion. Between 61% and 70% reported feeling moderately to extremely fatigued by the end of their workday and work week, respectively. Twelve of the 18 workers who responded that they had pain in the past 7 days reported taking medication for relief of their pain and 10 of the workers reported at least some difficulty keeping up with their work pace due to their pain. This does not support Amazon’s claim that they provide a “comfortable work environment.” Furthermore, although 7 of the 18 workers received treatment for their pain, only 4 of received treatment from Amazon and 5 workers reported that their symptoms prevented them from doing important activities at home.

The productivity measurement of “time off task” (TOT) for employees creates incentives and penalizes employees for taking the breaks that are needed for adequate recovery time that is medically necessary to prevent fatigue and injuries to the tendons, soft tissues, muscles and nerves. Moreover, penalizing employees for not keeping up with the work pace of co-workers and meeting productivity goals creates substantial work organization stress that independently contributes to risk of WRMSDs. One worker stated “I would like to have lower target rates so that we can be more safe. Safety is reduced when trying to reach targets because we have to go faster.” This statement summarizes in lay terms what should be well known to Amazon’s own safety and ergonomic experts: the current pace of work and job demands are risk factors for injuries at BFI4.

The target for productivity of 95% of peers at BFI4 is far too high to ensure that workers are not exposed to biomechanical hazards that pose a serious risk of WRMSDs given the wide variability in worker age, strength, endurance, stature, and other factors. The injury data at BFI4 clearly show that workers suffer excessive risk of WRMSDs. Therefore, it is evident that the “productivity” expectation that an employee must meet 95% of the average means that many workers at BFI4 will continue to be at high risk for WRMSDs. Again, this is a basic tenet of ergonomics. Amazon should strive to minimize the risk of injuries to their employees. It is evident that Amazon argues that “productivity” and “comfort” (in itself a term that does not pertain to a medical condition or injury) is a priority, and does not mention the prevention of serious WRMSDs (such as lumbar disc herniation, rotator cuff tear, tenosynovitis, muscle or tendon strain, ligament sprain, or nerve entrapment).

As noted, there are feasible and immediate abatement measures that can be implemented at BFI4 that will reduce the risk of WRMSDs caused by the excessive work pace. These include eliminating the requirement for mandatory overtime, maintaining adequate staffing to reduce the physical job demands, and creating a safety culture where penalties and reprimands are not tied to excessive productivity requirements that places priority for product delivery over employee safety.

Conclusions

The abatement steps that are required under the citation are straightforward and will have immediate impact on reducing the risk of serious harm. Five steps are outlined in the citation to correct the injury hazards: (1) Evaluation of engineering/administrative control options; (2) Selection of optimum and feasible control methods and completion of design; (3) Procurement, implementation and installation of control measures.; (4) Testing, modification, and acceptance of controls; and (5) Provide quarterly written updates detailing abatement progress. These are well known steps in health and safety management for addressing work-related MSDs. The longer the hazards at BFI4 remain unabated, the more disabling nerve, tendon, muscle, and joint injuries will be experienced by Amazon employees.

Amazon claims that “this is the complex world of ergonomics, applied to a vast and complex warehouse operation.” In fact, the outlined approach and the interventions listed in the case file can readily be applied to the BFI4 warehouse operations. The current approach used at BFI4 to address the hazards, relying primarily on body mechanics and stretching, will not reduce the hazards at BFI4, and continuing to rely on this approach will lead to more serious injuries to Amazon employees.

We declare under penalty of perjury of the laws of the State of Washington the foregoing is true and correct.

DATED this 12th day of May 2022, in San Francisco, CA



Robert Harrison, MD, MPH

DATED this 12th day of May 2022, in Inverness, CA



David Rempel, MD, MPH, CPE

DATED this 12th day of May 2022, in Walnut Creek, CA



Carisa Harris Adamson, PhD, CPE