



April 3, 2023

The White House
c/o Ambassador Susan Rice
Domestic Policy Council
1600 Pennsylvania Avenue NW
Washington, DC 20500

The Occupational Safety and Health Administration
c/o Assistant Secretary of Labor Douglas Parker
200 Constitution Avenue NW
Washington, DC 20210

The National Institute for Occupational Safety and Health
c/o Director John Howard
395 E Street SW Suite 9200
Washington, DC 20201

Dear Ambassador Rice, Assistant Secretary Parker, and Director Howard -

As workers across the country increasingly confront corporate abuses and attacks on their rights, the undersigned organizations urge the federal government to take action on an emerging front in the fight for worker rights: the harmful impacts of electronic surveillance and algorithmic management (“ESAM”) on worker safety and health.

Employers across the American economy are increasingly using ESAM to push employees and contractors to work harder and faster. These practices endanger workers' safety and health, hinder their ability to organize, and limit their access to rights of employment. Recent examples are instructive:

- **Amazon’s pervasive monitoring and disciplining systems have exacerbated its abysmal worker safety and health record.** As a result of crushing production quotas and speeds enforced by ESAM, Amazon workers suffer serious injuries at [twice the rate](#) of other warehouse workers.
- **Tesla used these technologies to surveil employees and [quash worker organizing efforts](#) – a potential violation of federal labor law.** The company also [fired union organizers](#) that asked for, among other things, less extensive and demeaning monitoring – a practice which some employees said led them to skip bathroom breaks.
- **McDonald’s uses technology to control its franchisees’ cashier employees but claims it is [not liable](#) to those workers under employment or labor law.** The practice frustrates workers’ ability to hold McDonald’s accountable, placing the burden solely on its undercapitalized franchisees.

As President Biden’s U.S. labor secretary nominee Julie Su [has noted](#), workplace technology introduced without sufficient worker input and control can have deleterious results. Given the increasing prevalence of these harmful practices, the undersigned organizations are releasing a slate of recommendations on how your agencies can use existing statutory authority to protect workers. These proposals build on previous requests from workers and advocates, adding supporting legal analysis and policy details. Specifically:

1. **Proposed Action Memo: The National Institute for Occupational Safety and Health (“NIOSH”) should fund new research into the effects of ESAM technologies on workers’ physical and mental health.** Existing research and documented worker experiences indicate that ESAM has a variety of negative physical and mental health effects on workers. It puts workers’

physical safety and health at risk through increasing the pace of work to unsustainable levels, which results in musculoskeletal strain and an increased likelihood of accidents. Additionally, such technologies contribute to heightened levels of job strain, which has both mental and physical health manifestations. While there has been some research, it is largely narrow and limited, and there remains much to be learned about the prevalence of ESAM practices and the effects that they have on workers' safety and health. NIOSH should use its existing statutory authority to fund studies that examine: 1) the effects of ESAM on workers' mental health; 2) the effects of ESAM on workers' physical health; and 3) the effects of ESAM on accident rates.

2. **Proposed Action Memo: The Occupational Safety and Health Administration (“OSHA”) should incorporate discussion of ESAM into its sector-by-sector guidance on workplace injury prevention and issue new guidance that comprehensively identifies workplace injury risks and solutions in warehousing.** ESAM practices can pose risks to workers' physical safety and health by encouraging an unhealthy pace of work that increases the risk of musculoskeletal disorders (“MSD’s”). OSHA has issued sector-specific ergonomics guidance to advise employers of best practices to prevent MSDs. However, none of these guidance documents discuss the role that ESAM can play in creating ergonomic risk. Additionally, there is not currently a comprehensive ergonomic guidance document for the warehousing sector, in which ESAM and MSDs are both especially pervasive. OSHA should update existing guidance documents for poultry processing and grocery warehousing to include a discussion of ESAM; and 2) issue a new guidance document on ESAM risks and solutions in warehousing.
3. **Legal Justification Memo: OSHA should begin a regulatory process for ESAM based on its existing statutory authority to regulate hazards to workers' physical safety and mental health.** The Occupational Safety and Health Act (“OSH Act”) empowers OSHA with broad authority to protect workers and requires the agency to do so, especially against newly-understood hazards. This memorandum explains how the statute authorizes OSHA to begin a regulatory process to develop an ESAM standard that regulates the hazards created by ESAM.

We look forward to collaborating with federal agencies on these policy proposals and developing others, and welcome any questions or feedback. Feel free to contact Reed Shaw at rshaw@governingforimpact.org.

Sincerely,

Governing for Impact
Center for Democracy & Technology
Access Now
Action Center on Race and the Economy
Amazon Labor Union
Athena Coalition
Data & Society Research Institute
Economic Policy Institute
Institute for Local Self-Reliance
Jobs With Justice
Make the Road NJ

Missouri Workers Center
Muslim Counterpublics Lab
National Disability Institute
National Employment Law Project
Open MIC
PowerSwitch Action
Service Employees International Union
The Center for Popular Democracy
Women Employed
Workplace Fairness



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DEFINITIONS & BACKGROUND

Electronic Surveillance and Algorithmic Management

Departments of Labor and Health and Human Services
March 2023

This document provides definitions and background information that is referenced throughout these memoranda.

I. Defining electronic surveillance and algorithmic management (“ESAM”)

We define ESAM as “a diverse set of technological tools and techniques to remotely manage workforces, relying on data collection and surveillance of workers to enable automated or semi-automated decision-making.”¹ There are several categories of workplace surveillance technologies, including: remote monitoring and tracking, gamification, and algorithmic management. Remote monitoring and time tracking allows companies to enforce pace-of-work policies that may not even be known to workers. Gamification describes technology that is meant to motivate workers “using video game elements, such as digital points, badges, and friendly competition.”² And algorithmic management is the overarching system that takes input from these surveillance technologies and makes assessments – sometimes leading to disciplinary action – and adjustments to increase worker productivity.³ The types of technologies that enable ESAM include: handheld devices, point-of-sale systems, mobile phones, fingerprint scanners, fitness and wellness apps, cameras, microphones, body sensors, keycards, electronic communication monitoring, geolocation tracking, collaboration tools, and customer review solicitation.⁴ While intrusive surveillance of worker activity has a deep and long history in the United States, the advent of new technologies makes it easier for employers to keep close tabs on their workers without expending much time or effort.

ESAM practices are increasingly prevalent in high-wage “knowledge” work, particularly as a result of the pandemic-induced work-from-home revolution.⁵ However, these documents primarily discuss ESAM in the low-wage context because, as a recent Data & Society report explained:

[L]ow-wage and hourly work—including in restaurant, retail, logistics, warehousing, agriculture, hospitality, domestic work, and healthcare—is more susceptible to datafication because these jobs’ tasks are easily measured. These workers are also often immigrants, women, and people of color, populations historically facing higher scrutiny and levels of surveillance and monitoring.⁶

¹ GC 23-02, *Electronic Monitoring and Algorithmic Management of Employees Interfering with the Exercise of Section 7 Rights* 5, (Oct. 31, 2022) quoting Aiha Nguyen, Data & Society, *The Constant Boss: Work Under Digital Surveillance* 3 (May 2021), https://datasociety.net/wp-content/uploads/2021/05/The_Constant_Boss.pdf (hereinafter “Constant Boss Report”).

² Tae Wan Kim, *Gamification of Labor and the Charge of Exploitation*, *Journal of Business Ethics* 152(1), (Sept. 2018), https://www.researchgate.net/publication/307091399_Gamification_of_Labor_and_the_Charge_of_Exploitation.

³ Matt Scherer, Center for Democracy & Technology, *Bossware May be Hazardous to Your Health* 8, (Jul. 29, 2021), <https://cdt.org/wp-content/uploads/2021/07/2021-07-29-Warning-Bossware-May-Be-Hazardous-To-Your-Health-Final.pdf> (hereinafter “Bossware Report”).

⁴ Constant Boss Report at 4; Kathryn Zickuhr, Washington Center for Equitable Growth, *Workplace surveillance is becoming the new normal for U.S. workers* 4 (Aug. 2021), <https://equitablegrowth.org/wp-content/uploads/2021/08/081821-worker-surv-report.pdf>.

⁵ Jodi Kantor and Arya Sundaram, *The Rise of the Worker Productivity Score*, *NY Times*, (Aug. 14, 2022), <https://www.nytimes.com/interactive/2022/08/14/business/worker-productivity-tracking.html>.

⁶ Constant Boss Report at 4.

II. ESAM is pervasive throughout the economy

Large companies frequently use ESAM technology to monitor their workers and the practice is increasingly prevalent throughout the economy. The pervasiveness of ESAM is a result of cheaper and omnipresent technology, declining levels of worker power, and weak workplace regulation.⁷ While there are no scientific studies indicating how many companies are using these technologies – and companies are generally not required to report or disclose their use – a 2018 survey of 239 large corporations found that more than half were using “nontraditional monitoring techniques,” and projected that the number would grow to nearly 80 percent by the end of 2020.⁸

The meatpacking and agricultural industries are both sectors in which ESAM is heavily employed to enforce intense line speeds and production quotas. Quotas and line speeds have long been tools of control for meatpacking management to keep an eye on production, but some of the largest companies are now investing in ESAM technologies like wristbands that track the movement of workers’ arms as they make their cuts.⁹ In the agricultural sector, guest workers, for example, face punishing quotas. The penalty for failing to meet such quotas can be as severe as deportation at their employers’ discretion.¹⁰

Amazon, the second largest private employer in the United States,¹¹ has heavily used ESAM to monitor its workers and ensure they meet demanding production quotas. In the company’s warehouses, for example, workers are monitored by artificial intelligence-enabled surveillance cameras, which track their movements, and by item scanners, which measure the amount of time that passes between scans and discipline workers for time off task (“ToT”) and for failing to meet their rate goal.¹² Outside of the warehouse, the company contracts out most of its delivery business to third-parties in order to avoid the costs and liabilities associated with employment relationships.¹³ While delivery drivers are either characterized as independent contractors¹⁴ or are employed by small contractors, Amazon has accelerated efforts to surveil drivers in order to maintain uniform operations.¹⁵ Amazon imposes a variety of requirements on non-employee drivers,¹⁶ and enforces them through handheld devices that track package drop offs and determine routes, as well as through artificial intelligence-

⁷ *Id.* at 6.

⁸ Brian Kropp, *The Future of Employee Monitoring*, Gartner, (May 3, 2019), <https://www.gartner.com/smarterwithgartner/the-future-of-employee-monitoring/>.

⁹ Madison McVan, *JBS, Tyson Foods invest in smartwatch app that monitors workers*, Missouri Independent, (Oct. 14, 2022), <https://missouriindependent.com/2022/10/14/jbs-tyson-foods-invest-in-smartwatch-app-that-monitors-workers/>.

¹⁰ David Bacon, *Growing Pains: Guest Farm Workers Face Exploitation, Dangerous Conditions – Part 1*, Capital & Main (Jun. 5, 2018), <https://capitalandmain.com/guest-farm-workers-face-exploitation-0605/>.

¹¹ April Glaser, *Amazon now employs almost 1 million people in the U.S. — or 1 in every 169 workers*, NBC News (July 30, 2021), <https://www.nbcnews.com/business/business-news/amazon-now-employs-almost-1-million-people-u-s-or-n1275539>.

¹² Annabelle Williams, *5 ways Amazon monitors its employees, from AI cameras to hiring a spy agency*, Insider, (Apr. 5, 2021), <https://www.businessinsider.com/how-amazon-monitors-employees-ai-cameras-union-surveillance-spy-agency-2021-4>.

¹³ Josh Eidelson and Matt Day, *Drivers don't work for Amazon but company has lots of rules for them*, (May 5, 2021), <https://www.detroitnews.com/story/business/2021/05/05/drivers-dont-work-amazon-but-company-has-lots-rules-them/4955413001/>.

¹⁴ Amazon Flex, (Accessed: Nov. 28, 2022), <https://hiring.amazon.com/job-opportunities/flex-driver-jobs#/>.

¹⁵ Josh Eidelson and Matt Day, *Drivers don't work for Amazon but company has lots of rules for them*, (May 5, 2021), <https://www.detroitnews.com/story/business/2021/05/05/drivers-dont-work-amazon-but-company-has-lots-rules-them/4955413001/>.

¹⁶ Including minutiae like dress codes, hair styles, and deodorant usage. *Id.*

enabled camera systems that monitor driving behavior.¹⁷ Contract drivers even report being fired via system-generated email.¹⁸

Of course, Amazon is not the only firm to engage in this kind of surveillance and automated management of workers who are allegedly independent contractors. Walmart’s Spark Driver program directs and monitors “independent contractors” through its mobile phone app, which plans a driver’s routes, the order in which they traverse a stores’ aisles, and which parking spot a driver should use.¹⁹

Rideshare companies like Via and Uber tightly control their non-employee workers through ride and job assignment and speed-monitoring apps, customer reviews, and cameras.²⁰ In a recent Data & Society report, delivery workers explained how the feeling of being watched changed their behavior.²¹

Outside of the independent contractor context, as early as the 1990s, franchisors like 7-Eleven were using point-of-sale (“POS”) software to maintain tight control over the employees of their franchisees. 7-Eleven disclaims an employment relationship with these workers but monitors the amount of time spent at the cash register and the speed of the ordering process in order to discipline them.²² By the 2010s, surveillance technology enabled Domino’s and McDonald’s to control their workforce in similar, but more sophisticated, ways.²³ In addition to disciplining workers for slow order processing, the mandatory software allowed the companies to dictate worker schedules and screen applicants from headquarters.²⁴ In a lawsuit against McDonald’s, the National Labor Relations Board’s (“NLRB’s”) General Counsel detailed the company’s use of technology to compare franchisees’ labor costs to their sales, and discipline franchisees accordingly.²⁵

Despite the many known examples of intrusive and harmful ESAM, however, the full extent to which companies are engaging in such practices remains unknown and, at present, perhaps unknowable. That is because, outside of a handful of states,²⁶ companies are not under any statutory or regulatory obligation to

¹⁷ Caroline O’Donovan & Ken Bensinger, *Amazon’s Next-Day Delivery Has Brought Chaos And Carnage To America’s Streets — But The World’s Biggest Retailer Has A System To Escape The Blame*, BuzzFeed News (Sept. 6, 2019), <https://www.buzzfeednews.com/article/carolineodonovan/amazon-next-day-delivery-deaths>; Tyler Sonnemaker, *Amazon is deploying AI cameras to surveil delivery drivers ‘100% of the time’*, (Feb 3, 2021), <https://www.businessinsider.com/amazon-plans-ai-cameras-surveil-delivery-drivers-netradyne-2021-2>.

¹⁸ Spencer Soper, *Fired by Bot at Amazon: ‘It’s You Against the Machine’*, Bloomberg (Jun. 28, 2021), <https://www.bloomberg.com/news/features/2021-06-28/fired-by-bot-amazon-turns-to-machine-managers-and-workers-are-losing-out>.

¹⁹ Video, drive4spark.com, (Accessed Nov. 21, 2022), <https://drive4spark.walmart.com/>. In some markets, Walmart partners with other companies like DoorDash to source independent contractor drivers. Those drivers routinely earn below Walmart’s minimum wage for its own employees. Nandita Bose, *Why Walmart farms out same-day grocery deliveries to low-cost freelance drivers*, Reuters, (Feb. 14, 2019), <https://www.reuters.com/article/us-walmart-labor-outsourcing-focus/why-walmart-farms-out-same-day-grocery-deliveries-to-low-cost-freelance-drivers-idUSKCN1Q30JS>.

²⁰ Mary Wisniewski, *Uber says monitoring drivers improves safety, but drivers have mixed views*, (Dec. 19, 2016), <https://www.chicagotribune.com/news/breaking/ct-uber-telematics-getting-around-20161218-column.html>.

²¹ See generally Ahia Nguyen & Eve Zelickson, *At the Digital Doorstep: How Customers Use Doorbell Cameras to Manage Delivery Workers*, (Oct. 2022), <https://datasociety.net/wp-content/uploads/2022/10/AttheDigitalDoorstepFINAL.pdf>.

²² Brian Callaci, Data & Society, *Puppet Entrepreneurship: Technology and Control in Franchised Industries 6-7*, 13 (Jan. 2021), <https://datasociety.net/wp-content/uploads/2021/01/DataSociety-PuppetEntrepreneurship-Final.pdf> (hereinafter “Puppet Entrepreneurship Report”).

²³ *Id.*

²⁴ *Id.*

²⁵ Jeffrey M. Hirsch, *Joint Employment in the United States*, Italian Labour Law e-Journal Vol. 13 at 57 (2020), https://scholarship.law.unc.edu/cgi/viewcontent.cgi?article=1574&context=faculty_publications.

²⁶ The California Consumer Privacy Act (CCPA) began applying to employee data in 2023, meaning that California businesses are now required to disclose any collection of “personal information” from their employees. See Cal. Civ.

disclose the nature or, in most cases, even the existence of workplace surveillance and monitoring. Consequently, the true breadth and depth of ESAM—and, by extension, the risks posed to workers—remains unknown to both workers and policymakers. In this regard, ESAM is a threat to workers that remains uniquely outside the control of workers and a hazard whose true effects may be largely hidden from regulators.

III. ESAM poses risks to workers’ physical health

Workplaces with higher levels of ESAM often experience an increase in the number of physical workplace injuries. Risk of physical injury arises from the increased pace of work, from a decrease in breaks and other forms of downtime that protect workers’ bodies from physical strain, and the physical manifestations of the mental health effects of ESAM.²⁷

First, ESAM increases the pace of work, which can be unsustainable and increase the risk of physical injury. For example, Amazon is infamous for its aggressive use of ESAM practices to speed up workers. Recent surges in demand as a result of COVID-19 led to a series of investigations into its employment practices that include variable quotas, hand held devices, cameras, and limited breaks. In part as a result of these practices, the rate of serious injuries in some of Amazon’s warehouses is over five times the average for similar workplaces.²⁸ Monitoring of Amazon-branded delivery contractors has also contributed to traffic accidents and deaths.²⁹ Indeed, Amazon’s record on workplace injuries is so bad that the company routinely ends up on the Council for Occupational Safety and Health’s annual “Dirty Dozen” list of the least safe American workplaces.³⁰ The Washington State Department of Labor and Industries has cited and fined Amazon repeatedly for forcing its warehouse workers to work at punishing speeds that exacerbate the risk of injury.³¹ Importantly, one such citation concluded that “[t]here is a direct connection between Amazon’s employee monitoring and discipline systems and workplace MSDs (musculoskeletal disorders).”³²

Amazon is certainly not the only company engaging in ESAM that leads to dangerous outcomes. Employers across industries have used ESAM technologies to speed up production with dangerous consequences for workers.³³ The meat industry, as noted above, has been able to dramatically increase line speeds in processing

Code § 1798.100 et seq; *see also* 19 DE Code § 705 (2022) (“Notice of monitoring of telephone transmissions, electronic mail and Internet usage”); CT Gen Stat § 31-48d (2020) (“Employers engaged in electronic monitoring required to give prior notice to employees. Exceptions. Civil penalty”).

²⁷ Bossware Report at 4.

²⁸ Reveal, *Find Out what injuries are like at the Amazon warehouse that handled your packages*, (Nov. 25, 2019), <https://revealnews.org/article/find-out-what-injuries-are-like-at-the-amazon-warehouse-that-handled-your-packages/>

²⁹ Patricia Callahan, *The Deadly Race: How Amazon Hooked America on Fast Delivery While Avoiding Responsibility for Crashes*, ProPublica (Sept. 5, 2019), <https://features.propublica.org/amazon-delivery-crashes/how-amazon-hooked-america-on-fast-delivery-while-avoiding-responsibility-for-crashes/>

³⁰ Jon Fingas, *Amazon makes advocacy group’s list of most dangerous US workplaces, again*, Engadget (Apr. 27, 2022), <https://www.engadget.com/amazon-cosh-most-dangerous-workplace-list-212035329.html>.

³¹ Lauren Rosenblatt, *Fine with fines? Amazon isn’t making enough changes to protect warehouse workers*, Washington state says, TechXplore (Mar. 29, 2022), <https://techxplore.com/news/2022-03-fine-fines-amazon-isnt-warehouse.html>.

³² Washington State Department of Labor and Industries, Citation and Notice: Amazon Services 2 (May 4, 2021), <https://s3.documentcloud.org/documents/20787752/amazon-dupont-citation-and-notice-may-2021.pdf>.

³³ Saima Akhtar, *Employers’ new tools to surveil and monitor workers are historically rooted*, Washington Post (May 6, 2021), <https://www.washingtonpost.com/outlook/2021/05/06/employers-new-tools-surveil-monitor-workers-are-historically-rooted/>.

and packaging facilities, in part thanks to new surveillance methods.³⁴ These high speeds are part of the reason that the poultry processing industry has some of the highest injury rates in the United States economy.³⁵

Second, and as discussed in the next section, ESAM reduces worker control and increases physical and mental demands by requiring them to be busy at every moment, which extensive research has linked to job strain, which occurs when workers have high demands at work but have little control over that work.³⁶ Prolonged periods of job strain increase the “rate of wear and tear on biological systems.”³⁷ This type of stress causes fatigue and research has linked it to mood and sleep disturbances, upset stomachs and headaches, and chronic health problems like cardiovascular disease and MSDs.³⁸ In fact, health care expenditures are nearly 50 percent higher for workers who report higher levels of stress.³⁹ Workplace stress also contributes to higher rates of workplace suicides: workplace suicides numbered at 307 in 2019, a 39 percent increase since 2000.⁴⁰

Disabled workers are particularly vulnerable to these negative health impacts. Disabled workers are more susceptible to new and exacerbated injuries and illnesses in the workplace and less able to comply with arbitrary, automatically enforced standards.⁴¹ Onerous and rigid pace-of-work requirements punish workers whose disabilities give them pressing bathroom needs, for example, and can exacerbate existing conditions for workers with existing musculoskeletal disorders.⁴² Such ESAM-enforced practices thus disproportionately harm disabled workers, who often require opportunities for rest, flexibility, and supportive work environments to attend to disability-related needs.

Studies have also found that fatigue and stress are major risk factors to workplace accidents that can result in physical harm to both workers affected by stress and fatigue and to the workers around them, and that this risk increases the longer workers go without a break.⁴³

IV. ESAM poses risks to workers’ mental health

³⁴ *Id.*

³⁵ Human Rights Watch, “*When We’re Dead and Buried, Our Bones Will Keep Hurting*”, (Sept. 4, 2019), <https://www.hrw.org/report/2019/09/04/when-were-dead-and-buried-our-bones-will-keep-hurting/workers-rights-under-threat>.

³⁶ Bossware Report at 4; An influential 1979 paper by Robert Karasek first defined job strain as the combination of high “psychosocial workload demands” and low “decision latitude” and identified its relationship with anxiety, depression, insomnia, and other negative health outcomes. See Robert A. Karasek, Jr., Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign, 24 Admin. Sci. Qtrly 285 (1979); Constant Boss Report at 12 (“A multitude of data sources drive automated decision-making systems, and such systems are designed to take choices out of workers’ hands”).

³⁷ NIOSH, *STRESS...At Work*, (1999), <https://www.cdc.gov/niosh/docs/99-101/#Job%20Stress%20and%20Health>.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ Michael Sainato, *It’s all preventable’: tackling America’s workplace suicide epidemic*, The Guardian, (May 27, 2022), <https://www.theguardian.com/us-news/2022/may/27/us-workplace-suicide-rates-pandemic>.

⁴¹ Lydia X.Z. Brown, et al., Center for Democracy & Technology, *Ableism and Disability Discrimination in New Employment* 50 (May 23, 2022), <https://cdt.org/wp-content/uploads/2022/05/2022-05-23-CDT-Ableism-and-Disability-Discrimination-in-New-Surveillance-Technologies-report-final-redu.pdf>.

⁴² *Id.* at 53.

⁴³ Philip Tucker, The impact of rest breaks upon accident risk, fatigue and performance: a review, *Work & Stress*, 17(2), 123-137.

ESAM can increase the risk of mental health problems through job strain.⁴⁴ A large body of research has shown that job strain is strongly linked to depression and anxiety. One 2018 study demonstrated that job strain was strongly associated with serious suicidal thoughts in workers.⁴⁵

The implications of this research are alarming given the expanding use of ESAM technologies. Many surveillance practices produce the exact risk factors for job strain: reducing worker control and increasing physical and mental demands by ensuring that they are busy at every moment.⁴⁶ These technologies allow employers to maximize productivity and eliminate even brief periods of worker downtime by continuously monitoring and enforcing a faster work pace. These practices exacerbate the job strain generated by other technology-driven employment decision systems, such as the use of scheduling algorithms that often produce erratic and precarious schedules that prevent workers from planning other aspects of their lives.⁴⁷

As NIOSH has noted, job conditions – rather than characteristics of individual workers – are the main drivers of workplace stress.⁴⁸ State workers’ compensation systems also recognize the impact of working conditions on mental health:

In 1960, a Michigan court upheld a compensation claim by an automotive assembly line worker who had difficulty keeping up with the pressures of the production line. To avoid falling behind, he tried to work on several assemblies at the same time and often got parts mixed up. As a result, he was subjected to repeated criticism from the foreman. Eventually he suffered a psychological breakdown.

By 1995, nearly one-half of the States allowed worker compensation claims for emotional disorders and disability due to stress on the job [note, however, that courts are reluctant to uphold claims for what can be considered ordinary working conditions or just hard work].⁴⁹

An investigation into Amazon’s surveillance practices concluded that the company’s monitoring of ToT through handheld scanners “create[d] the psychological effect of a constant ‘low-grade panic’” in the workplace.⁵⁰ The fact that employees did not know what productivity rate they needed to hit until they received a warning caused anxiety that followed workers home.⁵¹ Workers surveyed by Human Impact Partners reported that “constant surveillance results in stress, anxiety, and depression.”⁵² In 1987, the now-defunct United States Office of Technology Assessment issued a report that highlighted how “monitoring contributes to employee stress by creating a feeling of being watched.”⁵³

⁴⁴ Bossware Report at 4; An influential 1979 paper by Robert Karasek first defined job strain as the combination of high “psychosocial workload demands” and low “decision latitude” and identified its relationship with anxiety, depression, insomnia, and other negative health outcomes. See Robert A. Karasek, Jr., Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign, 24 Admin. Sci. Qtrly 285 (1979).

⁴⁵ See Bongkyoo Choi, *Job strain, long work hours, and suicidal ideation in US workers: a longitudinal study*, 91 Int’l Archives of Occ. & Environ. Health 865 (2018).

⁴⁶ See Constant Boss Report at 12 (“A multitude of data sources drive automated decision-making systems, and such systems are designed to take choices out of workers’ hands”).

⁴⁷ *Id.* at 18.

⁴⁸ NIOSH, *STRESS...At Work*, (1999), <https://www.cdc.gov/niosh/docs/99-101/#Job%20Stress%20and%20Health>.

⁴⁹ *Id.* (commentary in the original).

⁵⁰ Daniel A. Hanley & Sally Hubbard, *Eyes Everywhere: Amazon’s Surveillance Infrastructure and Revitalizing Worker Power 10*, Open Markets Institute (Sept. 2020), https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/5f4cffe23958d79eae1ab23/1598881772432/Amazon_Report_Final.pdf.

⁵¹ *Id.*

⁵² Martha Ockenfels-Martinez, *Blog: Workplace surveillance harms essential workers*, Berkeley Othering & Belonging Institute (Jan. 21, 2021), <https://belonging.berkeley.edu/blog-workplace-surveillance-harms-essential-workers>.

⁵³ U.S. Congress, Office of Technology Assessment, *The Electronic Supervisor: New*

As in the case of physical health, ESAM's threat to workers' mental health may be particularly acute in the case of workers with disabilities. Job strain can exacerbate anxiety, depression, cognitive disability, and trauma responses, and algorithmically enforced workplace policies can punish workers who need additional cognitive processing time.⁵⁴

Technology, New Tensions, OTA-CIT-333 (Washington, DC: U.S. Government Printing Office, Sept. 1987), <https://ota.fas.org/reports/8708.pdf>.

⁵⁴ Disability Discrimination in Surveillance Technologies at 53; Samuel B. Harvey et al., *The Role of Job Strain in Understanding Midlife Common Mental Disorder: A National Birth Cohort Study*, 5 *Lancet Psychiatry* 498 (2018), [https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(18\)30137-8/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(18)30137-8/fulltext).



PROPOSED ACTION
MEMORANDUM

Requesting that NIOSH Expand its Research on
the Effects of Electronic Surveillance and
Algorithmic Management

National Institute for Occupational Safety and Health, Department of Health and
Human Services
March 2023

I. Introduction

While there has been some limited research, there remains much to be learned about the prevalence of electronic surveillance and algorithmic management (“ESAM”) practices and the effects that they have on workers’ safety and health.

This memorandum proposes that the National Institute for Occupational Safety and Health (“NIOSH”) fund new research in this area. Specifically, NIOSH should fund studies that examine: 1) the effects of ESAM on workers’ mental health; 2) the effects of ESAM on workers’ physical health; and 3) the effects of ESAM on accident rates.

II. Justification

As detailed in the Definitions and Background document, ESAM likely has a variety of negative physical and mental health effects on workers. It puts workers’ physical safety and health at risk through increasing the pace of work to unsustainable levels, which results in musculoskeletal strain and an increased likelihood of accidents. Additionally, such technologies contribute to heightened levels of job stress, which has both mental and physical health manifestations. These health and safety impacts can have a particularly negative effect on disabled workers.¹

Given the myriad workplace hazards to which ESAM may contribute, OSHA should consider examining potential regulation of these practices. The OSH Act empowers the agency to promulgate occupational safety and health standards based on various sources of information.² One such source is “information submitted ... by ... the National Institute for Occupational Safety and Health.”³ In practice, OSHA often uses NIOSH research and recommended standards to guide its standard-setting process. For example, OSHA’s Respiratory Protection Standard incorporates NIOSH’s research about the effectiveness of respirators into the requirements it makes for workplaces.⁴ As another example, the limits contained in the OSHA standard on occupational noise exposure are based directly on NIOSH’s original recommended standard.⁵

NIOSH should commission the research proposed in this memorandum to better understand the scope and potential harms of ESAM and lay the groundwork for effective OSHA regulation on the subject. Additionally, OSHA’s field operations manual notes⁶ that NIOSH criteria documents that draw conclusions about workplace hazards can help support a finding of industry recognition for the purposes of OSHA’s enforcement under the

¹ Lydia X.Z. Brown, et al., Center for Democracy & Technology, *Ableism and Disability Discrimination in New Employment 50-54* (May 23, 2022), <https://cdt.org/wp-content/uploads/2022/05/2022-05-23-CDT-Ableism-and-Disability-Discrimination-in-New-Surveillance-Technologies-report-final-redu.pdf>.

² 29 U.S.C. § 655(b)(1).

³ *Id.*

⁴ Maryann M. D’Alessandro, et. al., *Who Does What? The Roles of NIOSH, OSHA, and the FDA in Respiratory Protection in the Workplace*, NIOSH Science Blog, (Sept. 9, 2021), https://blogs.cdc.gov/niosh-science-blog/2021/09/09/respirator_roles.

⁵ 29 C.F.R. § 1910.95(b)(2); NIOSH, *Recommendations for a Noise Standard I-4*, (1972), <https://www.cdc.gov/niosh/docs/73-11001/default.html>. However, the OSHA standard has not been updated to reflect stricter noise level recommendations issued by NIOSH since then. *See* NIOSH, *Revised Criteria for Occupational Noise Table T-1*, (1998), <https://www.cdc.gov/niosh/docs/98-126/pdfs/98-126.pdf>.

⁶ OSHA, *Field Operations Manual CPL 02-00-164 04-16*, (Apr. 4, 2020), https://www.osha.gov/sites/default/files/enforcement/directives/CPL_02-00-164_1.pdf.

Occupational Safety and Health Act's ("OSH Act") General Duty Clause.⁷ NIOSH research that makes its way into such criteria documents could help strengthen OSHA's enforcement function.

By all accounts, ESAM technology is rapidly spreading through workplaces around the country, making research into its effects on workers' safety and health a top priority. As regulators and legislators begin to take action,⁸ they must be able to do so based on scientific knowledge and understanding. NIOSH's role is to help provide that information to ensure an evidence-based policymaking process.

III. Current State

A considerable number of NIOSH studies have examined job strain and stress in the workplace. NIOSH has even funded limited research into the effect of electronic monitoring technology on workers with computer based jobs (discussed below).⁹ However, to our knowledge, NIOSH has not yet funded research into the effects of worker surveillance practices on non-computer based workers. This section briefly explains the limited research that NIOSH has commissioned. It demonstrates that more fulsome research into ESAM would be in line with the agency's previous work and is necessary to fulfill the agency's mission of protecting worker safety and health.

NIOSH's job stress research program has two primary themes: "[t]o better understand the influence of what are commonly-termed 'work organization' or 'psychosocial' factors on stress, illness, and injury" and "[t]o identify ways to redesign jobs to create safer and healthier workplaces."¹⁰ The website then lists several example research topics within these themes. Very relevant to the goals of this memorandum, this list includes: "[w]ork organization interventions to promote safe and healthy working conditions," "[s]urveillance of the changing nature of work," "[t]he effects of new organizational policies and practices on worker health and safety," and "[w]ork organization, cardiovascular disease, and depression."¹¹

NIOSH's 2020 Cross-Sector "National Occupational Research Agenda" ("NORA") for Healthy Work Design and Well-Being explained the importance of prioritizing research into new technology's effects on workers: "[t]here is a clear need to ... prioritize research, and create and disseminate strategies for safeguarding workers during a time of rapid technological dynamism."¹² Among the areas for future research, the 2020 NORA

⁷ 29 U.S.C. § 654(a)(1); *SeaWorld of Fla., LLC v. Perez*, 748 F.3d 1202, 1207 (D.C. Cir. 2014) (explaining that to support a general duty clause citation, OSHA must show that: "(1) an activity or condition in the employer's workplace presented a hazard to an employee, (2) either the employer or the industry recognized the condition or activity as a hazard, (3) the hazard was likely to or actually caused death or serious physical harm, and (4) a feasible means to eliminate or materially reduce the hazard existed").

⁸ *See, e.g.*, Senator Bob Casey, One Pager: Stop Spying Bosses Act of 2023, (Feb. 2, 2023), https://www.casey.senate.gov/imo/media/doc/stop_spying_bosses_act_one-pager.pdf; Allen Smith, *New York Enacts Law Targeting Amazon Work Rate Quotas*, SHRM, (Dec. 30, 2022), <https://www.shrm.org/resourcesandtools/legal-and-compliance/state-and-local-updates/pages/new-york-law-work-rate-quotas.aspx>; FTC Proposed Rule, Trade Regulation Rule on Commercial Surveillance and Data Security, 87 Fed. Reg. 51273, (Aug. 22, 2022), <https://www.federalregister.gov/documents/2022/08/22/2022-17752/trade-regulation-rule-on-commercial-surveillance-and-data-security>.

⁹ Schleifer et. al., Mood disturbances and musculoskeletal discomfort: Effects of electronic performance monitoring under different levels of VDT data entry performance, *International Journal of Human-Computer Interaction* Volume 8, 1996 - Issue 4, <https://doi.org/10.1080/10447319609526159>.

¹⁰ NIOSH, Stress At Work, (Accessed: Jan 19, 2023), <https://www.cdc.gov/niosh/topics/stress/default.html>

¹¹ *Id.*

¹² NIOSH, National Occupational Research Agenda for Healthy Work Design and Well-Being (Jan. 2020), https://www.cdc.gov/nora/councils/hwd/pdfs/Final-National-Occupational-Research-Agenda-for-HWD_January-2020.pdf.

included: new technological demands on workers, human-machine interaction, and virtual work.¹³ The 2020 NORA acknowledged that “there has been only scattered direct research” on these topics and recognized that the “impact on workers of different types of technology” remains a “[r]esearch gap[.]”¹⁴ Investigating the effects of ESAM technologies is directly relevant to this research objective.

For over two decades, NIOSH’s research into job stress in general has been guided by its 2002 “National Occupational Research Agenda” (“NORA”) on the subject, which helped identify “essential research and other requirements to better understand how work organization is changing, the safety and health implications of these changes, and prevention measures.”¹⁵ The NORA on job stress suggested four areas for future research: (1) data collection on changes in organizational practices in the economy, (2) safety and health effects of new organizational changes, (3) interventional organization of work changes that can protect worker safety and health, and (4) establishing organization of work as a distinct field of public health research and occupational safety and health.¹⁶ In terms of research related to technology, the 2002 NORA did identify the need to conduct research on the safety and health effects of “work intensification,” which it identifies as a result of processes that include “[i]ncreased electronic monitoring.”¹⁷

A search of NIOSH’s research database for research involving electronic monitoring and worker surveillance yields a few interesting results, but they are limited in scope and not recent. One article from 1992 explained the advent of electronic monitoring in computer/office-based jobs, and suggested that employers explore building in “stress allowances” to their electronically-enforced production quotas, which mirror work allowances that some employers create in physically demanding jobs.¹⁸ For example, if a particular task takes 10 minutes to perform, the employer’s electronically-enforced performance standard could allow 11.5 minutes for that task to make a 15 percent allowance for “personal time, rest breaks, machine delay, and ... fatigue.”¹⁹

The other search result was a 1996 randomized controlled experiment that evaluated the effects of electronic performance monitoring on self-reported mood disturbances and ergonomic discomfort.²⁰ The study of 47 office workers found that, “[r]egardless of the level of data-entry performance, the increase in perceived time pressure across the workdays was greater under EPM work management than under no EPM work management.”²¹ Additionally, “[a]mong workers who consistently failed to meet the performance standards (i.e., low and moderate performance), the increases in mood disturbances and musculoskeletal discomfort across the workdays were greater under EPM work management than under no EPM work management.”²² Finally, “stress effects were more evident when keystroke rates were relatively close to the standard than when they were far below the standard.”²³

¹³ *Id.*

¹⁴ *Id.* at 11.

¹⁵ *Id.*

¹⁶ CDC/NIOSH, *The Changing Organization of Work and the Safety and Health of Working People: Knowledge Gaps and Research Directions* vi-vii, (Apr. 2002), <https://www.cdc.gov/niosh/docs/2002-116/pdfs/2002-116.pdf?id=10.26616/NIOSH PUB2002116>.

¹⁷ *Id.* at 14.

¹⁸ L.M. Schleifer & R.L. Shell, A review and reappraisal of electronic performance monitoring, performance standards and stress allowances 51, *Applied Ergonomics*, Volume 23, Issue 1, (February 1992), [https://doi.org/10.1016/0003-6870\(92\)90010-S](https://doi.org/10.1016/0003-6870(92)90010-S).

¹⁹ *Id.*

²⁰ Schleifer et. al., Mood disturbances and musculoskeletal discomfort: Effects of electronic performance monitoring under different levels of VDT data entry performance, *International Journal of Human-Computer Interaction* Volume 8, 1996 - Issue 4, <https://doi.org/10.1080/10447319609526159>.

²¹ *Id.*

²² *Id.*

²³ *Id.*

Further, and as noted above,²⁴ NIOSH has funded extensive research on both the physical and mental health effects of job strain. For example, NIOSH-funded research found that job strain and long work hours contribute to significantly higher rates of moderate to severe suicidal ideation in working adults.²⁵ Other research indicates that job strain increases the risk of musculoskeletal pain by up to 62%,²⁶ and that job strain significantly increases the risk of requiring a disability pension due to musculoskeletal disorders (“MSDs”).²⁷ This potential link between job strain and musculoskeletal disease underscores the need for additional research into the health effects of ESAM, given the propensity of ESAM-connected practices to generate both.

As explained in this section, NIOSH has funded research into workplace mental health issues. It has even funded limited research into the connection between electronic monitoring and mental health effects. However, ESAM technology has become vastly more sophisticated and prevalent across sectors since the 1990s. Given that more and more companies are implementing ESAM practices,²⁸ there is an urgent need for NIOSH to support research that accounts for these changes on a scale commensurate with the pervasiveness of this technology.

IV. Proposed Action

NIOSH should fund further research to study ESAM’s effect on job strain and physical injury.

A. Legal authority

The NIOSH director has clear authority to dictate research. Congress and President Richard Nixon enacted the Occupational Safety and Health Act (“OSH Act”) in 1970 in part to “provid[e] for research in the field of occupational safety and health.”²⁹ The OSH Act created NIOSH to carry out the research and recommendation functions of the Act.³⁰ Statutory language empowers the NIOSH director to, after consultations with OSHA, “conduct (directly or by grants or contracts) research, experiments, and demonstrations relating to occupational safety and health, including studies of psychological factors involved, and relating to innovative methods, techniques, and approaches for dealing with occupational safety and health problems.”³¹

29 U.S.C. § 671(d) further (and directly) empowers the NIOSH director: “[u]pon his own initiative, or upon the request of the Secretary or the Secretary of Health and Human Services, the Director is authorized ... to conduct such research and experimental programs as he determines are necessary for the development of criteria for new and improved occupational safety and health standards.”

²⁴ *Supra* notes 12-13 and accompanying text.

²⁵ Sarah Mitchell & BongKyoo Choi, *Job Strain, Long Work Hours, and Suicidal Thoughts*, NIOSH Science Blog, (Sept. 13, 2018), <https://blogs.cdc.gov/niosh-science-blog/2018/09/13/suicide-prevention/>.

²⁶ Sohrab Amiri & Sepideh Behnezhad, *Is job strain a risk factor for musculoskeletal pain? A systematic review and meta-analysis of 21 longitudinal studies*, 181 *Pub. Health* 158 (2020), <https://www.sciencedirect.com/science/article/abs/pii/S0033350619303932>.

²⁷ Anne Mantyniemi, et al., *Job strain and the risk of disability pension due to musculoskeletal disorders, depression or coronary heart disease: a prospective cohort study of 69 842 employees*, 69 *Occupational & Environ. Med.* 574 (2012), <https://pubmed.ncbi.nlm.nih.gov/22573793/>.

²⁸ Kate Morgan and Delaney Nolan, *How worker surveillance is backfiring on employers*, BBC, (Jan. 30, 2023), <https://www.bbc.com/worklife/article/20230127-how-worker-surveillance-is-backfiring-on-employers>.

²⁹ 29 U.S.C. § 651(5).

³⁰ 29 U.S.C. § 671(a).

³¹ 29 U.S.C. § 669(a)(1) (authorizing the Secretary of Health and Human Services to engage in these activities); 29 U.S.C. § 669(e) (delegating authority from the Secretary of Health and Human Services to the NIOSH Director “to the extent feasible”).

B. Compatibility with NIOSH research priorities

Research into worker impacts of ESAM is relevant to several NORA objectives, including:

- NORA for Healthy Work Design and Well-Being³²
 - Objective 3: Address the Safety and Health Implications of Advancing Technology
 - Objective 4: Reduce Work Organization-Related Chronic Health Conditions among Workers
 - Objective 6: Improve the Safety, Health, and Well-being of Workers through Healthier Work Design and Better Organizational Practices
- NORA for Musculoskeletal Health³³
 - Objective 1: Define the incidence and impact of musculoskeletal disorders
 - Objective 2: Understand the risk factors for work-related MSDs
 - Objective 4: Develop and evaluate interventions to prevent MSDs and limit disability due to MSDs
- NORA for Transportation, Warehousing and Utilities³⁴
 - Objective 7: Proactively address the safety implications of emerging technology
- NORA for Wholesale and Retail Trade³⁵
 - Objective 1: Reduce occupational MSDs, i.e., overexertion injuries among WRT workers
- NORA for Manufacturing³⁶
 - Objective 3: Examine emerging risks from new technologies and explore ways in which new technologies can advance occupational safety and health in manufacturing

C. Fund research on the effects of ESAM on workers' physical and mental health, including musculoskeletal disorders and job strain

NIOSH should conduct or commission research in several areas related to ESAM, answering some or all of the following research questions:

- ESAM and job strain
 - What are the conditions under which ESAM heightens workers' risk for job strain?
 - What types of ESAM practices and technology contribute to more severe job strain?
 - What are the rates of job strain and other mental health issues among workers who are exposed to ESAM?
 - What physical diseases, disorders, and manifestations arise in workers affected by ESAM-associated job strain?

³² NIOSH, National Occupational Research Agenda for Healthy Work Design and Well-Being (Jan. 2020), https://www.cdc.gov/nora/councils/hwd/pdfs/Final-National-Occupational-Research-Agenda-for-HWD_January-2020.pdf.

³³ NIOSH, National Occupational Research Agenda for Musculoskeletal Health (Oct. 2018), <https://www.cdc.gov/nora/councils/mus/pdfs/National-Occupational-Research-Agenda-for-Musculoskeletal-Health-October-2018.pdf>.

³⁴ NIOSH, National Occupational Research Agenda for Transportation, Warehousing and Utilities (Feb. 2018), https://www.cdc.gov/nora/councils/twu/pdfs/National_Occupational_Research_Agenda_for_TWU_Feb_2018.pdf.

³⁵ NIOSH, National Occupational Research Agenda for Wholesale and Retail Trade (Aug. 2018), <https://www.cdc.gov/nora/councils/wrt/agenda.html>.

³⁶ NIOSH, National Occupational Research Agenda for Manufacturing (Jan. 2018), <https://www.cdc.gov/nora/councils/wrt/agenda.html>.

- ESAM and repetitive stress injuries
 - What are the conditions under which ESAM heightens workers’ risk for repetitive stress injuries and other musculoskeletal injury?
 - What features of ESAM technologies are the biggest contributors to this risk?
 - Does the risk of repetitive motion injuries suggest a clear limit on the “safe” pace of work for workers in particular industries or workplaces?
 - What are the conditions under which mental health and job strain effects of ESAM contribute to physical injury risk?
- ESAM and industrial accidents
 - Under what conditions, if any, does increased pace-of-work lead to more frequent workplace accidents?
 - Does the risk of workplace accidents suggest a clear limit on the “safe” pace of work for workers in particular industries or workplaces?
- Physical health and safety generally
 - How does employer use of ESAM affect workers with disabilities and their access to reasonable accommodations in the workplace?
 - Do employers’ and vendors’ claims that ESAM technologies reduce injury rates stand up to independent evaluation?³⁷
 - Does employer use of ESAM discourage workers from reporting workplace safety and health concerns?

The research questions above could be evaluated under criteria based on NIOSH’s Worker Well-Being Questionnaire (“WellBQ”). The research directly related to employees should also include demographic data, including race/ethnicity, gender, and disability status, to the fullest extent possible without risking identification. This would assist OSHA and NIOSH in future policymaking and in developing research focused on particularly harmed communities.

The precise design of the research on these topics should, of course, be determined by the researchers undertaking these projects, but potential research designs include:

- Survey research: much of the existing limited NIOSH-funded research on job stress is based primarily on survey research.³⁸ The surveys could be designed using tools like the NIOSH WellBQ. The survey respondents could be composed of employees and employers, although both may be reluctant to participate for various reasons. Employers may not want to be transparent about their ESAM practices for management or competitive reasons, whereas workers may be hesitant out of fear of retaliation.³⁹

³⁷ See, e.g., Mentore, (Accessed: Feb. 1, 2023), <https://mentore.ai/distribution/> (claiming that the technology “can significantly reduce injuries”).

³⁸ See e.g., Ahmad Yassin, et. al., Workplace Determinants of Depression, Anxiety, and Stress in U.S. Mariners during the COVID-19 Pandemic, (Dec. 10, 2022), *Int. J. Environ. Res. Public Health* 2022, 19(24), 16628, <https://doi.org/10.3390/ijerph192416628>; Hope Tiesman, et. al., Workplace Violence and the Mental Health of Public Health Workers During COVID-19, (Nov. 13, 2022), *Am. J. Prevent. Med.*, <https://doi.org/10.1016/j.amepre.2022.10.004>; Ja Gu, et. al., Mental Health Treatment Reported by US Workers before and during the COVID-19 Pandemic: United States (2019–2020), (Dec. 30, 2022), *Int. J. Environ. Res. Public Health* 2023, 20(1), 651; <https://doi.org/10.3390/ijerph20010651>.

³⁹ Though workers could obviously be kept anonymous and the OSH Act’s anti-retaliation and whistleblower protection provision likely protects workers who participate in NIOSH research. 29 U.S.C. § 660(c) (stating that “[n]o person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this chapter or has testified or is about to testify in any such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this chapter”).

- Randomized controlled trial (“RCT”): the one NIOSH-funded study into electronic monitoring and job stress that the authors could locate was based on an RCT, wherein workers were exposed to differing levels of electronic monitoring and their data entry speeds and self-reported moods were measured.⁴⁰ Of course, this approach poses substantial ethical problems related to purposeful exposure of individuals to stressful conditions, so it may not be advisable.⁴¹ However, an RCT approach could be useful in evaluating interventions designed to remedy ESAM-created hazards.
- Retrospective natural experiment: examining reported injury rates on either side of a company’s decision to institute or discontinue ESAM practices – or disciplinary action based on them – could be a valuable contribution to this area of research. For example, a report from the Strategic Organizing Center discussed the potential connection between Amazon’s temporary suspension of disciplinary action based on its ESAM production systems and a temporary drop in warehouse injury rates.⁴²

Additionally, NIOSH should look for opportunities to fund research that would shed light on the prevalence of ESAM in workplaces, both across the economy as a whole and within specific industries. While a truly comprehensive survey of employers might prove difficult due to the need for voluntary employer cooperation, any research that reliably sheds light on where and how employers are using ESAM would provide crucial information to both enforcement agencies and workers about these technologies and practices.

V. Risk Analysis

This proposal carries with it very little litigation risk for the agency. NIOSH’s statutory authority to commission research of this kind is clearly defined in the OSH Act and there are very few procedural requirements associated with such a policy action.

⁴⁰ Lawrence Schleifer, et. al., Mood disturbances and musculoskeletal discomfort: Effects of electronic performance monitoring under different levels of VDT data-entry performance, *Int. J. Human-Computer Interact.* (1996), <https://doi.org/10.1080/10447319609526159>.

⁴¹ Researchers could avoid ethical concerns by using less direct measures. For example, rather than expose workers directly to harmful technology, one study had participants read one of a series of news articles that included different perspectives on technological progress (i.e. an article about robots and their business applications versus an article about robots without mention of business application) and then asked them to self-report their perception of their level of job-security. *See* Yam, K. C., Tang, P. M., Jackson, J. C., Su, R., & Gray, K., The Rise of Robots Increases Job Insecurity and Maladaptive Workplace Behaviors: Multimethod Evidence 5, *Journal of Applied Psychology*, (Oct. 10, 2022), <http://dx.doi.org/10.1037/apl0001045>.

⁴² Strategic Organizing Center, *Primed for Pain: Amazon’s Epidemic of Workplace Injuries* 5, (May 2021), <https://thesoc.org/wp-content/uploads/2021/02/PrimedForPain.pdf>.



PROPOSED ACTION
MEMORANDUM

Requesting that OSHA Update Guidance
Documents to Address Risks Posed by Electronic
Surveillance and Algorithmic Management

Occupational Safety and Health Administration, Department of Labor

March 2023

I. Introduction

Electronic surveillance and algorithmic management (“ESAM”) practices can pose risks to workers’ physical safety and health by encouraging an unhealthy pace of work that increases the risk of musculoskeletal disorders (“MSDs”). After Congress used the Congressional Review Act (“CRA”) to invalidate Occupational Safety and Health Administration’s (“OSHA”) ergonomic standard in 2001, OSHA has issued sector-specific ergonomics guidance to advise employers of best practices to prevent MSDs. However, none of these guidance documents discuss the role that ESAM can play in creating ergonomic risk. Additionally, there is not currently a comprehensive ergonomic guidance document for the warehousing sector, in which ESAM and MSDs are both especially pervasive.

This memorandum proposes that OSHA: 1) update existing guidance documents for poultry processing and grocery warehousing to include a discussion of ESAM’s role in creating ergonomic risk; 2) issue a new guidance document that comprehensively identifies ergonomic risks and solutions in warehousing, including a discussion of ESAM’s role; and 3) distribute these guidance documents by mail or email to the largest employers in the relevant sectors.

II. Justification

OSHA does not have an enforceable rule on ergonomics because Congress used the CRA to repeal its 2000 rule (discussed in more detail in the next section). However, issuing guidance can increase awareness of the ergonomic risks posed by ESAM among employers and workers. It also may help support OSHA’s enforcement objectives under the OSH Act’s General Duty clause.

The OSH Act’s General Duty clause requires that employers “furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.”¹ In order to support a citation against an employer for a violation, OSHA must demonstrate that: “(1) an activity or condition in the employer's workplace presented a hazard to an employee, (2) either the employer or the industry recognized the condition or activity as a hazard, (3) the hazard was likely to or actually caused death or serious physical harm, and (4) a feasible means to eliminate or materially reduce the hazard existed.”²

Especially given that OSHA has recently found some employers to be liable under the General Duty clause for ergonomic hazards, employers may be newly receptive to suggestions from the agency as to how they may be able to decrease injury risks posed by ESAM technologies.³ As the Washington State Department of Labor and Industries explained in its citation of Amazon warehouses for ergonomic hazards, “[t]here is a direct connection between ... employee monitoring and discipline systems and workplace MSDs (musculoskeletal disorders).”⁴ This “direct connection” should be explained fully in OSHA guidance.

OSHA’s most recent field operations manual explained several ways to establish industry recognition. Among these methods are pointing to: 1) “[s]tatements by safety or health experts who are familiar with the relevant

¹ 29 U.S.C. § 654(a)(1).

² *SeaWorld of Fla., LLC v. Perez*, 748 F.3d 1202, 1207 (D.C. Cir. 2014).

³ OSHA, *US Department of Labor finds Amazon exposed workers to unsafe conditions, ergonomic hazards at three more warehouses in Colorado, Idaho, New York*, (Feb. 1, 2023), <https://www.osha.gov/news/newsreleases/national/02012023>.

⁴ Washington State Department of Labor and Industries, *Citation and Notice: Amazon Services 2* (May 4, 2021), <https://s3.documentcloud.org/documents/20787752/amazon-dupont-citation-and-notice-may-2021.pdf>.

conditions (regardless of whether they work in the employer’s industry),” and 2) “other agency publications.”⁵ The existence and employer awareness of an ESAM guidance document thus could be one piece of evidence that OSHA uses to support a general duty clause citation.⁶ Guidance is also critical to aid companies looking for ways to do right by their workers.

III. Current State

Ergonomics is a widely-recognized area of workplace risk, and OSHA’s regulatory history with the subject reflects this reality. Unfortunately, OSHA’s attempt to regulate this risk through an enforceable occupational safety and health standard was thwarted by Congress. OSHA’s action on the subject since then has been limited to subregulatory guidance and enforcement under the OSH Act’s General Duty clause.

After decades of increasing injury rates, worker organizing, and regulatory fits and starts, OSHA issued a final ergonomics standard in November 2000. However, Congress repealed the ergonomics standard soon thereafter. The CRA is a statute that allows Congress to overturn rules promulgated by federal agencies.⁷ When Congress repeals a regulation under the CRA, the issuing agency is not permitted to issue a regulation that is “substantially the same.”⁸ The 107th Congress was the first to use the CRA, and it used the law to invalidate OSHA’s ergonomics standard.⁹ Since the repeal, OSHA has not attempted to regulate in the ergonomics area beyond publishing voluntary guidance for a limited number of industries and issuing a small number of citations to employers under its General Duty Clause authority.¹⁰

⁵ OSHA, Field Operations Manual Directive CPL 02-00-164 at 4-15, 4-16, (Apr. 14, 2020), https://www.osha.gov/sites/default/files/enforcement/directives/CPL_02-00-164_1.pdf.

⁶ While there is fairly widespread agreement the existence of such guidance can be at least a piece of evidence to help establish one of four elements required to support a citation, *see* Adele L. Abrams, et. al., *OSHA’s General Duty Clause: A Guide to Enforcement and Legal Defenses* 6, American Society of Safety Professionals, (Accessed: Feb. 27, 2023), https://www.assp.org/docs/default-source/standards-documents/osha's-general-duty-clause---abrams.pdf?sfvrsn=89cdb147_2 (listing industries that “have exposure for GDC citations” about workplace violence because of the existence of sector-specific OSHA guidance documents on the subject); *see also* Phillip B. Russell, *OSHA Issues COVID-19 Guidance for Construction Workforces*, (Apr. 23, 2020), <https://ogletree.com/insights/osha-issues-covid-19-compliance-guidance-for-construction-workforces/> (an employer-side law firm explaining that “OSHA’s guidance documents are not legally binding, but they could be used to establish knowledge for an alleged violation or be the foundation of a General Duty Clause violation.”), there is scant and conflicting administrative and judicial adjudicatory treatment of the question of how helpful guidance documents are to OSHA’s establishment of a viable citation *See, e.g., Secretary of Labor v. Integra Health Management, Inc.*, OSHRC Docket No. 13-1124 at 24, 40 (Mar. 4, 2019), https://www.oshrc.gov/assets/1/18/Integra_Health_Management_Inc_Docket_13-1124_Combined_post.pdf?8328 (dueling concurring opinions disagree about the effect of OSHA’s guidance documents on the validity general duty clause citation); *Secretary of Labor v. UHS of Westwood Pembroke, Inc. and UHS of Delaware, Inc.* OSHRC 17-0737 at 10, (Mar. 3, 2022), https://www.oshrc.gov/assets/1/18/UHS_of_Westwood_Pembroke_Inc_and_UHS_of_Delaware_Inc_17-0737_Commission_and_ALJ_Decisions_030322_siigned.pdf?11913 (an OSHA ALJ explaining that the fact that “OSHA published guidance documents to inform the industry of the hazard and ways to address it” was indicative that employers in the industry should have been aware of the hazard).

⁷ Congressional Research Service, *The Congressional Review Act (CRA): Frequently Asked Questions*, Summary (Nov. 12, 2021), <https://sgp.fas.org/crs/misc/R43992.pdf>.

⁸ *See* Legal Memo Appendix B.

⁹ While the CRA bars OSHA from issuing a rule that is identical to the ergonomics standard, as explained in the Legal Memo included alongside this memorandum, it does not prevent the agency from issuing a different ergonomics standard that addresses ergonomic hazards, including those to which ESAM contributes.

¹⁰ In fact, OSHA recently cited three Amazon facilities for ergonomic hazards. In the citations, the agency details how employees at these facilities were exposed to ergonomic hazards, identifying specific tasks and package handling processes that heighten workers’ risks for musculoskeletal injuries, and makes reasonable recommendations for the

Rather than attempt to develop and issue a new, enforceable ergonomics standard, between 1993 and 2013 OSHA issued several sector-specific subregulatory guidance documents on ergonomic hazards in particular industries. The documents describe how particular features of work in the industries can contribute to ergonomic risk and suggest ways that employers can aim to mitigate these risks. OSHA has issued ergonomics guidance documents for: nursing homes, retail grocery stores, poultry processing, and meatpacking, among other sectors.¹¹ OSHA’s website also provides limited ergonomics resources for the warehousing sector.¹²

The existing guidance document for the poultry processing industry, for example, identifies best practices for developing an ergonomic program with worker input, management support, risk identification, and progress evaluation.¹³ The guidance also identifies ergonomic hazards specific to the industry and highlights corresponding engineering solutions (i.e. changes to workstation design, etc.) and administrative solutions (e.g., rotating workers, increasing breaks, etc.) to mitigate ergonomic risk.

None of the ergonomic guidance documents, however, discusses the ways in which ESAM can heighten the risk of ergonomic injury.

Additionally, the existing guidance documents on ergonomics do not include a comprehensive treatment of the warehousing industry where many of the most egregious ergonomic hazards present themselves in today’s world of e-commerce.

IV. Proposed Action

OSHA should incorporate discussion of ESAM in its sector-specific guidance on ergonomics hazards and issue warehouse industry ergonomics guidance.

A. Legal authority

Agencies have the authority to issue and modify guidance documents, which include agency policies, opinions, and recommendations (such as bulletins, circulars, letters, instructional memoranda, manuals, enforcement policies, alerts, and FAQs). Guidance documents, and changes to them, are exempt from the APA’s notice and comment requirements under the APA’s exception for “interpretive rules, general statements of policy, or rules of agency organization, procedure or practice.”¹⁴

company to mitigate the risk. For example, a New York warehouse was cited because employees there were required to “repeatedly lift[] packages” at a “high frequency, placing them at risk for lower back injuries.” To mitigate this risk, OSHA recommended, among other things, that Amazon install new machines to reduce manual lifting, redesigned workstations, and multiple person lifts. However, OSHA’s citations and news release failed to mention a major cause of Amazon’s twice-the-national-average injury rate: the company’s grueling worker surveillance and automated management regime. *See* OSHA, *US Department of Labor finds Amazon exposed workers to unsafe conditions, ergonomic hazards at three more warehouses in Colorado, Idaho, New York*, (Feb. 1, 2023), <https://www.osha.gov/news/newsreleases/national/02012023>.

¹¹ OSHA, Safety and Health Topics: Ergonomics, (Accessed: Dec. 16, 2022), <https://www.osha.gov/ergonomics/control-hazards#guidelines>.

¹² OSHA, Warehousing, (Accessed: Feb. 27, 2023), <https://www.osha.gov/warehousing/hazards-solutions>.

¹³ OSHA, Prevention of Musculoskeletal Injuries in Poultry Processing OSHA 3213-12R 2013, (Accessed: Feb. 27, 2023), <https://www.osha.gov/sites/default/files/publications/OSHA3213.pdf>.

¹⁴ 5 U.S.C. § 553(b)(A); The OSH Act also requires notice-and-comment procedures that are similar to the APA’s requirements for standards that the agency issues. Guidance documents are not standards, “which require[] conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment.” 29 U.S.C. § 652(8).

The OSH Act was enacted to, in part, “encourag[e] employers and employees in their efforts to reduce the number of occupational safety and health hazards at their places of employment, and to stimulate employers and employees to institute new and to perfect existing programs for providing safe and healthful working conditions.”¹⁵ Issuing guidance that explains the connection between certain worker surveillance and automated management practices and pace-of-work induced ergonomic injuries in workers is precisely in line with this statutory purpose.

B. Action 1: Update ergonomics guidance documents for poultry processing and grocery warehousing to include discussion of worker surveillance

In addition to amending various existing sections of these guidance documents (as described below), OSHA could include in each document a prominent section dedicated to a discussion of the effect that ESAM technologies and practices can have on workers’ ergonomic risk. The grocery warehousing eTool, for example, explains that “[w]ork rates that require [workers] to pick orders rapidly will benefit the company, in the short run, ... [h]owever, these benefits may be lost due to higher injury rates if work standards exceed the capabilities of individuals.”¹⁶ A new grocery warehousing guidance document could identify this repetitive motion risk, and highlight the fact that the pressure created by ESAM often pushes workers past their capabilities and heightens their risk of injury. Additionally, the document could discuss how having non-transparent ESAM technologies – for example, wherein workers do not know the rate they are supposed to hit or the amount of time off task that they have accrued – dissuades workers from taking breaks when needed to ensure their health and safety. As the grocery warehousing eTool explains: consistently working through breaks puts a worker “at a greater risk of musculoskeletal disorders (MSDs), accidents, and reduced quality of work due to operating at higher fatigue levels.”¹⁷

Abatement methods for ESAM-related ergonomic risk that the guidance documents could suggest include:

- Quota and time off task transparency: employers should provide transparency about the rate at which workers are expected to work and their progress toward hitting that goal.¹⁸ This would permit employees to plan their rest time rather than race against a clock they cannot see.
- Quota development: workers should be involved in the development of productivity metrics to ensure reasonableness and safety. Quotas should be no more frequent than daily.¹⁹ Employers could also hire a competent work-time consultant specializing in ergonomics and health and safety to survey work tasks and recommend appropriate and safe quotas.²⁰
- Customization and accommodation: ESAM technologies should be calibrated to allow for variation in physical capabilities among workers, and to ensure workers with disabilities have access to reasonable accommodation, as required by federal law.

The poultry processing guidance document could include discussion of ESAM technology in several parts:

¹⁵ 29 U.S.C. § 651(b)(1).

¹⁶ OSHA, Grocery Warehousing: Work Practice, (Accessed: Feb. 27, 2023), <https://www.osha.gov/etools/grocery-warehousing/work-practice>.

¹⁷ *Id.*

¹⁸ *See* New York Warehouse Worker Protection Act, Section 781. <https://legislation.nysenate.gov/pdf/bills/2021/S8922A>.

¹⁹ As proposed in legislation introduced to the New York City Council. *See* Wrongful discharge from employment, (Introduced Dec. 7, 2022), <https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=5958217&GUID=44D72CEC-FE82-4A43-BA31-4BB15FBC15EB>.

²⁰ As suggested in the grocery warehousing eTool. OSHA, Grocery Warehousing: Work Practice, (Accessed: Feb. 27, 2023), <https://www.osha.gov/etools/grocery-warehousing/work-practice>.

- Risk factors²¹: the guidance lists several ergonomic risk factors commonly confronted in poultry processing, including repetition, forceful exertion, awkward postures, and vibration. At the end of the list, the guidance notes that “[c]old temperatures in combination with the above risk factors may also increase the potential for MSDs to develop.” The guidance could add a similar statement about ESAM: “to the extent that ESAM technologies apply pressure to workers to move at an unsafe pace, they can increase the potential for MSDs to develop.”
- Administrative solutions²²: the guidance explains several “administrative solutions” that are used effectively by poultry processors, including rotating workers between cold and room-temperature settings, staffing “floating” workers to provide breaks between scheduled ones, and allowing pauses. This section could be amended to explicitly suggest that employers calibrate their ESAM practices to allow for these rotations and micro-breaks.

The grocery warehousing guidance could include discussion of ESAM technology in several parts:

- Skipping break periods²³: the guidance explains that working through breaks puts a worker “at a greater risk of musculoskeletal disorders (MSDs), accidents, and reduced quality of work due to operating at higher fatigue levels.” The guidance could be amended to explicitly highlight the role that ESAM design can play in workers’ failure to take necessary breaks to protect themselves from ergonomic risk. Additionally, the guidance notes that “[e]rgonomic improvements may not justify an increase in pick rates. The benefits of reduced risk could easily be lost if rates are increased because the task appears to be easier.” For this reason, the guidance could recommend against ESAM practices that increase the required rate over time by routinely disciplining or firing workers who perform in the bottom proportion of workers.²⁴
- Taking shortcuts²⁵: the guidance highlights the risks that shortcuts can pose to workers and recommends that employers “[f]actor proper work practice into pick times. Time limits should not force employees to use shortcuts like reaching across a pallet instead of walking around the pallet for better access.” This section could be amended to highlight the role that ESAM systems can play in encouraging workers to work beyond safe limits.

C. Action 2: Issue a new ergonomics guidance document for warehousing that includes discussion of ESAM and the risks it can create for workers.

The specifics of this new guidance document for warehousing should be informed by OSHA’s extensive experience with ergonomics. There are several resources to which OSHA can refer to develop the guidance document, including:

- The OSHA eTool for grocery warehousing²⁶: this guidance resource explains common ergonomic hazards present in the grocery warehousing sector and suggests ways that employers can mitigate

²¹ OSHA, Prevention of Musculoskeletal Injuries in Poultry Processing OSHA 3213-12R 2013 5, (Accessed: Feb. 27, 2023), <https://www.osha.gov/sites/default/files/publications/OSHA3213.pdf>.

²² OSHA, Prevention of Musculoskeletal Injuries in Poultry Processing OSHA 3213-12R 2013 8, (Accessed: Feb. 27, 2023), <https://www.osha.gov/sites/default/files/publications/OSHA3213.pdf>.

²³ OSHA, Grocery Warehousing: Work Practice, (Accessed: Feb. 27, 2023), <https://www.osha.gov/etools/grocery-warehousing/work-pract>.

²⁴ Colin Lecher, *How Amazon automatically tracks and fires warehouse workers for ‘productivity’*, The Verge, (Apr. 25, 2019), <https://www.theverge.com/2019/4/25/18516004/amazon-warehouse-fulfillment-centers-productivity-firing-terminations> (explaining how Amazon sends the bottom 5 percent of performers to a training plan.)

²⁵ OSHA, Grocery Warehousing: Work Practice, (Accessed: Feb. 27, 2023), <https://www.osha.gov/etools/grocery-warehousing/work-pract>.

²⁶ OSHA, Grocery Warehousing, (Accessed: Feb. 27, 2023), <https://www.osha.gov/etools/grocery-warehousing/>.

those hazards. The resource is divided into four categories: transport techniques, storage, packaging, and work practice.

- OSHA’s recent citations of Amazon facilities for ergonomic hazards²⁷: OSHA’s citations of Amazon facilities across three states identified specific hazards to ergonomic health and made recommendations about how the hazard should be abated. For example, the citation identifies “Inbound Fluid Unloading” as a process wherein Amazon could decrease ergonomic risk by ensuring that “trailers received from Amazon facilities . . . be palletized, on carts or in shuttle containers.” These practices and abatement measures could serve as a basis for a guidance document on the subject for the warehousing sector more broadly.
- OSHA’s existing webpage on hazards in the warehousing sector²⁸: this webpage includes limited discussion of some of the ergonomic hazards and recommended remedies present in warehousing. OSHA could supplement this information and update it to include new information gleaned from OSHA’s enforcement efforts in warehousing.
- Washington State ergonomic citation²⁹: a Washington State Department of Labor and Industries citation about ergonomic hazards at an Amazon warehouse concluded that “[t]here is a direct connection between Amazon’s employee monitoring and discipline systems and workplace MSDs (musculoskeletal disorders).”

In addition to general ergonomic guidance from existing resources and research, the new proposed guidance document should devote a prominent section to the role that ESAM plays in creating ergonomic risk in warehousing. Such a section could include principles discussed in Action 1 above.

D. Action 3: Send these guidance documents under a cover letter to employers in relevant industries.

After developing the guidance, the OSHA administrator should send the guidance documents to employers to ensure their awareness.

V. Risk Analysis

This proposal carries with it very little litigation risk for the issuing agency. First, as explained above, these are guidance documents, which agencies have the discretion to create and amend without going through the APA’s and OSH Act’s notice-and-comment procedures. OSHA has used its authority to publish such resources many times, including several guidance documents on the issue of sector-specific ergonomic risk. To ensure that there are no procedural issues, OSHA can include its routine disclaimers to clarify that the documents are nonbinding³⁰ and avoid using mandatory language in the document.

²⁷ OSHA, *US Department of Labor finds Amazon exposed workers to unsafe conditions, ergonomic hazards at three more warehouses in Colorado, Idaho, New York*, (Feb. 1, 2023), <https://www.osha.gov/news/newsreleases/national/02012023>.

²⁸ OSHA, *Warehousing*, (Accessed: Feb. 27, 2023), <https://www.osha.gov/warehousing/hazards-solutions>.

²⁹ Washington State Department of Labor and Industries, *Citation and Notice: Amazon Services 2* (May 4, 2021), <https://s3.documentcloud.org/documents/20787752/amazon-dupont-citation-and-notice-may-2021.pdf>.

³⁰ *See, e.g.*, OSHA, *Prevention of Musculoskeletal Injuries in Poultry Processing* OSHA 3213-12R, (2013), <https://www.osha.gov/sites/default/files/publications/OSHA3213.pdf> (explaining that the “guidance document is not a standard or regulation, and it creates no new legal obligations. It contains recommendations as well as descriptions of mandatory safety and health standards. The recommendations are advisory in nature, informational in content, and are intended to assist employers in providing a safe and healthful workplace”).

Second, the CRA does not present a bar to OSHA's issuance of guidance. Assuming threshold questions - like reviewability and standing - could be met,³¹ a litigant might argue that the CRA's "salt-the-earth" provision, which bars an agency from re-issuing a regulation that is "substantially the same" as one that Congress invalidated, should bar OSHA from issuing guidance on ergonomics. The CRA lacks a specific definition of the phrase "substantially the same." However, even under a rather agency-adverse interpretation of "substantially the same" that would require an agency to completely change the form and substance of a regulation that Congress has repealed using the CRA (see Legal Memo Appendix B #6), a CRA-based argument should fail for at least two reasons. First, issuing ergonomics *guidance* rather than an enforceable workplace standard is not merely a substantial change in the method of regulation – the former is not regulation at all. Second, the ergonomics standard applied across the economy with very few industries exempted from its requirements. In contrast, even assuming the guidance were considered regulation, the ergonomics guidance proposed here would be sector-specific, which changes its form and substance.

³¹ No small feat themselves, as 1) there is some case law that suggests that determinations under the CRA are not judicially reviewable, *see Montanans For Multiple Use v. Barbouletos*, 568 F.3d 225, 229 (D.C. Cir. 2009) (explaining that a section of the statute "unequivocal[ly]" "denies courts the power to void rules on the basis of agency noncompliance with the" CRA), and 2) guidance is inherently nonbinding and imposes no new legal obligations on parties, so it is not clear whether a plaintiff could establish that they suffered an injury as a result of OSHA's issuance of guidance.)



LEGAL MEMO

OSHA's Authority to Begin a Regulatory Process
on Workplace Electronic Surveillance and
Algorithmic Management

Occupational Safety and Health Administration, Department of Labor
March 2023

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I. Questions Presented

This memorandum considers four questions:

- First, what is the scope of the Occupational Safety and Health Administration’s (“OSHA”) statutory authority under the Occupational Safety and Health Act (“OSH Act”) to regulate novel workplace hazards posed by electronic surveillance and algorithmic management (“ESAM”)?
- Second, does OSHA have the statutory authority to regulate the physical hazards created by ESAM and does Congress’s use of the Congressional Review Act (“CRA”) to invalidate OSHA’s ergonomics standard pose an obstacle to the agency’s issuance of such regulation?
- Third, does OSHA have existing statutory authority to regulate the mental health hazards presented by ESAM?
- Fourth, does the Major Questions Doctrine (“MQD”) pose an obstacle to the agency’s issuance of such regulation?

II. Short Answer

This memorandum concludes, first, that the OSH Act empowers OSHA with broad authority to protect workers, and especially requires the agency to do so against newly-understood hazards. The OSH Act’s text, recent Supreme Court precedent, and the legislative and industrial history of the law all buttress this conclusion. Second, the CRA does not pose an obstacle to the agency’s ability to regulate the physical injury effects of ESAM. Under any reasonable interpretation of the law’s admonition on issuing a rule that is “substantially the same” as the invalidated rule, an ESAM standard would not fit such a definition. Third, mental health is clearly an important component of occupational safety and health, as evinced in law and policy, and therefore falls well within OSHA’s regulatory purview. Finally, the Supreme Court’s new MQD does not pose an obstacle to such a regulation.

III. Facts

This memorandum incorporates the definitions and factual background explained in the Definitions and Background document for this policy package.

IV. Discussion

This section proceeds in four parts. First, it explains that Congress’ statutory mandate for OSHA requires the agency to regulate workplace hazards as they arise. Second, it dispels the notion that Congress’s decision to use the CRA to invalidate OSHA’s ergonomics standard would present an obstacle to OSHA issuing an ESAM standard that protects workers from musculoskeletal risk posed by increased pace of work. Third, it explains OSHA’s existing statutory authority to regulate the mental health effects of ESAM, as they present themselves physiologically and on their own. Finally, it briefly discusses the Supreme Court’s new MQD and why a hypothetical OSHA ESAM standard could be crafted to survive judicial scrutiny.

For the purposes of this discussion, a hypothetical ESAM standard would focus primarily on 1) preventing physical injuries that occur as both a manifestation of mental health effects and because of the increased pace of work enforced and enabled by ESAM and 2) preventing mental health injury due to job strain that occurs as a result of ESAM.

A. OSHA has substantial authority to protect workers from health hazards, and must protect workers from new hazards as they arise.

As this section explains, Congress enacted the OSH Act during a period of great industrial upheaval in the post-war period. Cognizant of rapidly-changing working conditions across the labor force, Congress created OSHA to develop occupational safety and health standards that protect workers from both existing and novel threats. While worker surveillance is hardly novel, the ESAM technologies that firms are implementing across the economy are – as are the significant health and safety threats they pose. OSHA must use its clearly-delineated statutory authority to protect workers from these hazards.

1. The OSH Act’s text empowers OSHA with broad authority to protect workers against occupational safety and health hazards, especially novel ones.

Congress enacted the OSH Act in 1970 with the expressed purpose of “assur[ing] so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve [the nation’s] human resources...[.]”¹ The statute explained thirteen ways in which the new law would achieve this goal, including: “by authorizing [OSHA] to set mandatory occupational safety and health standards” and “by providing for the development and promulgation of occupational safety and health standards.”² Additionally, the statute imposes a duty on employers to “comply with occupational safety and health standards promulgated under” the statute.³ The term “occupational safety and health standard” is defined as “a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment.”⁴

In the very first provision of the OSH Act, Congress explained that it found “that personal injuries and illnesses arising out of work situations impose a substantial burden upon, and are a hindrance to, interstate commerce in terms of lost production, wage loss, medical expenses, and disability compensation payments.”⁵ Notably, Congress did not distinguish here between purely physical injuries and those with a psychological or mental component, nor between injuries resulting from repetitive stress and those from discrete accidents. This language, combined with the emphasis on OSHA’s responsibility to ensure “so far as possible” that workers are protected, underscore the breadth of hazards – known and unknown at the time – that Congress contemplated in its grant of authority.⁶

Congress was also careful to ensure that the authority it granted OSHA encompassed both worker safety and worker health, emphasizing OSHA’s responsibility to investigate and regulate new hazards to both. The Act explained that one purpose was to “discover latent diseases, establishing causal connections between diseases and work in environmental conditions, and conduct[] other research relating to health problems, in recognition of the fact that occupational health standards present problems often different from those involved in occupational safety.”⁷ OSHA’s authority to regulate workplace health and safety is thus clear from the statutory text.

¹ 29 U.S.C. § 651(b).

² *Id.* § 651(b)(9).

³ *Id.* § 654(a)(2).

⁴ *Id.* § 652(8).

⁵ *Id.* § 651(a).

⁶ *Id.* § 651(b).

⁷ *Id.* § 651(b)(6).

2. The legislative history of the OSH Act, and the industrial context in which it was enacted, suggest that Congress intended for OSHA to protect workers from newly-understood hazards.

The legislative history of the OSH Act confirms that Congress intended OSHA to protect against new work hazards. OSHA was born out of a tumultuous time in the American economy. The 1960s brought with them the beginning of deindustrialization and the mobilization for war in Vietnam. This created intensifying demands on labor, resulting in longer hours and increasingly dangerous working conditions.⁸ Dangers included epidemics among workers and economic and technical factors that produced a sharp increase in industrial accidents.⁹

There were also novel and emerging threats to workers that eventually prompted legislative action. The post-war era saw the increasing production and use of new chemicals and pesticides. A Public Health Service report in 1965 estimated that a “new chemical entered the workplace every 20 minutes” and that new evidence “showed a strong link between cancer and the workplace.”¹⁰

Congress clearly recognized this context during its deliberations surrounding the OSH Act’s passage. An examination of the Congressional record makes clear that Congress established OSHA because the field of occupational safety and health was changing quickly. Congress decided that it needed to empower a federal agency with the authority to keep up with changes in the organization of work and establish rules to protect workers. As the Congressional report explained, “technological advances and new processes in american [sic] industry have brought numerous new hazards to the workplace.”¹¹ New “processes are being introduced into industry at a much faster rate than the present meager resources of occupational health can keep up with.”¹²

The Chairman of the Senate Committee on Labor and Public Welfare agreed that OSHA must develop a regulatory regime that incorporates new dangers to worker safety and health as they emerge:

Not only are occupational diseases which first came to light at the beginning of the Industrial Revolution still undermining the health of workers, but new substances, new processes, and new sources of energy are presenting health problems of ever-increasing complexity.¹³

Taken in the context of its legislative history and of the events leading up to its passage, it is clear that the OSH Act was designed to protect workers from emerging, newly-understood threats to worker safety and health.

⁸ David Rosner & Gerald Markowitz, A Short History of Occupational Safety and Health In the United States, *Am. J. Public Health* 110(5): 622–628, (May 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7144431/>.

⁹ Charles Noble, *Liberalism at Work: The Rise and Fall of OSHA* 40, Temple University Press, (1986), <https://doi.org/10.2307/j.ctvn5tvk1>.

¹⁰ Brooke E. Lierman, "to Assure Safe and Healthful Working Conditions': Taking Lessons from Labor Unions to Fulfill Osha's Promises, 12 *Loy. J. Pub. Int. L* 1, 4 (2010).

¹¹ S. Rep. 91-1282 (1970).

¹² *Id.*

¹³ *Indus. Union Dep't, AFL-CIO v. Hodgson*, 499 F.2d 467, 470 (D.C. Cir. 1974).

3. The Supreme Court’s recent discussion of OSHA’s regulatory scope further supports the agency’s broad authority to regulate workplace threats to worker health.

The Supreme Court recently considered the scope of OSHA’s regulatory authority in a January 2022 case, *National Federation of Independent Businesses (“NFIB”) v. OSHA*.¹⁴ In that case, the Court invalidated the agency’s COVID-19 emergency temporary standard (“ETS”) in part because the vaccine-or-test regulation sought to regulate exposure to COVID-19, which exists inside and outside the workplace, in a manner that could “not be undone at the end of the work day.”¹⁵ The Court also emphasized that the regulation was not sufficiently tailored to reflect a causal relationship between “particular features” of a workplace and the threat of the regulated risk.¹⁶

Physical and mental health hazards posed by ESAM fall well within the *NFIB* Court’s definition of hazards regulable through occupational safety and health standards. While electronic surveillance exists during and outside of the workday as well (e.g., governmental surveillance), its frequent coupling with algorithmic management does not, and a potential OSHA standard would regulate ESAM only as it exists during working time. Any remedial requirements that a potential standard would place on employers would affect workers only during their work time, and would not follow workers into non-working time like the COVID-19 vaccine.

As reproduced above, an “occupational safety and health standard ... requires conditions, or the adoption ... of ... practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment.”¹⁷ Thus, OSHA can issue occupational safety and health standards regulating ESAM if it establishes that those practices are deleterious to safe and healthful employment and that they can be regulated “reasonably.”¹⁸

B. OSHA possesses the statutory authority to protect workers from the physical health and safety hazards caused by ESAM and the CRA should not pose an obstacle to such regulation.

1. OSHA possesses the statutory authority to protect workers from the physical health and safety hazards caused by ESAM.

The authority of OSHA to address hazards to workers’ physical safety and health is well-established through regulatory and Congressional action throughout the agency’s existence. As discussed in Section IV(A) of this memorandum, the OSH Act was enacted to “assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve [the nation’s] human resources...”¹⁹ The primary regulatory mechanism by which Congress authorized OSHA to accomplish this purpose is an occupational safety and health standard.²⁰

¹⁴ 142 S.Ct. 661 (2022).

¹⁵ *Id.* at 665.

¹⁶ *Id.*

¹⁷ *Id.* § 652(8).

¹⁸ *Id.*

¹⁹ 29 U.S.C. § 651(b).

²⁰ *Id.* § 652(8).

Congress was clearly concerned with threats to workers' physical safety and health when it passed the OSH Act. As the legislative history explained, Congress created OSHA to, in part, address the "physical hazards which characterize[d] modern industry."²¹

The physical hazards posed by ESAM – the risk of repetitive stress injury due to grueling pace-of-work requirements and the risk of industrial accident due to fatigue – are of the type that OSHA has repeatedly regulated to protect workers. For example, the Walking-Working Surfaces standard at 29 C.F.R. § 1910.21 regulates "any horizontal or vertical surface on or through which an employee walks, works, or gains access to work area[s] or workplace location[s]."²² OSHA issued this rule because falls from these surfaces posed a "significant risk" of physical harm to workers.²³ Similarly, an ESAM standard would mitigate the hazard that specific practices and technologies pose to workers' physical health via accidents or musculoskeletal disorders. The ergonomics standard – which was repealed by Congress on cost-benefit grounds rather than claims about OSHA's authority to issue the standard – explained that musculoskeletal disorders created a "significant" risk to workers' physical well-being within the meaning of the OSH Act.²⁴ As described in the Definitions and Background document, Washington state's OSHA concluded that ESAM practices contribute directly to risk of MSDs.²⁵

2. Congress's use of the CRA to invalidate the ergonomics standard does not pose an obstacle to the agency's authority to regulate the health and safety risks of ESAM, including repetitive stress injuries.

Congress's invalidation of OSHA's 2000 ergonomics standard does not present a total bar to the agency pursuing future ergonomic regulation. However, even if it did, OSHA still has the authority to regulate ESAM-related hazards because such a regulation would not be "substantially the same" as the ergonomic rule. As part of that regulation, OSHA can regulate the physical harms that ESAM causes, including repetitive stress injuries that could be characterized as "ergonomic."

i. OSHA issued an ergonomics standard in 2000.

OSHA issued its final ergonomics standard in November 2000, following decades of increasing injury rates, worker organizing, and regulatory fits and starts. The re-organization of work during the latter half of the twentieth century, wherein workers in many industries were relegated to performing the same movements over and over again, led to skyrocketing rates of work-related musculo-skeletal disorders ("WMSD").²⁶ By 1993, OSHA had issued 550 citations on ergonomics hazards. Because there was no ergonomics standard, OSHA brought all of these citations under OSHA's General Duty Clause authority, which requires proof that an employer failed to provide a workplace "free from recognized hazards likely to cause death or serious harm."²⁷

OSHA's final 2000 ergonomics standard was at once ambitious and a product of political pragmatism. On one hand, the ergonomics standard was an enormous undertaking, as few OSHA regulations had ever affected so many industries so deeply. On the other hand, in an effort to make it more palatable to industry interests,

²¹ S. Rep. 91-1282 (1970).

²² 29 C.F.R. § 1910.21(b).

²³ OSHA, Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems), 81 Fed. Reg. 82494, 82498, 82, (Nov. 18, 2016).

²⁴ OSHA, Ergonomics Program, 65 Fed. Reg. 68261, 68269 (Nov. 14, 2000).

²⁵ See Lauren Rosenblatt, *Fine with fines? Amazon isn't making enough changes to protect warehouse workers, Washington state says*, TechXplore (Mar. 29, 2022), <https://techxplore.com/news/2022-03-fine-fines-amazon-isnt-warehouse.html>.

²⁶ Or at least higher rates of reported WMSDs. Linda Delp, et. al., *A Legacy of Struggle: the OSHA Ergonomics Standard and Beyond, Part I*, New Solutions, Vol. 24(3) 365, 374 (2014) (hereinafter "Legacy Part I").

²⁷ *Id.*; 29 U.S.C. § 654(a)(2).

OSHA designed the ergonomics standard to only apply once an employee reported an ergonomic injury and as a performance standard, rather than a prescriptive one.²⁸ One law review article explained the difference: “instead of telling businesses and other regulated entities exactly what actions they must take or technologies they must adopt [as does prescription-based regulation], performance-based regulation imposes binding performance or outcome targets and leaves it entirely to regulated firms to determine how to achieve those targets.”²⁹

The primary regulatory mechanism of the ergonomics standard was an iterative process that required employers to implement workplace changes upon finding an ergonomic trigger. This process was designed to reduce industry backlash to the standard because it limited the number of workplaces to which the standard would ultimately apply.³⁰ Whether the standard applied to a workplace *at all* was based on an employer's own finding of whether an employee-reported injury qualified as a WMSD and whether the job that caused the injury required further action under the standard. Appendix A to this memorandum describes the specific mechanisms by which the ergonomics standard sought to decrease musculoskeletal injuries.

ii. **The CRA allows Congress to invalidate federal regulations under certain circumstances, and Congress used that power for the first time in its invalidation of the ergonomics standard.**

The CRA is a statute that allows Congress to overturn rules recently promulgated by federal agencies.³¹ A result of a wave of anti-regulatory sentiment during the 1990s, the CRA was enacted in 1996 to provide Congress with a mechanism to review and block agency regulatory activity.³²

The CRA requires federal agencies to give Congress notice of pending and finalized regulations and provides a period of time during which they may be blocked or repealed by a majority vote of both chambers and the President's signature.³³ If a regulation is “CRA'ed”, the regulation cannot take effect (or is repealed if it already took effect). Pursuant to a salt-the-earth provision,³⁴ the agency may not issue a new rule in “substantially the same form” or issue a “new rule that is substantially the same” as the repealed rule “unless the reissued or new rule is specifically authorized by a law enacted after the date of the joint resolution disapproving the original rule.”³⁵ Until recently, Congress invoked the CRA sparingly, so its use, enforcement, and legal effect are still somewhat uncertain.³⁶

²⁸ Legacy Part I at 382. Though, as this document discusses, this design choice was not enough to save the standard from industry backlash that ultimately led to its demise.

²⁹ Cary Coglianesi, *The Limits of Performance-Based Regulation*, 50 U. Mich. J. L. Reform 525, 526 (2017) (hereinafter “Limits of Performance”)

³⁰ *Id.* at 373.

³¹ Congressional Research Service, *The Congressional Review Act (CRA): Frequently Asked Questions*, Summary (Nov. 12, 2021), <https://sgp.fas.org/crs/misc/R43992.pdf>.

³² Adam M. Finkel & Jason W. Sullivan, A Cost-Benefit Interpretation of the “Substantially Similar” Hurdle in the Congressional Review Act: Can OSHA Ever Utter the E-Word (Ergonomics) Again?, 63:4 Admin. Law R. 707, 707 (2014) (hereinafter “E-Word Article”).

³³ The requirement that a majority of both houses and the President must approve a CRA resolution is a result of the Supreme Court's invalidation of earlier congressional attempts to create a legislative veto that ran afoul of the Constitution's bicameralism and presentment requirements. *Id.*

³⁴ Dylan Scott, *The new Republican plan to deregulate America, explained*, Vox (Apr. 25, 2018), <https://www.vox.com/policy-and-politics/2018/4/25/17275566/congressional-review-act-what-regulations-has-trump-cut>.

³⁵ E-Word Article at 707 quoting 5 U.S.C. § 801(b)(2).

³⁶ Indeed, because it requires a majority of both houses and the president's signature, the CRA is in practice only an option when there is a party change in the White House and the new president's party maintains majorities in both houses of Congress. This helps explain Congress's explosion in use of the CRA during the first two years of the Trump administration, during which Republicans possessed unified control of government. *Id.*

The 107th Congress was the first to use the CRA, and used it to invalidate OSHA’s ergonomics standard. OSHA had finalized the standard during the period following the 2000 election, and Congressional Republicans immediately sought to cast the rule as a prime example of government overreach into private affairs and a burden on business.³⁷ Congressional debates about the CRA resolution to invalidate the ergonomics standard focused on the regulation’s costs and benefits – both their relative sizes and the reliability of OSHA’s estimates.³⁸ In President Bush’s signing statement approving the repeal in 2001, he explained that there needed to be a better “understanding of the costs and benefits,” but expressed his intention that the administration would proceed with developing a better approach to ergonomics control.³⁹ Since the repeal, though, OSHA has not attempted to regulate in the ergonomics area beyond publishing voluntary guidance for a limited number of industries and issuing a small number of citations under its general duty clause authority.⁴⁰

iii. Whether Congress’s invalidation of the ergonomics standard bars OSHA from standard-setting may not be a judicially-reviewable question.

The CRA includes an explicit prohibition of judicial review: “no determination, finding, action, or omission under this chapter shall be subject to judicial review.”⁴¹ According to the Congressional Research Service, there is disagreement among the courts as to the scope of this prohibition.⁴² Most courts have interpreted this language to bar their review of all CRA claims.⁴³ Significantly, a District of Columbia Circuit Court of Appeals decision authored by now-Supreme Court Justice Brett Kavanaugh held that it is “unequivocal” and that it “denies courts the power to void rules on the basis of agency noncompliance with the” CRA.⁴⁴ However, there has yet to be a case considering specifically whether a reissued regulation qualifies as “substantially the same” as a regulation invalidated under the CRA. Further, some courts have found that they have the authority to review agencies’ compliance with the CRA because, they reason, barring judicial review would make the requirements of the statute virtually meaningless.⁴⁵

Some legal scholars interpret the CRA’s non-reviewability provision to apply only to determinations (i.e. a repeal or non-repeal of a regulation under the CRA) made by *Congress*.⁴⁶ This narrow interpretation would leave an agency’s decisions to proceed with rulemaking subject to judicial review under the “substantially the same” standard.

³⁷ E-Word Article at 727.

³⁸ *Id.*

³⁹ *Id.* quoting Presidential Statement on Signing Legislation to Repeal Federal Ergonomics Regulations, 37 Weekly Comp. Pres. Doc. 477 (Mar. 20, 2001).

⁴⁰ *Id.* at 728.

⁴¹ *Id.* quoting 5 U.S.C. § 805.

⁴² *Id.* at 23.

⁴³ *Id.*

⁴⁴ *Montanans For Multiple Use v. Barbouletos*, 568 F.3d 225, 229 (D.C. Cir. 2009). The D.C. Circuit is widely considered the second-most important court in the United States and hears a disproportionate number of administrative law cases. *See generally*, Eric M. Fraser, et. al., The Jurisdiction of the D.C. Circuit, 23 Cornell J. Law Pub. Policy 131 (2013), <https://www3.lawschool.cornell.edu/research/JLPP/upload/Fraser-et-al-final-3.pdf>.

⁴⁵ CRS Report at 23. *See, e.g., Tugaw Ranches, LLC v. United States Dep’t of the Interior*, 362 F. Supp. 3d 879, 883 (D. Idaho 2019) (noting that “without review, an agency would frankly have no reason to comply with the CRA—or at least no legal duty.”).

⁴⁶ E-Word Article at 732.

iv. **The CRA’s “substantially the same” language is best read as requiring narrow changes to a reissued regulation.**

Under most plausible interpretations of “substantially the same,” an OSHA standard on ESAM is not likely to be precluded by Congress’s use of the CRA to invalidate the ergonomics standard. The CRA lacks a specific definition of the phrase “substantially the same.” Academic articles and a couple of agencies reissuing “CRA’ed” rules have made guesses as to what could and should be the standard for substantial similarity, but a lack of case law or statutory guidance on the issue leaves this question unanswered.⁴⁷ Appendix B discusses several potential interpretations of the “substantially the same” language.

This memorandum agrees with a widely-cited law review article on this subject, which made a compelling case for a rather limited interpretation of the “substantially the same language.”⁴⁸ It argued that “the purposes of the CRA will be served and [a] new rule should not be barred as ‘substantially the same’” if the reissued rule “makes enough changes to alter the cost-benefit ratio in a significant and favorable way.”⁴⁹

Such a narrow interpretation, the authors explained, aligns with the legislative history of both the CRA’s enactment and Congress’s debate over its decision to invalidate the ergonomics rule. In both instances, Congress’ concern was with efficient regulation which, at that time, meant that a rule’s benefits outweighed its costs.⁵⁰ In fact, as discussed above, President Bush remarked when he signed the CRA resolution that the rule needed to reflect a clearer “understanding of the costs and benefits.”⁵¹ Second, the fact that the text of the joint resolution must invalidate an entire regulation – even if that regulation contained some non-offensive provisions – implies that a “far-reaching interpretation” of the “substantially the same” language would drastically limit an agency’s authority beyond Congress’ intention. Third, just as courts generally defer to agencies’ interpretations of their organic statutes,⁵² so too should they defer to agency action following a CRA resolution.⁵³ Finally, a more expansive interpretation of “substantially the same” would dramatically alter an agency’s delegated authority via a “speedy and less-than-deliberative process” that runs counter to the traditional deliberative nature of legislative governance.⁵⁴

v. **Even under more agency-adverse definitions of “substantially the same,” OSHA has the authority to issue an ESAM standard to protect workers from hazards to their physical and mental health.**

Acknowledging the reality of a conservative judiciary that is skeptical of the administrative state, this section assumes an agency-adverse interpretation of “substantially the same” that would require an agency to completely change the form and substance of a CRA-ed regulation (see Appendix B #6).⁵⁵ This is not meant to reflect the authors’ understanding of what *should* be the meaning of “substantially the same” – only that an ESAM standard should survive CRA-based judicial review, even in a hostile courtroom.

⁴⁷ See generally, e.g., Michael J. Cole, Interpreting the Congressional Review Act: Why the Courts Should Assert Judicial Review, Narrowly Construe “Substantially the Same,” and Decline to Defer to Agencies Under *Chevron*, 70 Admin. Law Review 54, http://www.administrativelawreview.org/wp-content/uploads/2018/04/ALR_70.1_Cole-Final.pdf (considering seven different proposed interpretations of “substantially the same”).

⁴⁸ E-Word Article at 134.

⁴⁹ *Id.*

⁵⁰ *Id.* at 135.

⁵¹ *Id.* quoting Presidential Statement on Signing Legislation to Repeal Federal Ergonomics Regulations, 37 Weekly Comp. Pres. Doc. 477 (Mar. 20, 2001).

⁵² This deference still exists for many regulations not subject to the Supreme Court’s new Major Questions Doctrine.

⁵³ E-Word Article at 135.

⁵⁴ *Id.*

⁵⁵ E-Word Article at 736. This section imagines some version of proposed interpretations #4-7.

There are several conceptual distinctions between regulating ergonomics and ESAM that suggest that an eventual OSHA ESAM standard would not likely be “substantially the same” as the ergonomics standard. Among them: a) an ESAM standard would regulate substantially different hazards; b) the arguable overlap between the ESAM and ergonomics standards would be narrow in scope; c) the two standards would use entirely different approaches to regulation of that overlap; and d) the remedial measures required by the standard would be different in substance, form, and cost.

The most important conceptual difference between OSHA regulating ergonomics and ESAM, and perhaps the most obvious, is that an OSHA standard about ESAM would cover hazards that were not contemplated in the ergonomics standard that Congress rejected. For example, an ESAM standard might seek to protect workers from the heightened risk of accidents resulting from a dangerously increased pace of work or mental health effects of workplace surveillance. The ergonomics standard did not seek to regulate such accidents and mental health impacts – and for good reason: it was issued in response to the specific threat of physical ergonomic hazards.

The fact that the two standards would likely regulate mostly distinct hazards is underscored by the narrow scope of arguable overlap between them. One of the policy justifications for an OSHA surveillance standard would be to reduce the number of workplace injuries that result from an increased pace of work enabled by technological surveillance. Some of these injuries could be characterized as “ergonomic.” However, the ergonomics standard sought to reduce a much larger universe of physical workplace injuries, including those from holding awkward postures, exposure to vibration, use of slamming force, and others.⁵⁶ Just as in the case of the post-CRA resolution SEC and DOL rules that the agencies justified by their altered scope, here too the indirect regulation of only repetitive-stress injuries, resulting from electronically-imposed pace-of-work requirements, overlaps only slightly with the broad ergonomic injuries and represents a drastic difference in scope from the CRA’ed ergonomic regulation.

Not only would the regulation of repetitive stress injuries ergonomic hazards in a surveillance standard be dramatically more narrow than the ergonomics standard, the regulation of that narrow overlap would be of an entirely different form. The surveillance standard would be an indirect, rather than a direct, regulation of pace-of-work injuries. Put another way: an ESAM standard would be regulating ESAM, with reducing ergonomic injuries being one of several beneficial results, whereas the ergonomics standard regulated ergonomics directly. To regulate ESAM is to regulate at a different, upstream, point in the causal chain of pace-of-work injuries.⁵⁷ This would be a wholly different *form* of regulation, passing muster under even the more agency-adverse possibilities of a “substantially the same” definition.⁵⁸

Finally, an OSHA standard on surveillance would likely include remedial measures that are completely different and may be easier for employers to implement than those required by the ergonomics standard. The ergonomics standard required employers with MSD hazards to implement various types of ergonomic controls to prevent injuries, with a preference towards engineering controls.⁵⁹ As defined in the standard, engineering controls are “physical changes to a job that reduce MSD hazards” like “changing or designing workstations, tools facilities, equipment, materials, or processes.”⁶⁰ These could be expensive and disruptive changes for businesses to make.

An ESAM standard, on the other hand, would likely not disrupt longstanding ways of doing business and would not require many physical changes to the workplace. It would likely limit employers’ use of sophisticated

⁵⁶ Former 29 C.F.R. § 1910.900(f), Table W-1 - Basic Screening Tool.

⁵⁷ See also Limits of Performance at 537 (discussing a related, but not directly analogous, concept of the “proximity between legal command and regulatory goal (close vs. distant)”).

⁵⁸ See Appendix B, #6, which requires that an agency change the regulatory approach completely in order to re-promulgate in the face of a CRA resolution.

⁵⁹ Former 29 C.F.R. § 1910.900(j).

⁶⁰ Former 29 C.F.R. § 1910.900(z).

surveillance technologies, which themselves are relatively new. And those technologies include software and services that are relatively easy to turn on and off in a workplace. There is an important difference between asking that a company completely reorganize the physical layout of its factory floor and requiring a company to disable a particular software program on its handheld devices. Again, this speaks to both the dissimilarity between regulating surveillance and ergonomics, as well as the substantially different form that an OSHA surveillance standard would likely take relative to the one regulating ergonomics.

Other components of the ergonomic standard are also markedly different from how an ESAM standard would likely operate. The ergonomics standard was centered on requirements that employers create comprehensive ergonomic programs for each job within their organization that met certain “trigger” criteria.⁶¹ Additionally, required ergonomic programs included, as noted above, hazard prevention and control, in addition to requirements like employee participation and training.⁶² An ESAM standard, in contrast, would likely require only that employers turn off or modify software systems.

In short, an ESAM standard would be dramatically different in form, function, and scope from the CRA’ed ergonomics standard. Far from being “substantially the same,” the regulation would carry only an incidental overlap with the defunct ergonomics standard. The CRA thus poses no barrier to the enactment of an ESAM standard that, among other things, regulates the risk of WMSDs associated with ESAM.

C. OSHA possesses the statutory authority to protect workers from mental health hazards created by ESAM.

Although OSHA has more regulatory experience with creating standards to protect workers’ physical safety and health, the agency’s grant of authority from Congress clearly includes the power to protect workers’ mental health from workplace hazards as well.

1. Mental health is a commonly-recognized component of “safety and health.”

As explained in Section IV(A), the OSH Act was enacted to protect workers from a broad range of hazards. Regulation of ESAM falls within this regulatory mandate. Included in that authority is OSHA’s authority to regulate mental health effects as one of several risks created by ESAM practices.

The OSH Act defines “occupational safety and health” somewhat circularly and does not comprehensively define what it means by “safety” and “health.”⁶³ When a statute leaves words ambiguous, courts turn to both agencies’ interpretations⁶⁴ and, increasingly, the words’ common meanings.⁶⁵ Merriam Webster defines “safety” as “the condition of being safe from undergoing or causing hurt, injury, or loss” and “health” as “the condition of being sound in body, *mind*, or spirit.”⁶⁶

⁶¹ Former 29 C.F.R. § 1910.900(h).

⁶² Former 29 C.F.R. § 1910.900(i),(t).

⁶³ 29 U.S.C. § 652(8).

⁶⁴ *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984).

⁶⁵ See generally John Calhoun, Measuring the Fortress: Explaining Trends in Supreme Court and Circuit Court Dictionary Use, 124 Yale L.J. 484 (2014).

⁶⁶ Merriam-Webster Dictionary, (Accessed: Feb. 28, 2023), <https://www.merriam-webster.com> (emphasis added).

American and international agencies recognize the connectedness between mental health and worker safety and health. NIOSH and the CDC’s extensive research on mental health and job strain reflects this connection.⁶⁷ The World Health Organization, too, has issued guidance on mental health as a component of worker safety and health.⁶⁸ As explained below, OSHA itself tracks some mental health injuries as part of its recordkeeping regulations.⁶⁹

Other areas of work-related law also acknowledge that mental health is an important part of worker safety and health. All states’ worker compensation systems recognize “physical-mental” cases where job-related physical trauma leads to a mental disorder, many states recognize “mental-physical” cases where job-related mental stress causes a physical disability, and an increasing number of states recognize “mental-mental” cases where work-related stress causes a mental disability.⁷⁰ For example, both Virginia and Washington D.C.’s state worker compensation systems recognize “emotional injuries” – with or without accompanying physical manifestations of injury – as sufficient to support a workers’ compensation claim.⁷¹ The workers compensation system for federal government workers also compensates workers for mental health injuries.⁷²

2. Mental and physical health are inextricably linked.

As noted in a prior section, the OSH Act requires employers to comply with “occupational safety and health standards,” which are defined as “a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment.”⁷³ As discussed, this memorandum takes the position that the “safe and healthful” language and the overall purposes of the OSH Act empower OSHA to regulate hazards to workers’ mental health directly. However, even if a court were to find that OSHA has the authority only to regulate physical health hazards, it would still be able to regulate many surveillance and automated management practices that cause mental health impacts because of the direct connection between mental and physical and physiological health.

The physical and physiological impacts of work stress are well-documented, including by OSHA and NIOSH.⁷⁴ OSHA issued a guidance resource explaining that long-term stress has physical harms for workers including: heart disease, high blood pressure, muscle pain, headaches, poor sleep, and weight swings.⁷⁵ Again as explained above, prolonged periods of job stress – like those caused by pervasive ESAM – increase the “rate of wear and tear on biological systems.”⁷⁶ This can cause fatigue and chronic health problems, including in the

⁶⁷ See NIOSH, *STRESS...At Work*, (1999), <https://www.cdc.gov/niosh/docs/99-101/#Job%20Stress%20and%20Health>; Mental Health in the Workplace, CDC (Jul. 2018), <https://www.cdc.gov/workplacehealthpromotion/tools-resources/pdfs/WHRC-Mental-Health-and-Stress-in-the-Workplac-Issue-Brief-H.pdf>.

⁶⁸ World Health Organization, Guidelines on mental health at work, (Sept. 28, 2022), <https://www.who.int/publications/i/item/9789240053052>.

⁶⁹ 29 C.F.R. § 1904.5(b)(2)(ix).

⁷⁰ AFL-CIO Comments to OSHA on Occupational Injury and Illness and Reporting Requirements (29 C.F.R. §§ 1904, 1952), (Jul. 3, 1996).

⁷¹ See *Amisi v. Riverside Reg'l Jail Auth.*, 469 F. Supp. 3d 545, 562 (E.D. Va. 2020); *Howard v. Fed. Express Corp.*, 280 F. Supp. 3d 26, 34 (D.D.C. 2017).

⁷² Aaron D. Wersing, *Filing Workers' Comp for Stress and Anxiety—What Federal Employees Should Know*, FedLaws, (Aug. 25, 2021), <https://fedemploymentattorneys.com/legal-blog/workers-comp-for-stress-and-anxiety/>.

⁷³ 29 U.S.C. §§ 654(a)(2), 652(8).

⁷⁴ NIOSH, *STRESS...At Work*, (1999), <https://www.cdc.gov/niosh/docs/99-101/#Job%20Stress%20and%20Health>.

⁷⁵ OSHA, *Long-Term Stress Harms Everyone in the Workplace*, (Accessed: Dec. 15, 2022), https://www.osha.gov/sites/default/files/Long-Term_Stress_Harms_Workplace_Stress_Toolkit_revised_508.pdf.

⁷⁶ NIOSH, *STRESS...At Work*, (1999), <https://www.cdc.gov/niosh/docs/99-101/#Job%20Stress%20and%20Health>.

cardiovascular system.⁷⁷ In fact, health care expenditures are nearly 50 percent higher for workers who report higher levels of stress.⁷⁸ A 2020 study of call center workers found that stress was highest among workers who were subject to significant electronic monitoring.⁷⁹ This is similar to the way that OSHA-regulated hazardous chemicals act on the body; prolonged occupational exposure to lead, for example, can also cause “chronic” effects on, among others, the cardiovascular system.⁸⁰ Additionally, workplace stress contributes to higher rates of workplace suicides: workplace suicides numbered at 307 in 2019, a 39 percent increase since 2000.⁸¹

In addition to its potential mental-to-physiological effects, ESAM can also contribute to behaviors that put workers at risk of physical injury. ESAM technologies lead to an increased, and often unsustainable, pace of work that results in increased injury rates. As the Washington state Department of Labor and Industries explained in its citation of Amazon, “[t]here is a direct connection between Amazon’s employee monitoring and discipline systems and workplace MSDs (musculoskeletal disorders).”⁸²

3. The OSH Act recognized mental health as a threat to worker safety and health in its own right.

The Act envisioned “providing for research in the field of occupational safety and health, including the psychological factors involved, and by developing innovative methods, techniques, and approaches for dealing with occupational safety and health problems.”⁸³ The Act contemplated “providing medical criteria which will assure insofar as practicable that no employee will suffer diminished health, functional capacity, or life expectancy as a result of his work experience.”⁸⁴ The phrasing of 29 U.S.C. § 651(b)(5) suggests that Congress meant for OSHA to regulate mental health hazards in the workplace. In fact, the OSH Act made this inclusion explicit: “the field of occupational safety and health, *including the psychological factors involved...*”⁸⁵ Indeed, OSHA itself affirmed this interpretation of the same language in its 2001 recordkeeping rule, which stated: “[t]he OSH Act is concerned with both physical and mental injuries and illnesses, and in fact refers to ‘psychological factors’ in the statement of Congressional purpose in section 2 of the Act (29 U.S.C. 651(b)(5)).”⁸⁶

4. Regulating occupational mental health hazards falls within OSHA’s sphere of expertise.

In concluding that the OSH Act did not “plainly authorize” the ETS, the *NFIB* Court lamented that the vaccine-or-test COVID-19 ETS was a “broad public health measure[]” that fell “outside of OSHA’s sphere of expertise.”⁸⁷ In contrast, an OSHA standard protecting workers from ESAM’s mental health hazards would

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ Virginia Doellgast & Sean O’Brady, ILR School, Cornell U. and Degroot School of Business, McMaster U, Making call center jobs better: The relationship between management practices and worker stress 5, (Jun. 2020), https://www.researchgate.net/publication/344332175_Making_Call_Center_Jobs_Better_The_Relationship_between_Management_Practices_and_Worker_Stress.

⁸⁰ OSHA, Advanced Notice of Proposed Rulemaking - Blood Lead Level for Medical Removal, 87 Fed. Reg. 38343, 38346 (Jun. 28, 2022).

⁸¹ Michael Sainato, *It’s all preventable’: tackling America’s workplace suicide epidemic*, The Guardian, (May 27, 2022), <https://www.theguardian.com/us-news/2022/may/27/us-workplace-suicide-rates-pandemic>.

⁸² Washington State Department of Labor and Industries, Citation and Notice: Amazon Services 2 (May 4, 2021), <https://s3.documentcloud.org/documents/20787752/amazon-dupont-citation-and-notice-may-2021.pdf>.

⁸³ 29 U.S.C. § 651(b)(5).

⁸⁴ *Id.* § 651(b)(7).

⁸⁵ *Id.* § 651(b)(5) (emphasis added).

⁸⁶ OSHA, Occupational Injury and Illness Recording and Reporting Requirements, 66 Fed. Reg. 5916 (Jan. 19, 2001).

⁸⁷ *NFIB*, 142 S. Ct. at 665.

fall well within OSHA’s “sphere of expertise,” as a regulation that mitigates workers’ risk of a workplace hazard through implementation of workplace-based controls.

OSHA’s activity reveals the extent to which a standard designed to protect workers’ mental health would be squarely in its wheelhouse. For one thing, OSHA already engages in research and training and issues guidance to employers and employees on the subject.⁸⁸ As OSHA Administrator Doug Parker recently explained, “[s]tress is a major determinant of both mental and physical health issues and impacts workplace health and safety.”⁸⁹

OSHA’s regulatory history, too, demonstrates its experience in regulating mental health. In 2001, OSHA issued new record-keeping regulations that mandated that employers keep track of work-related mental health injury and illness. In its final rule, which mandates that employers record and report workplace mental injuries for which employees provide a doctor’s note vouching for its work-relatedness, OSHA noted that it had “required the recording of [mental health] illnesses since the inception of the OSH Act” and collecting the information is crucial to “assess[ing] occupational hazards.”⁹⁰

Within its substantive safety and health standards, OSHA also incorporates requirements related to mental health. The standards regulating hazardous and toxic substances, for example, discuss mental health in two places. First, the standard at 29 C.F.R. § 1910.1020(e)(2)(ii)(D) permits an employer to decline to share with an employee medical information “regarding a specific diagnosis of a . . . psychiatric condition,” the disclosure of which “could be detrimental to the employee’s health,” until the employer receives written consent from the employee’s designated representative.⁹¹ An appendix to the same standard discusses the danger of “over-protection” with PPE because it can create “significant worker hazards, such as . . . physical and psychological stress,” among other harms.⁹² Second, an appendix to OSHA’s lead standard warns of the “behavioral and psychological disturbances” that can result from lead exposure.⁹³

D. The Major Questions Doctrine does not pose an obstacle to OSHA’s regulation of ESAM to reduce mental health or repetitive-stress hazards.

In addition to its relevance as a Supreme Court case about OSHA’s authority specifically, *NFIB* was an application of the Supreme Court’s new Major Questions Doctrine (“MQD”).⁹⁴ The MQD is relatively new, and it limits⁹⁵ deference to an agency’s interpretation of its statutory authority in cases where the agency seeks to regulate on major questions.⁹⁶ Although arguably the Court began applying it as early as 2000, the Supreme Court, for the first time in a majority opinion, explicitly invoked the MQD in *West Virginia v. EPA*.⁹⁷

⁸⁸ OSHA, Workplace Stress, (Accessed: Dec. 15, 2022), <https://www.osha.gov/workplace-stress>.

⁸⁹ Safety+Health, *Workplace stress and mental health: OSHA launches webpage*, (Nov. 16, 2022), <https://www.safetyandhealthmagazine.com/articles/23265-workplace-stress-and-mental-health-osha-launches-webpage>.

⁹⁰ OSHA, Occupational Injury and Illness Recording and Reporting Requirements, 66 Fed. Reg. 5916, 5919 (Jan. 19, 2001).

⁹¹ 29 C.F.R. § 1910.1020(e)(2)(ii)(D).

⁹² Appendix C to 29 C.F.R. § 1910.120.

⁹³ Appendix C to 29 C.F.R. § 1910.1025.

⁹⁴ Technically, the per curiam opinion did not use the words “major question”; however, Justice Gorsuch’s concurrence did. *NFIB*, 142 S. Ct. at 668 (Gorsuch, J., concurring). And the Court later acknowledged in *West Virginia v. EPA* that this was indeed a major questions case.

⁹⁵ It arguably *eliminates* deference in such cases.

⁹⁶ See generally Michael Sebring, *The Major Rules Doctrine*, (Sept. 17, 2018), <https://www.law.georgetown.edu/public-policy-journal/blog/the-major-rules-doctrine/>.

⁹⁷ *W. Virginia v. Env’t Prot. Agency*, 142 S. Ct. 2587 (2022).

While uncertainty remains about how the MQD will operate in practice and the extent to which agency policy making will be subjected to heightened judicial scrutiny under *West Virginia*, a standard regulating the health and safety risks associated with ESAM likely would not trigger the doctrine.

1. The Supreme Court recently laid out a two-part test for dealing with major questions cases.

In a change from the typical deference afforded to federal agencies, the *West Virginia* Court deployed the MQD to invalidate the EPA’s Clean Power Plan, which was an Obama-era greenhouse gas regulation that relied on a rarely-used section of the Clean Air Act. In reaching its conclusion, the majority devised what is essentially a two-part MQD test.

First, a court must assess whether a given exercise of regulatory power poses a major question. It does so by assessing “the history and breadth of the authority that [the agency] has asserted, and the economic and political significance of that assertion.”⁹⁸ Put differently: skepticism is due, the Court suggested, when an agency (a) claims “to discover in a long-extant statute an unheralded power” that (b) represents “a transformative expansion in its regulatory authority.”⁹⁹

Second, in the event a court determines that a given agency action does pose a major question, that action will only survive if the government can point to “clear congressional authorization” for its interpretation, which requires “something more than a merely plausible textual basis.”¹⁰⁰ Because we conclude that an ESAM standard likely would not pose a major question, this memorandum does not proceed to this step of the analysis.

2. An OSHA standard to protect workers from the health and safety hazards of ESAM would likely not constitute a major question.

An ESAM standard likely would not pose a major question. For starters, an ESAM standard would be neither “unheralded” nor “unprecedented.” On the contrary, an OSHA standard that touches on the safety and health effects of harmful new workplace technologies would be firmly rooted in historical precedent.

⁹⁸ *Id.* at 2608 (internal citations omitted).

⁹⁹ *Id.* at 2610, quoting *Utility Air Group v. EPA* at 324 (internal citations omitted). Admittedly, whether this phrase constitutes a reformulation of the MQD Step One’s core charge or a distinct and additional set of considerations for what effectively functions as a multi-factor test at MQD Step One, remains the subject of some debate. *See* Natasha Brunstein & Donald L. R. Goodson, “Unheralded and Transformative: The Test for Major Questions After *West Virginia*,” 47 *Wm. & Mary Env’t L. & Pol’y Rev.* (forthcoming 2023) at 3–4 (working paper available here: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4300622). Importantly, Justice Gorsuch’s opinion, styled as a concurrence, and which seems to suggest that any one of several indicia — for example, an agency “claim[ing] the power to resolve a matter of great political significance” or “seek[ing] to intrude into an area that is the particular domain of state law” — would be sufficient to independently trigger MQD scrutiny, received the support of only one other justice, and so does not constitute binding precedent. *See W. Virginia* at 2620 (internal citations omitted).

¹⁰⁰ *W. Virginia* at 2609 (internal citations omitted).

Since the OSH Act was passed in 1970, OSHA has issued over 450 standards.¹⁰¹ This practice is at the core of OSHA’s mission: standards are OSHA’s most common mode of regulation, and OSHA’s enforcement program is heavily focused on violations of these standards.¹⁰²

An ESAM standard would be in line with other standards that OSHA has issued to ensure that workplace technology does not negatively impact workers’ health and safety. Indeed, most OSHA standards are of this type. For example, at 29 C.F.R. § 1910.66, OSHA regulates “Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms” to prevent injury. The standard prescribes various requirements, including technical specifications on such technology, like the ability of the employer to easily operate its electrical circuitry and to do so independently from the building.¹⁰³ OSHA issued similar safety standards for other workplace technologies, like powered industrial trucks, cranes, derricks, woodworking machines, mechanical machine presses, and many others.¹⁰⁴ An ESAM standard would operate similarly to these standards by prescribing limits and requirements that ensure technologies are used safely. Additionally, OSHA commonly regulates technology in a way that takes into account human behaviors. For example, within its suite of standards about electrical safety, 29 C.F.R. § 1910.333, OSHA explains how employers must select and use safe work practices for workers (e.g. keeping a safe distance from energized parts) who interact with electrical equipment. Similarly, an OSHA ESAM standard would likely focus on ensuring that the technology implemented in a workplace is designed and modifiable to ensure that workers are able to, for example, take micro-breaks to protect their physical and mental health.

Additionally, an ESAM standard would not affect a “transformative expansion in regulatory authority” or a “fundamental revision of the statute.”¹⁰⁵ As described in previous sections of this memo, an OSHA standard on hazards caused by surveillance in the workplace would be precisely the type of occupational safety and health standard that is well within the definition laid out in statutory text and reiterated by the Supreme Court. Unlike the Covid-19 ETS, an OSHA ESAM standard would primarily consist of workplace controls that could be “undone at the end of the workday.”¹⁰⁶ It would apply only to a workplace where “particular features” (i.e. aggressive ESAM practices) make health hazards a “special danger.”¹⁰⁷ OSHA’s regulatory history¹⁰⁸ also demonstrates how such a standard would fall precisely within the meaning of “occupational safety and health standard[],” as permitted by the OSH Act.

An ESAM regulation would be directed not at a “hazard[] of daily life” that happens to follow workers into the workplace, as the Court found was the case in *NFIB*,¹⁰⁹ but a hazard that exists solely as a result of a worker’s exposure to it in the workplace itself. That is in line with the traditional workplace safety authority of OSHA, and well within the authority that Congress granted OSHA in the OSH Act.

The extent to which a rule’s economic or political significance should factor into a MQD analysis remains contested. While *West Virginia* and other recent MQD decisions at the Supreme Court have referenced those

¹⁰¹ See OSHA, OSHA’s 30th Anniversary, (Accessed Mar. 27, 2023), <https://www.osha.gov/aboutosha/30-years> (explaining OSHA’s earliest standards in the 1970s, including those for “more than 400 toxic substances”); GAO, GAO-12-330: Multiple Challenges Lengthen OSHA’s Standard Setting Table 1 (Apr. 2012), <https://www.gao.gov/assets/gao-12-330.pdf> (tracking procedural timelines of 58 “significant” standards issued between 1981 and 2010).

¹⁰² Bossware Report at 16.

¹⁰³ 29 C.F.R. § 1910.66(e)(11)(iii), (iv).

¹⁰⁴ See generally *id.* § 1910.66-272.

¹⁰⁵ *W. Virginia* at 2612.

¹⁰⁶ See Section IV(A)(3).

¹⁰⁷ *NFIB*, 142 S. Ct. at 661, 665-6 (2022).

¹⁰⁸ See Section IV(C)(4); Section IV(B)(1).

¹⁰⁹ *NFIB*, 142 S. Ct. at 665.

factors,¹¹⁰ Natasha Brunstein and Donald L. R. Goodson have argued that *West Virginia*'s actual analysis of the Clean Power Plan neglected to “rest its analysis on some amorphous assertion of economic and political significance,” as some legal commentators had urged the Court to do; as a result, Brunstein and Goodson suggest *West Virginia* has effectively de-emphasized such inquiries.¹¹¹ However, it is likely that OSHA could craft an ESAM regulation in such a way that even these contested prongs of the MQD test would not be obstacles. Although pre-judging the economic and political significance of an undeveloped regulation is difficult, the economic significance of the regulation would be limited by the fact that the regulation would likely only require employers to switch off or modify ESAM systems, rather than take actions to, for example, reorganize their physical workplaces or install new technology.

The *West Virginia* Court inferred political significance in regulatory actions that purported to settle a national policy debate, the “basic and consequential tradeoffs” of which are ones that Congress likely would have intended to keep itself. While Congress may indeed consider legislation on ESAM topics in the future,¹¹² the regulation of safety and health impacts of workplace management processes is a policy debate that was largely settled at the legislative level when Congress passed the OSH Act.

Finally, OSHA could lessen the economic and political significance of such a regulation by focusing only on sectors where ESAM poses a unique threat to workers. While the authors of this memorandum would prefer an economy-wide approach, an industry-specific approach could be prudent given an increasingly conservative judiciary. In fact, some of OSHA's most recent regulatory action has been sector-specific, likely for a combination of policy and legal reasons.¹¹³

¹¹⁰ See *W. Virginia* at 2608; *NFIB* at 664; and *Alabama Ass'n of Realtors v. Dep't of Health & Hum. Servs.*, 141 S. Ct. 2485, 2489 (2021).

¹¹¹ See Natasha Brunstein & Donald L. R. Goodson, “Unheralded and Transformative: The Test for Major Questions After *West Virginia*,” 47 *Wm. & Mary Env't L. & Pol'y Rev.* (forthcoming 2023) at 37.

¹¹² And Senator Bob Casey did recently introduce a bill about employee surveillance. See Senator Bob Casey, One Pager: Stop Spying Bosses Act of 2023, (Feb. 2, 2023), https://www.casey.senate.gov/imo/media/doc/stop_spying_bosses_act_one-pager.pdf.

¹¹³ See, e.g., OSHA, *US Department of Labor reopens rulemaking record, schedules public hearing on proposed final rule to protect healthcare workers from COVID-19 exposure*, (Mar. 22, 2022), <https://www.osha.gov/news/newsreleases/national/03222022>; Department of Labor, Agency Rule List - Fall 2022, (Accessed: Jan. 30, 2023), <https://www.reginfo.gov/public/do/eAgendaMain> (listing “Prevention of Workplace Violence in Health Care and Social Assistance” at a pre-rule stage).

Appendix A: The ergonomics standard

The primary regulatory mechanism of the ergonomics standard was an iterative process that required employers to implement workplace changes upon finding an ergonomic trigger. This process was designed to reduce industry backlash to the standard because it limited the number of workplaces to which the standard would ultimately apply. Whether the standard applied to a workplace *at all* was based on an employer's own finding of whether an employee-reported injury qualified as a WMSD and whether the job that caused the injury required further action under the standard. Specifically:

1. MSD Incident: In order for the standard to apply to an employer at all, an employee first had to report an injury that the employer had determined qualified as an “MSD Incident.”¹¹⁴ An employee’s injury qualified as an MSD Incident if the employer found, with or without the assistance of a health care professional (HCP), that either:
 - i. The MSD is work related and requires days away from work, restricted work, or medical treatment beyond first aid; or
 - ii. The MSD signs or symptoms are work-related and last for 7 consecutive days after the employee report them to [the employer].¹¹⁵

If the injury report did qualify as an MSD Incident, the employer did not need to take any further action.¹¹⁶

2. Action Trigger: The employer was then required to determine whether the job in which the employee worked qualified as an “Action Trigger.” A job was an Action Trigger if: “i. An MSD Incident has occurred in that job; and ii. The employee’s job routinely involves, on one or more days a week, exposure to one or more relevant risk factors at the levels described in” a screening tool chart that was included in the federal register publication. The chart described several risk factors including: repetition, force, awkward postures, contact stress, and vibration. Each risk factor described work tasks that enhanced the risk factor and the body part that was associated with the MSD Incident.

For example, the risk factor “repetition” could apply to an MSD Incident affected any body part (neck/shoulder, hand/wrist/arm, back/trunk/hip, leg/knee/ankle) and the job that caused the MSD Incident would be considered an Action Trigger if the job required “[r]epeating the same motions every few seconds or repeating a cycle of motions involving the affected body part more than twice per minute for more than 2 consecutive hours in a workday.”¹¹⁷

If the job did not qualify as an Action Trigger, the employer did not need to take any further action.¹¹⁸

3. Ergonomics Program: If the job did qualify as an Action Trigger, and the employer was not allowed to or chose not to implement a Quick Fix (described in #4), the employer was required to develop and implement an “Ergonomics Program” that included:
 - i. Management leadership: the employer was required to assign and adequately resource an individual or team that would be responsible for setting up and managing an ergonomics program; communicate with employees about MSD hazards; and ensure that workplace policies encouraged employee participation and early reporting of MSD hazards.¹¹⁹

¹¹⁴ Ergonomics Standard Proposed 29 C.F.R. § 1910.900(e).

¹¹⁵ *Id.* § 1910.900(e)(1).

¹¹⁶ *Id.* § 1910.900(e)(3).

¹¹⁷ *Id.* § 1910.900(f), Table W-1 - Basic Screening Tool.

¹¹⁸ *Id.* § 1910.900(f)(2).

¹¹⁹ *Id.* § 1910.900(h).

- ii. Employee participation: the employer was required to ensure that employees and unions: had ways to report MSDs, their signs and symptoms, and hazards; received prompt responses to their reports; were provided with resources about the standard and the employer’s ergonomics program; and were involved in the development, implementation, and evaluation of the ergonomics program.¹²⁰
 - iii. MSD management: for any employee who suffered an MSD Incident in an Action Trigger job, the employer was required to provide to the employee for free: access to a HCP, any necessary work restrictions or time off to recover, work protection to prevent firing or demotion due to injury, and evaluation and follow-up of the incident. The standard explains in detail the process by which an employer should use an HCP’s opinion in cases of disagreement between the patient’s chosen HCP and the employer’s.¹²¹
 - iv. Job hazard analysis: for each Action Trigger job, the employer was required to conduct a job hazard analysis to determine whether that job was a “Problem Job.” The analysis included talking with employees in the job and their unions about MSD hazards they face and observing the employees engaging in their daily tasks to identify risk factors. The employer was allowed to use one of a number of OSHA-provided or ergonomics professional-provided tools to complete the analysis. If the employer determined that there was an MSD hazard in the job, the job would be termed a “Problem Job.”¹²²
 - v. Hazard reduction and control (if applicable): in Problem Jobs, an employer was required to control and reduce MSD hazards to acceptable levels listed in the standard by collaborating with employees and unions to identify feasible engineering (preferred), work practice, or administrative controls.¹²³ The employer was also required to continually evaluate the controls and their effectiveness and ensure eventual compliance with acceptable hazard levels.¹²⁴
 - vi. Training: the standard required training every three years for employees and supervisors in jobs that meet an Action Trigger.¹²⁵
4. Quick Fix: If the employer determined that a job did qualify as an Action Trigger, this was the first MSD Incident associated with the job, and the workplace had no more than two prior MSD incidents in the workplace in the preceding 18 months, the employer could choose to implement a “Quick Fix” in lieu of a full Ergonomics Program. In a Quick Fix, the employer would provide the same MSD management as described in #3, but would be permitted to bypass the full job hazard analysis process by simply collaborating with employees and their unions about controls. If the controls brought hazards to an acceptable level within 30 days, the employer did not need to take any further action besides maintaining the control. If the controls were not effective, the employer would be required to implement a full ergonomics program described in #3.

¹²⁰ *Id.* § 1910.900(i).

¹²¹ *Id.* § 1910.900(p),(q),(r),(s).

¹²² *Id.* § 1910.900(j). If the employer determined that the MSD hazards posed a risk only to the employee who reported the MSD, the employer was permitted to limit job controls, training, and evaluation to that individual employee’s job. 1910.900(j), note to paragraph (j).

¹²³ The standard defined: “engineering controls” as “physical changes to a job that reduce MSD hazards. Examples of engineering controls include changing or designing workstations, tools facilities, equipment, materials, or processes”; “work practice controls” as “changes in the way an employee performs the physical work activities of a job that reduce or control exposure to MSD hazards,” for example, “[u]se of neutral postures to perform tasks (straight wrists, lifting close to the body),” “[u]se of two-person lift teams,” and “[o]bservance of micro-breaks”; and “administrative controls” as “changes in the way that work in a job is assigned or scheduled to reduce the magnitude, frequency or duration of exposure to ergonomic risk factors,” for example, “[e]mployee rotation,” “[j]ob task enlargement,” “[a]lternative tasks,” and “[e]mployer-authorized changes in work pace.” *Id.* § 1910.900(z).

¹²⁴ *Id.* § 1910.900(k),(l),(m).

¹²⁵ *Id.* § 1910.900(t).

The remainder of the standard included details related to record keeping and the criteria for ending an ergonomic program, as well as regulatory definitions of certain terms.¹²⁶

¹²⁶ See generally *id.* § 1910.900(v),(x),(y)(z).

Appendix B: Potential definitions of “substantially the same”

One widely-cited article on the subject discussed the range of plausible interpretations of the phrase “substantially the same,” arranged from least to most troublesome for an agency seeking to regulate in an area in which Congress has CRA-ed a regulation¹²⁷:

1. An identical rule can be reissued if the agency asserts that external conditions have changed, thus changing the effect of the rule enough to not be “substantially the same.”
2. An identical rule can be reissued if external conditions truly have changed (as determined by a court, rather than relying on an agency’s assertion).
3. The reissued rule must be altered so as to have significantly greater benefits and/or significantly lower costs than the original rule.
4. In addition to changing the overall costs and benefits of the rule, the agency must fix all of the specific problems Congress identified when it vetoed the rule.
5. In addition to changing the costs and benefits and fixing specific problems, the agency must do more to show it has “learned its lesson,” like changing the regulation drafting and issuing process.
6. In addition to the above, the agency must devise a wholly different regulatory approach if it wishes to regulate in an area Congress has cautioned it about.
7. An agency simply cannot attempt to regulate (in any way) in an area where Congress has disapproved of a specific regulation.

The scholars who offered the above range of potential interpretations of “substantially the same” analyzed congressional intent during passage of the CRA and during the floor debate over OSHA’s ergonomics standard; the general preference in Administrative Law to offer deference to agency expertise; and general good government principles. The scholars concluded that the third option best comported with the aforementioned factors; in their view, the agency’s decision to regulate in an area where Congress has already CRA’ed a regulation should be permitted under the “substantially the same” standard so long as the new regulation has a substantially better benefits-cost ratio as the CRA’ed regulation.

Other legal academics have suggested different understandings of what “substantially the same” should mean. One suggested that a CRA disapproval resolution should create a relatively more broad “buffer zone” around the CRA’ed regulation in which an agency cannot regulate.¹²⁸ Another argued that “substantially the same” must be considered in light of the underlying statute that authorized the regulation in the first place.¹²⁹

Looking to agency practice offers limited guidance on the meaning of “substantially the same” too, as there have only been two instances in which an agency issued a rule on a subject where a previous rule had been previously invalidated through Congress’s use of the CRA. In both cases, there was a statutory mandate for the agency to conduct rulemaking of some kind on the subject matter of the rule. In its reissued final rule on occupational drug testing, the Labor Department (“DOL”) responded to a commenter who questioned the agency’s authority to regulate in the same area in which a previous rule had been “CRA’ed.” The agency explained that the CRA only prohibited it from issuing a regulation on the same matter that is “substantially

¹²⁷ E-Word Article at 734-7.

¹²⁸ Paul J. Larkin, Jr., Reawakening the Congressional Review Act, 41 Harv. J.L. & Pub. Pol’y 187, 244–46 (2018).

¹²⁹ Cary Coglianese, Solving the Congressional Review Act’s Conundrum, Comment Submitted on SEC Proposed Rule on Disclosure of Payments by Resource Extraction Issuers (Mar. 16, 2020), <https://www.sec.gov/comments/s7-24-19/s72419-6960307-212731.pdf>.

the same” as the rescinded regulation.¹³⁰ The final rule examined the dictionary definition “substantially” and concluded that its change-in-scope (in this case, making it more stringent) from the rescinded rule fit the definition. In another case, the Securities and Exchange Commission (“SEC”) reissued a rule and made a similar determination as the Labor Department in terms of what the “substantially the same” standard required.¹³¹ The SEC considered commenters’ arguments that the SEC could simply reissue the same rules but with different rationales and/or economic analysis, or maintain the primary parts of the rule but substantially alter “ancillary or secondary components” of the rule. The SEC rejected those suggestions and instead found that it must change the scope (in this case, to narrow it) of the primary requirements of the regulation.

¹³⁰ Employment and Training Administration, Federal-State Unemployment Compensation Program; Establishing Appropriate Occupations for Drug Testing of Unemployment Compensation Applicants Under the Middle Class Tax Relief and Job Creation Act of 2012, 84 Fed. Reg. 53037 (Oct. 4, 2019).

¹³¹ Securities and Exchange Commission, Disclosure of Payments by Resource Extraction Issuers, 86 Fed. Reg. 4662 (Jan. 15, 2021).