On October 3, 2016, a warehouse employee of General Dynamics Land Systems, Inc. (GDL) was seriously injured when seven crates containing 94-pound struts fell from a stack onto him as he was inventorizing them. There were no witnesses to the accident and the injured employee has no memory of the event. Following an inspection by Compliance Safety and Health Officer (CSHO) William Glasscock of the Birmingham, Alabama, Area Office of the Occupational Safety and Health Administration (OSHA), the Secretary concluded the cause of the accident was the instability of the stack of crates. The Secretary issued GDL a citation alleging a serious violation of 29 C.F.R. § 1910.176(b) for failure to ensure the stack of crates was stable, for which he proposed a penalty of $9,234. GDL timely contested the citation bringing the matter before the Occupational Safety and Health Review Commission pursuant to § 10(c) of the Occupational Safety and Health Act of 1970, 29 U.S.C. § 651-678 (the Act). GDL contends the accident was not caused by the instability of the stack, but, by the injured employee climbing on the stack, causing it to fall.
I held a hearing in this matter on December 6, 2017, in Birmingham, Alabama. The parties filed post-hearing briefs on February 12, 2018.¹

For the reasons discussed below, the citation is vacated.

**Jurisdiction**

At the hearing, the parties stipulated jurisdiction of this action is conferred upon the Commission pursuant to §10(c) of the Act. The parties also stipulated at the hearing that at all times relevant to this action, GDL was an employer engaged in a business affecting interstate commerce within the meaning of § 3(5) of the Act (Tr. 9-10). Based on the parties’ stipulations and the facts presented, I find GDL is an employer covered under the Act and the Commission has jurisdiction over this proceeding.

**Background**

GDL is a large defense contractor. Among its operations is production of Stryker vehicles, a family of wheeled military vehicle. The facility at issue, located near the Anniston Army Depot in Anniston, Alabama, is a warehouse for Stryker parts. It is referred to in the record as the Warner Warehouse. At the Warner Warehouse, GDL receives parts in its receiving department. These parts are taken to the floor of the warehouse where they are stacked and their location recorded by the GDL employees assigned to inventory control (Tr. 155). Large parts arrive crated with various numbers on the crates, including part and serial number (Tr. 186). When parts are ordered, the inventory control employees pick the parts from the stacks in the warehouse and take them to the shipping department (Tr. 158).

GDL stores parts at the Warner Warehouse on shelves and on the floor in stacked crates (Exh. R-11 at p. 8). Due to their size, many of the parts come individually crated. Large, individually crated parts are stacked one on top of the other (Exh. R-11 at pp. 1-7). GDL has requirements for these stacks of crated parts. The crates must be suitable for stacking (Tr. 36, 161, 232). Only like parts can be stacked on top of like parts to maintain the same footprint (Tr. 35, 161, 231-32). Corners of the stacks must be square (Tr. 35). The height of a stack cannot exceed 15 feet (Tr. 231). Crates are to be stacked so that they do not move (Tr. 35-36).

GDL maintains a record of all the parts at the Warner Warehouse. Employees assigned to inventory control routinely count and check that record with the parts stored in the warehouse.

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¹ To the extent either party failed to raise any other arguments in its post-hearing brief, such arguments are deemed abandoned.
as part of GDL’s inventory control process. At the beginning of their shifts, employees are given written lists of the parts they are to check. Some of the assignments are simple counts, some involve checking serial numbers of each item to be inventoried. Various types of equipment are available for employees to use when their task requires them to read labels on the top of stacks or to move the parts to read the labels (Tr. 22, 188). These include order selectors, stackers, forklifts, and ladders (Tr. 173).²

On October 3, 2016, Jason Johnson, Materials Team Lead and the injured employee’s supervisor, assigned the injured employee to perform a “cycle count.” (Tr. 186, 214) Johnson provided the injured employee with a spread sheet containing a list of parts designated by location and serial number that the injured employee was to count (Tr. 21, 186, 214). The injured employee went to the “upper bulk” where large parts were located (Tr. 21, 27). The stack he was to inventory contained struts to the Stryker vehicle individually housed in wooden crates. A single crated strut weighs 94 pounds (Tr. 234). Each crate was labeled with the serial number of the strut (Tr. 216-17). The stack was 10 crates high or 11 feet, 4 inches (Tr. 245). The injured employee was to read each serial number and check it off his list. The injured employee testified he had inventoried this stack several times before (Tr. 36).

The injured employee worked alone. He testified he has no recollection of any of the events of the day after leaving home for work that morning (Tr. 21). At some point seven of the crates containing the struts fell from the top of the stack onto the injured employee (Tr. 208). He was found unconscious with the crates on top of him (Tr. 186-87, 207-08). There was no ladder or other equipment in the area (Tr. 187). No one had witnessed the accident. The injured employee sustained serious injuries including a broken leg, injuries to his shoulder and face, and possible head trauma (Tr. 10, 24). He remained unable to work as of the date of the hearing (Tr. 24).

GDL notified the OSHA Birmingham Area office of the accident (Tr. 51). CSHO Glasscock of that office was assigned to and conducted an inspection of GDL’s Warner Warehouse. Beginning October 11, 2016, CSHO Glasscock performed a walk around inspection

² The selector, stacker, and forklift used at the GDL warehouse are depicted in Exhibit R-11, pp. 11, 12, and 13, respectively (Tr. 173-77).
of the Warner Warehouse, including the area in which the accident happened. (Tr. 53-56).³ CSHO Glasscock interviewed employees who performed work similar to the injured employee and supervisory employees. He gathered documentation regarding GDL’s safety and health program (Tr. 60-62; Exhs. C-4, C-5, C-6, and C-7). CSHO Glasscock obtained GDL’s job safety analysis for material handling and an “EHS” talk titled “Warehouse Operations Safety” used by GDL (Exhs. C-5 and C-6). The EHS talk contained a direction to “[b]and or wrap all loose materials stored over 10 feet.” (Exh. C-6) CSHO Glasscock noted the strut crates were not banded together and concluded GDL was not following its own procedure (Tr. 66). He testified all four employees he spoke with expressed the opinion the unbanded crates were unstable (Tr. 60). CSHO Glasscock conceded he observed no stacks he considered unstable during his inspection (Tr. 86). He concluded, based upon the failure of GDL to band crates together and the opinions expressed by the employees he interviewed, the crates containing struts were not stacked in a stable manner and recommended GDL be issued a citation for failure to comply with § 1910.176(b). GDL timely contested the citation.

The Citation

Item 1, Citation 1, alleges a violation of § 1910.176(b). The cited regulation is part of Subpart N Material Handling and Storage. It reads

Secure storage. Storage of material shall not create a hazard. Bags, containers, bundles, etc., stored in tiers shall be stacked, blocked, interlocked and limited in height so that they are stable and secure against sliding or collapse.

29 C.F.R. § 1910.176(b). The alleged violation description states “On or about 10/11/2016 – UB2115, 150 Werner Drive, Anniston, AL, an employee was struck by crates while performing inventory count of stored military vehicle parts.” The Secretary alleges the struts were stacked “at a height and in a manner that was hazardous to employees working in its warehouse on October 3, 2016.”⁴ (Secretary’s Brief at p. 5) The Secretary argues the stack was hazardous because the stack was “at least 10 feet high” and “not interlocked.” (Secretary’s Brief at p. 5).

³ CSHO Glasscock photographed the area where the accident occurred and the stack the injured employee had been counting (see Exhs. C-1, C-2 and C-3). The parties agree these photographs were not representative of conditions either immediately preceding or after the accident.

⁴ The alleged violation description refers to conditions on October 11, 2016, the day of the inspection, rather than October 3, 2016, the day of the accident. This appears to be error in drafting the citation. The citation describes events of October 3, 2016. Respondent’s defense focuses on conditions at the warehouse on October 3, 2016. Both post-hearing briefs refer to the October 3, 2016, events. The citation is hereby amended to reflect October 3, 2016, as the appropriate date of violation. Based on the evidence presented at hearing and all pleadings, the parties
**Discussion**

The Secretary has the burden of establishing the employer violated the cited standard. To prove a violation of an OSHA standard, the Secretary must show by a preponderance of the evidence that (1) the cited standard applies; (2) the employer failed to comply with the terms of the cited standard; (3) employees had access to the violative condition; and (4) the cited employer either knew or could have known with the exercise of reasonable diligence of the violative condition. *JPC Group, Inc.*, 22 BNA OSHC 1859, 1861 (No. 05-1907, 2009).

**Applicability of the Standard**

There is no dispute the standard applies to the cited conditions. The standard at § 1910.176(b) applies generally to all material in storage. Respondent does not dispute the crated struts were in storage. Nor is there any dispute the crated struts were “stored in tiers.” The common definition of a tier is “a layer of articles arranged one above another.” *Webster’s New Collegiate Dictionary*. The crates were stored one on top of the other or in tiers (Exhs. C-1, C-2 and C-3). The standard applies to the stack of crated struts.

**Violation of the Standard**

A threshold matter to be resolved is the Secretary’s burden to establish noncompliance with § 1910.176(b). Neither party squarely addressed this issue.

The hazard addressed in § 1910.176(b) is that posed by the sliding or collapse of material stored in tiers. Generally, a standard presumes a hazard and the Secretary need only show the employer violated the terms of the standard. *Kasper Electroplating Corp.*, 16 BNA OSHC 1517, 1523 (No. 90-2866, 1993). However, a hazard is not presumed when the standard incorporates the hazard as a violative element. *Bunge Corp v. Secretary of Labor*, 638 F.2d 831 (5th Cir. 1981).

A reading of the standard as a whole leads to the conclusion § 1910.176(b) incorporates the hazard as a violative element the Secretary must establish in order to show the employer in violation. Although the standard reads as a specific requirement that stored material be “stacked, blocked, interlocked and limited in height” those requirements are imposed only so as to ensure stability and security of the material. In other words, failure to stack, block, interlock, and limit in height tiered material only constitutes a violation of the standard where it creates the hazard of

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“squaresly recognized” the citation was intended to refer to October 3, 2016. *McWilliams Forge Co.*, 11 BNA OSHC 2128, 2129-30 (No. 80-5868, 1984). I find the parties have tried the amendment by consent.
sliding or collapse.\(^5\) It is well recognized that statutes must be read as a whole, “making every effort not to interpret a provision in a manner that renders other provisions of the same statute inconsistent, meaningless, or superfluous.” *Lake Cumberland Trust, Inc. v. E.P.A.*, 954 F.2d 1218, 1222 (6th Cir 1992), quoting, *Boise Cascade Corp. v. U.S. E.P.A.*, 942 F2d 1427, 1431-32 (9th Cir. 1991)). The last phrase of the cited standard incorporates an additional element of the Secretary’s prima facie case, i.e. establishing the lack of stability and security against sliding or collapse of the stored material. To interpret the regulation otherwise would render the final phrase - “so that they are stable and secure against sliding or collapse” – superfluous. To establish a violation of § 1910.176(b), the Secretary must show the stack of strut crates was not stable and secure against sliding or collapse.

The Secretary’s theory of violation has been a moving target throughout this case. The alleged violation description references only the fact of the October 3rd accident as the basis for finding GDL in violation of the standard. CSHO Glasscock initially testified he found GDL in violation of the standard because it had not enforced its own procedure calling for banding of loose materials (Tr. 66). When prompted, CSHO Glasscock suggested the height of the stack and the weight of the struts contributed to the stack’s instability (Tr. 94). In his brief, the Secretary argued because the struts were stored 10 feet high and the crates were not interlocked they created a hazard. As proof of this hazard, the Secretary points to the accident.

To the extent the Secretary’s theory of violation relies on GDL’s failure to band the strut crates, the theory fails. The plain language of the standard does not require banding of material.

The standard does require material stored in tiers be interlocked. The term “interlock” is not defined in the standard. Nor has the Commission provided any guidance on interpretation of the term as used in the standard. The dictionary definition of the term “interlock” is “to lock together” or “to connect so the motion or operation of any part is constrained by another.” *Webster’s New Collegiate Dictionary*. As evidenced in the photographs at Exhibits C-1, C-2, and R-11, nothing about the manner in which the crates are stored could reasonably be interpreted as

\(^5\) In holding the Secretary must show the failure to stack, block, interlock and limit in height creates a hazard, I find it is not necessary to reach GDL’s argument regarding whether the word “and” as it is used in the standard should be read in the conjunctive or disjunctive. GDL argues to interpret the word “and” in the conjunctive would result in a finding tiered material otherwise stable and secure, i.e. posing no hazard, could never be in compliance unless it meets all four criteria enumerated in the standard. Requiring the Secretary to establish the existence of the hazard of lack of stability or security against sliding or collapse of any material stored in tiers eliminates the concern raised by GDL that interpreting the word “and” in the conjunctive would lead to this absurd result.
being locked together or connected such that one crate constrains the motion of the other. Earnest Marquez, GDL’s Section Manager in charge of the Warner Warehouse testified the crates were stacked one on top of the other such that if the top of the stack were to “topple over, [the] whole stack would probably go.” (Tr. 250) The Secretary established the crates were not interlocked. The Secretary has also alleged the stack of crates was not “limited in height.” The Secretary’s burden is only met if the height of the stack, the failure to interlock the crates, or both rendered the stack unstable or not secure against sliding or collapse.

Neither the term “stable” nor “secure” is defined in the standard. The common understanding of the term stable is “placed so as to resist forces tending to cause motion or change.” Webster’s New Collegiate Dictionary. Secure is used to refer to something “free of danger” or “affording safety.” Webster’s New Collegiate Dictionary. To meet his burden, the Secretary must establish the crates were stacked so that they would be unable to resist a force tending to cause the stack to move in a manner that was unsafe or posed a danger. Under the specific terms of the standard, the movement to be prevented is sliding or collapse.

This interpretation of the Secretary’s burden is consistent with the Commission’s long-standing precedent in Clement Food Company, 11 BNA OSHC 2120 (No. 80-607, 1984).6 The question in Clement Food was whether a stack of boxes was configured in a manner that rendered it unstable in violation of § 1910.176(b). The citation had alleged a 15-foot high, tiered stack of boxes was not interlocked or blocked and the top tier was leaning. In affirming the alleged violation, the Administrative Law Judge relied on evidence the center mass of the stack was “so displaced that any shock or vibration…could cause the top tier to fall.” Id. On review the employer argued the stack was not unstable because an outside force was needed to cause a slip or collapse. The Commission disagreed the standard required the Secretary to establish material stored in tiers is inherently unstable. The Commission held § 1910.176(b) “is not limited by its words to stacks so unstable that they might collapse of their own weight.” Id.

This interpretation of § 1910.176(b) was upheld by the Fifth Circuit in an unpublished decision in Sanderson Farms, Inc. v. OSHRC, 348 Fed. Appx. 53 (5th Cir. 2009). In Sanderson Farms, the Fifth Circuit upheld the ALJ’s finding7 of a violation of § 1910.176(b) holding,

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6 Neither party addressed this apposite Commission precedent.
7 The Commission declined review of the ALJ’s decision and the ALJ’s decision became a final order of the Commission.
“although the entire structure was basically stable when undisturbed, the pallets and boxes became unstable when they were struck or disturbed.” *Id.*

The record establishes the stack of crates that fell on the injured employee was not configured “to resist forces tending to cause motion or change.” Although the evidence in this record fails to establish what force acted on the stack of crates, it is not necessary for the Secretary to make that showing. It is enough the record establishes the stack was capable of sliding or collapsing when struck or disturbed.

GDL’s contention the Secretary must establish the cause of the accident is rejected. In making this argument, Respondent relies on *Koppers Company, Inc.*, 1 BNA OSHC 666 (No. 402, 1972) and *Buckeye Fabricating Co.*, 14 BNA OSHC 2145 (Nos. 90-948 and 90-1013, 1991). Both are unreviewed ALJ decisions with no precedential value. Both are also inapposite. In *Koppers Company*, the ALJ vacated a citation alleging a violation of § 1910.176(b) finding the material that had fallen and injured an employee was not being stored. Therefore, the standard did not apply. Similarly, in *Buckeye Fabricating*, the ALJ found the standard did not apply because the material that had fallen and injured an employee was not stored in tiers. In both cases, the actions of the employees preceding the accident were dispositive of the issue of whether the standard applied. Here, the cause of the sliding of the crates is not dispositive of whether GDL violated the standard.⁸

The record establishes the stack of strut crates slid while the injured employee was inventorying its contents. The crates were not interlocked such that the force that acted on the stack was capable of causing it to slide or collapse. It was not stable and secure within the meaning of the standard. The Secretary has established GDL was in violation of § 1910.176(b).⁹

*Employee Exposure*

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⁸ GDL appears to be arguing the only force capable of causing the stack to slide is one it could not reasonably have foreseen being applied to the stack. It seems reasonable the standard was not intended to require employers to ensure stability against all outside forces no matter how great or unpredictable. I find this is an issue more appropriately addressed with regard to the Secretary’s burden to establish employer knowledge of the violative condition.

⁹ In so holding, I have placed no reliance on the testimony of CSHO Glasscock that four employees told him they believed the stacks were unstable (Tr. 59-60, 81-82). This testimony regarding the opinion of unnamed employees that certain unidentified stacks of crates were unstable, without any explanation as to the basis for the opinion is not probative evidence of a violation.
To establish exposure, the Secretary must show that an employee was actually exposed to the cited condition or that access to the cited condition was reasonably predictable. *Phoenix Roofing Inc.*, 17 BNA OSHC 1076, 1079 (No. 90-2148, 1995). As evidenced by the accident, the injured employee was exposed to the hazard of being struck by the strut crates when the stack slid and fell on him. Other inventory control employees performing similar work would likewise be exposed. The Secretary has met his burden to establish employee exposure to the cited condition.

**Employer Knowledge**

To establish employer knowledge of a violation the Secretary must show the employer knew, or with the exercise of reasonable diligence could have known of a hazardous condition. *Dun Par Engineered Form Co.*, 12 BNA OSHC 1962, 1965-66 (No. 82-928, 1986). To meet his burden, the Secretary must establish GDL was aware the manner in which the crates were stacked rendered them unstable. I find he has not met that burden.

The stack that fell on the injured employee had been in the same location and condition since 2014 (Tr. 190). There was no evidence it had ever shifted or shown any signs of instability in the past (Tr. 190). The injured employee had inventoried the stack on three prior occasions (Tr. 36, 190). He testified it had always been stable (Tr. 36). He did not testify he complained about the condition of the stack on the day of the accident or any other time. CSHO Glasscock testified he observed no unstable stacks during his inspection. With the exception of the height, there is no difference between the manner in which the crates were stacked on the day of the accident and the day of the inspection. The Secretary identified nothing in any of the photographic evidence constituting a visible sign of a hazardous condition.\(^{10}\) The Secretary failed to establish GDL had actual knowledge the stack that fell on the injured employee was unstable prior to the accident.

The Secretary relies on the testimony of the injured employee that he told Johnson and another supervisor\(^{11}\) the stacks were “unsafe” and that “somebody is going to get hurt.” (Tr. 27)

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\(^{10}\) In both *Clement Foods* and *Sanderson Farms*, cited herein, although the stacked material became unstable only when an outside force was applied, there were signs the stacks were susceptible to collapse under such circumstances. In *Clement Foods*, the photographic evidence showed the top tier of the stack was leaning. In *Sanderson Farms*, the racks upon which boxes were stacked were “dilapidated and their legs were often twisted or broken” and the tiers of boxes were leaning.

\(^{11}\) There is some dispute in the record as to whether this second person was a supervisory level employee. It is not necessary to reach that issue.
The Secretary presented evidence other employees similarly felt some of the stacks were unstable, but presented no evidence these employees ever notified supervisory employees of this concern. Nor is there any documentary evidence of employee complaints about unstable or unsafe stacks of crates (Tr. 140-41). The record contains no evidence of any prior accidents involving a collapse or slipping of the stacked crates (Tr. 102-03, 139, 231).\textsuperscript{12} There was no evidence the stacks have been subject to being struck by any of the various material handling equipment at the Warner Warehouse. The evidence presented by the Secretary, that the injured employee told his supervisor about an unspecified unsafe stack at an unspecified time, is insufficient to establish management at GDL was put on notice of a hazardous condition associated with any specific stack of crates or, more importantly, the manner in which GDL stacked the crates generally.

To the extent the Secretary attempted to establish GDL had constructive knowledge the stacks were unstable, his evidence fails to do so. Constructive knowledge is shown where the Secretary establishes the employer could have known of the cited condition with the exercise of reasonable diligence. \textit{Par Electrical Contractors, Inc.}, 20 BNA OSHC 1624, 1627 (No. 99-1520).

Whether an employer was reasonably diligent involves a consideration of several factors, including the employer’s obligation to have adequate work rules and training programs, to adequately supervise employees, to anticipate hazards to which employees may be exposed, and to take measures to prevent the occurrence of violations. \textit{Id.} citing \textit{Precision Concrete Constr.} 19 BNA OSHC 1404, 1407 (No. 99-707, 2001).

“Reasonable diligence implies effort, attention, and action not mere reliance upon the action of another.” \textit{Carlisle Equipment Co. v. Secretary of Labor}, 24 F.3d 790, 794 (6\textsuperscript{th} Cir. 1994). The Commission has held that “[r]easonable steps to monitor compliance with safety requirements are part of an effective safety program.” \textit{Southwestern Bell Tel. Co.}, 19 BNA OSHC 1097, 1099 (No. 98-1748, 2000 (citations omitted), \textit{aff’d without published opinion}, 277 F.3d 1374 (5th Cir. 2001).

As previously noted, the Secretary posited no explanation as to the force that caused the stack to slide. Although the Secretary need not show the exact cause of the accident, he must

\textsuperscript{12} Jackie Waldron, the Director of Operations for GDL in Anniston, testified if material had fallen, a report would be required because, as a defense contractor, GDL would have to make restitution for any damage (Tr. 102-03).
show how GDL could have been aware the stack was unstable. In other words, the Secretary
must show sliding or collapse of the stacks was a hazard a reasonably diligent employer would
have anticipated under the circumstances. The record as a whole fails to do so.

The injured employee testified when orders are picked, employees don’t always restack
the material in a stable manner (Tr. 31). The injured employee testified that reporting unstable
stacks to his supervisor was an almost daily occurrence (Tr. 41). He testified Johnson would
likewise identify unstable stacks to him (Tr. 41). When that happens, he testified Johnson would
require the stack be fixed (Tr. 31). Johnson testified part of his job was to walk the warehouse to
observe the condition of the stacked material (Tr. 213). He testified he observed unstable stacks
infrequently, but when he did, he had the inventory control employees restack and stabilize them
(Tr. 159). The injured employee corroborated Johnson always had him fix a stack identified as
unstable (Tr. 42). The Secretary contends this evidence establishes GDL’s knowledge of the
hazardous condition of the stacks at the Warner Warehouse. I disagree this is the proper
inference to be drawn from this evidence.

GDL has a comprehensive safety and health program on which its employees are trained
(Tr. 134; Exhs. R-8 and R-10). GDL has standard procedures for stacking materials. These
include maintaining the same footprint throughout the stack, limiting stacks to 15 feet\textsuperscript{13}, and
ensuring the condition of the crates are suitable for stacking (Tr. 231-32). The injured employee
testified he was aware of these rules, including a rule that the stack “can’t be moving.” (Tr.
350-36). GDL conducts both internal safety audits and third-party audits (Tr. 135-36). Delbert
Hopper, GDL’s Environmental Health and Safety Representative, testified no auditor has ever
identified the manner in which GDL stacks crates at the Warner Warehouse as hazardous or
otherwise non-compliant (Tr. 138).

Although a storage facility, GDL’s warehouse is a dynamic environment. Material is
received, moved to storage, ordered, pulled or picked, and shipped out. It is inevitable the
condition of stacks will change. The evidence establishes the inventory control process results in
frequent observation of the stacks by employees. The Secretary contends the process of
restacking crates to ensure their stability was an almost daily occurrence. The record contains no

\textsuperscript{13} The Secretary presented no evidence establishing GDL’s rule allowing stacks up to 15 feet resulted in some stacks
being unstable. Nor did he present any explanation why the height of the stack that fell, which was less than 15 feet,
was hazardous.
The injured employee testified about one or two incidents during which a stack fell when hit by a forklift (Tr. 29). The injured employee could not provide an approximate date of either occurrence. The Secretary provided no corroborating evidence of either incident. I give this testimony very little weight.

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14 The injured employee testified about one or two incidents during which a stack fell when hit by a forklift (Tr. 29). The injured employee could not provide an approximate date of either occurrence. The Secretary provided no corroborating evidence of either incident. I give this testimony very little weight.