

September 16, 2021

District IV periodic meeting

Topic of discussion include:

1. District Open Positions

Currently we have 3 open positions that we are attempting to recruit. If you know anybody, please reach out to them.

2. Citing ETS = CFR

Note – all files citing the ETS need to go through CFR

3. Routing casefiles to Victoria... do and don'ts

Remember to provide insp. no., full establishment name, reason for review (ex.: CFR, Temp Agency, other) and the fatality presentation (if applicable) when emailing/routing a casefile to VVoight for review.

4. Current Staffing and Fatalities/Accident/Unprogrammed Activities

We have a reduction in released CSHO --7 SCOs/HCOs total. You may have more than 1 fatality, etc. at any given time. Please keep me informed of any challenges.

5. SEP Goals.

Thank you for all of your assistance helping to accomplish goals in this dept. Need a few more to get to where we need to be. Always use the email updates and performance indicator report (PIR) as the guiding light to make inspection decisions.

6. Review OFIR

Make sure the report is factual and any fat you are working on is included or if 000 not included.

7. Assignment – Ted, Tom, and Jill can assign programmed activities

8. All EE periodic training

Nov training will be done virtual

9. Availability / Attorney General Representative

Please remember to respond to the AGs office rep about your availability for upcoming hearings.

10. Fatality update meetings

Currently, we have 2 fatalities which require a fatality update meeting, Ben's and Jill's. Please keep me in the loop so that we can get these done within 30 days of opening the inspection.

11. George's hearing update – see attached

12. Amber's fatality update – see attached

13. Ben's fatality update – postponed until later date.



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Met Jake, M/I Site Supervisor

Jake said he visits jobsites three times a day, morning, lunchtime, before he leaves.

Asked Jake if he had already been to Lot 134. He said, "Yeah"

Asked Jake what he looks for. "FP, Ladders, Hard Hats, Electrical"

Dropped Truth Bomb on Jake that the crew had no fall protection on site at all.

Jake clammed up and I talked with Safety rep for the rest of inspection.

Safety rep said M/I documents inspections, and he would send me the last few months of daily inspection.

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I discovered that M/I had an interactive site map on their website where customers could see progress of their homes, and all were dated.

Received documents from M/I that included "daily" inspections and some "violation" forms.

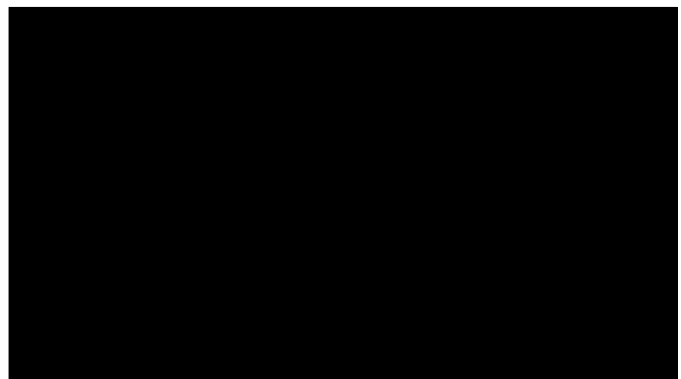
One of the violation forms was for the intermediate in my case. Since I knew about the photos on the interactive site plan, I figured I would see if there was a photo that showed that crew. Just being curious....

That's what started it.

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- Last week this case was in front of the hearing examiner.
- Keep in mind....I have never been in one of these.
- Less than 24 hours before, I was prepped....then two hours before I received a list of questions with my answers from prep...(which I can't have with me)
- However, I was looking forward to describing what I had found and prepared for that.
- Here is the list of items from my investigation that were entered into evidence....I have to use another slide to show it....

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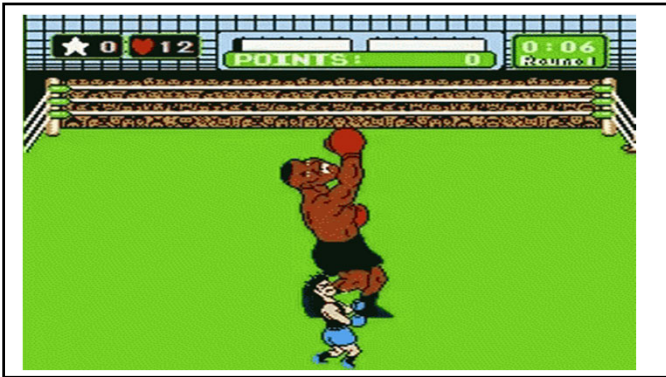
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- So....I was only able to talk about the actual site conversations in order to support my citation.
- I was asked by the M/I attorney about who owned the land....
- I was asked if Jake could have seen what was going on.....
- I was asked if Jake was supposed to have the sub open their van to show equipment.....

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3M Company DBA 3M Scott Fire and Safety

06/28/2021
318223138

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Victim Information

- Deceased: Nathalie "Nash" Mundy
- Age: 50
- Job Title: HR Coordinator
- Employed at 3M Scott Fire and Safety for 3 years
- Found deceased at Scott Clark Toyota in her car with dry ice in the back.

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Overview

- 3M Scott Fire and Safety makes SCBA and thermal imaging cameras for fire fighters
- The mask mounted regulator of the SCBA is made from injected molded plastic and dry ice is used to deburr.
- Dry ice is delivered once a week every Monday afternoon (400-500 pounds).
- Dry ice used is in 10-pound bricks



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Timeline- June 28th

- 6:36- General Supervisor was notified that alarm bodies are low.
- 7:28- The company was notified that the dry ice delivery was delayed a day.
- 7:59- The engineer who orders the dry ice suggested that they get dry ice from the grocery store.
- 8:56- General supervisor added Nathalie Mundy (had purchasing card for operations) to email conversation about dry ice.

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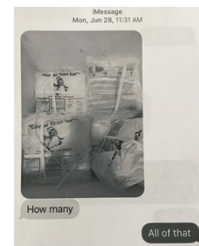
Timeline- June 28th

- 8:57- Supply chain analyst was added to the email conversation and told to help Ms. Mundy
- 10:37- Supply chain analyst found a Harris Teeter that had $\frac{3}{4}$ box left and Ms. Mundy was going to get it.
 - Engineer said that they needed to get 10 good plates of dry ice
- 11:25- Ms. Mundy arrived at the Harris Teeter

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Timeline- June 28th

- 11:31- Ms. Mundy texted a picture of the dry ice in the box and asked "how many" to the general supervisor



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Timeline- June 28th

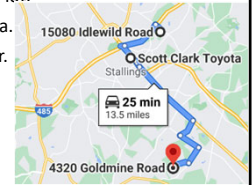
- 11:42- Ms. Mundy walks out of the store with 216 pounds of dry ice



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Timeline- June 28th

- Ms. Mundy texted the general supervisor " I will need help when I get there. 216 lbs worth of dry ice. ETA 12:10p"
- 11:50- Ms. Mundy leaves Harris Teeter parking lot.
- 11:59- Ms. Mundy exits 74 at Scott Clark Toyota.
- 12:02- Ms. Mundy backed in and turned off car.



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Timeline- June 28th

- 13:40-HR manager realized that Ms. Mundy was not at work.
- 20:23- Police secured scene after her son had tracked her phone and found her at Scott Clark Toyota in her car.



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Conditions

- Harris Teeter dry ice is a 5-7 pound paver shape piece per bag
 - Each bag has 4 holes (paper hole puncher sized)
- Temperature: 85°F to 88°F – partly cloudy
- Transported in totes without lids (personal totes)

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Calculation

- Weight of dry ice: 216 pounds
- Sublimation rate: 2%*
- Car interior volume: 102.4 ft³
- Air exchange: 1 (assumption)

$\frac{(\text{dry ice weight, lbs}) (\text{sublimation rate})}{(\text{volume, ft}^3) (\text{air exchanges per hour})} = \text{CO}_2 \text{ concentration (\%)}$

$$\frac{(216 \text{ lbs.}) (0.176)}{(102.4 \text{ ft}^3) (1)} = 37\% \text{ or } 370,000 \text{ ppm} \quad \text{IDLH is } 4\% \text{ or } 40,000 \text{ ppm}$$

$$11 \text{ minutes} = 67,883 \text{ ppm}$$

* A 2% sublimation rate produces 17.6 ft³ CO₂ gas per 100 pounds (using 5-pound packages) of dry ice per hour

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Proposed Citation

- NCGS 95-129(1)
- 1910.1200(h)(1)
- 1904.39(a)(1)

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Dist iv periodic mtg.
March 19, 2021

A discussion of the following topics:

- COVID
 - COVID discussion – covid complaints, covid fatalities, vaccinations, work from home, etc.
- Inspection numbers
 - Performance OSHNC Compliance – almost 2/3 of the way through performance period. Please update NCVIP Goals.
- Case files
 - N-16 COVID-19 optional code
 - Triple-zero fatalities. Will be shared among all the CSHOs. Investigation and enter insp. no. into OE, Investigation tab must be completed, route to me for review
 - Entry date on the OSHA-1 is when first attempt was made to open the inspection. It must be within one business day of when the fatality was reported.
 - Be mindful of the 60 day report
 - On a weekly basis please check your abatement past due report
- Open Discussion/Significant Cases – Each CSHO discussed a hazard/challenge/lesson learned/concern/interesting case/etc.

District IV periodic meeting

November 20, 2020

1. Director's update discussion and questions (director's update from 11.19.2020)
2. Covid training update and training. Wear face covering, wash hand and wipe down surfaces. Products in office. Discussion of PAPRs from Raleigh
3. Discussion of the following: submit multi-employer inspections together, closing files which were prior to electronic make sure audit the physical file, add table of contents to documents section of OE to list all of your attached documents, remember to complete the investigation portion when doing a fatality,
4. Presentation by CSHO Hartis to discuss welding hazards specifically noise exposure.

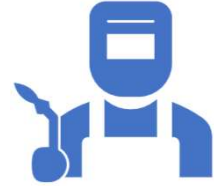
Ultrasonic Welding

Amber Hartis
11/20/2020

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Welding

- Means joining metals
- Goes back several millennia
- Examples include MIG, TIG, stick, and ultrasonic welding



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Ultrasonic welding

- Began in the 1960's
- First application was the toy industry
- 1969 first car made entirely out of plastic using an ultrasonic welder
- Now it is used electronics, aerospace, automotive, packaging, and clothing industries



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Ultrasonic welding

- Joins thin sheets or wires made of metal or thermoplastic through high frequency vibration and pressure.
- Advantages:
 - Quick
 - Welds without significant amounts of heat
 - No consumables



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The downside

- Disadvantage:
 - Noise
 - 93 to 115 dBA
 - 20-40 kHz
 - Can cause nausea and headaches



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Example



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Dosimetry

- Operator 1:
 - Sampled 197 minutes
 - 59.1% dose or 86.2 dBA
 - Full shift with same conditions 92.6 dBA
- Operator 2:
 - Sampled 208 minutes
 - 439.4% dose or 100.7 dBA
 - Full shift with same conditions 106.7 dBA



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Octave band analysis

- Ultrasonic welders operate at 20kHz

		Frequency (Hz)										
	Sample	Max	16	31	63	125	250	500	1000	2000	8000	16000
dBA of Noise	1	115	48	59	65	74	78	78	79	86	110	115
	2	107	29	47	57	67	75	78	73	80	106	107
	3	111	35	42	55	66	71	70	78	87	111	109

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Is it a noise hazard?

- Human hearing ranges from 20Hz to 20kHz
- Employees are exposed to the subharmonics
- ACGIH recommendations
 - Typically 8-hr TWA of 80 dBA
 - In 20 kHz frequency 8-hr TWA of 94 dBA



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Is it a noise hazard?

- Sound enclosures
- Sound dampening material such as acoustical foam or glass fiber
- Work practices
- Hearing protection



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