

THE 10 THINGS I DO, 100 TIMES

A personal look at how a
little OCD helps me stay safe,
reliable, and avoid
embarrassment.



I Am A Work In Progress

- Throughout my life and career, I have learned many lessons.
- Some good lessons and some tough lessons.
- Some happy lessons, some sad lessons.
- Some physically painful lessons, some educational lessons, and some just embarrassing lessons.
- Some lessons from my own actions, some lessons from others.
- Who knows what lessons today will bring?

Sitting in this Board Meeting, you might be wondering what do my life lessons have to do with performing safe work, at CCPUD?

- Through these lessons that I have learned, I have developed some methods and routines on how I go about my work.
- As electric utility workers, different tasks that we perform require different levels of attention.
- First, we must recognize the level of attention necessary and then provide it.
- Tying your boots in the morning takes much less care and focus than picking the rotor out of a 130 MW Hydro Electric Generator.
- With this presentation, I would like to discuss 10 of the more critical tasks that I perform during my work-days, and how I have learned to approach them.
- This might seem a bit goofy or like overkill, but these methods have served me well and so I am going to take this time to share them with you.



1 - High Voltage Switching

- While performing switching activities in the district's Generation, Transmission, and Distribution sites, the OCD comes on strong. I review one simple task ten times!
- This is a lot, but I do have a good record of switching.
- What kind of lesson would be learned if this went wrong?

2 - Entering Relay Settings

- The trip equation: One wrong character can change everything!
- Few people know about this, let alone see this small string of logic, but this single relay setting is one of the most critical pieces of any electric system. I go back and verify this is correct, numerous times!
- What kind of lesson would be learned if this went wrong?

Tripping Logic Equations: (See Figure 5.1)

Direct Trip Conditions

$$TR = M1P + Z1G + M2PT + Z2GT + 51GT + 51PT * LOP$$

Communications Assisted Trip Conditions:

$$TRCOMM = M2P + Z2G$$

Switch-onto-fault trip conditions:

$$TRSOTF = M2P + Z2G$$

Direct Transfer Trip Conditions:

$$DTT = 0$$

Unlatch Trip Conditions:

$$ULTR = !(50L + 51G)$$

3 - Hooking Up a Trailer

- Hooking up a trailer isn't all that complicated, but things can go wrong in a hurry if a critical step is missed.
- I am constantly going back and checking my work, when towing.
- Not safe, not reliable, and EMBARRASSING!!!!





4 - Opening Necessary Test Switches to Trip a Lock-Out Relay

- Testing in-service lock-out relays is stressful.
- One wrong or missed move can be catastrophic.
- I must go back and verify the proper test switches are open 10 times!
- The fastidiousness is strong on these days!
- Reliability – PLEASE!

5 - Pulling Out, Across the Highway While Leaving RI

- Ever since the births of my Daughters, my driving habits have drastically changed.
- I look left and right NUMEROUS times before crossing the highway.
- A few extra seconds spent verifying what I think I saw can assure that I get home safely to my girls.



BREAKING NEWS UPDATE

Two Killed in Six-Vehicle Crash

BATAVIA

6 - The Fuel Pump: Before, During, and After



- Two lifelong goals of mine are to never fill up a gasoline engine truck's tank with diesel, and to never be the guy with the fuel nozzle and hose hanging off the side of his rig, while driving down the road.
- I check these things so many times, it would make your head spin!
- I will agree with you that this is 100% overkill, but I haven't been that guy yet, so I am going to stick to my OCD routine!
- Can you imagine how embarrassed you would be???

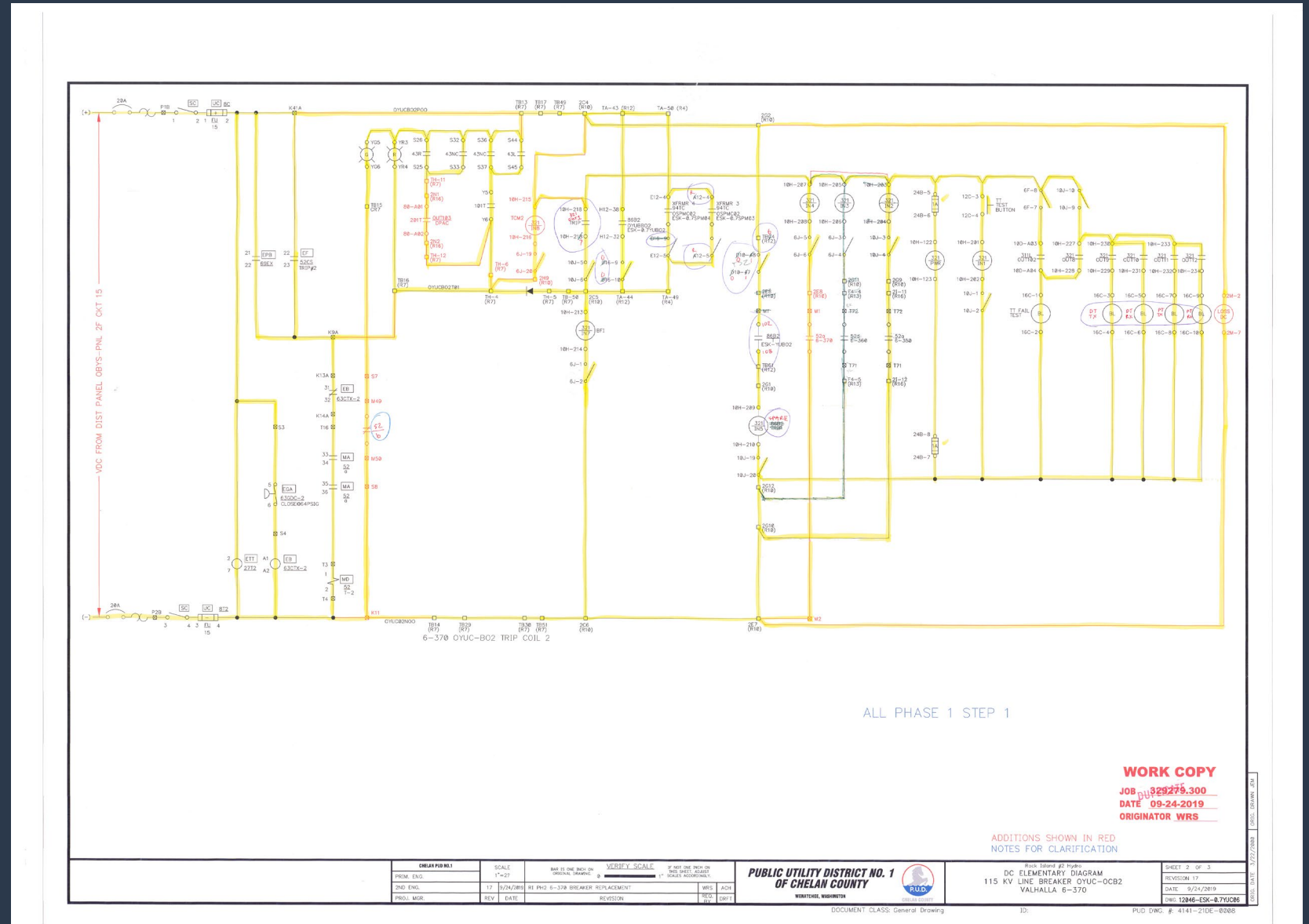
7 - Checking For Overhead Loads

- The places we work are incredibly dangerous.
- On Wednesday June 13th, 2018, we lost one of the best guys that any of us have ever met.
- Eddie's death undoubtedly changed the way that I move about my work-days.
- I am **CONSTANTLY** checking for crane loads and overhead loads while on the projects. I truly do not take my eyes off them.
- We love you Brom, and we miss you! We are all better people for the time that we got to spend with you!



8 - Pulsing a Relay Output

- Which relay am I connected to???
- Which output???
- What am I going to energize???
- I checked my DC Elementary four times, but I think I'll check once more!
- Safety, Reliability, and Embarrassment can all be just one key-stroke away!



9 - Sending a Sensitive Email

- When typing up an email that needs to go to a specific person(s), I must check the “TO:” box 20 times!
- Overkill? You bet!
- But hey, this little touch of OCD could save you from some MASSIVE embarrassment!



10 - Checking Disconnects Open Before Closing a Generator Breaker



- In October of 2015, six workers at Priest Rapids Hydro Project were severely injured when one of them closed the generator main breaker, into a hot bus, with the unit at-rest.
- A massive arc-blast event occurred, and the breaker and surrounding area continued to burn for 16 seconds.
- Miraculously, all survived.
- Four eventually returned to work while two were so badly injured, they never did.
- We are routinely tasked with breaker checkout during unit overhauls and rehabs.
- I have this incident on the front of my mind **EVERY TIME** that I manually close a generator breaker.
- My RI mates can attest, I check those disconnects open multiple times before the first closure, and regularly throughout the rest of the job.
- Side note - I got a first-hand account of that day from the guy who was second on the scene, after the arc blast. Talk about a somber story!

In Conclusion:

Well, as it turns out, maybe it doesn't take me 100 checks to perform 10 tasks. Maybe a better title for this presentation would have been something about double and triple checking critical steps. But hopefully, you see the point that I am making. I'm sure that my eyes aren't the only eyes in this room that have lied before. Without a doubt, those few extra checks have proven prudent to ensuring a safe, reliable and embarrassment free work-day.

My Two Challenges to You:

1. Spend a minute today thinking about something that you have screwed up. Whether it was from a safety, reliability or just embarrassing standpoint, look back and think if first recognizing the importance of the task and then giving a quick double or triple check could have resulted in a better outcome?
2. Take the extra time on your next critical task to bring a little OCD on-board and ensure that prior to performing the work, you are certain that things will go as you want them to!

Thank you for your time!