

Remsburg, Kristy

From: Holmes, Sarah (Shaheen) [mailto:Sarah_Holmes@shaheen.senate.gov]
Sent: Tuesday, January 07, 2014 10:09 AM
To: Dacus, Eugene
Subject: FW: Seabrook issues

Gene,

Happy New Year - I hope you and your family had a nice holiday and are staying warm!.

Please see the note below from the Senator's constituent Mike Mulligan. He is very concerned about issues with deteriorating plumbing around the plant at Seabrook. Can you please provide us with a formal reply to his concerns/allegations?

Thank you, please let me know if you need any additional information.

Kind Regards,
Sarah

From: Michael Mulligan [mailto:steamshovel2002@yahoo.com]
Sent: Wednesday, December 18, 2013 1:22 PM
To: Holmes, Sarah (Shaheen)
Subject: Re: Seabrook issues

Sarah,
If you don't talk tough to these guys, they will allow Seabrook to deteriorate into a Vermont Yankee. This is very similar to their concrete problem where it took much more NRC action. I never have any confidentiality or anonymity needs what so ever!
Mike

Dear Senator Shaheen,

These comments below are from the NH Union Leader newspaper by Seabrook Station's Local 555 Union President Ted Janis on Nov 26, 2013. They were negotiating a union contract.

"Their battle cry is 'natural gas' is killing us. We are not making the money we were making five years ago," said Jenis. "But it's hard for us to sit here and see these raises go out to management."

"This is a workplace that has been beaten down over the last few years," he said.

"There seems to be a total attitude change toward the workers from the corporate level."

Seabrook nuclear plant was brought on line in 1990 with cheap and non-corrosion resistant carbon steel service water piping. Within two years, piping integrity problems began showing up with pitting and local corrosion. And this problem has only gotten worst and it's running out of control as I write. It is corrupting the staff of this organizations.

In 2011 they replaced a 30 year old 8 foot section of 24 inch (huge) width pipe on the service water strainer by pass line. I think because of corrosion issues. It seemingly had a secret failure of some sort in 2011, as the NRC didn't disclose it in their most recent inspection report (2013001). They replaced it with new carbon steel piping that was lined with so called super epoxy material Belzona. It failed within three years during August of this year. This is called progress. How do we know if the Belzona isn't going to clog again the emergency diesel generator cooling water orifices?

As it stands right now, the pipe only has a Band-Aid over the wound till the next outage (late spring 2014). Seabrook and the NRC will tell you they ultrasonically tested the hell out of this section of pipe once they detected it leaking. This device shows you the thickness of the metal piping. This is a nuclear plant and a crucial nuclear safety component...one which just failed mysteriously after 2 years...why weren't they UTing the hell out the pipe before it leaked, as they knew the carbon steel service water piping was seriously corrosion prone? Why wasn't there an intense program to uncover any corrosion throughout the system and especially on the strainer bypass line that already failed? Why didn't they catch the defect before it first leaked...then catch it before the tinfoil thickness pipe wall burst and the leak got even bigger threatening the design of the plant? This is a matter of trusting them and their integrity. This is a matter of the NRC prodding them over and over again about following their procedures and using conservative engineering ethics.

Seabrook through August this year didn't want to shut down over a pipe leak fearing a summer grid emergency with limited electricity and in a heat wave with expensive replacement electricity. Was this all about money and very little about public safety?

Seabrook obtained regulatory good will and forbearance to not shutdown to fix this dangerous leak even after botching the UT reading. The American Society of Mechanical Engineers sets the engineering standards that the NRC requires Seabrook to abide by. The ASME nuclear piping codes requires Seabrook to repair the pipe...not a temporary repair like the NRC gave them permission to do. I bet you they want Seabrook to actually see the damage inside by eye to make certain they know what is going on...not guessing. They could have kept this plant up at power if they first designed this plant prior to construction with sufficient extra service water capacity and flexibility in this area.

- *"ASME Standards used in over 100 countries*
- *ASME members provide engineering and technical expertise to policy makers in Congress, the White House Office of Science and Technology policy, and key federal agencies"*

You get it, the poor initial plant design of the service water system sets Seabrook up to cry like a baby to the NRC with the burdens of code and agency compliance. Your brother Pilgrim (Entergy) plant up north and the NRC doesn't have a care in the world with any "shutting the plant down in mid-cycle creates undue and unnecessary stress on plant systems, structures, and components" during the last year over all the multitudes of shutdowns and scrams they had caused by their poor plant upkeep and maintenance. These are nothing but excuses of convenience and it borders on another falsification in federal documents.

"6. Burden Caused by Compliance

It is impractical to complete a Code-acceptable repair to the identified SW leak at Seabrook Station without shutting the plant down. Shutting the plant down in mid-cycle creates undue and unnecessary stress on plant systems, structures, and components." (Sept 4, 2013)

I don't think these guys deserved any regulatory forbearance. They should have prepared their service water system years before for the rigors of summertime operations. This is how you protect the consumers from the potential of electricity shortages and maintain nuclear safety. Nuclear safety never comes from undeserving regulatory good will. Honestly, they need to spend big bucks to fix

their service water. Course, the grid might be more vulnerable in winter time operations and with our limited natural gas piping capacity. They should have spent our good money towards the aims of making this plant reliable without regulatory nuclear safety forbearance during these critical summer months. Do you think the NRC's regulatory good will and forbearance will get us a reliable service water system for the rest of the life of this plant?

The service water cooling system supports all the reactor core cooling and the emergency diesel generator. This is certainly their Fukushima nuclear safety system. I spent considerable time talking to the NRC senior resident inspector and his boss the branch chief. The senior NRC resident frames the quality of the carbon steel service water piping system as "crap". Every professional in the field knows this is grossly inappropriate material for a salt water system.

Because of the poor quality of the carbon steel and its reckless susceptibility to early failure and all sorts of corrosions, they have lined (inside) portions of the piping with concrete, plastisol and Belzona. Seabrook began using plastisol in 1992 two years after first operation of the plant. The station was oblivious to the fact that the plastisol only has a service life of fifteen years. The NRC had to remind them of this. The brittle and pitted plastisol then sheeted off the piping and clogged a cooling orifice into a Fukushima emergency diesel generator. The machine didn't have enough cooling water and the station botched the "operability determination" over this twice. The big event you should be worrying about is any of the cement, plastisol or Belzona detaching from the inside of the piping and clogging up the water flow or damaging any of the valves.

I believe Seabrook knowingly falsified internal paperwork (prompt operability determination (POD)) the NRC depends on to make a regulatory judgment. Is it safe to stay up at power or should they shut down? Seabrook has made a string of bad "operability determinations" over the recent years and nothing the NRC does seem to turn these guys around into making accurate operability determinations. Seabrook had a leak in their service water system and they used an ultrasonic detector to measure the nature of hole in the pipe. They had information the hole was a very dangerous type which could leak big amounts of water...but they put on the POD document it was a safe and stable hole. Within weeks the hole widened and leaked significant amount of water inside the plant threatening other safety equipment.

I questioned the Branch Chief and senior NRC inspector. They tell me Seabrook didn't adequately support their prompt operability determination (POD). This is a basic operation's safety function at a nuclear plant and they are all trained much on it. What are they even up at power for if they can't perform this simple determination? These guys are all extremely educated and there are many employees with advanced engineering degrees who ultimately make these determinations. It doesn't wash with these really smart and educated people making these kinds of simple mistakes. What they are really good at is cover-ups and playing stupid. Like I said, this plant has had lots of bum service water safety operability determinations lately...why isn't the punishment cumulative? They had at least two stupid and inaccurate operability determinations with erratic cooling water flow indication to an emergency diesel generator. The dangerous brittle and over aged so called protective plastisol that sheeted off the sw pipes. What does it take to turn their hearts? What does it take to make accurate and safe operability determination? How will this faux stupidity end? This revolved around an accurate UT scan of the pipe hole on day one and the staff blowing it with getting the information into the "Prompted Operability Determination". (wink wink)

I questioned the NRC inspector Mr. Cataldo about if it was a falsification of documents or if the NRC interpretation was Seabrook didn't adequately support the POD. How could these really smart and highly trained employees ever make that kind of simple mistake? He said, "Mike, it was just gross staff incompetence" surrounding the reading of the UT and getting the correct information into the POD." I still believe it was an intentional willful falsification of documentation and the NRC is sweet talking this event into a poor support of the POD. But the great problem now is; *why didn't the NRC accurately characterize this event as "gross Seabrook staff incompetence" surrounding the UT and the characterization of the hole in the NRC's inspection report?* Does the NRC have two tiers of

reporting, the prettified talk in the inspection reports for the community and the actual events at the plant?

I have real issues with the early failure of the new carbon steel piping and its super epoxy material Belzona. The nuclear industry is riddled with issues of improper heat treatment of metals and using the wrong type of metal. Remember, the old section of pipe failed mysteriously after 30 years. You get it, they never depressurized this section of piping. They never eyeballed the flaw inside the pipe and taken samples for sophisticated metallurgical analysis at an approved engineering laboratory. And these guys are terrible at guesswork. It could be related to microbial corrosion, electrochemical reactions with dissimilar metals and cement is a great worry.

"As previously stated in Section 7.2, the cause of the degradation is from localized corrosion. The typical corrosion rate used in Seabrook Station Service Water piping evaluations is 30 mils per year (mpy). However, the current identified wall defect resides in piping which was recently replaced during Refueling Outage 14 during April 2011, concluding that an accelerated (presently unknown) mechanism exists within the bounding area." (Sept 4, 2013)

The new carbon steel and the super coating failed after two years. The NRC's branch chief says the seawater in the bypass line is stagnant, but is open at the downstream connection. Nowhere in their documentation does it explain why the new section of piping failed so quickly other than to imply it is the same corrosion mechanism that destroyed the 30 year old first pipe. I think it is a new failure mechanism and other areas of the pipe could also fail quickly.

And believe me, there is no way to get an objective and independent interpretation of what went on here. The NRC and Seabrook have dog in this race with protecting their credibility...you would need a recording (voice, visual) of the initial control room discussion about this hole with the NRC and then a recording of any subsequent discussion on this. Can you even imagine in a nuclear plant's safety cooling water piping, the NRC would allow the metal destruction mechanism to remain unknown? Senior inspector Paul Cataldo told me he fought like hell with his bosses trying to get a bigger violation over this. He talked to me about the burdens the agency only gives him with a very limited weekly or month time budget with events at the plant. He put in a lot of time with this non violation. No overtime and certainly no paid overtime. I got the impression he thinks his bosses don't fully support him as they should and he is worried Seabrook's management doesn't respect him for his Federal oversight role at the plant.

I have called Seabrook's security gate and left a message asking to speak to an engineer about the sw strainer piping leaks. Better, somebody in the know within the operations department. I am still waiting for that call back?

Sincerely,

Mike Mulligan
Hinsdale, NH
(Cell)16032094206
'The Popperville Town Hall'
<http://steamshovel2002.blogspot.com/>

On Friday, December 13, 2013 2:35 PM, Michael Mulligan <steamshovel2002@yahoo.com> wrote:
Sarah,

There we go!

Mike

On Friday, December 13, 2013 2:27 PM, "Holmes, Sarah (Shaheen)" <Sarah_Holmes@shaheen.senate.gov> wrote:
Hi Mike,

Let's try this one more time.

Sarah

From: Holmes, Sarah (Shaheen)
Sent: Thursday, December 12, 2013 10:17 AM
To: 'steamshovel2002@yahoo.com'
Subject: Seabrook issues

Mike,

Nice talking with you today. As we discussed, can you please send me a summary of the issues with leaks at Seabrook, that would be very helpful. I will forward along to the NRC with a cover note from the Senator asking for a response and additional information.

Kind Regards,
Sarah

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