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NUCLEAR REGULATORY COMMISSION

IN RE: TETRA TECH, EC, INC.	**DECLARATION OF SUSAN V. ANDREWS IN SUPPORT OF PETITION TO REVOKE THE LICENSE OF TETRA TECH EC, INC.**

I, SUSAN V. ANDREWS, declare:

Background and Work History

1. I started working in the nuclear industry in September 2003. My first job was at Peach Bottom Atomic Power Station near Delta, Pennsylvania. The employer provided a two-week class for new recruits like me. They trained me as a junior deconner, which is the lowest rung on the totem pole of radiation workers. "Decon" (decontamination) means cleaning something of radiation that a senior Health Physics Specialist ("HP") has found using meters. As a deconner, I worked at: the Crystal River Nuclear Power Plant in Florida; the D.C. Cook Nuclear Power Plant in Stevensville, Michigan; the Limerick Generating Station in Pottstown, Pennsylvania; the Dominion Millstone Nuclear Power Station in Waterford, Connecticut; and the North Anna Nuclear Generating Station in Louisa County, Virginia. Most of these jobs lasted about thirty days each.

2. I then worked at Oak Ridge, Tennessee for the Department of Energy's Oak Ridge National Laboratory. Oak Ridge is the largest nuclear and science research national laboratory in the Department of Energy's system. That job lasted approximately nine months. This was my first job as a Junior HP, for which they gave me six weeks of extensive training related to the scanning, handling and safety procedures for radioactive materials. After Oak Ridge, I went to the R.E. Ginna Nuclear Power Plant in Ontario, New York, where I received more training on how to use various instruments, including how to source check the instruments, and how to make sure that these specialized instruments are correctly calibrated. The training included classes, testing, and the use of mock-ups. The New York job lasted about a month. I then returned to the Dominion Millstone Nuclear Power Station in Connecticut as a Junior HP. Millstone lasted 21 days and then I was laid off. In all of the nuclear related jobs I held, the supervisors over my work performance informed me they were pleased, valued the work I did for them, and I was considered a skilled and valuable employee.

3. After I left Millstone, I received a phone call from Kari Guidry, the Human Resources Manager of New World Environmental ("NWE"), a radiological-staffing company. She apparently

had heard I was looking for work through a mutual acquaintance. She offered me a Senior HP position at Hunters Point Naval Shipyard ("HPNS"). I told her I wasn't qualified for a Senior HP position; I didn't feel at that point I had acquired enough experience to be a Senior HP, although I had received extensive training and experience as a Junior HP. Guidry said that a senior position was the only one that was available and urged me to take it. I did not accept because I believed that based on my training and experience, and what I had seen of the training and experience necessary to be a Senior HP, that although I had extensive experience in the nuclear industry, it did not meet the industry standard yet for a Senior HP position. Instead, I waited until a Junior HP position opened up at HPNS and I took that position at Hunters Point when it became available and was offered to me.

4. I was at HPNS for approximately six and a half years. I was employed by New World except for the last year, when I was employed by Aleut World Solutions ("AWS"), another radiological-staffing firm. I worked for NWE at HPNS from June 27, 2005 until on or about December 31st of 2010. I worked for AWS from early 2011 until December 16, 2011. At all times during my employment at HPNS by NWE, I was supervised by both NWE and Tetra Tech. During the year I worked for AWS, I was supervised by both AWS and Tetra Tech. My immediate superiors at both companies reported to Tetra Tech personnel, including its top two on-site managers, Dennis McWade, the Construction Superintendent and Bill Dougherty, the HPNS Project Manager.

5. When I started work at HPNS in 2005, I worked as a Junior HP for approximately one month doing surveys. My supervisor was Senior HP Justin Hubbard.

6. One time during the month I was doing surveys in 2005, I saw people talking on their phones when taking soil surveys in the Radiological Survey Yard ("RSY"). An RSY is a "lay down area" where soil is spread out to be scanned for radiation. At later times the scanning was done using a towed-array detection system, and at other times the scanning was done with a hand-held sensor instrument. An HP talking on the phone while doing surveys for radiological contamination in an RSY was strictly prohibited; no phones, food, or water were allowed. I

complained about this to HP Supervisor Justin Hubbard. He, in turn, complained that I was performing surveys too carefully and slowly, and moved me to the Portal Monitor.

7. The Portal Monitor is an instrument that is designed to assist in detecting high levels of gamma radiation. Two 7 foot towers containing radiation detecting sensors were used and placed so that a truck could drive between them. If excessively high radiation was emitted from the load carried by the truck, and if the high radiation was not screened by soil, moisture, and the truck bed, then the Portal Monitor alarm would be triggered and set off an alarm to alert staff that excessively high radiation emissions were detected. The Portal Monitor was used at Hunters Point to scan trucks that entered or left the shipyard to prevent high levels of residual radiation above release levels coming in or leaving Hunters Point.

8. I worked at the Portal Monitor for approximately a month at that early time in 2005. When I was assigned to the Portal Monitor, I made certain I was thoroughly familiar with the written procedures and totally understood them before operating it. I stuck strictly to the procedure and turned trucks around if they failed to clear the Portal Monitor. However, after about a month, Justin Hubbard told me I was failing too many trucks resulting in increased costs and delays for Tetra Tech, as if I was to blame. It was as if he thought I had the ability to cause or prevent the Portal Monitor alarm bring triggered, which was not the case. The Portal Monitor triggering an alarm was based on the sensitivity setting of the sensors, how slow the truck drove through the sensors, and whether materials screened the sensors from detecting the residual radioactive contamination. When a truck failed the Portal Monitor, proper procedure required the HP to scan the truck and try to identify the sources of the excessively high radiation materials in the truck bed. I diligently worked on scanning and locating the excessively high residual radiation contamination, and made sure the soil load was sent back to be re-worked. Prior to September 2011, every failed soil load was required to be sent back to the RSY screening yard to be re-worked. Justin Hubbard and other supervisors working under Tetra Tech made it known to me through comments and attitude, that Tetra Tech wanted the trucks to pass, pass quickly, and that doing my job carefully at the Portal Monitor was not something that was valued, but a negative.

As a result, I was removed from the Portal Monitor and was told that if I wanted to remain at Hunters Point I could work in the on-site laboratory as a lab assistant, which I did.

9. I worked in the lab for approximately four years. In 2009, I was moved out of the lab because they needed to downsize the lab by one employee. They moved me out to the field as a Senior HP. I still did not believe I was qualified to be a Senior HP since Tetra Tech at Hunters Point did not provide the type of training to employees that was required to progress to the level of a Senior HP that I had observed in the industry. I shared my belief that I had not gotten the training necessary at Hunters Point to be a Senior HP with Tetra Tech's Project Manager, Bill Dougherty, but he did not respond. I took the job despite feeling unqualified because I needed the work and it paid well. I worked as a Senior HP for NWE for approximately a year and a half, followed by about a year as a Senior HP for AWS.

10. I was laid off by New World in December 2010 for the standard year-end holiday shut-down. Because NWE had lost its contract with Tetra Tech and was to be replaced by AWS, Tetra Tech asked the HPs who worked for NWE to submit an application to AWS, which I did. We were all told by Tetra Tech when we left for Christmas break that we would have a job to report back to after we returned from our break in January.

11. As of January 2011 under AWS, Bert Bowers of Tetra Tech EC was my direct supervisor for two weeks until he was removed from the Hunters Point project by Project Manager Bill Dougherty. After Bert Bowers was removed from the site, Bryan White, also of Tetra Tech EC became my new on-site supervisor. I reported to Bryan White until December 16, 2011, when I was laid off. Bryan White reported to Adam Berry, who in turn reported to Erik Abkemeier, the Radiation Safety Officer ("RSO"). Bill Dougherty was the Project Manager who oversaw the Navy-funded project at Hunters Point. Berry, Abkemeier and Dougherty all worked for Tetra Tech and supervised us.

12. On December 9, 2011, Brian White notified me I would be laid off as of December 16, 2011. On December 16, 2011, I was laid off.

Culture of Incompetence and Fraud

13. Having been extensively trained in proper radiological procedures at nuclear power plants, I understood the dangers of the work and the need to follow strict procedures. I took pride in doing my job in a professional manner, "by the book." However, at HPNS I often witnessed what I'd call "bad rad practices."

14. Tetra Tech had a culture at odds with what I'd been taught. Rather than the HPs being independent of Tetra Tech's Construction Department, the needs of the Construction Department overrode proper radiological procedures. Tetra Tech created a culture of cutting corners in order to speed up rad work to get "free release" of areas, material or buildings. Written procedures were ignored and in some cases didn't exist, as further described below. This unhealthy culture was exacerbated by unqualified rad supervisors who deferred to Tetra Tech construction management – management unqualified to direct radiological work - rather than requiring that proper radiological procedure be strictly followed.

15. At Hunters Point under Tetra Tech EC, there was also a culture of covering up improper rad practices. HP supervisors had an "early warning system" in which the construction management staff in the office provided an alert to them when the chief radiological safety officer on site, the Radiation Safety Officer's Representative (RSOR), Bert Bowers, was about to come out to the field. Thus alerted, the supervisors knew not to openly engage in improper practices, at least until the RSOR went back to his office. I witnessed the warnings and that workers in the field changed what they were doing due to the alerts, and I learned from my co-workers that this early warning system was used throughout Hunters Point to hide improper rad practices.

Unqualified Workers

16. One of the bad rad practices I observed and was concerned about during my tenure at Hunters Point was the hiring of unqualified workers.

17. My first example of this, as described above, was when Kari Guidry insisted I could be hired as a Senior HP when I knew I didn't have enough experience for that position.

18. Another example of an unqualified HP was Jane Taylor, whom I firmly believe falsified her resume to get a job as a Junior HP.

19. Jane Taylor's daughter, Samantha Taylor, had worked at HPNS as a Junior HP before Jane Taylor was hired. Samantha Taylor told Richard Stoney, a Senior HP who related the story to me, that her mother had no radiological work experience.

20. Samantha Taylor asked me if she could email her mom's resume to me so I could print out a copy to submit it to NWE, which I agreed to. The resume was printed out and submitted on May 25, 2006. It listed "Taylor Made Construction" as the only radiological work experience Jane Taylor had, and stated she had worked doing extensive radiological remediation work for years for the company. Both Richard Stoney, a senior HP and Bert Bowers, the RSOR, knew nearly all of the employers in the nuclear industry that would perform the type of work listed, and they told me they had never heard of Taylor Made Construction; they thought the reference to Taylor Made Construction as a source of rad experience was a fabrication. The resume also stated that Taylor had passed the Department of Energy (DOE) CORE test (a test created by DOE for testing the knowledge an HP is expected to have mastered). The CORE test is one of the most important qualifications in our industry.

21. Bowers told me he brought his suspicion of resume fraud to the attention of Kari Guidry, NWE's Human Resources Director.

22. I was asked to print out a second resume for Jane Taylor which was printed out and submitted on June 28, 2006 after Taylor has been hired to work at Hunters Point. This second resume deleted all references to Taylor Made Construction and the CORE test. I believe the second resume deleted these qualifications because Jane Taylor was afraid of being found out for the fraud she engaged in with the false resume.

23. Despite her lack of experience and apparently fabricated resume, Taylor was hired to work at Hunters Point as a Junior HP. Within several months she was promoted to Senior HP.

24. Based on my observations, it was apparent that Jane Taylor was incompetent. One example concerned the way Taylor's soil sample team operated. Senior HPs led sampling crews and

collected soil samples from grids mapped out by engineers. Jane Taylor led a sampling crew composed of an HP to scan the soil and one or two laborers who collected soil samples. I observed that Taylor didn't know how to read the maps—she couldn't tell east from west, north or south, nor the more specific details involved in the maps. Taylor's incompetence resulted in misdirecting the laborers as to the correct location from which to collect soil samples. Taylor's incompetence affected not just the work of the laborers but the work of all members of the crew. None of their tasks were being coordinated properly. The samples were taken from an incorrect grid, and were recorded and labeled erroneously.

25. Taylor was eventually assigned to the RSYs where she supervised the towed array scanner. I observed that she scanned the soil on the RSY pad at a much faster speed than is required to get proper results. If she didn't want to find radiation, scanning at a faster speed than is proper would be a perfect way to prevent finding radiation contamination.

26. Another indication of Taylor's bad rad practices was allowing her daughter, Victoria, on site without having had the proper training and without being issued protective equipment like a dosimeter. Victoria should not have been allowed in the field. Every time I saw her there I brought it to the attention of Bryan White. I complained to him about it approximately a half-dozen times but no action was taken to my knowledge.

27. Richard Stoney worked his way up over 20 years in the nuclear plant industry from an entry-level position to being a Senior HP. When NEW, at TTEC's behest, promoted Taylor to a Senior HP with only a few months of experience and none of the required industry training, Stoney objected to his supervisors. Stoney observed Taylor's work and he told me it was clear to him that she did not have the qualifications for the job, so Mr. Stoney told me he quit and told management that this was the reason he quit. He told me he would not work at HPNS if they were going to let people with no experience and no training work there and put them in important positions as they had with Taylor. Mr. Stoney informed me that it offended his sense of professionalism and could be dangerous to have individuals like Jane Taylor working on such a rad project.

28. Another unqualified HP was Tina Robertson. This became clear to me as a result of incidents in which Robertson took faulty readings from building surveys. The HPs had a required "buddy system" for going into an empty, unworked and locked building. Proper procedure required two HPs to enter. When you go into a building of that type, you have to sign on the Radiation Written Permit ("RWP"). You also need to fill out a logbook declaring the instruments you are taking in, the scope of your work, and why you're entering. One time when we were doing a building scan, Robertson got agitated about the "hot" readings she was getting. I observed that she was not getting the same readings I'd gotten and was interpreting the readings incorrectly. I talked with her about the instrument and the readings. As a result, I realized that Robertson did not understand her instruments, and how they worked. I told my supervisor, Bryan White, that Robertson was not qualified or capable of doing her job. I also told Adam Berry when a similar incident happened with Robertson in another building. I tried from then on to avoid having to work with Ms. Robertson as part of the buddy system.

29. Based on my personal observations of their work and their statements and behavior, I concluded that besides Taylor and Robertson, HP Supervisors Justin Hubbard and Steve Rolfe were unqualified for their positions; they were qualified to be Junior HPs, not Senior HPs, and not HP supervisors. In addition, Jeff Rolfe, a Senior HP and Steve Rolfe's brother, was not qualified to be a Senior HP, but rather was qualified to be a Junior HP, based.

Radioactive Fence

30. The point of taking readings by meters and sampling was to prevent contaminated objects from leaving the HPNS site. Due to directions and pressure from Tetra Tech supervisors the meter readings of soil and objects that were seeking to leave Hunters Point were sometimes ignored or even worse, destroyed. One time in 2009, I took readings of fencing around the perimeter of a Radiological Controlled Area/Radioactive Materials Area ("RCA/RMA"). The readings from the instrument I was getting was what I'd call "screaming hot." Dennis McWade, Tetra Tech's Construction Superintendent, was present when two other Senior HPs and I were conducting the readings. McWade contested the reading, saying it wasn't possible the fence was contaminated.

He also said the fence had to be cleared so Tetra Tech wouldn't have to pay for it. Due to the pressure from Mr. McWade who made it very clear he did not want the fencing to be found contaminated with radioactive material, I wanted to be absolutely sure that my meter readings showing elevated radioactive activity were correct. I therefore took additional readings using my instrument as well as the instruments belonging to Phil Poole and Bob Evans, the other HPs who were there working on the fence scanning. I used three different meters, and every one of them showed the same screaming hot radioactive results. According to proper procedure, the fence should have been stored inside an RCA/RMA because it was radiologically contaminated, and disposed of as radioactive waste. Dennis McWade did not allow us to take the action of storing the fencing in an RCA area.

31. I had taken not only instrument readings of the fencing that showed elevated radioactive emissions, but I also took physical samples of the contaminated area with what is called a "smear." In taking a "smear" I use an approved material and wipe the surface of the item to be tested, here the fencing. I identified the smear and submitted the smears and the instrument information to the office at the end of the day.

32. The next day the lab had run the smears and the smears came back with very elevated radioactive results well above the Navy's release standards. Based on the smears and the instrument readings the process confirmed the fencing contained an unacceptable level of radioactive contamination and had to be disposed of as low level radioactive waste.

33. I was called into the office of the Tetra Tech Radiation Safety Officer Representative at the time, Mr. Charles "Chuck" Taylor, with my supervisor Rhonda Richardson. Mr. Taylor told me that Tetra Tech would not allow the fence to be treated as contaminated with radioactivity, and that I was to get the smears and the lab results from the smears and destroy them. Mr. Taylor also ordered me to delete the data from my instrument and the company computer of the fence's elevated reading for he wanted no record of the elevated radioactive readings for the fencing. Mr. Taylor told me that I would be terminated if I did not follow the orders to destroy these radiological records and data. My supervisor, Rhonda Richardson told me prior to the meeting

with Mr. Taylor that she feared for her job and for mine, and that I was to be quiet during the meeting, and if anything needed to be said for us to retain our jobs she would do it. At no time did Ms. Richardson object to Mr. Taylor and his orders, or contend that the destruction of legitimate lab results and instrument readings that showed high radioactivity was improper. I did as Mr. Taylor ordered by obtaining the smears and lab results and destroyed them. I also went on the company computer and did what I could to delete the record of the elevated fence scan readings.

34. The Tetra Tech company computer used a program called "Access". I and others in the lab were trained on the "Access" program. From my training on the "Access" program, I was led to understand that although I might try to delete information from the computer, the information would be retained in a host of files that I could not access and delete. I suspect that somewhere in the Tetra Tech computer the instrument scans and lab smear results have not been totally erased as a result of my actions. I informed Rhonda Richardson that I had followed the orders of Mr. Taylor and destroyed the records and data.

35. During the next month or so, the fence was improperly left outside of an RCA/RMA. About a month after Chuck Taylor directed that the data be destroyed, Senior HP Bob Evans told me he had gotten the fence released. When I asked him how that happened, he said "I didn't scan where you did, dummy." The fences were labeled Rental Fences by United, and were returned to United Rentals in their radioactive contaminated state.

Frisking

36. Proper procedure for people leaving an RCA-RMA required that they be "frisked." That is, their hands and feet are checked to confirm that they are not taking any radiation out of that area. I observed that frisking was not taking place. I reported this matter to Bryan White about 10 times during the year I was employed by AWS (2010-2011). There were times when I wasn't the HP manning a gate and I saw somebody leaving an RCA without being frisked. When that happened, I left my work zone to try to get that person frisked. Tetra Tech HP Supervisor Justin Hubbard told me to mind my own business, that it was not my responsibility to assure that individuals were frisked as required, and not to intercede again. I reported the matter to Bryan White. He said that

he would handle it, but nothing changed or happened, and people continued to leave RCA areas without being frisked for their own protection and the protection of others.

Lab Work

37. Working at a remediation site with radioactive materials is dangerous and requires adherence to proper procedures and the use of proper personal protective equipment ("PPE"). In October 2011, I observed two laborers working in the lab, who obviously had not been adequately trained. Their names were Luis and Alfredo (I do not recall their last names). They were "pounding" dirt for radioactive sample testing using a mortar and pestle with their bare hands to prepare samples for analysis and were not wearing gloves or face masks. They were apparently unaware not only of the radiation exposure they were risking, but also the danger of cross contaminating the samples. This indicated that they were not properly trained to handle samples. When I asked them what they were doing, they replied that Robin Fluty, one of the lab managers, liked them and that they were allowed to help out all the time.

38. I was very concerned about untrained laborers working with radioactive materials without protective gear and warned them about the dangers of radiation. Shortly after this incident involving Luis and Alfredo, I went to the office and got out the procedure book to see what the qualifications were for laborers who processed soil samples. Bill Dougherty, Tetra Tech's Project Manager, came into the room and asked me what I was doing. When I told him I was looking up the procedure to see if laborers were allowed to process soil samples, he told me I didn't need to be looking that up. He said there was no current written procedure allowing laborers to take samples, but that a procedure would be written to cover the matter. I never saw the laborers working the lab in a manner that would reflect proper procedures were being followed. I was very concerned that they were risking their health and the integrity of other samples.

Sample Storage

39. The storage of radioactive materials was not always handled properly, resulting in the health and safety of workers being endangered. A certain building was used for storing radioactive material. It may have been building 271 but I'm not sure. The area next to the elevator shaft in the

building was separated into two sections. One of them was fenced off. Jars of every sample that had been tested by the lab since the beginning of work at HPNS were stacked in this fenced-off section. I kept an inventory of the jars during the years I worked in the lab. At one point, I went to the building and found that the jars in the lower stacks had gotten crushed by the jars on the higher stacks and were leaking potentially radioactive dirt onto the floor of the area. I told Phil Poole, who had accompanied me, not to step on the dirt. The laborers in the group were stepping on the radioactive dirt, even as I told them "don't step in it," which was indicative of their lack of training and experience in rad work. Walking in radioactive soil could result in radioactive material being spread throughout areas that were clean of radioactivity, such as the break area, bathrooms, offices, etc.

Portal Monitor

40. Trucks loaded with soil and debris that were cleared by radiation surveys to leave Hunters Point had to first successfully pass through the radiation-detection Portal Monitor to confirm that nothing above radioactive remediation levels left the shipyard. If the truck and its load failed the first pass through the Portal Monitor, the truck had to go through the Portal Monitor again. If the truck failed two out of three passes, the procedure was that the truck was not permitted to leave Hunters Point. [As further discussed below, this process was changed in September of 2011 to allow trucks that failed the Portal Monitor to leave Hunters Point.] Prior to September 2011, a failed truck was directed to an area where two HPs were required to thoroughly scan the vehicle on its undercarriage, sides, and from the top of the truck by use of a scaffold that allowed the HPs to climb up and scan down into the load of soil in an attempt to locate the source of radiation. I was assigned to the Portal Monitor, when needed, after I left the lab in 2009, and am very familiar with the Portal Monitor procedures from that time. The HPs would document their scan findings. In my experience the most effective scanning of a truck load that failed the Portal Monitor was the scanning done from the scaffold, which allowed us to scan down over the top of the soil in the truck bed. Every truck that failed the Portal Monitor using the full scanning, including the scaffolding, that I was involved with resulted in the high radioactive material being located.

41. After the HPs scanned the truck, the truck was required to be returned to a RSY yard where its load was dumped and the survey process was redone entirely. At the RSY yard the soil was spread out to a uniform depth of about six inches. A towed array detector system ("towed array") was slowly pulled over the pad by a small tractor. After I was moved out of the lab in 2009, I was often assigned the Portal Monitor function until the end of my employment.

42. There were written procedures at HPNS for every job that I was involved with that had to be performed. Jane Taylor was put in charge of the RSY soil pads in late 2010 or early 2011. After that, a lot of the trucks were failing the Portal Monitor screening. Prior to Taylor taking over supervision of the RSY pads, experienced and more qualified Senior HPs than Taylor were assigned to the RSY process. The HP was to oversee the taking of soil samples from the highest radioactive readings on the soil pad, and in that process, try to remove that radioactive material. The soil samples were sent to the Tetra Tech EC controlled lab on HPNS. If any samples came back with radioactive readings above release levels, further scans and sampling was required of the pad until all lab tests came back at levels below radiological free release levels. The soil was not to be put onto a truck and sent through the Portal Monitor until the pad was clean of hazardous radioactive materials that was detectable.

43. Under the direction of many HPs prior to Taylor being put in control over the RSY yards, at the insistence of Dennis McWade, the level of truck failures through the Portal Monitor was modest. After Jane Taylor began oversight and control of the RSY processes, the frequency of Portal Monitor failures immediately increased dramatically.

44. I was concerned for both the soil going off site, and the soil that was used as backfill at Hunters Point. The soil going off site was tripping alarms with greater and greater frequency. The potential of hazardous radioactivity in the soil going off HPNS was steadily increasing with Jane Taylor's supervision of the RSY process. For example, I recall that one day in the first half of 2011, nearly every one of the approximate 37 trucks that came with soil to go through the Portal Monitor failed. However, at least the soil going off site had to go through the Portal Monitor as some form of check on the work to remove the radioactive materials from the soil. The time and

expense to Tetra Tech to re-process the RSY soil was significant, as it involved repeat sampling and lab analysis. The supervisors made it clear they wanted the trucks to be cleared, not rejected.

45. For the soil designated to be used as back-fill, which was a majority of the soil that came from the HPNS trenches, the backfilled soil did not go through the Portal Monitor after the RSY processes directed by Taylor. The soil used as backfill could have been loaded with high radioactivity that the sampling directed by Taylor avoided or missed. I suspect the soil used as back-fill was done more poorly and contrary to procedures even more than the soil going off-site since it was known that there was no check to be sure it was done right. After the contracts Tetra Tech had with the Navy went to fixed price contracts, TTEC made more money the less they had to do with the soil. Taylor's ignoring or avoiding excessive radioactive contamination for soil to be used as backfill made more profit for Tetra Tech EC. Based on what my supervisors told me, it also made the Navy happy that the process was moving along.

46. One day in September 2011, Tetra Tech simply changed the setting of the Portal Monitor to lower the sensitivity. For years prior to that the pre-set sensitivity level for the Portal Monitor was 3 sigma plus mean background level, which corresponds to the remediation goals under the Navy contract. In September 2011, Tetra Tech relaxed the Portal Monitor sensitivity from 3 sigma plus mean background to 8 sigma plus mean background before the truck load would fail the Portal Monitor screening. A sigma 3 means that the Portal Monitor was set to a sensitivity in which it was to alarm if the sensors picked up radiological contamination at a level of background plus 3 times that background amount of radiation.

47. I questioned why Tetra Tech had dramatically lowered the sensitivity on the Portal Monitor which would allow loads of soil with radioactive contamination much higher than established release levels to leave HPNS. I asked Bryan White and Adam Berry, two Tetra Tech EC supervisors, who were there on site, why this change that lowered the Portal Monitor sensitivity was being made. Berry told me that the reason for the change was that they were going to have a lot of off-site shipments and some of the trucks would have aluminum beds which, he said, could allow radioactive contamination to be more easily detected by the Portal Monitor. It

was explained to me that with so many off-site shipments expected, if the failure rate was high, it would slow down the clearance of soils that Taylor and her crew were processing at the RSY yards. I did not think his explanation made sense. I asked to see the new procedure that authorized this change. Tetra Tech management did not have one. I refused to follow their oral directions that altered the Portal Monitor procedures. Tetra Tech subsequently wrote a Portal Monitor procedure with two fundamental changes, including the altered sensitivity setting and, as further discussed below, changing the way a failed truck load was scanned. Even after the weakening of the Portal Monitor standards, most of the trucks were still steel framed truck beds, and the weakened standards were applied to those truck as well as the aluminum bed trucks that were supposedly the impetus for the change in sensitivity.

48. A second change besides the weakening of the sensitivity of the Portal Monitor from sigma 3 to sigma 8, was the process that took place after a truck failed the Portal Monitor. Even after the Portal Monitor standards were dramatically weakened, trucks coming from the RSY pad processing regularly failed the Portal Monitor by setting off the alarm two out of three passes or more through the monitor. Tetra Tech EC gave directives that fundamentally made the Portal Monitor useless to prevent radioactive materials above release levels from leaving HPNS. In the years before the change of September 2011, when a truck failed the Portal Monitor the truck material was not allowed to leave HPNS without having been returned to the RSY pads for further remediation to remove radioactive wastes. Consistently HPs such as myself, found the high radioactive materials when we scanned the truck after the failure through the Portal Monitor, but almost only when other HPs or I scanned from standing on top of the scaffolding and suspended the scanning instruments over the top of the trailer down toward the soil. In the years leading up to September 2011, very seldom did scanning through the metal bed of the trailers result in the scan readings identifying the high level radioactive waste in the truck trailer. Rather, we got the hot results by scanning from over the top of the trailer.

49. In September of 2011, Tetra Tech EC changed the post-failure Portal Monitor procedure in two ways that resulted in soil that might have exceeded the release standard being allowed to leave

HPNS as if the soil was clean of hazardous radioactive contamination. First, Tetra Tech EC barred HPs from using the scaffolding and scanning over the top of the truck trailer sides down to the soil in the truck beds. Tetra Tech management knew that this was the only way to reliably obtain hand held scan readings of the high level radioactive contamination due to the years of experience at the Portal Monitor. I believe that Tetra Tech management barred HPs such as myself from using scaffolding after the years of using it at HPNS because Tetra Tech management had the intent of having soils with radioactive contamination above release levels to be cleared and allowed to be shipped off HPNS to the unsuspecting public that got the soil, to get the company profits and get the work done quickly to please the Navy.

50. The second post-failure Portal Monitor change that Tetra Tech EC instituted in September of 2011 was that a truck load of soil that failed the Portal Monitor was now permitted to leave HPNS without further remediation if the HP scans through the metal beds did not find the high radioactive material readings. Before September of 2011, every truck load of soil that failed the Portal Monitor was required to be re-remediated on the RSY pads to clean up and remove the radioactive contamination. In September of 2011, nearly every single truck load of soil that failed the Portal Monitor was released to the public because the restricted non-scaffold hand scans that scanned through the metal trailer beds almost never were able to locate the high radioactive material, as they had in the past when using the scaffolding to scan over the top of the sides of the trailer.

51. Another practice I objected to was Tetra Tech's routinely hosing down trucks that were about to enter the Portal Monitor. The reason I objected was that water acts as a shield to some radioactivity. There was no reason to hose down the trucks just before they were to go through the Portal Monitor. If there was a dust issue the trucks could have been hosed down after they went through the Portal Monitor and before they left HPNS. It was impossible to accurately scan a hosed-down truck in the Portal Monitor for the radioactivity would be masked and not detected. I also objected to using the Portal Monitor when it was raining, for the same reason.

Disregard for Posted Areas

52. In July 2011, there was an incident where Jane Taylor instructed a driver to remove the ropes demarcating an RCA-RMA, and to ignore the established procedure for frisking to ensure that radiation was not taken out of that posted area. This happened in an area where radioactive containers were stored above ground in an RCA-RMA. Tetra Tech hired a company called EMS to transport radioactive materials. The procedure was for the EMS driver to have an HP escort him into that area to take those containers to another area to prepare them for off-site shipment. The container and driver had to be frisked to ensure that no radioactive materials were taken outside of the posted area, other than what was included in the protective containers. Taylor told the driver to take the RCA rad rope down, go into the RCA posted area and get his containers, and that no HP had to be there to supervise the job. The EMS driver, Curtis, reported this irregularity to Phil Poole and Bryan White. The two of them and I went over to the RCA-RMA in question, and made sure that the procedure was followed properly. White later "wrote up" a complaint against Dennis McWade who had stated that he directed or approved of Jane Taylor's procedural violation, rather than write up Jane Taylor. I believe that McWade was covering for Jane Taylor since Dennis McWade was married to Jane Taylor.

53. In August 2011, I was covering Work Area 33. The workers were removing a piece of pipe from the ground. I found that one of the construction workers, Hank, moved the RAD posting back from the established the boundaries of an RCA, areas know to have high levels of radioactive contamination present. By moving the postings of the RCA back, potentially hazardous radioactive areas now appeared to be non-impacted radiological areas where radiological safety measures were not enforced. I stopped Hank and told him that he couldn't move radiation postings at his discretion. The delineators of a RCA area are not supposed to be moved; they indicate a radioactive area that needs to be controlled for the health and safety of those working, as well as to keep radioactive contamination limited to the areas it already exists, rather than spreading it around due to sloppy work practices. Moving those delineators was a blatant disregard

of proper procedure. The HP in control of that area, Justin Hubbard, wasn't competent or vigilant enough to prevent this obvious breach of proper procedure and safety.

Other Bad Rad Practices

54. HP Tina Robertson told me that the Chain of Custody ("COC") forms for soil samples that were sent to the labs were being forged. On July 22, 2011, she told me that "someone," she didn't say who, was falsely signing COC forms for someone else. The forms were coming out of the office already signed with a person's name on it, when the samples hadn't been collected yet. I reported the matter to Bryan White. White told me he then told Dennis McWade, the Construction Superintendent. Nothing happened as a result of this complaint.

55. There was at least one incident when two untrained field workers delivered a radioactive source to a secure lockup area. The radioactive source was captured at RSY-4. Jane Taylor and Marie Winder, another HP, brought the source to be secured in a lockup area. There are procedures for entering the building and for placing such radioactive material in the lockup. I prepared the forms that had to be filled in. I heard on the radio that a frisker that checks them for contamination on their body, was ready to frisk Taylor and Winder on their leaving RSY-4. I went out to the parking lot as Taylor and Winder were pulling up to the lockup, without having been frisked. Taylor tried to give me the source material, contained in what we called a "PIG," a steel container for radioactive materials. I explained the procedure to Taylor, one that any Senior HP should have been familiar with, and told her that she had to take the source into the lockup with Winder and record it due to chain of custody requirements and safety procedures. Taylor then tried to have Winder go in the building alone with the PIG and log it in, contrary to procedures. Taylor then told me to open up the PIG and take a look, in violation of all procedures for safe handling of radioactive materials. You are not supposed to do anything of the kind right in the middle of the parking lot, and moreover without personal protective equipment. Bryan White, who had been waiting for their arrival in the secure building, told Taylor and Winder that because they demonstrated by their behavior that they didn't know how to handle delivery of source material, they would be trained right then and there. However, minutes later, as White and I waited in the

parking lot to train Taylor and Winder, we saw Jane Taylor and Dennis McWade, Jane Taylor's husband and Tetra Tech's Construction Superintendent, drive off-site for lunch. Taylor refused training on this basic HP function. No action was taken to ensure Taylor received the training that was a necessary part of her job, nor was anything done due to Taylor's refusal of the training that White said was required.

Informing the NRC

56. The bad rad practices I witnessed at HPNS caused me a great deal of concern. I'd heard that RSOR Bert Bowers had filed a complaint with the Nuclear Regulatory Commission ("NRC") and I felt compelled to report my concerns to them in November 2011. I reported, for example, what I'd been told regarding the Chain of Custody forms being forged and made out beforehand, and urged the investigator I spoke to at the NRC to investigate the COCs. In particular, in November of 2011, I suggested that the investigator compare the signatures on the COCs with those of the purported samplers. However, the investigator, Orysia Masnyk Bailey, NRC Health Physics Specialist, apparently did not go to the trouble to do so.

57. I also took photographs of the radioactive materials storage area including the broken jars with spilled content, and reported this danger to the NRC, including providing Ms. Bailey with the photos. Ms. Bailey failed to go to that particular area in the building, and failed to perform a proper investigation.

58. Because the NRC didn't adequately follow up on my concerns, I concluded that the NRC wasn't interested in doing a serious investigation of Tetra Tech's rad practices at HPNS. I felt the NRC "blew me off" rather than take my concerns seriously. For example, I suggested the NRC investigators interview people whom the NRC never contacted. The NRC also failed to follow up on suggestions for where to take samples and what buildings at HPNS to inspect.

59. I raised concerns more than once to my supervisors that the radiological remediation was not being performed properly, that unqualified individuals such as Jane Taylor were performing important functions in an incorrect manner, and as a result the radioactive contamination at Hunters Point was not being fully cleaned up as the Navy agreement required. More than once my

supervisors told me words to the effect that I had a long term, good paying job, and that neither I nor the others working at Hunters Point were going to live near Hunters Point afterwards so just take the money and shut up about things not being done right. I was deeply disturbed by the attitude of the supervisors and some of the other workers that not doing the job of radiological remediation correctly was fine since they knew they were not going to live in the area.

60. Over the years of working at Hunters Point, it became clear to me that the Construction Department of Tetra Tech did not respect HPs' professional responsibilities, or the hazards of radiological contamination. Rather, HPs were treated as an impediment to production and the needs of the Construction Department to cut costs, increase profits, and increase speed in meeting contract terms with the Navy which overrode proper radiological procedures.

61. Since I left HPNS, I have learned that some COCs for soil samples taken there indicate that the soil samples were taken exactly five minutes apart over a period of hours. Based on my training and experience, this isn't possible. When taking soil samples in the field, HPs need to follow exacting practices to decontaminate all sampling equipment between samples. Having to take the time to locate the next sampling location and decontaminate the equipment between samples – including allowing them to air dry - makes it virtually impossible to collect soil samples every 5 minutes.

I declare under penalty of perjury that the foregoing is true and correct to the best of my personal knowledge.

Executed on 6-15-17 in Newell, WV

Susan V. Andrews

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