OUR NUCLEAR NIGHTMARE

Ralph and Jodi Stanton 2016

INTRODUCTION

I am Ralph Stanton. My wife Jodi and I were employed for several years at the Idaho National Laboratory (INL). During our employment at the INL, we have observed unethical, illegal and willfully negligent practices by the Department of Energy (DOE) and Battelle Energy Alliance (BEA) which leave the safety of the public and the workers who handle nuclear material severely compromised. Due to these behaviors and practices, Jodi and I feel compelled to share what we observed and the evidence to back up our allegations with the nuclear workers, their families, and the community so that they are better informed on matters that may have serious consequences that may affect them

On November 8, 2011, fifteen of my co-workers and I were exposed to very high levels of airborne plutonium-239, americium-241, and uranium-235 in the **Zero Power Physics Reactor Facility known as ZPPR.**

The medical symptoms that I suffered in the hours and days following my radiological exposure were: ***Nausea, Vomiting, Severe Diarrhea, Body Aches, Fever, Inflamed Throat and Nares, Lymphadenopathy (inflamed lymph nodes), Bloody Noses, Bone Marrow Suppression, Lack of Energy, Loss of Appetite,***

Heavy Sweating, Confusion, Inflammation, Hard Time Keeping Hydrated, White Blood Cells including Lymphocytes reduced to 50% of normal levels only 5 hours after I was Exposed.

According to the U.S. Department of Health and Human Services report on the Toxicological profile for ionizing radiation, symptoms that I suffered after the ZPPR accident are dose dependent, meaning that it takes a high enough radiation exposure before they will manifest themselves. According to various government agencies such as the **Centers for Disease Control and Prevention (CDC), Department of Energy (DOE), Radiation Emergency Assistance Center Training Site (REACTS),** the above medical symptoms that manifested in me shortly after my exposure correlate with a full body radiological dose of at least a **100 Roentgen Equivalent Man (rem)** or more. The maximum full body federal dose limit for a DOE nuclear worker is 5 rem per year whether it is an internal or external radiation dose. Many of the medical symptoms are due to bone marrow dose and an intake of plutonium or americium may yield a disproportionately high bone marrow dose compared to a whole-body dose from external radiation.

On September 24, 2012, the BEA Internal Dosimetry Staff met with all 16 ZPPR exposure victims privately to give us our dose assignments for 2011. When it was my turn, I walked in and sat down with BEA's Lead Internal Dosimetrist, and his manager. They told me that my assigned dose for the year 2011 was 200 millirem (mrem), and this included my exposure from the ZPPR Accident. I instantly knew that this dose assignment was nowhere close to being accurate because I verified my year-to-date dose at 256 mrem on the morning of the accident, as was protocol before starting any radiological work. I knew nothing about internal dosimetry at the time, but I knew that it was impossible to start the day off with a year-to-date dose of 256 mrem and have it drop to 200 mrem after being exposed to enough radiation to get radiation sickness and be put on medical/radiological work restriction for the better part of a year due to my urine and fecal results.

Due to the vast differences of my exposure situation in relation to the dose assignment that BEA chose to give me, I became compelled to learn the truth about my dose. During this journey, many other shocking unethical and illegal acts were brought to my attention along with how far the DOE and Battelle Energy Alliance (BEA) would go to keep them buried.

When I was hired as a Nuclear Facility Operator, I was told that the DOE and Battelle Energy Alliance (BEA) had my personal safety as a first priority. I was told

that safe and legal work practices were highly regulated and enforced by the DOE. I believed every word. It was only after I was hired as a Nuclear Facility Operator that I learned the truth about how the DOE and its nuclear contractors play the money game.

The scope of this investigation centers around the real cause of the November 8, 2011 Zero Power Physics Reactor Facility (ZPPR) Accident. I will show the **motive, opportunity, and intent** of BEA to manipulate and falsify the dose assignments of the exposed ZPPR workers.

To understand what would motivate BEA and the DOE to use its vast resources to falsify the radiological dose assignments of the ZPPR workers, one must understand the circumstances surrounding the November 8, 2011 ZPPR Facility Accident and the financial implications that were at stake for BEA.

INL EMPLOYMENT HISTORY

I started my employment at the lab in August 2004 with **Argonne National Lab** as a **Security Police Officer (SPO)**. In January 2005, **Battelle Energy Alliance (BEA)** took over the contract from Argonne and renamed the complex to the **Material and Fuels Complex (MFC)** which consisted of several nuclear facilities.

My job description as a SPO was to protect **Special Nuclear Material (SNM)** from theft or sabotage. I was trained and certified on several different military weapons and tactics. It was necessary for me to be familiar with all of the facilities and surrounding area to be able to effectively respond to emergencies anywhere I was needed, this work was challenging and fun. I especially enjoyed the comradery of our crew. In the summer of 2007, Nuclear Operations opened up six new Nuclear Facility Operator jobs. The company encouraged SPO's to apply because we already had the security clearance to start training and handling SNM (weapons grade plutonium or uranium) on the first day. This was a great advantage for any SPO that wanted to go to work as a Nuclear Facility Operator because it could easily take a year for a new hire off the street to get the necessary security clearance to be of any use. The operator jobs were more attractive to older SPO's because security work was more of a young man's game, several SPO's on my crew filled out resume's and turned them in. The job would also come with a big pay raise and a lot more career up-ward mobility. The more I

thought about it, the more I started to give this new opportunity a lot of thought. I noticed that one of the older guys on the crew who had transferred from the Rocky Flats Laboratory a couple of years earlier didn't seem interested in applying for these jobs. This was puzzling to me because he had a degree and it seemed that this job change would have been a good fit for him. One night on shift, I was curious so I asked him if he was going to put in for one of these jobs, he told me that his wife would not let him apply. I thought, this is crazy, more money, more up-ward mobility, no more shift work, why would any wife stand in the way of that? This crew member of mine further elaborated that his wife was a Rad-Con Technician when they worked at Rocky Flats and whenever she covered jobs for nuclear operations, safety always took a back seat to completing the job quickly to earn the milestone bonuses. I respected this crew members decision not to apply, but I thought that he was missing out on a great opportunity because his wife was a little paranoid. I had heard other stories like this one through the grape vine and I always chalked it up as conspiracy theory talk. The SPO's who transferred from Rocky Flats also talked about the number of SPO's they worked with at Rocky Flats who were young, healthy non-smoker types that had passed away with cancer and other types of diseases caused by exposures in the contaminated facilities they had to patrol. In my own mind, I knew that these accounts had to be exaggerated or the DOE would not allow these patrols to be conducted in any facilities thought to be contaminated. It would be fair to say that I was very naïve at this point and had a lot to learn about the nuclear industry.

JODI HIRED AT INL

Meanwhile, my wife Jodi interviewed and was hired at the INL in July of 2007 as a Visional Examination Operator (VE) at the Radioactive Waste Management Complex (RWMC) burial grounds. Her new job was to characterize and document nuclear waste from the Rocky Flats Weapons Complex that was brought out to Idaho in the 1950s, 60s and early 70s by train and buried in the Idaho desert. After being excavated out of the ground, the VE's would characterize and document the waste as it was repackaged in new drums, then sent to the Waste Isolation Pilot Plant (WIPP) facility down in New Mexico to be stored. This new job

required Jodi to become Rad Worker II qualified which meant that she would receive advanced radiation training.

RALPH HIRED AS A NUCLEAR FACILITY OPERATOR IN 2007

I was just like everyone else who goes to work for a DOE Nuclear Contractor; I was blinded by the opportunity to make more money than I ever imagined I could. I ignored the negative chatter about working for Nuclear Operations and applied for one of the six Nuclear Facility Operator jobs. In August 2007 I was hired as a **Nuclear Facility Operator (NFO)** in the **Zero Power Physics Reactor Facility known as (ZPPR)**

Materials and Fuels Complex showing the large white ZPPR Facility at bottom/center.

ZPPR FACILITY HISTORY

The (ZPPR) Zero Power Physics Reactor where I would be a new Nuclear Facility Operator was operational from 1969 to 1992 and defunded and shutdown due to

budget constraints and the reactor was physically removed from the ZPPR Facility cell area in 2009/2010. The only thing that remained was the entire inventory of nuclear material secured in the Vault. This inventory consisted of metric tons of both weapons grade and reactor grade plutonium-239 (Pu-239) and uranium-235 (U-235) and many other forms of nuclear material and precious metals used for research in the reactor when it was operational. The entire inventory of ZPPR nuclear material was slated to eventually be drummed up and shipped to a national storage area because DOE did not have a current mission for it.

These plans all changed when some local homeland security experimenters started inquiring about using the ZPPR weapons grade plutonium-239 stainless steel cladded plates for their experiments. Using the ZPPR material would save them time and money by not having to travel to another national laboratory and would safely give them a unique opportunity to conduct experiments with weapons grade material outside of a glovebox. Word of mouth spread among to researchers all over the world about the available inventory of ZPPR Pu-239 stainless steel cladded plates and before we knew it, the ZPPR Facility had a mission with many good paying customers. Some of these customers included homeland security, the military, and several others from private firms with deep pockets, this made the ZPPR Facility very profitable for BEA.

ZPPR INDEPENDENT SAFETY REVIEW CHAIRMAN

The Independent Review Safety Chairman (IRSC) for the ZPPR facility was chartered to provide independent oversight of and review safety basis documents to ensure attention to safety requirements. His job was to review safety issues and bring them to the attention of the Safety Analyst and Senior Nuclear Operations Management. The ISRC was perfect for this job because he was an operator in the ZPPR facility decades earlier when the reactor was up and running and he was considered a safety expert.

As an operator in the ZPPR Facility when the reactor was operational, he had encountered Pu-239 stainless steel cladded plates that had failed in the past and were still being stored in the ZPPR Vault. Due to BEA's decision to start handling the ZPPR Pu-239 stainless steel cladded plates again, The ISRC wrote a "white paper" in January 2009 warning BEA Nuclear Safety Analysists and Senior Nuclear

Operations Management about his knowledge of these failed Pu-239 plates because there were no mitigations to protect an unsuspecting operator from an airborne exposure after opening one of these defective plates in the ZPPR workroom hood. The biggest mitigation needed to safely open the clamshell container and inspect the plutonium stainless steel cladded plates would be a glovebox. This would require a lot of work with great expense. This warning from the ISRC could not have come at a worse time for BEA with the new growing list of good paying customers wanting to conduct their research with these potentially defective Pu-239 stainless steel cladded plates. According to **Code of Federal Regulations (CFR) 10 CFR 830 subpart B,** BEA was legally mandated to stop all operations in the ZPPR Facility once the ISRC warned them about the unmitigated failed Pu-239 plates that were currently being stored in the ZPPR Vault until mitigations were put in place to protect ZPPR Operators. BEA Nuclear Safety Analysists and Senior Nuclear Operations Management kept the money train going instead of being compliant with the Code of Federal Regulation.

On July 29, 2010, I passed my boards and was promoted to a Nuclear Operator-4. The new work happening in the ZPPR Facility was truly experimental and researchers from all over the world were very eager to pay the big dollars for the opportunity to perform their experiments using the plutonium-239 stainless steel cladded plates. These stainless steel cladded plates were available to the new customers in both weapons grade and reactor grade material.

ZPPR DOCUMENTED SAFETY ANALYSIS (DSA)

The ZPPR Documented Safety Analysis (DSA) is a big thick document that goes into great detail about the ZPPR Facility, for simplicity, I will explain the ZPPR DSA as it correlates to the November 8, 2011 ZPPR Accident. The ZPPR DSA is a legal contract between the DOE and BEA on how they would operate the ZPPR Facility safely, it was written by BEA Nuclear Safety Analysist and other nuclear safety personnel who were familiar with the work and processes performed in the ZPPR Facility. These safety professionals would compile a list of the most probable accident scenarios based on their experience and perform an analysis of the possible radiological consequences to the worker, public, and environment. A prediction of how likely each accident scenario would happen was also documented in the DSA. Based on this information, a determination would be

made of what mitigations were needed to be placed in the facility to mitigate the consequences of the accident scenario.

As an example, I will use the accident scenario from the November 8, 2011 ZPPR Accident. This accident scenario was documented in the ZPPR DSA as an airborne release due to a failed plutonium-239 stainless steel cladded plate. The mitigations documented in the DSA to mitigate this accident scenario was the **Ventilation System, Radiation Alarms, Work Hood, Stainless Steel Cladded Jackets.**

LEADING UP TO THE ZPPR ACCIDENT

The ZPPR Shift Supervisor (SS) and the ZPPR Facility Nuclear Manager (NFM) were both new and didn't have any experience with handling the type of nuclear material in the ZPPR Facility. By 2011, the risky decisions made by BEA Nuclear Operations Management would prove to be the year it would all catch up to them.

From January 2011 to April 2011, a safety work shutdown took place due to a series of radiological accidents, worker over exposures and other safety related incidences across the lab. This shutdown was a time when management was supposed to take a step back and reflect on how they could change the reckless course we were on. After three months of reflection, training and meetings, all radiological work resumed in April 2011. When work resumed in April, the unexpected happened, it was like safety became completely non-existent.

LEAD SHIELDING

After the radiological work continued in April, ZPPR facility management announced that we would be conducting the semi-annual surveillance of the PU-239 stainless steel cladded plates. On this occasion, we were scheduled to randomly inspect 410 of these Pu-239 plates. During the job brief, I was told that I would be handling these plates and that I was not allowed to use the work hood lead shielding that was available and had been used for the past 40 years by ZPPR Operators handling these highly radioactive plates.

We were permitted to accumulate 750 millirem of dose a year, with the very high dose rate of these plates. I knew that I would have been out of dose for the year after inspecting only 10 to 15 of the 410 plates if I performed this job without using the work hood lead shielding. I refused to perform this job due to safety concerns and our facility management circumvented my concerns and directed a new operator who had never handled this material before to take my place. After inspecting only two of the 410 plates, the new operator's electronic dosimeter started sounding off indicating that he was in a very high radiation area. The Rad-Con Tech shut the job down to excessive dose.

The next day we were allowed to use the lead shielding and completed the job. On another occasion we were directed to handle plutonium pins without the shielding by the ZPPR Assistant Manager who also didn't have any experience with this material. We could not believe that we were going the have to fight this fight again.

After we raised our concerns, the Assistant Manager told us that this material was a lot lower enriched than weapons grade material and it would not be so radiologically hot. We told the Assistant Manager that this material had been in the vault for 40 years and had a lot of decay in the form of americium-241 which is much more radioactive than plutonium-239. We knew that the only way to settle this was to go into the vault and pull the material out and have the Rad-Con Tech survey it, so that what we did.

With all of us in the vault, a co-worker pulled the clam-shell container from the location and before he could set it on the cart, his electronic dosimeter started sounding off and the Rad-Con Tech shut the job down due the Pu-239 pins having radiation levels too high to safely handle without the lead shielding.

On both occasions, we were severely harassed by facility management after refusing to handle this highly radioactive material without the available lead shielding protection. The direction given to us by our facility management to perform this highly radioactive work without the use of the available work room hood shielding is still a mystery to me to this day — the shielding had been used for decades by the ZPPR Operators to protect themselves from high radiation levels when handling nuclear material in the workroom hood. Handling this highly radioactive material without any shielding went against all of our training and

knowledge. When we asked our nuclear facility management why they would ask us to perform this work without the use of the lead shielding, they couldn't give us a logical answer, we were told to "Just do it!"

BUILDING #784 CONTAMINATION AREA

About a week later, a co-worker, and I were directed to go out into Building 784 and search for depleted Uranium plates. Building #784 is a big metal out building, much like an old metal shed with a concrete floor that you may have in your back yard, only much larger. The building was adjacent to the ZPPR Facility and was used to store metric tons of depleted uranium plates in ammo boxes along with many other radioactive materials and precious metals that were once used in the ZPPR reactor for research years earlier. This building was designated as a "Contamination Area" (CA) for several different reasons.

The Depleted Uranium was in the form of un-cladded bare plates making every radiological smear positive for Alpha Contamination. There was no ventilation system in the building or sealed doors to control contamination. On a windy day, air would blow underneath the doors and walls kicking up who knows what kind of contamination. There was no documentation of the buildings extensive radioactive inventory including exotic metals stored in this building — no one had any idea of what they might run into if they got poking around.

These reasons made it necessary to wear the same respiratory protective equipment that are pictured below. When the Shift Supervisor (SS) informed us that we were no longer required to wear respiratory protection in this Contamination Area, I stood there thinking what am I missing? I spoke up and told the SS that I wanted to wear the respiratory protection anyway because I found positive smears of alpha contamination on every depleted uranium plate I ever checked back there. The SS instantly started screaming at me in front of another supervisor, saying, "don't start this again."

I was trying to reason with him about how crazy this decision was, and I wanted to discuss it further. I tried to explain to him that on top of the known hazards that we were already aware of in this facility that required us to wear the respiratory protection, there were still many possible unknown hazards that we may encounter back there that were much worse. This building did not have any

way to mitigate possible airborne contamination or any Contamination Air Monitors to detect and trigger an evacuation should contamination go airborne. I asked the shift supervisor why we no longer needed this respiratory protection and he couldn't give me an answer, he just kept yelling at me.

I felt like my job was already in jeopardy because I stopped work the week before and here, I was again in the same situation. I needed my job to support my family, so I went back and searched for the Depleted Uranium Plates on the list without any respiratory protection.

I did some digging and found out that this unsafe decision along with the decision to not allow us the use of the workroom hood lead shielding while handling highly radioactive plutonium-239 was made during the three-month safety work stop. Most of these new decisions cut corners and went against logic and all of our radiological training and were only going to get someone hurt or exposed to a lot of radiation for no reason.

The following year in 2012, previously unknown open containers of Beryllium were discovered in this building #784 and due to this decision, and operators had been working there without any respiratory protection.

Footage from the video shows respiratory protection.

RESPIRATORY PROTECTION TAKEN AWAY FROM WORKERS IN BLDG #784

As the summer of 2011 was in full swing, the tensions were building between management and workers who did not appreciate being put in harm's way. My wife, Jodi was getting very concerned about my safety at work due to the available protections being taken away from us by our management without any logical explanation.

Things were getting out of hand in our facility, the critical safety systems and components that were mandated to be "Operable" and needed to operate the facility safely had become in-operable due to the cost of upkeep, repair or replacement. If that wasn't enough to be worried about, the inexperienced ZPPR Facility Management was getting more and more reckless. **On October 7, 2011,** a

New Director of Nuclear Operations called a meeting with all the Nuclear Facility Operators throughout the MFC Complex to introduce himself and let us know what his expectations for us were. Due to a poor safety record at MFC, he spoke about safety and how it was to be our main priority, he also told us how important it was that we have personal integrity. A co-worker and me had been at odds with the ZPPR facility management over their defiant attitude towards anyone bringing up safety concerns, especially when it came to stopping milestone bonus jobs with a deadline to meet. One of the requirements of our security clearances is that we were to report aberrant behavior from any one acting in a non-professional or unethical manner, this included our management. After listening to this **New Director** speak about great personal attributes such as integrity and commitment to safety**,** we felt like this guy might listen to our concerns and help us fix what was broken before something bad happened. After the meeting, we walked over to his office to speak to him about our concerns face to face. We told him about how unsafe it had become for us to perform this hazardous work in a dilapidated facility. We also told this man about the facility ventilation problems and our facility Management not permitting us to use the workroom hood lead shielding during plutonium handling operations along with the retribution we received whenever we questioned them about an unsafe work situation. We spent about 30 minutes unloading on the new director and as we were leaving my co-worker got to the door, turned around and warned the new director, "if someone didn't get ahold on our facility management and get them under control, someone was going to get hurt.***" This was 31 days before the ZPPR Accident.)*** The new director acted concerned about what we had told him, and we felt like it was a productive meeting, so we really hoped things would change but nothing did, except for the tension growing even worse between us and our management.

The next morning, the same co-worker and me were pulled into our facility managements office and reprimanded for going over their heads with our safety concerns. I told our SS and our NFM that it was to the point that we had to go over their heads because they would not listen to reason and we needed to change the direction we were headed before one of us got hurt.

On October 14, 2011, ***(24 days before the ZPPR Accident)*** I walked over to the ZPPR Facility after the morning rounds, our **Shift Supervisor,** was walking the

other way with paperwork in his hand, as he walked by he handed me 25 Type 1 procedures and directed a co-worker and me to fill these procedures out for work that had been performed the day before by other workers. He then left for his meeting. The co-worker turned to me and said, “did he just ask us to falsify these procedures” I answered, “I think so.”

We were shocked to say the least, so we walked into the **Shift Supervisors** office and called his boss, the **ZPPR Nuclear Facility Manager,** we put the phone on speaker so we both could hear, we then informed him what the SS had just directed us to do. The co-worker and me were even more shocked with what the NFM said next, he said, ***“we are in a tough spot and we need you to get these procedures filled out for us and I will have your back if this should ever come up.”***

We told the ZPPR NFM that we were not going to do it. We could not believe that we had just been asked by our facility management to commit 25 felonies in a nuclear category 1 facility. The behavior of our management had become very reckless and illegal and there was nowhere to turn for help, if we had been making hamburgers instead of handling kilograms of weapons grade plutonium-239, maybe there wouldn’t be such an urgency to act. We knew and understood that if we couldn’t get anyone to help us soon, someone would very likely get hurt. Once again, we brought this safety issue/crime to the attention of the **New Director,** and once again he was complicit and did nothing about this federal crime, and other employees were forced under duress to falsify these Type 1 Work Procedures.

After our visit to the New Directors office, the co-worker and I faced more retaliation from our facility management in the form of a more hostile attitude towards us. Going to work every day was starting to become hostile and very stressful. My wife Jodi used Type 1 procedures in her job and understood the possible ramifications if these procedures were not followed as written. She was shocked and shared my concern for what was going on at work. Below is a Laboratory wide instruction on how these Type 1 procedures are to be used.

LWP-9100, states, “Failure to perform a Use Type 1 laboratory instruction in a read and perform manner could result in significant health, safety, or

environmental risk to the employee or public or have a significant adverse impact to safety-related equipment and/or facility reliability"

During my employment at the INL, I found that rules, procedures, laws could be ignored whenever it suited the company.

NOVEMBER 8, 2011 ZPPR ACCIDENT

November 8, 2011 would be the day that BEA's willful negligence would manifest itself in the form of a Category "A" Nuclear Facility Accident that changed lives forever. The job we were directed to perform that day was to pull out several clamshell containers from the ZPPR Vault, bring them to the workroom hood, open them up and remove the Pu-239 stainless steel cladded plates and repackage them in drums then send them off to another national lab. The day started with a pre-job brief. Afterwards I checked out my electronic dosimeter and checked my year-to-date dose total as required — I was at 256 millirem for the year.

After I had my dosimeter and dose total, we went into the facility work room and completed our daily rounds. I was slated to be the one handling the plutonium plates in the workroom hood that day, so I put my lab coat on, and the Rad-Con Techs placed the six additional dosimeters on me in their proper spots. Finally, I put on my finger ring dosimeters with two pairs of rubber gloves on my hands. I waited at the workroom hood for two of my co-workers to bring me the clamshell containers that were holding the plutonium-239 stainless steel cladded plates. Upon locating the targeted plates in the vault, my two co-workers discovered non-typical hand-written labels on the top of the targeted clam-shell containers. The writing said, ***"PLATE DENTED-WRAPPED IN PLASTIC",*** this clam-shell had not been opened since 1981, thirty years ago.

To the experienced personnel in the workroom that day, this label meant trouble and something we didn't want to mess with, even if the job was a milestone bonus job. After voicing our concerns to our inexperienced Shift Supervisor (SS), about bringing these clamshells out of the ZPPR Vault, he disregarded our concerns and directed the two operators to bring them into the ZPPR Workroom anyway. Once these clam-shell containers were brought into the workroom,

everyone was able to see the writing and several more of us voiced our concerns to the SS about opening them. I guess he must have felt some pressure because the SS made a call to his boss, the ZPPR Nuclear Facility Manager (NFM), who was another inexperienced manager and consulted with him about the situation.

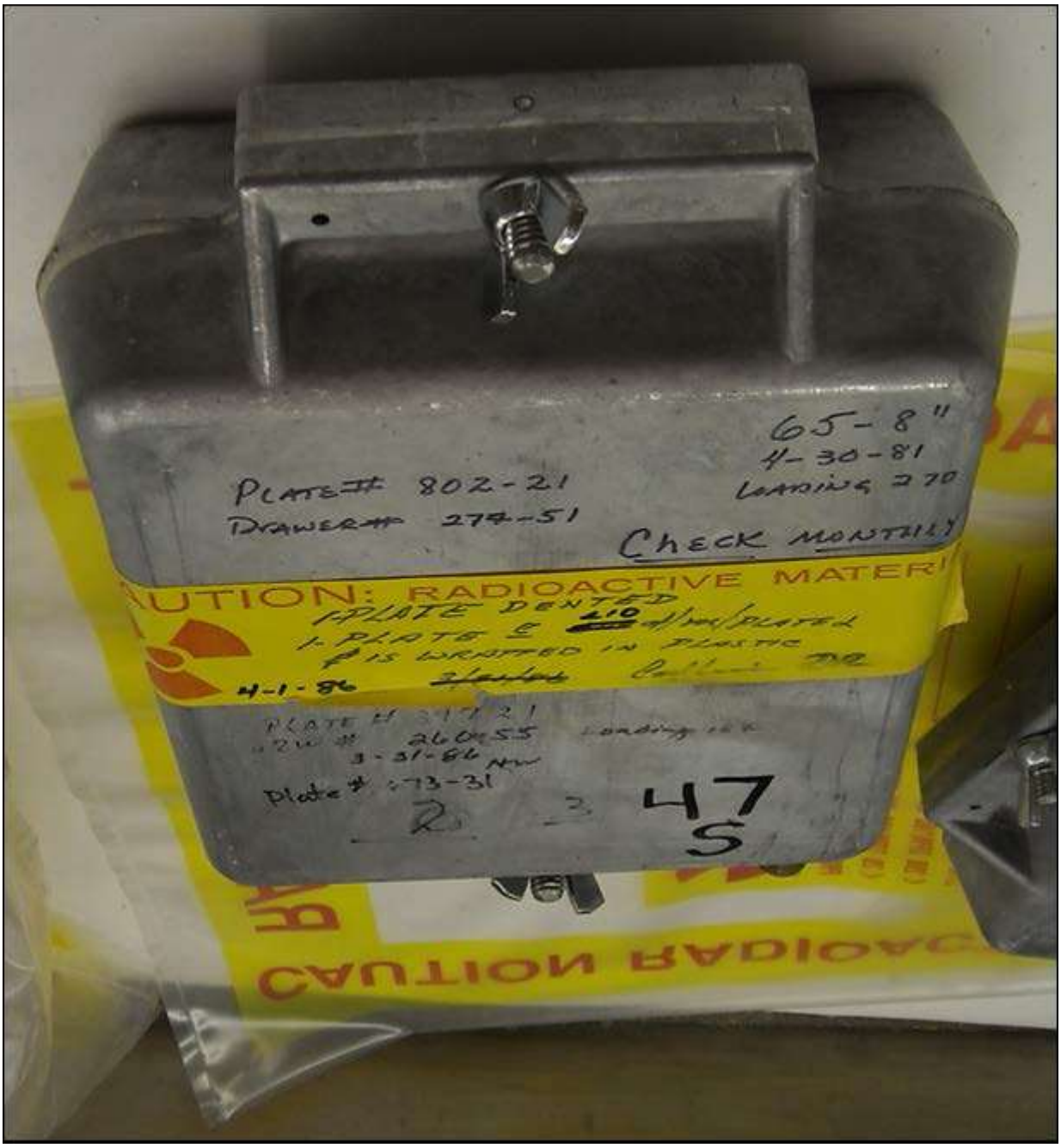
After the call, the SS hung up the phone and directed me to proceed with cutting the plastic around the damaged plate. No one had a very warm and fuzzy feeling about opening these damaged plutonium plates. One, because the label said that they were “dented” and two because they had not been opened since 1981.

But, due to the retribution my co-workers and I had received for stopping jobs in the past for safety concerns, no one wanted to stop this job unless we were able to clearly see any damage to the plate ourselves. Everyone was in fear for our jobs, so we had to pick our battles.

Our management had always told us that there had never been a failed Pu-239 stainless steel cladded plates. This knowledge was the only comfort that we had when proceeding forward when instructed to do so.

Footage from the security video shows the four clamshell containers on the two carts in the workroom after the ZPPR Shift Supervisor, directed them to be brought in from the vault. I am on the left in front of the workroom hood

observing the writing on the clamshell lids, the co-worker is wearing the hat on the right, and about 10 other individuals are just out of view. The entrance to ZPPR Vault is top middle and blurred out.



Actual clamshell container containing defective plate inside. (Picture taken during re-entry.)

The co-worker handed me this clamshell container in the hood, I un-screwed the wing nuts and lifted the top half of the clamshell container off the bottom half, inside was one plutonium plate wrapped heavily in plastic with duct tape around it. One of the Rad-Con Techs gave me a radiological smear *(a piece of paper about the size of a silver dollar)* to swipe the plastic so he could survey it to check for contamination.

The Rad-Con Tech came back and said it was clean. The co-worker asked the SS the hypothetical question of how they were going to get me out of the work hood if we encountered plutonium powder and it started on fire after I cut through the plastic. The inexperienced SS who was not aware that Pu-239 powder could start on fire once it was in a high oxygen enriched environment told the co-worker "This was not an issue that we would be dealing with today."

The SS then directed me to cut the plastic. I then picked up the plate wrapped in plastic to check the integrity by seeing if it would easily bend or I could tell if it was damaged. The plate seemed solid, so I started to carefully cut through the tightly wrapped plastic and duct tape. After about two minutes of cutting, I flipped the plate over to cut on the other side, I heard the co-worker who was standing next to me on my right say the dreaded words, "We've got powder." After hearing "We've got powder" I looked down into the clamshell container and saw black powder sitting on the bottom.

I immediately put the plate back down into the bottom half of the clamshell container to seal it with the top half when I heard the Shift Supervisor shout out, "I want a smear." One of the Rad-Con Tech's handed me a radiological smear, I took the smear and swiped it on the plastic wrapped around the plutonium plate and on the bottom of the clam-shell container. I then handed the smear back to the Rad-Con Teck, to be surveyed, the smear looked like I wiped it on black charcoal. Next, I placed the top half of the clamshell container on the bottom half and secured the defective plate inside.

The co-worker who was standing on my right shoulder said, "I really hope that wasn't what I think it was." I kept thinking Management had always told us that there had never been a defective breeched plutonium plate and that knowledge was reassuring to me as we waited for the survey results from the smear. We had been waiting about a minute when the hand and foot survey monitor started to

audibly alarm. This monitor is located at the west end of the workroom hood and is used by operators to survey their hands and feet clean before they exit the workroom. It was assumed by the Rad-Con Techs and our SS that this was a spurious alarm because no one was using the monitor at the time it alarmed. Little did we know the real reason it was alarming was that airborne contamination was drifting out of the workroom hood and started to fill the workroom with a radioactive cloud of plutonium-239 and americium-241.

Shortly after the hand and foot monitor was silenced, the Rad-Con Tech came back with a panic in his voice and told me that the smear instantly "pegged his meter" and he had to get me out of the hood immediately. As he started to survey my left arm, his survey meter started to scream, and it pegged again, we both knew we were in trouble at that point. Seconds later, the full gravity of the situation became clear when the Vault Contamination Air Monitor (CAM) located about 15 to 20 feet behind us and upstream of the ventilation alarmed. (A Contamination Air Alarm (CAM) is like a smoke detector in your house except it detects airborne radioactive particles.)

I remember thinking that we were all in deep shit. Everyone immediately evacuated from the workroom into the control room, the Rad-Con Tech (RCT) somehow had the presence of mind in the middle of our evacuation to wrap my very contaminated hands in plastic before we left the workroom.

When we evacuated to the ZPPR control room, I was placed away from most everyone because I was confirmed to be very contaminated. Unfortunately, I was not placed far enough away from the Security Police Officer (SPO), who was sitting at his post in the ZPPR Control Room. Due to my proximity to him, he tested positive for contamination in his lungs. After we evacuated to the Control Room, I remember it being very quiet as we just stood there and looked at each other wondering what had just happened. I kept telling myself that it couldn't be that bad, but my gut told me otherwise.

One of the 16 exposure victims, a trainee, was sitting in the control room observing the airborne contamination level in the workroom from a remote read out gauge connected to the alarming CAM. The first sign that it was not going to be a good day for us was when we all heard this exposure victim start calling out the rising airborne contamination levels, everyone was quiet, and you could see

the concern on their faces as we all just looked at each other and wondered how bad it would get.

The airborne contamination level is known as the DERIVED AIR CONCENTRATION (DAC) measurement. To put these DAC levels in perspective, a (DAC) airborne level of 0.3 DAC, would require us to wear respirators for breathing protection. We all puckered up when we heard our co-worker call out, “1000 DAC” and then “2000 DAC” and “3000 DAC” all the way to the final DAC measurement of 4756 DAC. The final DAC measurement was 4756 DAC, which is over 15,000 times the DAC level that requires operators to wear a respirator. In our case, a respirator would not have given us the proper protection as **a respirator is only rated to protect up to a level of 50 DAC**, and we were not wearing any respiratory protection.

After standing still for about an hour in the ZPPR control room, Rad-Con Techs from other facilities started arriving to our facility to help evacuate us to the medical facility. Some of the first responders showed up in full anti-contamination clothing with full respiratory protection, while others showed up with no protection at all — it was very disorganized.

Three of the unprotected personnel who were already in the ZPPR Control Room were exposed internally from the heavy contamination that covered the rest of us, so this made a total of 16 exposure victims.

Decontamination showers were historically available in the ZPPR facility but had been removed to cut cost. Due to the ZPPR facility showers having been removed, the only thing that they could do for us was take our clothes and put us in modesty clothing (surgical scrubs). I stripped down to my underwear and socks and put a big yellow anti decontamination suit on. Then I was surveyed on the outside of my clothing several times.

Further surveys showed high levels of contamination in my hair and face, so a hat was placed on my head and I was put into a government vehicle and driven over to the Experimental Breeder Reactor (EBR 2) facility for a decontamination shower. Once I arrived there, I asked the Rad-Con Techs about the shower, they informed me that I was not going to shower because I was going to be transported to the site medical facility for chelation therapy. The Rad-Con Techs directed me to go over to the sink and wash my face with water and paper

towels. After I washed, I was still contaminated on my face and facial hair and still had contamination in my hair. I asked them if I could shave, but no razors were available. I used more water and paper towels to scrub my face again and finally, I surveyed clean. But without a shower, my hair was still contaminated.

Due to the water dripping from my face down to my neck and chest, I asked to be surveyed on my chest, the survey showed that my wet chest was clean. I later found out that a radiological survey instrument cannot detect Alpha Radiation when your skin is wet. I'm not sure why the Rad-Con Techs did not know this. I was then surveyed on the outside of my modesty clothing again and released.

After I was released from the EBR-2 Facility, three of us who were the most contaminated were the first to be driven about 15 miles away to the Site Medical Facility. I knew this was going to be big news and I wanted Jodi to hear it from me first, so I used a phone while being transported and called to let her know I was ok.

On the ride over to the medical facility, I kept telling myself that this was no big deal and I wouldn't be too long. I realized the seriousness of our situation when we arrived at the site medical Facility. I walked inside and saw gurneys lined up in a big room with IV's attached to them and the medical staff and first responders standing next to them not saying anything, just starring at us. It was an eerie experience.

My stress level shot through the roof as my gut told me that this was a lot worse than we were being told. Finally, the head nurse walked up to the three of us and told us that the IV drips were Chelation treatment, an experimental drug used to enter the blood stream and attach itself to the plutonium particles and carry them out of the body through the urine and fecal process. We were told that we needed this treatment because of the very high level of contamination we were exposed to. I was also told this treatment was very time sensitive and the quicker it was administered after the exposure, the better it would work. It had already been about five hours and the protocol for this treatment says that it should be administered within one hour after being exposed.

The head nurse told us that we needed to fill out Workers' Compensation paperwork before we were given any treatment. I found this very curious because she had just told us that this treatment was very time sensitive. I filled out the

paperwork and the medical staff took my blood pressure, it was 188/123, *(I was very stressed out)* then I gave a urine sample that showed levels of americium-241 *(not good!).*

Next, they drew my blood, the PA told me that my blood was being drawn to examine my blood cell count (CBC) which was medical protocol after a big radiological exposure that was to be used to see how substantial my exposure was.

The PA then told me that I would be getting my blood drawn several times a week for two to three weeks to monitor my white blood cell count. After the results of this initial CBC count came back indicating Acute Radiation Syndrome (Radiation Sickness), BEA ignored the medical protocol to further keep drawing my blood to monitor my cells. This would be the first and last time BEA drew my blood.

Stopping this medical protocol would stop the production of any more evidence showing just how high my exposure was. I always wondered why I was never called back to the medical facility for more blood work. I would eventually find out at a much later date that my low white blood cell counts *(especially my Lymphocyte counts)* taken that day indicated a very substantial dose.

Before I gave my permission to be chelated, I asked the PA about any side effects that could be expected from this chelation treatment, he replied, “There weren’t any.” I started asking him more questions about the treatment, he told me that they had never needed to administer Chelation treatment to anyone before at the INL and he handed me a pamphlet about Chelation Treatment that was several pages long and he told me to read and sign. I tried reading the first sentence, but I was so stressed out that my eyes couldn’t focus on the words to read it, so I told him that they were supposed to be the medical experts and if they thought I should have this treatment, then I trusted them, so I would just go ahead and sign the authorization and let them do it.

I was then hooked up to an IV drip and chelated. After my Chelation treatment, I was driven over to the lung counting facility located a short distance away to be put in a shielded room with long sensors like telescopes placed on my chest area to have the americium-241 counted in my lungs. (The americium-241 is easier to detect in the lung count than plutonium, and so is often used to derive an estimate of the plutonium intake based on knowledge of the composition of the

material inhaled.) After a 30-minute count, I walked to the next room and sat with the rest of the ZPPR exposure victims for the first time since our evacuation. I sat down next to one of the exposure victims and we watched about 8 medical and radiological staff members look at my lung count results with serious looks on their faces and whispering to each other. I remember one of my co-workers sitting next to me stating, “It looks like they are not happy with the results of your count.”

The radiation sickness started to kick in about 7 to 8 hours after my exposure as I started to feel very nauseous with dry heaves and felt like I wanted to vomit and probably would have except that I had not eaten all day. Our management came over to the medical facility during our treatment for a fact-finding meeting, after the meeting, I was released from the medical facility about 1100 PM that night.

The news of our exposures had made national news and family members and friends had been calling Jodi all night wondering if I was one of the exposed workers. I was ill when I got home, I walked up to the house and found Jodi waiting for me. When she saw me, she hugged me and wouldn’t let go. She asked me if I was cleared to go home and then asked me if I was clean. By this time, I was physically ill and didn’t even think about not being showered, so I just replied, “They cleared me to come home.” I pulled off my modesty clothing and crawled into bed **only to be up all-night with severe stomach pain on the floor of my bathroom vomiting with severe diarrhea and nausea**.

NOVEMBER 9, 2011 — THE NEXT DAY

The next morning, a co-worker and I had to drive back out to the lung counting facility to be retested due to our positive lung counts the day before and to meet with the Lead Medical Doctor for BEA. When I rolled out of bed the next morning, I noticed that my cognitive abilities seemed diminished. The sensation was very strange — it was like I was in a big daze that I couldn’t shake out of. The closest thing that I have experienced to this daze was a concussion I received after being involved in a car wreck in 2000. Jodi noticed this when I got out of the shower the next morning and she was talking to me. We were having a conversation when she asked me another question, when I didn’t answer her, she shouted, “Ralph,

answer me." I answered her back and asked her, "Were we talking?" That's when the seriousness of my exposure hit home for Jodi.

When the co-worker and I arrived out to the lung counting facility, the company physician asked us how we were doing, I told him that the both of us had experienced vomiting, nausea, and diarrhea and had been very sick throughout the night. Without any hesitation or medical test of any kind, the company physician told us that our physical symptoms were due to us carpooling together, and one of us gave the other one "INFLUENZA." This diagnosis from the company doctor could have been verified medically and inexpensively with a simple test but wasn't. BEA would do everything they could to deny that our clinical symptoms had anything to do with our exposure.

This co-worker and I were sent home for the week to recuperate from our illness after the exposure. I started to notice BEA downplaying our exposure: first, by telling us that our radiation sickness was "Influenza," and next I learned by reading in the local newspaper that BEA reported to the public that all of the ZPPR exposure victims were all back to work the next day. This was not true, not one of the exposure victims were back performing any radiation work for nearly two months after our exposure and two of us, a co-worker and myself were not back to radiation work for eight months due to our urine and fecal results. All 16 of us were told that we would not be permitted in a radiological area until our urine and fecal results were no longer positive for radionuclides.

During the time I spent recuperating at home after my exposure, I had many friends who came to my home to check on me — the support was really nice. Some of these friends who had worked at various DOE Nuclear Laboratories across the nation gave me the best advice that I could have ever had at that time. They advised me to get every piece of exposure evidence that I could get my hands on because it would soon disappear, especially when it could be proven that the exposure was the result of the contractor's willful negligence. At this time, I was very naïve and trusted the company to do the right thing, but I took this advice from friends I trusted and followed through with it.

DOE INVESTIGATION

On **November 17, 2011,** DOE formed a three-person investigation team and gathered all 16 ZPPR Exposure Victims and other personnel with any ties to the ZPPR Accident and interviewed them under oath. At the time, we didn't know anything other than we were exposed to airborne plutonium-239 and americium-241 after opening up a clam-shell container with a failed Pu-239 plate inside. After my interview, the investigators encouraged me to call them if I remembered anything or learned any new information. I learned a few days later that some managers were called back several different times to be further interrogated. This was the first clue to me that there was something learned that could be incriminating.

INCRIMINATING INFORMATION STARTS COMING IN

On **November** 27, 2011, a co-worker and me were hanging out at my house when his phone rang, a man told him that there was a lot more to the ZPPR accident than what we knew and that he wanted to meet us at the Albertson's grocery store parking lot on Broadway at 9:30 Pm. This man told this co-worker that he had a document that he wanted us to see. At the time, the co-worker wasn't sure who this man was, I grabbed my 40 and we drove over to meet with him and parked and waited. He soon walked up to the car wearing a hoodie and got into the backseat. This guy was very nervous and paranoid acting, he asked us to take the batteries out of our cell phones, this put me on edge, but I did as he asked. The man then handed us a document several pages long that would be known as the "white paper" written by **The Independent Review Safety Chairman (IRSC**).

The man then told us that the ISRC personally gave a copy of this "white paper" warning to BEA nuclear safety analysist and senior nuclear operations management in January 2009, nearly three years prior to our exposures, warning them that there were multiple plutonium plates with defective stainless steel cladding currently in the ZPPR vault. The ISRC warned that mitigations were needed to be made to protect unsuspecting operators from an airborne exposure after opening one of these defective plates in the ZPPR workroom hood.

After I was handed The ISRC "white paper" I read the first paragraph out loud, it said:

"I feel there is a potential for finding failed SS [stainless steel] cladding on ZPPR 239 Pu plates that are now in storage in the ZPPR vault in "sealed containers," (clam-shells), even after an initial survey of the sealed containers being performed in the vault, and then being transferred to the ZPPR workroom hood to be opened for repackaging. My concern is I think the potential for discovering failed SS cladding plates in the hood is greater than facility and senior management realizes."

What made this information such a bombshell to us was that our management never passed this critical information down to us. By not passing this knowledge to us, we would not have a reason to call a stop work and force the company and DOE to make very expensive repairs to the inoperable systems and components in the facility that were designed to mitigate an uncontrolled airborne release and there would be no interruption for the new customers paying the big bucks to conduct their research with the PU-239 stainless steel cladded plates.

A "white paper" is often a quick way for managers to obtain information from an expert or small group of experts. A "white paper" is not formally reviewed nor is it entered into official recordkeeping systems as normal reports or communications are. Using a "white paper" to convey safety concerns reveals quite a bit about the dysfunctional nuclear facility safety culture at MFC.

After we read this "white paper" and listened to what this man had to say, we were angry and felt very betrayed by BEA operations management who personally knew us. This man also told us that DOE did not interview the ISRC during their investigation, he retired and moved to Boise four months before the ZPPR accident.

Four and a half years after the ZPPR accident, the ISRC was finally deposed by an attorney representing two of the ZPPR exposure victims in April 2016. When the ISRC was asked if anyone from BEA or DOE had tried to contact him after the ZPPR Accident, he replied that the only one who contacted him after the ZPPR accident was senior a BEA nuclear operations manager. The ISRC testified that he called and asked him if he wanted to change the "white paper." The ISRC testified that he told this BEA Operations Manager that the "white paper"

would stay like it was and he wasn't going to change any of it. BEA tried to get this deposition sealed in the name of national security, but a federal judge ruled that there was nothing in it to keep it from being released to the public.

I thought if our management can send us into perform work while having the knowledge that we would eventually encounter one of these defective plutonium plates without any mitigations in place, what other ticking time bombs were being kept from us?

New incriminating details about the ZPPR accident were being learned on a daily basis, most of this information was very incriminating to both BEA and DOE. My main motivation at this time was to find out as much information about my exposure as I could, but a lot of other incriminating information was finding its way to me. This motivated me to dig deeper to find out how these pieces to this big massive puzzle fit together. At night, Jodi and I would talk about the new information that I was learning and the stress and anxiety of it was really starting to take its toll on both of us.

BEA INVESTIGATION

BEA decided to conduct their own investigation. On **November 29, 2011,** all 16 ZPPR exposure victims met with the BEA investigation team to answer questions about the ZPPR accident. I told this investigation team about our facility managements defiant and reckless attitude regarding bonuses over safety and the fact that our facility was in a very unsafe and dilapidated condition on the day of the accident. We brought up the fact that our management ignored our stop work on different occasions leading up to the accident and directed a co-worker and I to falsify 25 Type 1 procedures, **(which is a felony)**. After I was done dropping these bombs on this investigation team, they dropped one on us.

The investigation team informed all 16 of us that the Independent Safety Review Chairman (ISRC) personally presented his "white paper" to the new Director of Nuclear Operations and warned him about the failed Pu-239 stainless steel cladded plates currently being stored in the ZPPR Vault before he retired. When I heard this, I thought how many times does the Director of Nuclear Operations have to be warned about the serious safety issues in the ZPPR Facility before he does something about it?

Thirty-one days before the ZPPR Accident, a co-worker and me warned this man about the dilapidated and unsafe condition that the ZPPR Facility was in along with the reckless attitude and illegal actions of our facility management. A week after that warning, the same co-worker and I found ourselves back in the office of the Director of Nuclear Operations because our management had directed us to commit felonies by falsifying 25 type 1 work procedures. After being complicit about safety concerns addressed by the co-worker and me, we find out that the Director of Nuclear Operations ignored a personal warning from the Independent Safety Review Chairman (ISRC), warning him that there were unmitigated failed Pu-239 stainless steel cladded plates currently being stored in the ZPPR Vault.

The ISRC warned the Director that we were basically playing Russian roulette until we eventually pulled out and opened one of the unmitigated failed plates and exposed workers to very dangerous levels of airborne radiation. Again, the Director of Nuclear Operations does nothing, and 16 workers are exposed to very high levels of airborne plutonium-239, americium-241 and uranium-235. This man was eventually promoted.

After the co-worker and me learned that the Director of Nuclear Operations had been warned personally by the ISRC about the failed plates, we left the INL investigation meeting to have a little chat with him. We were very angry with this man and wanted to hold him accountable for his inaction to warnings from very credible sources about serious safety issues and both of us had very substantial exposures due to his inaction. We asked the Director for an explanation, he told us that the ISRC was a “soft spoken” individual and there was no urgency in his voice when he briefed him about the failed plutonium plates and so he didn’t take his warning seriously. This is like your car mechanic telling you that most of the lug nuts are missing from your right front tire and if you don’t them repaired, your tire you will eventually break free from your car while driving and someone could get hurt — and because he tells you this in a soft spoken way, you just ignore him until you crash your car.

Instead of apologizing to the co-worker and me for ignoring our warnings and the warnings from the Independent Safety Review Chairman that would have prevented our very high-level radiation exposure, the Director said that he “didn’t blame us for being pissed off, but we were going to have to get over it and get

back to work soon." I thought, how can I ever trust anything this guy ever says again, and what other unmitigated hazards does he know about that could potentially harm us after we go back to work?

FIRST URINE SAMPLES DESTROYED

On **December 1, 2011**, the BEA Internal Dosimetry Manager invited one of the exposure victims and I to her office for some news regarding our dose. The Dosimetry Manager always seemed nervous and had a difficult time looking us in the eye when talking to us about our dose and this time would be no different. She told us that she had some bad news about our urine samples and explained that a mistake was made, and our first urine samples were ruined and would not be able to be used in the calculation of our doses due to a miscommunication with Gel Labs, (the lab BEA was using to process our samples).

This news seemed very suspicious to me, so I did a little research. I learned that the first urine samples were the most important because they may provide the most accurate assessment of intake. It was compelling to me that the only urine samples that were destroyed, belonged to the four workers with the highest exposure. I was starting to notice a pattern, any evidence that indicated ZPPR workers received a very substantial exposure was being concealed or destroyed. All the advice from friends telling me to document everything surrounding my exposure was right on the mark, I wouldn't have any accurate dose data had I trusted BEA and DOE to provide it.

A little over a month after our exposure, we still had not been given much information regarding our dose. One of my exposed co-workers and I had noticed that BEA was very tight lipped about our exposures instead of being transparent, so we set up a meeting to get some answers. On **December 14, 2011**, we with the BEA Internal Dosimetry Manager, and the BEA lead internal dosimetrist, they told us that two of the 16 ZPPR workers could exceed the federal dose limit of 5 rem. I assumed the two unlucky workers were this co-worker and me, so I asked the Internal Dosimetry Manager to confirm my assumption, instead, she told me that my levels had dropped significantly and that I would be returning to work soon. I was very happy to get this news because it had been weighing very heavy on my mind and the minds of my family members. They also had some bad news as they

told us that the co-worker was one of the two that could exceed the 5 rem federal limit, I felt badly for him. I could tell that this news was weighing heavy on his mind.

After our meeting, the two of us drove back to MFC, and we walked back down to our cubicle where they had us stashed in the basement of the Analytical Laboratory. I checked my email and saw that I had received a dose report from the Oakridge Independent Dose Verification Team. **(This was a team of dose experts from the Oakridge labs who were tasked with providing an independent verification of BEA's dose assessment on the ZPPR workers.)** This report was their assessment of our doses based on the dose data that BEA had provided for them, primarily our lung counts. I later found out that this Independent dose assessment was sent to all 16 of us by mistake. As I read the Oakridge Report, it reflected vast differences in our dose levels given by BEA, for example, BEA assessed my bone dose at 1.3 rem verses the Oakridge Team assessing my bone dose at 49.7 rem. (Conveniently, this was barely under the federal dose limit of 50 rem for an organ.)

Another difference was BEA stated that only 2 workers could exceed the federal dose limit while the Oakridge Report stated that 4 workers could exceed the limit. While studying this report, I noticed other irregularities like the conspicuous absents of my November 8, 2011, positive lung count. This lung count showed that my lungs had nearly twice the level of Americium-241 than any of the other 16 exposure victims. Because this lung count was nowhere to be found in the Oakridge report, it meant that BEA did not share this very crucial piece of exposure data with them. It also meant that if my initial lung count had been included in the Oak Ridge assessment, my levels would have been way over the federal dose limits. For my own sanity, I needed to believe BEA's internal dosimetrists when they told me that my levels had dropped significantly. But I could no longer ignore the overwhelming evidence that my employer was not being honest with me regarding my dose.

BEA required all 16 individuals who were exposed in the ZPPR Accident to attend mandatory stress group meetings with the company shrink, the lead BEA Medical Physician, and the new Director of Nuclear Operations. On December 16, 2011, we all met to talk about any issues we might be having due to the ZPPR Accident.

Everyone's biggest frustration was not being told anything regarding our doses and it was causing us and our families a lot of stress.

My frustration started after I was told by the BEA lead medical physician that influenza was the cause of my radiation sickness symptoms the day after our exposure. Then my frustration increased after being told by the BEA internal dosimetry manager that my first urine samples which were the most important in determining my dose were accidently destroyed (regarding the americium-241 in the urine). Furthermore, when looking through the Oakridge Independent Dose Review Report and finding out that the independent reviewers were never given critical dose data of mine by BEA to be independently evaluated and assessed. This meant that an accurate assessment could not be performed. I also mentioned that the Oakridge Independent Dose Team Report greatly contradicted BEA's assessment of our dose, upon hearing this, the doctors and management team present said nothing.

These meetings were always the same, one other exposure victim and I were the only two who would express our frustration about not being told anything regarding our dose while the others were too afraid for their jobs to say much at all, although when alone, some of them would confide in us about their fears and frustrations. What was interesting about these mandatory stress meetings, was the biggest issue to always come up was our dose information being kept from us. Our exposure information was weighing heavy on our minds and all BEA needed to do was be honest and transparent with us and we could have dealt with it. But keeping this vital information from us was the main cause of our stress and the stress of our families and it only made it worse when we caught them being dishonest with us.

After BEA realized that the Oakridge Independent Dose Report was sent to all 16 of us and it seemed to contradict their claims that my levels had dropped significantly, I received an email from the BEA Internal Dosimetry Manager a week later that was now informing me that I was not going to be released with my coworkers like they told me. Due to my high urine and fecal bioassay results, I would remain on radiological/medical work restriction. This email completely contradicted what the Internal Dosimetry Manager and the Lead Internal Dosimetrist told me only 8 days earlier. I went from being told my levels were

low to being told that I was now one of the two workers who could exceed the federal dose limit.

Most of the other workers were being released after the holidays and a couple more released in March. In April, only one other co-worker and myself were remaining on medical/radiation work restriction due to the radiation levels in our urine and fecal samples. This news only added more confusion and frustration to this emotional rollercoaster that Jodi and I were riding. The Dosimetry Manager also said in this email that GEL labs would be working over the Christmas break for us and they expected to have dose results after curtailment that will allow them to release me from rad restrictions soon.

I would not be released for another six months and would spend it in isolation down in the Analytical Laboratory basement doing nothing.

I have wondered what would have happened if I hadn't received the Oakridge Report in an email by mistake — would BEA have just sent me back to perform radiological work and let me believe I was clean. I would eventually learn that they were capable of this very thing.

Before the accident, I worked out at a local gym. I decided to try and start working out again to relieve some stress. One thing I noticed was that my respiratory systems was not functioning normally — I had difficulty getting air.

Further medical tests confirmed issues with my lungs that I keep monitored. I was still having medical issues but did not trust BEA Medical or Dosimetry personnel and had nowhere else to turn, so I asked the Director of Nuclear Operations if he could find a medical doctor that was not affiliated with BEA or DOE and he said that he would. The Director had never come through in the past and was the number one reason that the ZPPR Accident happened, but there was nowhere else to turn.

The Workers' Compensation paperwork that we were made to sign on the day of our exposure told us that we had the right to an independent second opinion from a medical doctor at no cost to us. After a couple of months went by, it was obvious that an independent doctor was not coming. So, a co-worker and I went back to the Directors office and asked him about the independent doctor he said that he would arrange. He told us that this doctor was cancelled and he was not

going to be rescheduled. Some of us had medical questions about the symptoms we were having: one of my co-workers was still vomiting, **and I was experiencing gushing nose bleeds without any cause**. I had never experienced these symptoms before and knew that I would never get an honest answer from the BEA medical staff.

CALL FROM THE INDEPENDENT SAFETY REVIEW CHAIRMAN (ISRC)

The co-worker found someone who had kept in touch with ISRC since he retired and had his phone number, so he called him and left a message. On January 7, 2012, the co-worker, Jodi and I were having dinner at Buffalo Wild Wings when his phone rang, it was the former ISRC calling him back, they spoke for at least an hour. The ISRC gave the co-worker names of who he briefed about the defective ZPPR plutonium plates. The names of some of these managers and safety analysists blew our minds, we wondered how high up the ladder this knowledge went. This information also raised more questions of why DOE investigators did not interview the ISRC, who's "white paper" was at the center of the DOE's Investigation and even though he was retired, he was only living in Boise.

PAAA INVESTIGATION CANCELLED

One of the DOE Investigators who was a part of the DOE Investigation Team that interviewed the ZPPR workers back in November would occasionally call my cell phone to see how the co-worker and I were doing. On January 10, 2012, this investigator called during our commute home from work at MFC. I put the phone on speaker so we both could talk to her. She asked how we were doing, and I told her that the co-worker had spoken with the ISRC over the weekend and found out what MFC Managers he briefed about the defective plutonium plates. The investigator was very surprised, and loudly exclaimed, "you guys talked to the ISRC?" I said, "Yes, and we can now prove which managers lied to you and your investigation team under oath." I then said, "You know that managers lied to you under oath, don't you?" The investigator replied, "Yes I do." We also talked about other things that had been brought to our attention about the truth being withheld. I asked the investigator if he wanted the phone number for the ISRC to

interview him and charge these managers with perjury, the investigator told me that he did not want the number right now, but he would get back with me later — I haven't heard from him since.

The co-worker and I thought it was strange that this investigator did not want the ISRC's phone number to verify what we had told him. This only made us look forward even more to the Price Anderson Amendment Act (PAAA) Investigation Team coming out from Washington DC to interview all 16 ZPPR exposure victims, Nuclear Operations Management, and other groups and individuals associated with the ZPPR Accident about what they knew and when they knew it. We figured that we could finally get some justice and stop this from happening to someone else. I was so naïve, just over a month after I gave the DOE investigator the incriminating information about what the ISRC had given to the co-worker, I received an email from the Director of Nuclear Operations on February 29, 2012, stating that the PAAA investigation team was now cancelling their interviews with the ZPPR workers and they would use the existing information to determine fines and other punishments for BEA. Every day, the level of corruption kept getting higher and higher. It was very apparent at this point and it had become obvious to me that the Department of Energy was more of a business partner with BEA than the oversight role that it was mandated to be.

BEA tried to get the ISRC deposition sealed in the name of national security, but a federal judge ruled that there was nothing in it to keep it from being released to the public.

THE DOE ACCIDENT INVESTIGATION REPORT

The DOE ZPPR Accident Investigation Report was released in January 2012 and it did not reflect good on BEA. The report put the blame for the accident squarely on the shoulders of BEA Nuclear Operations Management.

BEA was in a bad place at this time because of their horrible safety record and the pile of evidence proving they ignored specific safety warnings by the Independent Safety Review Chairman and ZPPR Operators that would have prevented the ZPPR Accident. The DOE Report on the ZPPR Accident said that BEA violated **Code of Federal Regulations (CFR) 10 CFR 830 subpart B** when they didn't stop operations

in the facility upon being warned about the failed PU-239 stainless steel cladded plates keeping the facility open and to win award fees.

The DOE admitted in the report that the local DOE officials had knowingly allowed unmitigated nuclear material handling operations to continue in the ZPPR Facility. This statement meant that they also had blood on their hands and wanted it buried as bad as BEA did.

CRITICAL MITIGATIONS NEGLECTED

The November 8, 2011 ZPPR Accident was caused by a failed Pu-239 stainless steel cladded plate being opened up by unsuspecting operators. This accident scenario was documented in the ZPPR DSA. The mitigations required to protect the worker for this accident scenario were the **facility Ventilation System (Exhaust Fans), Radiation/Contamination Alarms (upstream Alpha/Beta Contamination Monitor), Workroom Hood, Stainless Steel Cladded Jackets that encased the Pu-239 plates.** Because these systems and components were documented in the ZPPR DSA as mitigations, they were legally mandated to be "Operable" before any nuclear material could legally be handled in the ZPPR Facility. On the day of the ZPPR Accident, **not one** of these systems or components were operable. I will talk in a little more detail about each one of these critical layers of protection below.

UPSTREAM ALPHA/BETA ALARM MONITOR REMOVED

This alarm worked much like a smoke detector in your house, except it detected microscopic airborne radiological particles. It was an Engineering Control used as one of the layers in defense designed to protect the worker from an airborne exposure by monitoring the workroom hood exhaust ventilation and sounding off very loudly when radionuclides were detected triggering ZPPR Operators to evacuate.

The up-stream Alpha/Beta alarm was documented in the ZPPR DSA as one of the mitigations that were mandatory to be "Operable" before any nuclear material was to be brought out of the Vault and handled in the workroom hood. This alarm had been having performance issues and needed repair or replacement for quite some time but was removed in February 2011 due to the cost and not replaced

with an alarm of equal capabilities as required. This life saving alarm was removed about a year after BEA Safety Analysists and Senior Nuclear Operations Management learned that there were failed, defective Pu-239 stainless steel cladded plates currently in the ZPPR Vault that operators would eventually encounter after opening them in the hood. The defective plates were an airborne exposure hazard and by removing this airborne contamination monitor and not replacing it just nine months prior to the ZPPR Accident, ZPPR Operators were left vulnerable without any warning to evacuate.

On page 31 of the DOE ZPPR Accident Report says**, "MAINTENANCE OF THE SUBJECT ALPHA AND BETA/GAMMA DETECTORS IS COSTLY AND RECENT PROBLEMS ARE INDICATING THE NEED FOR REPAIR OR REPLACEMENT."** Had this alarm been kept "OPERABLE" and working as designed, instead of being taken out of service when repairs were needed, our exposures would have been minimal.

The DOE Accident Investigation report on page 31. Analysis**: "THE NEED TO <u>REMOVE THE ALPHA AND BETA-GAMMA UPSTREAM MONITORS WAS BASED ON COST ISSUES RELEVENT TO MAINTENANCE AND RERPLACEMENT OF THE EQUIPMENT</u>, BUT NO COST/BENEFIT ANALYSIS WAS PERFORMED TO SUPPORT THE DECISION"**

The DOE fined BEA for yanking this legally required lifesaving monitor out and not replacing it. The DOE's fine was just for show as they returned the money to BEA the next year saying that BEA had taken care of the issues. By doing this, the incentive was taken away for BEA to conduct themselves ethically, safely and legally.

ZPPR VENTILATION PROBLEMS

In a nuclear facility such as ZPPR where plutonium is handled, an exhaust ventilation system capable of keeping the facility at a negative pressure to control any airborne contamination is critical to keeping workers safe. When I was hired in August of 2007, the ZPPR exhaust fans were old and not capable of consistently keeping the workroom at the required safe minimum negative pressure. The minimum negative pressure needed to make handling nuclear material safe in the workroom hood had been evaluated to be 0.20wc when the exhaust fans were new and capable of doing their job. This reading was verified on a gauge every

day during our rounds in the facility and was a mandatory minimum requirement that had to be met before any nuclear material could be placed into the workroom hood. This requirement was seldom met due to the poor operability of the facility exhaust fans. The exhaust fans had been in this condition for years with the knowledge of the previous ZPPR Facility Management.

The New ZPPR Shift Supervisor (SS), was hired in 2010 and didn't have any experience handling nuclear material. I trained him in the ZPPR facility and made him very aware of the ventilation problems that we dealt with on a daily basis. When he assured me that the ventilation system in the facility would be repaired and function properly as soon as he was running things, I gave him the benefit of the doubt. It didn't take senior management long to recalibrate the new SS's ambitions.

In early 2011, when the New SS informed me that a resolution to our facility ventilation issue had been decided, I felt relieved. But then he informed me that they would not be repairing or replacing the exhaust ventilation fans and restoring them so they would work as designed and met the negative pressure level needed to keep workers safe. ZPPR management along with the backing of BEA Nuclear Safety Analysts went the other way and lowered the minimum negative pressure requirement down from 0.20wc to 0.05wc. This lowered the minimum requirement 75%, so the old broken-down exhaust fans would now be able to reach this new minimum requirement dreamed up by BEA to allow nuclear material handling to continue in the ZPPR Facility while allowing BEA and the DOE to avoid very expensive repairs and down time and keep the bonuses flowing in. This was another decision that could greatly affect the ability to exhaust airborne contamination in the facility leaving operators at risk. This decision was also made after BEA was given the knowledge about the high likelihood of finding failed defective Pu-239 plates, higher than previously stated in the DSA.

All this information was available to the DOE investigation team, but they ignored a lot of this very incriminating evidence.

On November 8, 2011, the day of the ZPPR accident, 3 out of 4 exhaust fans were not "OPERABLE." The exhaust fans were Engineering Controls which are the most

critical controls for worker safety in a nuclear facility and had been written up for at least a year to be repaired or replaced.

Nuclear Operations Management was aware of this significant safety issue, but kept nuclear material handling operations full speed ahead. The safety of our crew depended on these exhaust fans working properly and had our management been concerned about our safety instead of the money it would take to repair or replace these inoperable systems, our radiological doses would have been significantly reduced.

ZPPR WORKROOM HOOD

The ZPPR Workroom Hood was designed to contain airborne contamination by drawing air from the workroom into the hood then exhausted through a series of HEPA Filters then finally out the stack. All nuclear material handled in the ZPPR Facility was opened in the hood to mitigate an airborne exposure to workers. **The DOE Report on the ZPPR Accident states:**

"Based on the history of Workroom hood testing, BEA has disregarded its own limits for face velocity by accepting test results above those deemed acceptable. Due to the mechanical limitations of hoods, as well as inconsistent testing and maintenance practices, taking credit in the safety basis for the Workroom South Hood's mitigation of airborne releases of particulate transuranic material is questionable at best. The Board concluded that, though credited in the ZPPR safety basis as a defense-in-depth, the ZPPR Workroom South Hood was not maintained in such a way to provide assurance of its performance or operability"

The **ZPPR workroom hood** is an Engineering Control that is designed to contain air borne contamination when it is operating and maintained properly. The ZPPR Operators depended on it working properly to protect them from a potential airborne exposure.

Picture of workroom hood during decontamination of ZPPR workroom.

The workroom hood had failed a face velocity test in 2011, just months before the ZPPR Accident.

When technicians tested the workroom hood, all personnel in the workroom were told to sit away from the hood and not to move so that the air face velocity test would likely pass. This made the testing unrealistic because in a real work situation, there were several operators and tech's always working in and around the hood. The decision to lower the negative pressure requirement instead of repairing the exhaust fans, also greatly affected the ability of the workroom hood to contain airborne radiological contamination.

PLUTONIUM 239 PLATE STAINLESS STEEL CLADDED JACKET

The Stainless Steel Cladded Jacket was credited in the ZPPR Documented Safety Analysis (DSA) as a layer in defense. It was the last line of protection designed to

prevent the worker from becoming a victim of an airborne exposure in the event all the other mitigations failed. As long as the Stainless Steel Cladded Jacket was not bent or damaged and remained air tight, it would protect the plutonium-239 inside the stainless steel incasing from oxidizing and going airborne once the ZPPR Operator opened the clam-shell container.

The stainless steel cladding also gave paying customers a unique ability to safely conduct experiments with weapons grade plutonium-239 outside of a glovebox. BEA had a lot of financial incentive to ignore the warnings from the ISRC about the defective failed Pu-239 plates currently being stored in the ZPPR Vault due to these plates being the sole reason the new customers were now paying the big bucks to come to ZPPR to conduct their research.

To

Clamshell container with a stainless steel cladded plutonium-239 plate replica

Operating a DOE Nuclear Site is very profitable for a contractor unless they start having to many accidents that cause workers to be overexposed causing public scrutiny. BEA had its first contract extension coming up and had a terrible safety record at this point. Work had been shut down from January 2011 to April 2011 due to radiological incidences and worker exposures and shut down again from April 2012 to December 2012 due to several more accidents.

The evidence of willful negligence was too great for BEA to wiggle out of. The way I see it, the only chance BEA had to win the very lucrative contract extension was to demonstrate that none of the 16 workers received much of a dose from this accident, the thought being "No harm, no foul." BEA had the opportunity to pull this off because they employed all of the Rad-Con Technicians, Internal Dosimetrists, and Medical staff, who all contributed to our final dose assessments. BEA controlled all of our dose data and could give the independent dose assessors whatever data was needed to fit their story, and the evidence strongly suggests that's exactly what they did.

This was demonstrated when critical dose data provided by BEA was missing in the Oakridge Independent Dose Report and could not be assessed by them. The independent report and communications evidence between BEA and these dose experts strongly suggest that the experts did not agree with BEA's assessment of our dose assignments.

The contract extension was not the only reason BEA had for falsifying ZPPR worker doses. Millions of dollars in safety bonuses were at stake and possible incarceration for BEA and DOE personnel who made the choice to allow nuclear handling work to continue while knowing that critical systems and components in the ZPPR Facility were not "operable." The DOE acknowledged in their own investigation report that they themselves allowed plutonium operations to continue with their knowledge of safety related issues in the ZPPR Facility which put blood on their hands. This may be why BEA had as much latitude as they needed to perform some very creative dose calculations resulting in low ZPPR worker doses. I believe that as long as BEA could come up with low dose assignments for the ZPPR workers, they could keep their safety bonuses, avoid big PAAA fines, higher workman comp premiums, and avoid possible criminal charges and jail time should one of us eventually get sick and die from this exposure. BEA

had all of the resources and motivation to do this and they were able to control their own fate due to not having to worry about any oversight from DOE.

Battelle Energy Alliance (BEA) is a private nonprofit corporation and private corporations base their decisions on the financial bottom line which depends on the award fees determined by the Department of Energy. If BEA were found to have caused a significant accident, not only would award fees have been withheld, BEA could face monetary fines. It was a big conflict of interest for BEA to be the only source assigning the ZPPR worker doses when it was proven that our radiological exposures were caused by their willful negligence.

I was always told that when it came to safety, money didn't matter, but during my investigation I was finding that money was the only thing that did matter.

Workers decontaminate ZPPR workroom and hood after accident.

BEA's assertions were always inconsistent with the evidence. One of the many instances was when they claimed that we were exposed to low levels of airborne plutonium, it took a team dressed in these decontamination suites with respiratory equipment nine months to decontaminate the ZPPR Facility after the accident. BEA's claims never jived with the evidence!

On January 23, 2012, I received a phone call from Jodi's boss telling me that she was on her way to the site medical facility in an ambulance with abdominal pain, the stress of everything going on was taking a big toll on Jodi's health. The co-worker and I drove from MFC to the site medical facility to meet her and see how she was doing. After Jodi was treated, one of the company physicians and BEA's Head Nurse asked us if they could meet with us privately. We sat down, and I told the company physician that the co-worker was still vomiting several times a week, without any hesitation or exam, he told us that "it was due to stress."

Sometimes on the way home from work, the co-worker and I would be talking and clicking down the road at 65 mph when in mid-sentence, he would need to vomit, I would have to stop very quickly and pull off the road before he vomited in the car. During this time, the co-worker was losing a lot of weight and had no energy at all. It was obvious that BEA's medical doctors were not going to do any testing or try to treat or even acknowledge his medical condition. It was also obvious that the Director of Nuclear Operations was not going to keep his promise and get us a medical doctor who didn't have any ties to DOE for a second opinion. Four and a half months had passed since our exposure and BEA still wasn't not parting with any of our dose information or providing an independent medical doctor to evaluate our medical issues.

OBTAINING AND UNDERSTANDING OUR RADIOLOGICAL EXPOSURE RECORDS

On **March 27, 2012,** one of my co-workers and me hired a local attorney to help us gain access to our medical and radiological records that were being concealed from us by BEA. This was information that should have been given to us after one of our many request instead of having to hire an attorney to get it. We sent the Director of Nuclear Operations a legal request for our medical and radiological

records due to BEA not abiding by their own protocol. After sending the company this legal request, the co-worker and me became BEA enemy number one.

RADIOLOGICAL CONTAMINATION EXPERT MARCO KALTOFIN

I knew that if we were going to get some answers regarding our health and exposure, it wasn't going to be from BEA or the DOE. I was out for elbow surgery in April 2012 and had a lot of time on my hands, so I started calling different groups and anyone across the country that I thought might be able to medically help us. I stumbled on to a Radiological Contamination Expert who was working in Japan on the Fukushima disaster as a consultant, his name was Dr. Marco Kaltofin and he worked for a Boston Chemical Company. I told Marco that I was looking for an independent medical doctor familiar with radiation exposure issues, Marco explained that he was a contamination expert, not a medical doctor and couldn't help us but he was curious why I was looking for a medical doctor.

I told Marco what happened and how high the levels of airborne contamination were in our breathing space and that we were not wearing any respiratory protection. Marco expressed his concern about the level of our internal exposure then tried to console me by telling me that at least an internal exposure would pose no risk to my family due to being showered and decontaminated externally after the accident. I thought for a second and told Marco that I was never showered before I came home, and in fact my face and chest area was the only part of my body that was decontaminated, and I performed that myself. I told him that I stripped down to my underwear and socks and changed into a big yellow contamination suit that was given to me after the exposure. When I got to the lung counting facility, I was given surgical greens to wear home.

Marco was shocked and seemed very outraged and asked me if the company I worked for even understood the hazards of nuclear material. Marco asked me to send him dust samples in my house, I told him that we had the carpets and furniture professionally cleaned right after Christmas as we always did, and my wife and daughter did the spring cleaning on the house earlier that month and that it wasn't possible that there would still be any contamination in my house. Marco told me that it would be a good idea to just make sure nothing was there and said he would check it for free. I agreed to send him some dust samples and I

got two of my co-workers to do the same. We mailed our home dust samples off to Marco and forgot about it.

About two weeks later, a co-worker and I were having lunch at Sizzler and my phone rang, it was Marco. Marco said I have some bad news, your samples tested positive for **plutonium 239, americium 241, and uranium 235,** he also stated that ***the samples from my two co-workers*** also came back positive for the same isotopes. None of us had any idea of what to do next, I asked Marco about how we should handle this, he told me that little things such as not having any company over to my home for at least an hour after I vacuumed to allow any contamination to settle, he also suggested that we should wipe down the dust in our home daily instead of weekly. After finding out that my vacuum bag and several dust samples tested hot, I instantly thought of my 14-yr. old daughter because her chores were to vacuum and dust. It is known that the younger you are when exposed to radiological contamination, the more damaging to your health it is. The thought of bringing home plutonium-239 and americium-241 home with me and exposing my wife and daughter is still always on my mind.

As of August 2018, my wife, also a radiation worker, had tested positive for 5 nodules in her lungs and she had never smoked a day in her life.

I went home and told my wife about the test results and she just broke down and cried, this was her house and the refuge that she created for her family and now it was contaminated. Her stress level was already more than she could handle, I felt numb, the nightmare that we were living in just kept getting bigger with no end in sight. We knew that we would not get any help from BEA or DOE because they were already full speed ahead covering up our dose and medical conditions, not to mention that both of us were now considered full outcast because we attained an attorney to gain possession of our own medical and radiological records. The official DOE Accident Investigation report said that the reason we didn't get showers was that there was no hot water available in the lung counting facility. A friend of mine who was a Rad-Con Tech, told me that when she transferred over to MFC in 2010, *a year before the ZPPR accident,* she took a tour with her new manager and during this tour her manager told her that the contamination shower reservoirs were full of contaminated water and had not been removed due to the cost. Only two of the ZPPR exposure victims were able

to shower, one of these showered exposed workers sent dust samples from his home to Dr. Marco Kaltofin and still came back contaminated.

RADIOLOGICAL DOSE EXPERT JAN BEYEA

I was 99.9% sure that I had tracked home contamination after the ZPPR Accident, but I wanted to be 100% sure so I got another opinion. I hired Jan Beyea, a very well respected and experienced PHD dose expert and expert on Nuclear contamination. After studying the dust samples from our house, Dr. Beyea concluded that, *"The material on the sample has a forensic signature nearly identical to that of the mixture of radioactive materials released during the exposure event on November 8, 2011".*

I also called Dr. Marco Kaltofin, who had originally determined that my home was contaminated and asked him if it was even remotely possible that the contamination samples from my home were from the weapons testing as BEA had contended. Marco told me that BEA's contentions were not a possibility because the radiological particles in the dust samples from my home were found to be "virgin plutonium-239, and americium-241" which meant that the particles did not have **any fission products that would result from nuclear weapons testing** and therefore could not be from weapons atmospheric fallout as BEA contended. Also, in the DOE employees concerns report that was sent to me by DOE on March 10, 2014, PG 4, states, "The Pu-239/240 in the soil is the result of global fallout from nuclear-weapons testing" and "No Plutonium-238 or Americium-241 was detected in the soil samples in 2012.**"**

According to the scientific evidence, the forensic signature of my home contamination was identical to the plutonium-239 plate that exposed 16 workers including myself. One of the isotopes identified in my home samples as well as two co-workers was americium-241. The DOE documented that americium-241 was not detected in the 2012 soil samples in our area. Without any logical explanation, The DOE ignores its own data and concludes the dust samples from my home were from global fallout testing.

The DOE avoided mentioning the millions of curies released by the INL since the 1950s from nuclear reactor operations, spent fuel reprocessing, accidents, and nuclear fuel melting. The INL has historically and currently also releases

americium-241, plutonium-239, plutonium-238 and other transuranic radionuclides from weapons production waste disposal and other research. Am-241 has been detected in soil monitoring in some years and is a radionuclide included in INL radiological emissions reports. However, the specific radionuclide composition of the contamination found in my home closely matched that of the ZPPR plate.

Dr. Beyea also concluded that the levels were much higher than what BEA contended. The evidence indicating that we went home contaminated was overwhelming, I hate to think what the contamination levels were before our home, furniture, and carpets were professionally cleaned, because we only had evidence of the levels after the cleaning.

Not long after I came home contaminated, Jodi took her new vacuum into the store where she bought it to get some service work on it. A store employee was removing the bag when he dumped it all over himself, at the time they both just laughed, but we now wonder how contaminated he was when he went home that day and how many other customers it affected.

Due to the findings of Dr. Marco Kaltofin and Dr. Jan Beyea regarding my home dust samples, Jodi filed a lawsuit against BEA on August 14, 2014, to recuperate our financial losses for having to gut our home which was necessary to remove the plutonium-239, americium-241 and uranium-235, at our expense. We could also prove that BEA was well aware of the fact that we most likely went home contaminated through witness accounts. Other indicators in BEA's own reports pointed to workers going home contaminated. One example is the INL Dunn 2012, ZPPR Accident Report, that documents that at least 7 workers had contamination in their hair, but only 2 workers were allowed to shower. One of the workers had no hair, so that leaves 6 workers who had contamination documented in their hair and didn't shower.

Anyone who has ever been on an old dusty road knows that the dust is not coming out of your hair until you have taken a shower, and airborne radioactive contamination is no different except that the particles are microscopic. Another example is that the Security Police Officers who were in the workroom with us were sent home after the accident in the same camo uniforms they were wearing when the material went airborne, the rifle slung around their neck and the Glock

handgun they wore around their waist was found to be contaminated along with having positive bioassay. Should we believe that an individual can have positive bioassay samples which indicate an internal exposure along with contaminated items carried on their person, but by some miracle according to BEA, their clothes did not get contaminated and they were clean to wear home? It is simply not possible that the guns they were carrying on them became contaminated but their clothes and hair were not. These were the type claims that you were expected to believe and not question.

JANUARY 6, 2015 THE UNITED STATES DISTRICT COURT

The evidence against BEA was more than overwhelming in their negligence that allowed us to come home contaminated after our airborne exposures. BEA's first argument to the court to dismiss our case was that they did not ***"OWE A DUTY TO THE PUBLIC"*** to protect them from the nuclear material in their custody. This meant that they contended that they were not legally liable for any nuclear material leaving the site and contaminating homes or businesses. BEA also argued that the contamination we found in our home was from nuclear weapons testing in the Nevada and New Mexico desert in the 40's and 50's. This was very devastating to all of us because it meant that BEA and DOE could be as negligent as they wanted to be with no consequences.

After my elbow surgery, I came back to work around the first of June 2012. Due to the radiation levels in our urine and fecal samples, the co-worker and I were still on radiological work restriction. I had been sitting in a basement for eight months doing nothing, the longer we were on this work restriction, the more talk I heard from employees about how big our doses must be. This was a big concern for BEA because they had been playing down our exposures and the severity of the accident since it happened. Another concern for BEA operations management was that the co-worker and I had been uncovering incriminating information about our dose constructions and other matters related to the ZPPR Accident.

BEA CHIPS AWAY AT MY CREDIBILITY

After I got back to work, it was painfully obvious that BEA Operations Management was on a mission to destroy our credibility and fire us. The big problem for them was that the co-worker and I were still producing positive urine and fecal samples which kept us on radiological work restriction, and they could not get their hands on us. On June 11, 2012, two Nuclear Operations Managers, walked down into the basement of the L&O laboratory where we had been stuffed away to pay us a visit. It was obvious from the git-go that these managers were not on a social call, and they told us that they were going to put us back to work regardless of any work restrictions that we were currently on. The internal dosimetrist informed us that we would be on work restriction until our urine and fecal samples were no longer producing positive samples. The Code of Federal Regulations state that only a medical physician can lift work restrictions for a worker who is returning to work.

After the operations managers walked out, the co-worker and I were wondering how they were going to go around all the radiological and medical regulations to get their way. To this point I had witnessed more corruption than I ever dreamed possible, but I thought there was no way that an operations manager could just pull us back to radiological work while we were still producing hot bioassay samples. Turns out I was very wrong.

The very next day, June 12, 2012, I received an email from the **BEA Internal Dosimetry Manager**, it read, ***"RECOMMENDATION TO REMOVE RADIOLOGICAL RESTRICTION" "On June 12, 2012, you were requested to give a set of urine and fecal samples, you are not expected to yield further positive results. Following your submittal, it is recommended that your radiological work restrictions be removed. Any further positive urine or fecal results will be evaluated as separate exposures".***

I gave a fecal sample to BEA on June 19, 2012, and then I was sent back to perform radiological work in the Fuel Conditioning Facility (FCF) before the results came back. I was told by BEA that I was ***"not expected to yield any further positive results"***. When I didn't hear back from them regarding my 6/19/12 urine and fecal results, I was under the impression that my results were clean, and it was very comforting. Due to my lawyer forcing BEA to produce my urine and fecal

results, I later found out that my 6/19/12 bioassay sample came back positive for americium-241, plutonium-238, and plutonium-239, these results should have prevented me from returning to radiological work but didn't. By not being honest and transparent about my bioassay sample results, BEA only showed that they had much to hide about my dose.

RADIOLOGICAL CONTROL MANUAL LRD 15001 ARTICLE 521

"Individuals should be notified of positive bioassays and the results of dose assessments and subsequent refinements. Dose assessment results will be provided in terms of Rem and Millirem".

On June 12, 2012, the co-worker and I were sent back to work in the Hot Cell Facility's by nuclear operations management while still producing positive bioassay samples.

The summer of 2012 was very stressful due to not having any information about my dose and finding out that our homes were confirmed contaminated with plutonium-239, americium-241, and uranium-235 by two different independent laboratories. The plutonium cloud that we were unknowingly ingulfed in for five minutes was so radioactive that one of my co-workers who was exposed had his items still come back positive even though he was showered. Jodi had been to the emergency room a few times with stress related issues, my 14-yr. old daughter who was involved in sports and doing well in school became withdrawn and soon dropped out of school. I was watching my family, my home, my career and life as I knew it, be destroyed right in front of my eyes and I was helpless to stop it. Life had become a nightmare that I couldn't wakeup from and it was about to get much worse.

The INL's MFC was still on its second radiological work shutdown in 1 ½ years when I was sent back to work in the FCF facility. This safety shut down was in response to having several more accidents. A few of the operators who I met at FCF told me that Management had a meeting with them about me before I got there, and it wasn't positive. I went from being a well-respected Nuclear Facility Operator in ZPPR working with world class scientists performing cutting edge experiments to a troublemaker because I refused to falsify documents and perform nuclear material handling work in an unsafe and reckless manner. I also

refused to let management lie to me, because of this, I was closely being watched and my actions were being reported to management by a few of my new co-workers. I believe that BEA Operations Management understood that they had to get us back to work before they could set us up and get rid of us. The retribution to the coworker and me started on day one of our return to work and was in full swing with no end in sight. The FCF Nuclear Facility Manager was constantly calling me up to his office to accuse me of something new several times a week, I believe that this was an attempt to chip away at my credibility. It was painfully obvious that they were trying to make me quit or invent a reason to fire me. Nuclear Operations Management would have their work cut out for them because I had a great work history with the company and also had a SIGMA Security Clearance which was higher than any of them had.

On June 18, 2012, Operations Managers called me to the A&L Conference room for a disciplinary meeting and to give me a disciplinary letter for my employee file. I was falsely accused and written up for having my feet on my desk when the two managers came down to the basement to tell the co-worker and me that they were putting us back to work regardless of our work status. I was also written up for exhibiting bad body language (whatever that means) and arguing about travel arrangements to a meeting. Every one of these accusations was not only false but petty as well. The co-worker and I were disciplined by this senior operations manager due to what he called unprofessional behavior and made it mandatory for us to have weekly meetings with our new supervisors and Nuclear Facility Managers and Bi-weekly meetings with the BEA company shrink. We were also not permitted to speak to each other during work hours. The co-worker was also written up for the same reasons.

When I was assigned to go to work at the Fuel Conditioning Facility (FCF) MFC was on another safety stand down due to several more industrial and radiological accidents. The crew had a lot of time on their hands, it became painfully obvious which of my new co-workers were assigned to watch everything I did. Someone was always looking to see what I was doing, listening to what I was talking about or just trying to pump me for information, so it could be reported to management. BEA was looking for anything they could use against me to take away my credibility. I never gave them anything they could legitimately use so they started inventing reasons to write me up.

It didn't take management long to accuse me of more false accusations, on July 2, 2012, I was called up to the office of my Nuclear Facility Manager to face another false accusation. The FCF management was waiting for me when I walked in to see what the next accusation was about. They accused me of being in the basement of the L&O Laboratory unauthorized where my cubicle was. I told them that I was authorized to be there because the only computer that I could access was down there. The FCF Nuclear Facility Manager told me that someone had accused me of some kind of crime, but he would not tell me who was accusing me or what I was being accused of. This was the most confusing disciplinary meeting that they had sprung on me so far; I couldn't wait to see what I would be accused of next.

Some of the crew that I had got to know were noticing how I was being treated and would express how wrong it was, but the retribution was just getting started. The very next day, July 3, 2012, I was told that the FCF Nuclear Facility Manager needed to see me immediately in his office. I thought, here we go again. These false allegations were becoming comical for the other operators in the facility. When I got to the office of the FCF NFM he told me that federal investigators wanted to interview me about participating in work place violence, so I laughed and said let's go see them. When I walked into the security building to be interrogated, some of the security guards that I worked with and knew well, started laughing and shaking their heads when they saw me because they knew how bogus this and all of the other accusations against me were. I was taken in a private room and interrogated by a federal investigator who was trying to accuse me of threatening a manager with bodily harm. I told the investigator that this was all untrue and this was nothing more than just harassment. After this bazar interrogation, BEA Management was still able to dream up a false accusation and put another disciplinary letter in my file for workplace violence. In my disciplinary letter, BEA accused me of standing next to another employee who was making threatening statements about management, the letter states that even though I was not the one who made any of the inappropriate statements, I did nothing to stop or correct the individual who supposedly made the comments, therefore I was also responsible. I didn't think that these accusations could possibly get more absurd, but they did.

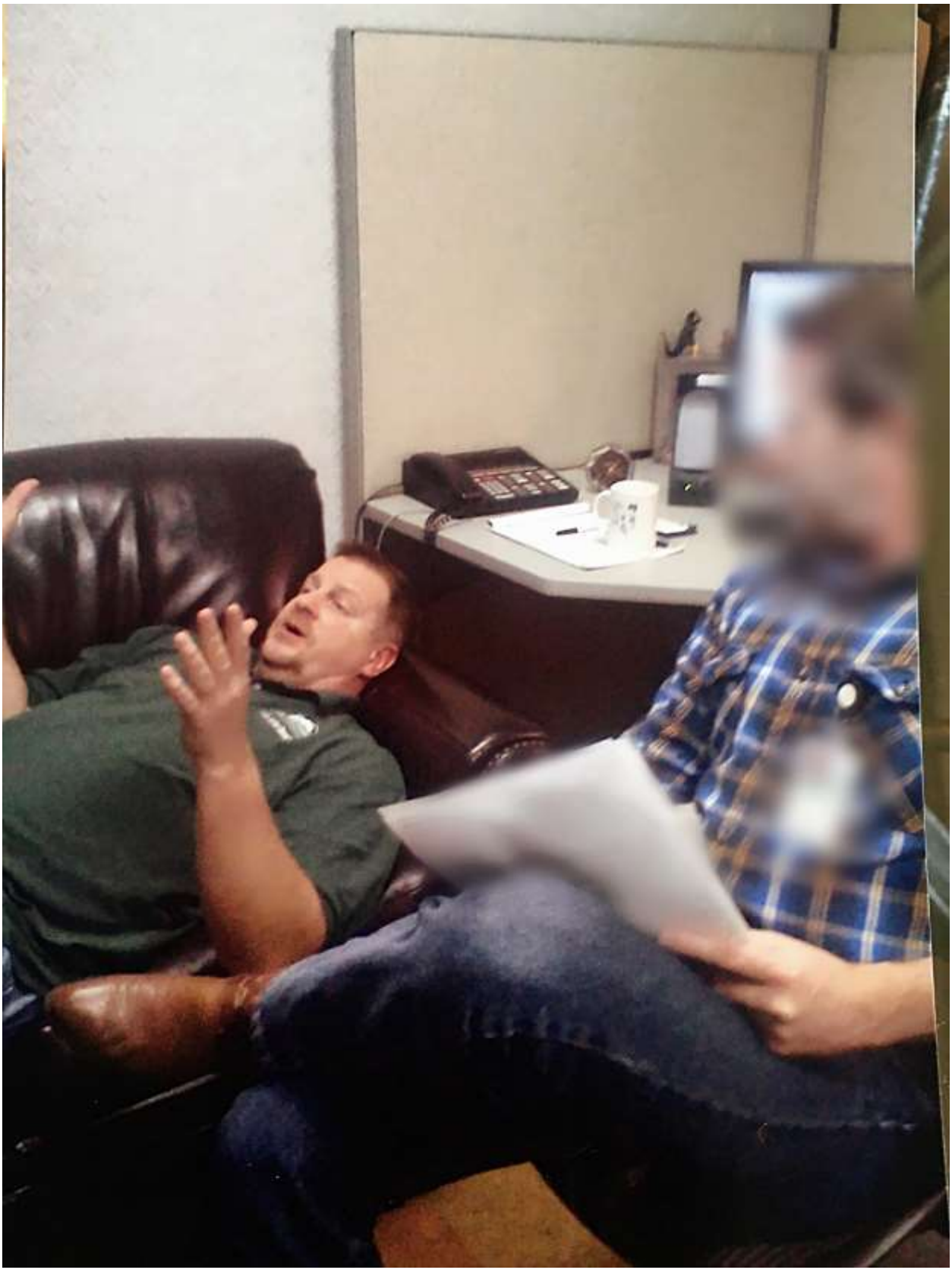
On July 10, 2012, the FCF NFM walked up to me during my lunch break and told me that he needed to escort me over to the Analytical Laboratory Board room for another disciplinary meeting, this time with HR and Senior Nuclear Operations management. I giggled and wondered to myself, what haven't they already accused me of? Will they will accuse me of selling drugs or will they accuse me of prostitution this time? I walked over to the board room, several senior operations managers, HR personnel, other personnel I had never seen before as well as my **immediate supervisor** and the **FCF Nuclear Facility Manager** were present. I looked around at all the top brass sitting around the board room table waiting for me and figured they were going to accuse me of a serious crime. I looked to see who was spearheading these new accusations and noticed that it was none other than one of the Senior Nuclear Operations Managers, who told the DOE investigation Team that he knew nothing about the failed plutonium-239 plates when in fact the ISRC identified him as one of the managers that he gave a copy of his "white paper" to. This made perfect sense now, due to our previous conversations, he knew that I could make a case that he committed perjury in the DOE investigation, this would give him the motive to destroy any credibility that I had.

As we started this meeting, he looked me in the eye and told me how ashamed he was of me for pulling a prank on other nuclear operators by leaving a **giant stuffed teddy bear** on the floor while they were away on a pre-job brief. I was told that this action of mine caused a great disturbance among the operators. After he told me this, I waited to see what other accusations would come next, I knew that this false and absurd accusation alone could not possibly justify a full board room of top tier management and HR, so I kept waiting for more accusations.

When nothing else was said, I was stunned — I didn't think that the false accusations could possibly get more bazar than the last one did, but this one took the cake. This manager had a straight face when he accused me of throwing a full-size teddy bear on the floor of an operators cubical. I told him and everyone else in the board room that this was just another false accusation and they all knew it. I also told him that I would not sign the disciplinary letter. After I left this meeting, I did my own investigation and found out that security guards and some of the operators that I had supposedly disturbed, had been throwing this life size stuffed

Teddy Bear into each other's offices at night just joking around. After security personnel told BEA nuclear operations management that they were responsible, the disciplinary paperwork was never removed from my file.

Management's retribution and goal to fire me was in full swing at this time. Co-workers that we ate lunch with were now hesitant to be seen talking to us at work. We were still trying to figure out how to survey our homes for any hot spots that we may still have in our homes. BEA was inflicting as much stress on us as they possibly could.



***Ralph Stanton in a mandatory meeting with the BEA shrink*.**

I had to find a way to use humor to deal with the absurd accusations and requirements that were forced on me. On one of our mandatory visits to the BEA shrink, I told the co-worker that I wanted him to take a picture of me laying down on the couch and talking to the shrink like you would see on TV. This was my way of laughing at the whole situation and keeping my sanity. On July 17, 2012, BEA employee services called me and informed me that I was scheduled for an appointment with an outside shrink. The co-worker was also informed that he had an appointment to meet with this shrink. Lowell Hawkes was an attorney from Pocatello who was helping us, I called him to go with me to this appointment because I knew that BEA was up to no good. When my name was called in the waiting room, Lowell got up with me and we walked up to the Shrink, Lowell introduced himself as my attorney and the shrink told me to go back in the waiting room and wait while Lowell and he had a private chat. Lowell took the whole hour assigned to me and I was reassigned to come back the following week.

On July 24, 2012, I took my turn with this shrink, I didn't hold anything back, I told him about how unethically BEA was treating me and that I could prove every illegal act that I had been asked to perform, and the countless ones that they had performed. The shrink hardly talked or said much and didn't take notes — I did just about all the talking for about an hour and a half. Afterward, he gave me a 500 question MMPI test to complete. I got the impression that this shrink knew BEA really stepped in it this time and thought it best to call it straight and not declare the co-worker or me unfit for duty.

By this time, the happiness my family had once known had basically dissolved. I don't know to this day how we made it through the trips to the emergency room for **Jodi** and watching my **14-yr. old daughter** go through hell. They didn't deserve any of it. Seeing this every day made me feel broken because I couldn't change it. The incredible stress BEA was inflicting on me was taking its toll and I was barely capable of making it through each day, but I put my best face on every day because I didn't want BEA to know that they were getting to me. I also had to be on top of my game because I was being watched at all times by multiple employees. The co-worker had been reduced from a very fun happy go lucky guy to a very angry and bitter man. Other coworkers who were involved in the ZPPR

exposure with me would come over to my home and vent, we tried to take care of each other because we had nowhere else to turn.

Jodi and my 14-yr. old daughter in happier times.

In August of 2012, the co-worker, Lowell, Jodi, and I had an hour-long phone conversation with **Marco Kaltofin** at my house. **Marco** told us that Pace Labs (Independent Laboratory) confirmed his positive findings of americium-241, plutonium-239, and uranium-235 on the contaminated dust samples taken from our homes in May of 2012. He also answered questions about our concerns.

Marco told us that the levels of plutonium, americium, and uranium in our homes were low. Jodi then asked him if he would feel comfortable with his family living in our home with the levels he found in our samples, **Marco** told us all that he **would not** feel comfortable with his family in our home **Jodi** just broke down and cried. The big concern we were dealing with was that I came home contaminated on November 8, 2011, we had our carpets and furniture professionally cleaned 1 ½ months later on December 28, 2011, and Jodi and my daughter did the spring cleaning in March of 2012, which consisted of a deep cleaning of the entire house. I did not send Marco any dust samples of my home until late April 2012, I wondered how much contamination we wallowed in from November 8, 2011 to December 28, 2012 when we had our carpets and furniture cleaned. My initial bioassay samples showed that my levels were going up and down, this is not normal. The lead Internal Dosimetrist for BEA was perplexed by this result; however, Dr. Marco Kaltofin had another theory. After testing the contamination samples from my home, Dr. Kaltofin wrote a letter to my lawyer which was forwarded to the BEA legal department suggesting that I was being re-contaminated every time I came home from the unknown contamination that I carried home the night of the accident.

On September 13, 2012, the co-worker and I had a mandatory meeting with the BEA shrink to stay in compliance with our disciplinary directives from operations management. We knew that the BEA shrink was the only one who could have authorized an appointment with the outside shrink, Dr. Hargraves. We walked in to the office of the BEA shrink and asked him why he blindsided us by sending us to visit with this outside shrink, he told us that "Nuclear Operations Management made those appointments for us and they had absolutely no basis or authority to do so."

A very large chunk of BEA's profits came from Nuclear Operations which meant that operations management called the shots. This can be verified when they were able to bypass radiological and medical regulations by sending the co-worker and I back to work while still producing positive BIO-ASSAY samples and making it mandatory for us to visit an outside shrink of their choosing for a fitness-for-duty evaluation without the authority or basis to do so.

DOSE ASSIGNMENTS

On September 24, 2012, all 16 ZPPR exposure victims were called to our conference room to individually meet with the **BEA Internal Dosimetrist Manager** and the **BEA Lead internal dosimetrist** and receive our dose assignments for the ZPPR exposure and our final dose assignments for the year 2011. I was really hoping that I would finally get some closure and my questions would be answered. When my name was called, I walked in and sat down with them, I was very nervous. They told me that my final dose assignment for the year 2011, was 200 mrem. I knew this dose assignment couldn't possibly be mine, so I asked these two dosimetrists if this assignment included the dose I received from the ZPPR Accident, they told me that the 200 mrem assignment included the accumulative dose I received for the year 2011 which included the ZPPR Accident. As I sat there looking at them, a thousand things were going through my mind. I knew this dose assignment couldn't possibly be correct.

As a radiation worker, we were required to know and document our year-to-date dose total each day before we began any radiological work, on the morning of November 8, 2011, before we began work, my year-to-date dose was 256 mrem. I knew that it was an impossibility for my dose to drop from 256 mrem to 200 mrem after a very substantial radiological exposure.

I like to believe in miracles, but this was an impossibility. Even had I not been exposed in the ZPPR accident and not performed any more radiological work for the rest of the year, my dose would have still been 256 mrem instead of 200 mrem.

After giving me my dose assignment, the dosimetrists asked me to sign my dose paper work stating that I understood my dose assignment and that I had received a copy of the dose report explaining the data, information, and basis for the legal models that BEA used to calculate my dose. I told these two internal dosimetrists that I needed a copy of this dose report before I would sign any paper work. The two of them tried to assure me that it would be ok to sign the paperwork now and email a request for my dose report to, **BEA's FOIA Expert** and he would send it to me. I told the both of them that I would wait until the report was in my hand and I understood how they calculated my dose assignment before I signed the paperwork. The co-worker was called next and did not sign his paperwork either. I

suppose that BEA thought they could just assign us an unrealistic dose number showing that we did not receive any dose and then just bully or BS us into signing the paperwork without having to justify the very unrealistic dose assignment they gave us. By not signing the paperwork, we threw a big wrench in their plan, this caused a great deal of tension and would lead to more retribution. BEA knew that they could not produce a report to even come close to justifying their dose assignments. The other problem for them was that they knew that legally I was entitled to that report and I was going to make them produce one.

A couple days later, on September 26, 2012, I had not heard back from the internal dosimetry department regarding my dose report, so I thought I would try their suggestion to see if they were being truthful with me. I sent an email to **BEA's FOIA/Privacy Act expert** and requested a copy of my dose report. At this point, nothing was adding up, but I still hoped that somehow, I could learn about the level of my exposure and take steps to preserve my health. I sent my request off and hoped for the best.

On October 4, 2012, I received the FOIA Experts email response to my dose report request. He wrote me stating, *"the requested report meets the threshold of Battelle Energy Alliance (BEA) work product and is the property of BEA" "BEA has elected not to release a copy of the report at this time."*

I can't say that I was surprised when I read this email, but I was disappointed because it meant that BEA had a lot to hide about my exposure which had been weighing heavy on my mind as well as the minds of my family members for the last eleven months. I could not figure out why BEA and DOE were above the law. OSHA regulations give any employee who has been exposed to a toxic or Radioactive substance at work, the right to have access to all their exposure data that includes the models and methods used by the company to determine their dose exposure to radiological and toxic substances. My stress and anxiety level went sky high when BEA told me that I couldn't have my own exposure information.

Tensions kept growing over the co-workers and my refusal to sign the dose paperwork. BEA did not want to provide this report and seemed to be very determined not to by bullying us into signing the paperwork and just accepting our unverified dose assignments. On October 25, 2012, the FCF facility manager

once again found me and informed me that he needed to escort me to the Directors office for more disciplinary action. Some of my new co-workers had been watching this retribution and would privately tell me of their disgust for the company's unethical behavior and encouraging me to not let them get to me. When I walked in to the Directors office, he and the **Assistant MFC Rad-Con Manager** were waiting for me. BEA must have known that the dose report would be very incriminating to them, so they would try another forceful tactic. The Assistant Rad-Con Manager had my dose paperwork and demanded that I sign it. I asked him if he had my dose report, and he told me in a matter-of-fact manner that I would never get a copy of that report. I told him that I would never sign for the receipt of my dose report until I received a copy of it. The Assistant Rad-Con Manager then gave me an ultimatum: he told me to sign the dose paperwork or he would take my Rad Qualifications away so that I would be forced to sit in the facility lunchroom doing nothing. I told him to go ahead and do what he felt he needed to do, but I wasn't going to sign paperwork stating that I had received my dose report when in fact I hadn't. BEA pulled my radiation qualifications and I sat in the lunch room at the FCF facility lunch room doing nothing. This reminded me of being sent to the principal's office on occasion when I was in grade school.

Below: This is the statement on the Internal Dose Evaluation form that documents my right to have my exposure information before I sign.

1) *Form 441.A65, Internal Dosimetry Evaluation, that states, "the contractor shall also provide individuals with a report of his or her exposure data"*

Below is the OSHA Code of Regulation (CFR) that provides an employee access to their medical and exposure records.

29 CFR 1910.1020 - Access to employee exposure and medical records. "Purpose. The purpose of this section is to provide employees and their designated representatives a right of access to relevant exposure and medical records"

"Whenever an employee or designated representative requests access to a record, the employer shall assure that access is provided in a reasonable time, place, and manner".

BEA was not being transparent with our dose information, this could only mean that they had a reason for hiding our information.

On October 18, 2012, I was working with a rad con tech in the Fuel Conditioning Facility and I asked her if they ever allowed workers to take-home hand-held contamination monitors. She said, "Yes, all you have to do is write down the serial number and have your manager sign it." I thanked her for the information. I should have known that she would go to management and tell them about my request.

About an hour after that, the FCF Nuclear Facility Manager told me that the Director of Nuclear Operations needed to see me in his office immediately. Like many times before, the FCF manager happily escorted me to his office and I sat down. The Director was waiting there for me with the MFC Rad Con Director. The Director asked me why I wanted to take a radiological survey instrument home with me. I told him that he was already aware of why I asked to borrow a contamination monitor and that he knew that we went home contaminated. I told these two Directors about the two co-worker's and me sending off dust samples from our home to be tested by Contamination Expert, Dr. Marco Kaltofin.

Next, I told them that our samples tested positive for plutonium-239, americium-241, and uranium-235. I told both of them that my samples still tested positive six months after we came home contaminated even though my carpets and furniture had been professionally cleaned, and my wife and daughter performed their annual deep cleaning on the entire house before I took the dust samples from our home and still came up positive.

I also brought up the fact that the Rad-Con Tech was one of the two ZPPR workers allowed to shower and emphasized that he still came home contaminated. I told these two directors that I just wanted to survey my house for hot spots to put my wife at ease. I understood that the tension between BEA and myself ran deep, but I really thought that they would show a little bit of their human side and let me borrow a survey instrument to ease my family's stress. Once again, I overestimated BEA's desire to do the ethical thing.

The Director of Nuclear Operations, told me that I could not have a radiation monitor to take home because I was not trained how to use it. I told him that was a bunch of Bull Shit because I was trained and certified on how to use this monitor and performed radiological surveys on ourselves and each other quite often when we would exit a Radiation or Contamination Area. The MFC Rad-Con

Director was sitting next to the Director of Nuclear Operations and knew that I was telling the truth about being qualified on this survey instrument and said nothing.

After the Director of Nuclear Operations realized that his phony excuse wasn't going to fly, he tried another excuse that was even more absurd by telling me that it was fine for me to have a safe level of plutonium in my home and that it wouldn't harm my family. I about fell out of my chair when he told me this. I told him that I did not agree with his opinion of having safe levels of plutonium in my home. The Director finally just came out and told me that I could not have a radiological survey instrument to take home with me but said he would send a rad con tech to check my house. I told him that I would be the only one to survey my home so that I knew that the results would be truthful, and some rad con tech would not get caught in the middle of finding contamination and having to decide if he will keep his job or report it.

After I inquired about taking a radiological survey instrument home, the **BEA legal team** wanted to meet with **Jodi** and me. On November 1, 2012, my attorney, **Lowell Hawkes** and myself met with them at the Willow Creek Building in Idaho Falls. We felt best to keep **Jodi** out of this meeting due to the hostility that she felt and held towards BEA for what they did to her home and the treatment of me**.** **BEA** already knew that they sent us home without a shower and their own report indicated that they were aware that we may have gone home contaminated, but they were determined to not be held accountable for it.

BEA's Lead Attorney, asked us about how we became aware that our homes were contaminated, I told her about sending the dust samples to Dr. Marco Kaltofin. The attorney was already aware of how we learned about our homes because all she did was try to discredit Marco, even though his credentials and experience testing radiological contamination were way beyond that of anyone at the Idaho National Laboratory. After trying to discredit Marco, the BEA attorney started blaming Jodi for our home contamination by stating that she must have brought it to our home from the radiological waste burial ground where she worked. I told her that it was a nice theory except that Jodi had never been in the other two homes that had been scientifically determined to be contaminated with the same isotopes found in my home which matched the failed plate.

After I stated that Jodi had never been in either of the other two homes, the attorney switched it up again by blaming it on the governments nuclear weapons testing in the New Mexico and Nevada desert, back in the 1940's and 50's, anything but taking responsibility and fixing it. She finally said that they would find three different companies to come and survey our home and we could pick the one that we felt was the best, but **BEA** never followed through with their offer**. Jodi** and I knew that **BEA** was not ever going to help us because they had not been honest about anything connected to the November 8, 2011 ZPPR Accident.

DOSE REPORT

On November 19, 2012, BEA finally gave me my dose report. When I read through it, I could see why they didn't want me to have it. I fully explain this report in the "Radiation Dose Assessment" section.

At this time, it had been almost a year since my exposure, and I started to ponder all of my experiences in the last year. I couldn't believe all that had happened, and I wondered if this bad dream would ever end. When I started this job, I never imagined that I would have been directed to handle weapons grade plutonium-239 multiple times without lead shielding or directed to commit multiple felonies by falsifying 25 type1 work procedures in a Category 1 Nuclear Facility or go through all of the retribution and false allegations for refusing to perform these acts. I could have never imagined my employer keeping my radiological and medical records from me or willfully disregarding federal regulations that resulted in me sustaining a very substantial radiological exposure. I never thought that Jodi and I would have to deal with a contaminated home because I was not provided a shower before I came home after I was exposed to a cloud of airborne contamination. I could never have imagined all this causing my wife's physical and mental health to fade so rapidly. And I was still wondering about my gushing nose bleeds out of no-where and other physical issues I was having since this exposure.

I was being watched very closely at work every day for quite some time now and it was not just uncomfortable anymore. It was all now starting to take its toll on my health. I wish BEA would have just been honest with me in my job interview and told me that it would be expected of me to work unsafely on milestone bonus

jobs and falsify documents when directed to do so and I could have thanked them for their time and said this job is not for me and I could have avoided this nightmare.

TAKING OUR LIFE BACK

Jodi and I had become broken, but we had always been fighters and in early 2013 we decided that we had been victims long enough and we became hellbent on taking our lives back and not allowing BEA to whittle us down to nothing. The first thing that we were going to get back was our home and our family. We bought a respirator and we gutted our home to make it our refuge again.

I started to put the pieces to my dose construction together and come back at them to show that I wasn't going to stand still and let them tear my life apart without a fierce fight.

REQUESTING THE SECURITY VIDEO

On May 7, 2013, a coworker and I verbally requested the security video footage of the ZPPR Accident from the DOE FOIA Officer. He told us that we would never get a copy of this video. The DOE FOIA Officer always made things as difficult as he could for us to attain any information. We were legally entitled to this video because BEA used it during their investigation and claimed that it was evidence of events that took place in the ZPPR Facility before, during, and after the accident. BEA and DOE referenced this security video in their reports as the basis for some of their conclusions. The co-worker and I didn't remember things happening the way BEA claimed the security video footage presented. BEA had not been truthful about anything which left them without any credibility. The DOE and BEA must have figured that they could claim anything was on that video as long as they kept it from everyone else. The same philosophy applied to my dose report, but they didn't figure that I would go as far as I needed to, to make them give me what was rightfully and legally mine.

Jodi decontaminating the closet where I put my contaminated modest clothing in after coming home contaminated on the night of our exposure.

FREEDOM OF INFORMATION ACT (FOIA)

"All agency records must be made available to the public under the Freedom of Information Act (FOIA), except for records that are: Properly classified as secret in the interest of national defense or foreign policy."

In my experience, whenever I requested FOIA information that was incriminating to the DOE or BEA, I was given a bogus and unfounded reason for denying me access to it without any credible basis. For example, On July 18, 2013, the co-worker and I requested the security video, the DOE FOIA officer denied us access

giving the following reason, (The video) ***"includes information that, if disclosed, would reasonably be expected to interfere with enforcement proceedings and/or endanger the life or physical safety of any individual".***

This extra red tape makes the experience a lot more painful for the anyone trying to attain records from the DOE. From my point of view, the DOE tries to demoralize and frustrate folks hoping they will give up on their information quest. On June 12, 2013, our lawyer drew up the papers and we filed a lawsuit to attain the ZPPR Security Video. The laws that govern suing a DOE Nuclear Contractor for FOIA documents are designed to make the process too frustrating and expensive for most folks to stomach. The laws require the plaintiff to jump through the DOE court system before filing the lawsuit in the federal court system. In my opinion, the DOE court system is nothing more than a kangaroo court designed to intimidate and demoralize folks from attempting to attain information that was rightfully theirs for free in the first place.

Our first step was to simply make a formal request to the DOE FOIA officer, and once we were denied, so we then appealed the decision. After being denied again, we made a second appeal, after we were denied twice, we then were permitted to take our case out of the DOE kangaroo court system and into the federal court system. The DOE court system is so predictably corrupt, that my lawyer already knew that we would have both of our appeals denied and our final path to win the video was going to be through the federal court system.

We filed our lawsuit immediately after our appeal was denied by DOE, BEA and the DOE were very aware that they did not have a chance of winning this case outside of a DOE Kangaroo Court, so they conceded a copy of the video they said that we would never get. When we watched the video, I noticed that they gave us a very edited version with the most incriminating parts cut out of the video. I directed my attorney to call BEA and tell them we wanted the rest of the video unless they wanted to continue with the lawsuit, as it turned out they didn't want to continue and came up with the rest of the edited version. When we watched the entire video, it was obvious why they didn't want us to have it: BEA's version of events didn't jive with the video evidence.

I wanted to make sure that no other family had to go through what my family went through, so I set out to find a way to make that happen. I knew that the DOE

and BEA were in bed together so I couldn't go to the DOE. The PAAA investigation team was obviously under the control of the DOE so that was a dead end. It just seemed like **BEA** had everyone and every agency in their pocket. I just couldn't accept that. We knew if BEA and the DOE could get away with the crimes involved in the ZPPR accident, they could get away with anything.

I had heard these crazy kinds of stories that happened at other nuclear labs and weapons complexes across the nation, but always thought that only about half of it could possibly be true. I was now convinced that this was standard operating procedure. I kept looking for an answer to this madness and in August of 2013, I contacted an individual I thought may be able to help me, she gave me the number to a man who worked at a commercial nuclear power plant and discovered illegal activities going on where he worked and contacted the **FBI** to investigate. I called him, and this man did not want to be identified and never told me his name, but he gave me the number to the FBI agents who were able to prosecute several individuals who were committing fraud where he worked. I couldn't believe that I hadn't thought of this before, the FBI is the ultimate authority. The next day I contacted the FBI and spoke to a female who identified herself as just **Rebecca**, she told me that she would hand my name to an agent and he would reach out to me to gather my evidence.

In October 2013, a man called me and identified himself as a **Special Agent** with the FBI. I told him about the fraud and other crimes committed by BEA and the DOE of which I had evidence of and could prove every one of my allegations. The **Special Agent** told me that he would talk with his management about this case and reach out to me after he spoke with them.

The agent called me back a couple days later and said that his management is on board and that they would turn over every rock to find the truth. He told me that agents would be at my home the following Friday to collect my evidence. This made a believer once again, I thought finally we will get some justice.

The day before agents were to be at my home on November 7, 2013, I spoke with the agent and he informed me that the FBI could no longer have anything to do with this case. He told me that he had informed the DOE Inspector General about my accusations and they were very interested in them. I told this Special Agent that the DOE Inspector General was also corrupt and by telling them about my

accusations, he just got me fired from my job. I was absolutely devastated and thought, is the whole federal government corrupt? Is there anyone that can't be bought? I was getting a crash course in how the world really works and there was no such thing as equal justice under the law. The investigator that worked for the law firm I was with, told me that this whole experience was like dealing with the former cold war era corrupt Soviet Union Government.

I can only assume that when the FBI contacted the DOE IG and told them of my desire to report the fraud taking place at the INL, BEA was contacted, and I became marked.

Due to the Whistleblower lawsuit I filed against BEA, the Environment, Safety and Health (ES&H) manager was doing everything she could to make it appear that BEA was going the extra mile to accommodate our concerns. This of course was just for show. On November 14, 2013, she set up a meeting between a BEA Nuclear Health Physicist and me. I suspected that they were up to no good, but I went anyway and brought my son Jesse for a witness. He had just got back from being deployed to the middle east in the military. My lawyer didn't like me talking to these guys, but I always took a credible witness and I knew that not all of them were corrupt plus I always wanted to give them a chance to do the right thing. Jesse and I met with this man in his office at the Willow creek building in Idaho Falls. I had no idea what to expect from this meeting, but I was curious what the ES&H Director's angle was. This Health Physicist seemed like a nice enough fellow and he started off the meeting by asking me to tell him in my own words about what happened. I knew that he was directed by the Director to get as much information as he could, but I had nothing to hide so I told him about everything leading up to the ZPPR Accident and everything following my exposure. After I told this man about Nuclear Operations Senior Management ignoring the repeated warnings from Independent Review Safety Chairman about handling the defective Pu-239 plates, **He became emotional and told me about the Independent Safety Review Chairman and himself going to visit the Director of Nuclear Operations and "begging" him to stop the handling of the Pu-239 plates until mitigations could be made.** He also admitted to Jesse and me that he could not reveal this information to DOE investigators during the ZPPR accident investigation because he still needed his job for 2 more years before he could retire, he mentioned that he could let the cat out of the bag with us because he

could now retire if he needed to. I was speechless and blown away when this man shared this with us, but it only brought more anger. My son Jesse was seeing this corruption with his own eyes and hearing it with his own ears instead of just hearing about it from Jodi and me. This kind of thing is so outrageous that it can only be reality when you experience it for yourself. After the meeting, Jesse and I got in the car to come home, he was really quiet all the way home. This experience hit him pretty hard because of the amount of grief it had caused his family. Jesse lost a certain amount of innocence that day. At the time of this meeting, I was pretty sure that I knew most everything that there was to know about BEA's cover-up of the ZPPR accident, but after hearing this confession, it made me realize that there was so much more I didn't know.

Due to the media stories publicizing the contamination we brought home after our exposure, BEA brought a team from Oakridge to survey contaminated homes. Only four workers allowed this team hired by BEA in their homes. Jodi and I had already gutted and decontaminated our home about ten months earlier, but BEA really wanted this team to survey our home so they could publicly state that no contamination was found in our home by the team. I told the ES&H Director that I would allow their team to survey my home knowing full well what their intentions were if they would agree survey the vacuum store that my wife took her vacuum to and the store employee accidently flipped the contaminated contents of her vacuum bag all over the floor and himself. The director agreed to arrange for it to be done, my only stipulation was that she does her part first because I did not trust BEA. On the last day of the survey teams stay, the Director told me that she was not going to survey the vacuum store like we agreed so I told her that her team would not be allowed in my home and that's where we left it. One of the exposure victims gave the Oakridge Team his vacuum bag to be surveyed. The report on their findings was sent to him on Feb 4, 2014. He had already sent items from his house to Radiological Contamination Expert, Dr. Marco Kaltofin who tested and found them to be contaminated with plutonium-239 and americium-241.

The Oakridge Team that BEA hired found his vacuum bag to be contaminated with ***"low levels of plutonium,"*** and they also gave an excuse for dismissing the positive result they found. The Oakridge Team stated that they couldn't confirm the history of the vacuum in question (where it had been throughout its lifetime)

and therefore, could not be confirmed. This is another example why most of the contaminated ZPPR Workers didn't want these people in their homes.

On December 11, 2013 I was performing a mock iteration with the Cask Crew that was being evaluated by 5 managers in a small room. After this Management assessment we walked over to the conference room to be critiqued. During this critique by the management assessment team, we were told that it went flawless. Our supervisor spoke up and told us that we all did a great job.

The next day on December 12, 2013, I walked into our supervisor's office to see what we were doing that day. He told me that we both needed to walk up to our nuclear facility managers office and have a talk. When we got to the office, my supervisor accused me of sleeping during the mock work iteration the day before. I just laughed and told him that if this was true, it would have been addressed right then and I would have been fired on the spot and not accused of it the day after. I was told that a board would decide my fate. I asked the nuclear facility manager if I could address this board on my behalf and he said I could. Ten days had passed with Christmas break coming and I still had not heard anything about this false accusation, so I was looking forward to being away from that place for 9 or 10 days. BEA management waited until the 23rd of December to call me at home and fire me on the first day of Christmas Break. Since this false accusation would be easy to prove, I filed for unemployment and the Department of Labor found in my favor and I was able to collect unemployment.

So, there I was, jobless on the first day of Christmas break. I had no idea what I was going to do. I had no health insurance for my family, no income besides unemployment, and a large but unknown amount of plutonium-239 and americium-241. By calling me at home and firing on the first day of Christmas break, I believe it was a warning to the other operators of how ruthless they could be with any employee who dared to question anything they were told to perform, no matter if it was illegal or unsafe. I was definitely knocked down, I started feeling sorry for myself sitting around the house on Christmas break when everyone else was so dam cheery. As I sat home licking my wounds, I started to think about the times I watched BEA management fire employees or harass them until they just quit for refusing to go along with unethical and illegal requests. The more I thought about it, the more I became determined not to roll over for BEA

and let them completely destroy me. I thought about the corruption and the fact that they falsified my dose data to protect their safety bonuses. I thought about how their willful negligence contaminated my body and my home and how their unethical and illegal behavior destroyed the career I once loved. I thought about how they destroyed my reputation by firing me with false allegations. I understood that I was at war against a ruthless bully who had the endless resources of the U.S Government but unlike the employees I knew in the past who chose to walk away quietly after they were either ran off or fired, I decided to go right back at them and not just be another employee who they had their way with. I picked myself up again and went back to researching and proving my case.

I had to study the laws unique to the DOE contractor and also become capable of going toe to toe with radiological dose experts hired by BEA to down play my dose. Usually employment litigation is a pay the attorney by the hour as you go due to the financial risk involved to the law firm. This is where the cost of all the extra red tape makes it cost prohibitive for the terminated employee. Due to the overwhelming evidence I had against BEA, I was able to get my contract on a contingent fee, meaning that my attorney got paid only when we won. This was the only reason I was able to stay in the fight after I was fired.

DEPARTMENT OF LABOR RULES IN MY FAVOR

After I was fired from BEA on December 23, 2013, I filed for unemployment benefits but was denied because I was fired. I appealed that decision because, one, I knew it was false, and two, because I would have a chance to personally argue the points that BEA's accusations were false in front of the labor board. I was looking forward to this encounter with BEA when on February 4, 2014, I received a letter from the Department of Labor granting me full un-employment benefits. Apparently, BEA decided to not oppose my contentions that they had illegally fired me. This decision was a big deal for me because it was my first step in proving the injustice that I had encountered.

NIOSH IGNORES DOE MISDEEDS

On July 29, 2014, I attended National Institute for Occupational Safety and Health (NIOSH) meeting in Idaho Falls. NIOSH is in the U.S. Department of Health and Human Services and is an agency established to help assure “safe and healthful working conditions for working men and women by providing research, information, education, and training in the field of occupational safety and health.”

NIOSH provides national and world leadership to prevent work-related illness, injury, disability, and death by gathering information, conducting scientific research, and translating the knowledge gained into products and services. NIOSH’s mission is critical to the health and safety of every American worker.

NIOSH also provides scientific support for claims under the Energy Employees Occupational Illness Compensation (EEOICP) for workers with cancer due to radiation exposure. They do this by developing scientific methods to reconstruct radiation dose. This is why the board travels around the country to cities where Department of Energy (DOE) Nuclear Weapons Sites are located. NIOSH is part of the Centers for Disease Control and Prevention in the U.S. Department of Health and Human Services (HHS). This is the reason that I went to this meeting., I had been working on my dose construction for about three years at the time and had very substantial evidence that my dose evaluation performed by BEA had been falsified. I knew that I had been exposed to a very high level of airborne radiation and felt that I would more than likely experience health issues from it this exposure in the future.

For background, EEOICP provides free medical care for an approved medical issue caused by the exposures to radiation and other toxic substances. The program also can provide monetary compensation. Once a worker submits a claim, a claims examiner (CE) will investigate it. One of the variables that is looked at closely is your exposure records sent to your CE by DOE to see if you had enough exposure which would result in your illness. Here is where a lot of issues start for sick and dying ex-nuclear workers; they find that their records are missing, or their dose assignments reflect doses too low to qualify for EEOICP. A good example is a neighbor of mine that worked at the Idaho National Laboratory for

many years in the hot cells and as a roundsman. After he retired, he was diagnosed with Bladder Cancer. He made a call to the Radiological Director for BEA in hopes he could secure his radiological records and receive some of the medical benefits that he was eligible for. The Rad-Con Director told him that his records indicated that he did not receive enough radiation exposure at the lab to have caused his cancer. This man told me about all of the times that he worked in the hot cells that were very radioactive. Even though my neighbor had a qualifying cancer, he didn't want to go through the fight of trying to prove his radiation exposure with missing or inaccurate exposure records. Unfortunately, this is a similar story heard from a lot of ex-nuclear workers. The DOE and Department of Labor (DOL) have informed workers that these records have disappeared or been misplaced through the years making the search for dose information impossible in some cases.

There are several challenges for nuclear workers trying to receive these benefits they are intitled to receive. The biggest hurdle in my humble opinion is that the DOE pays its nuclear contractors based on their performance measures. One of those measures is assigned radiological doses to workers. These dose assignments can affect safety bonuses, Workers' Compensation premiums, contract extensions, in short it can amount to millions of dollars in profits. DOE conducting business in this manner gives BEA and all other nuclear contractors the financial incentive to conceal, destroy, or falsify any data that will negatively affect their safety bonuses. This would especially include worker doses. Congress has even concluded that radiological doses are being falsified.

Radiation Exposure Compensation Act 42 USC 2210
7384 Findings; sense of Congress
(a) Findings
(b) Furthermore, studies indicate that 98% of radiation-induced cancers within the weapons nuclear complex **have occurred at dose levels below existing maximum safe thresholds.**

This finding by Congress in 2000 is very clear that they understood and that falsifications of worker doses were done, and they addressed this by enacting the compensation program.

My experience shows that Department of Energy contractors, including BEA, are still falsifying records. At least they are in my case. If this practice is ever going to change, the people who are affected, along with their family and friends, are going to have to stand up and demand justice.

If getting a fair dose assignment by the contractor after a very substantial exposure is not a big enough hurdle for you, then try to get a favorable decision from DOL who is trying to get all medical claims after 1995 thrown out due to their baseless and ridicules claim that the proper mitigations were used after that year and operations were safe, and the program would not be needed for the nuclear workers after 1995.

I wanted to present my dose evaluation to NIOSH dose experts and have it documented that BEA's unreasonably low dose assignments after my exposure was not credible.

I had been gathering evidence for about 3 years on BEA's falsification of my dose at the time and felt I had more than enough evidence to prove that my dose was falsified. My premise was to get my suspicions verified and documented by NIOSH dose reconstruction experts so if I or any of the other 15 ZPPR exposure victims were to get cancer or other diseases caused by this high level acute exposure, it could already be determined that the dose assignments given to us by BEA were far from accurate and not credible and would not determine our eligibility for medical benefits if necessary.

My lawyers advised me not to go and speak at this meeting, but I couldn't have the knowledge that doses were being falsified and be fortunate enough to have the evidence to prove my allegations and not say anything about it. I knew how large my dose was and the fact that some of us would very likely have medical issues in the future due to our exposure. Many other good people helped me along the way, and I felt that it was my civic duty to alert NIOSH on the record and to what I had uncovered because it affected so many people. I went to this meeting in Idaho Falls and addressed the NIOSH Board telling them that BEA and DOE falsified my dose and I could prove it. After I spoke, I walked out into the hall where a few men in suits surrounded me and wanted to talk to me. They asked me if I would present my dose evidence to dose experts that would be flying in

from Washington DC later that fall, I told them that I would be willing to present my evidence to them.

NOVEMBER 19, 2014 — I PRESENTED MY DOSE EVIDENCE TO NIOSH

NIOSH rented a conference room at a local hotel. I arrived a little early and even though I had a lot of hope that NIOSH was on the up and up, I brought two witnesses with me due to all of my negative experiences with BEA and the DOE. When we walked into the room, there was a couple already speaking with the NIOSH dose experts. There was a lady sitting with her husband, she was a worker who worked at the RWMC nuclear waste burial grounds. She was involved in a lead exposure at the nuclear waste cleanup area and had become very sick. This lady laid out some very compelling evidence showing the falsification of her own exposure records by her employer, and the NIOSH experts just blew her off. I was disgusted how these dose experts ignored this very strong evidence of dose tampering. This lady and her husband left very deflated. She had to travel out of the country every month for very expensive treatments due to her exposure just to stay alive. Her baby who she was carrying when she was exposed had many health issues due to her exposure. After watching how the NIOSH dose experts just ignored the substantial evidence she presented, I knew I had my work cut out for me.

It was now my turn, and I was very prepared and determined to not let them buffalo me. I set up my presentation first by showing a large pattern of unethical behavior by BEA pertaining to my dose such as withholding dose information and not using sound technical methods to determine the basis for decisions made in my dose construction. I also quoted the regulations or laws that were not being complied with during the process. I started this way to set up the rest of my presentation. It was amazing to watch these NIOSH experts just blow off these unethical patterns of deceit.

It was obvious to me that the NIOSH experts were there to defend BEA. Even though they would continue to ignore the string of unethical dose construction practices, I knew that they would not be able to blow off the undisputable felonies of which I had more than enough evidence. I got about 70% through my presentation and the NIOSH Experts told me that “I didn’t need to go any further,

it is obvious that serious mistakes were made on the calculation of your dose Ralph."

After my presentation, they looked beaten and surprised that I was able to prove my allegations so convincingly. The first thing they wanted to know was what I now intended to do with my dose evidence. This seemed to be very important to them. I told them that I wanted them to give me their findings in a report, so I could give those results to any of the other 15 ZPPR exposure victims should they ever get sick from this exposure. The NIOSH Experts said that they would send me a report on my presentation by late December of that year. December came and went with no report.

The following July of 2015, I attended another NIOSH board meeting in Idaho Falls and during the public comment time I walked up to the microphone and asked them where my report was. Chairman Melius yelled out to a man in the audience and told him to get me my report.

September 3, 2015, two months later, I received a report from them. This report was just random sentences from my presentation that were in no order and conspicuously missing were the incriminating comments about the "serious issues with my dose construction" made by the NIOSH Dose Experts.

My first thought was how is this going to help anyone who gets sick from our exposure and if my presentation wasn't so incriminating to BEA and DOE, would they have included their own comments? After I read the report on my dose presentation, I was very disappointed. I suspected that there must have been a good reason that they didn't put their comments in their report.

The EEOICPA Program was enacted in 2000 by president Clinton to compensate the large number of sick exposed cold war era workers who worked at DOE weapons facilities. The policy made by DOL that proper mitigations were used to prevent worker exposures after 1995 is a big myth. I can use my experience as evidence working in several nuclear facilities. I saw gloveboxes that leaked, hot cells that leaked, decisions to proceed at risk on criticality issues, criticality alarms removed from a facility due to the cost of maintenance. The ZPPR Accident is the best example of how things could happen to nuclear weapons workers after 1995.

The ZPPR Accident proved that money controlled the decisions made by DOE and BEA. Not one of the mitigations documented in the ZPPR Documented Safety Analysis (DSA) to protect a worker from an airborne exposure was operable on the day of our exposure.

The logbooks used to document the ZPPR worker and facility surveys were concealed or destroyed. These log books contained radiological contamination data from swipes and other monitoring that are critical for dose assessment. From the ZPPR Accident, we know that proper mitigations are used only if it is affordable. We also can say that exposure information does not disappear because it just gets lost through the years. It appears that BEA intentionally destroyed some of our exposure information shortly after the accident.

Once again, it all came back to MONEY! In my experience at the Idaho National Laboratory, nuclear operations were very unsafe due to available protections and the decisions not to use them to save the Department of Energy money.

During a press interview after our exposure, BEA was asked about the expense of medical care in the future for the exposed ZPPR victims. BEA told the press that the workers would not be responsible for the cost of any medical care because Workers' Compensation or other programs would cover any medical cost depending on their dose evaluation.

The issue with this answer is that BEA would be conducting our dose evaluations — this meant that our dose assignments would never reflect our actual radiation doses and would never reflect levels high enough to be eligible for any of these programs.

After I was given my unrealistically low dose assignment by BEA, Workers' Compensation sent me a letter stating that BEA had sent them the Diagnostic Study on my exposure and based on those results they were closing my claim. I requested those Diagnostic Studies from the insurance company and found that there were no diagnostic studies, only several medical dictations taken by BEA medical staff shortly after I was exposed.

It is my opinion that the Workers' Compensation insurance companies will always take the side of the company, so they don't have any expense to the exposed worker.

I read interviews from sick and dying ex-nuclear workers who were radiologically exposed during their employment at various DOE Nuclear Laboratories and weapons production plants. The one thing they all had in common was that they were good loyal workers who trusted that their government would always have their back only to discover that they were left to fend for themselves after they became ill from their exposures.

Many of these nuclear weapons workers gave the best years of their lives only to get sick from their exposures. They fruitlessly spend what time they have left fighting to acquire accurate information related to their dose — information they may never get. They may never receive paid medical treatment that they were entitled to and they may leave their family broke. I would have been in the same situation if it hadn't been for a few thoughtful friends of mine who had warned me.

The worker is always the loser in this scenario. The dose constructions performed by NIOSH Dose Reconstruction Experts still rely on the exposure data from the contractor and is often unreliable. In the case of the ZPPR Accident, BEA was on the hook for the medical issues due to the evidence of their willful negligence in causing the accident.

In Idaho, the law gives any employee injured on the job to go around Workers' Compensation laws and go directly after the company in cases that there is enough evidence to prove willful negligence. One of my co-workers was able to prove this in federal court. (See Simons vs BEA.) There are many good people fighting for the rights of sick nuclear weapons workers, but I feel that we are slowly losing the war. I think that the only chance we have to win this war, is for all of the former workers who are sick and the current nuclear weapons workers who are healthy along with their family members from all DOE nuclear sites nationwide to unite in large numbers and loud voices. I would hope that tens of thousands of voices cannot be ignored!

OTHER INFORMATION LEARNED

After the local press wrote a few stories about me, other former INL employees would reach out to me and tell me their stories and secrets they had been living with. One such former employee reached out to me and said he needed to meet

me and give me a document he wanted me to have, so I met him for lunch, and we spoke for a while about his document. This man told me about an experience he had after his boss called him into his office and showed him a map of all the underground water wells that were being monitored by the INL. This man told me that a manager told him that he needed him to go around and exchange new maps of these well sites and destroy the old ones. The manager then circled several of these underground water well testing sites on one of the maps and told him to collect the rest of the maps and make new ones without the water well sites that he had circled. This man asked why he didn't want the circled sites on the new maps and was told that, "they were hotter than hell." This man gathered all the maps as he was directed to do and replaced them with new maps not showing the circled contaminated water testing sites, but he kept the one copy of the contaminated wells.

After being given this direction, the man had new maps made and destroyed the other maps showing the locations of the contaminated wells. The man kept the last known map documenting the contaminated wells south of the INL in his home for years waiting for the right opportunity to pass it on to someone he felt he could trust with it to do the right thing. Finally, this man told me that he had been paranoid about having this document in his house and he was glad to get rid of it. Well, it's in my house now and I not the least bit paranoid, I'm pissed to say the least. Present and past employees would leave me un-postmarked letters and other things in my mail box, it was amazing at some of the things that had been permitted to happen out there through the years.

After I publicly stood up to BEA, a very interesting thing started happening — other employees would catch me alone and share with me some of the illegal and unsafe acts that they were being asked to perform. I would ask them why they just didn't refuse to do comply with the illegal or unsafe request? It was always the same answer, they had families to take care of and needed their job, so they did what they were told. This was a common theme.

I had earlier filed a Whistle Blower Lawsuit against BEA, and on May 31, 2014, my lawyer called me and said that they wanted to mediate our case in Boise. Jodi and I drove over to Boise only to find out that they were not serious at all about settling our case, only to try to low ball me. I refused their offers and we kept

going forward with the lawsuit. It was obvious to me that BEA wanted to know if I was financially able to continue with the lawsuit after only collecting un-employment benefits for 5 months. Jodi and I were on solid ground financially because we lived way beneath our means and Jodi was still making very good money at the site. Soon after we turned down BEA's lowball offer, Jodi started getting harassed out to work by management who ran the waste side of the site. BEA was by far the biggest contractor running the research end of the site with the best job security and most of the managers and employees from the smaller contractors on the waste side of the site try to ultimately find employment with BEA. This situation gives BEA nearly all of the influence at the Idaho National Laboratory. It was becoming obvious that Jodi had been marked for termination or harassed until she quit. There were a couple of men who worked for Jodi's company who saw what was going on and stuck their necks out for her. This manager had made some sexual remarks in the past that Jodi let slide by because she needed her job, but this constant harassment out of nowhere was going too far. Jodi went to the CEO of her company and told her what was going on and the two guys on her crew backed up her story. Instead of addressing the issue with this top manager, the CEO reprimanded Jodi and her witnesses. With the contract extension coming up on the first of October, the CEO was not going to address any issues with the man who controlled the fate of her business, no matter how illegal his behavior was.

Jodi reached out to the DOE Employee's concerns officer and predicted that she and two other employees who had verified her story would lose their jobs unless they intervened. Jodi had the most seniority out of all the other employees who worked for International Engineering Services (IES), a Colorado firm. Jodi also had by far the least mistakes and had performed other company activities on her own time such as the Christmas parties and summer get-togethers. It was only because of Jodi's Job, that we were able to pay our bills, and BEA knew it. Jodi like me, used to love her job, but it had become very obvious that despite her work ethic and record, Jodi had to go to work so that our finances would not collapse. I told Jodi that since it was her last option, she could at least make a record of it. But the DOE employee programs had proven to be a false front to investigate complaints of employees only to turn them in to the contractor. None of the employees that I knew trusted DOE or any of the employee programs. The

harassment of Jodi and now her witnesses was allowed to continue, even with the knowledge of the IES CEO and the DOE Employee Concerns Office. IES had a contract extension due on the first of October, and on September 30, 2014, the day before this contract extension was to be awarded, Jodi was called into the office at work and told that she was not a team player and they fired her. Needless to say, IES got their contract extension. The co-workers who backed her up also lost their jobs for various fictitious reasons. This was all designed for maximum stress and to financially destroy us and break our spirit. I had found a low paying job and Jodi was now unemployed, we were now in real danger of losing our home and destroying our credit along with everything else we had worked hard for our entire life. I had to take my retirement out and refinance our home.

Lucky for us, Jodi and I had survived hard times before when I was in the military. Just days after my first son was born, I was deployed to the Middle East in Saudi Arabia at the beginning of the Gulf War. Those times were lonely, and we barely had enough money to get by. Having these experiences gave us the confidence that we would make it. We still had our daughter Marissa at home and felt bad for all that she had endured. The only thing we could do now was keep fighting with everything we had.

RADIATION DOSE ASSESSMENT

The nuclear industry knows that nuclear power suffers from public worries over safety. This negatively affects nuclear research as well as nuclear energy acceptance. Because of this fact, the one thing that can quickly shut the funding down for a DOE Nuclear Site is an uncontrolled airborne release resulting in multiple workers receiving dose assignments over the federal dose limit. This is especially true when it can be proven that these worker exposures were caused by the contractor's willful negligence. A couple facts made the ZPPR Accident a disaster for both BEA and DOE. First, there were 16 workers that were exposed to very high levels of airborne plutonium-239, americium-241, and uranium-235 and it quickly made national news. Secondly, the exposures were caused by the willful negligence of BEA and DOE. The mountain of evidence proving willful negligence was to solid for BEA and DOE to wiggle out of, but BEA had all the inhouse

resources and control the dose constructions to make sure that the ZPPR worker dose assignments were underestimated and stayed well under federal limits.

Based on my experiences, this is done to enable the contractor to keep exposed workers and other employees who are injured on the job from seeking medical attention elsewhere and getting an unfavorable diagnosis that goes against the company's safety record. The DOE also requires their contractors to employ internal dosimetrist, so they have the capability of calculating internal doses to exposed workers in house. The logistics of this setup can be a good thing if used ethically, because an exposure victim can get treatment sooner. But on the flip side of this setup, it can be a huge conflict of interest and the exposed worker may not get an accurate dose assessment or proper medical care, especially when the exposure is the fault of the nuclear contractor as was the case in the ZPPR exposure. BEA is graded and paid very large bonuses based on safety. A nuclear worker who receives a dose assignment over the federal limit is a very bad thing and can have devastating financial repercussions to BEA.

During this investigation, I had a good conversation with a Nuclear Accident Investigator from the Washington DC area, who investigated the Three-Mile-Island Nuclear Accident. He told me that if I wanted to put the pieces of this big puzzle together, "just follow the money." This was the best advice in regard to putting this investigation together that I ever could have received. I always wondered how anyone could think that it was not a conflict of interest for the same company that illegally exposed you to very high levels of radiation also conduct the medical exams and radiological dose assignments that determined how liable they would be held for any future medical issues caused by the exposure. The DOE's decision for which company would get the next lucrative 5-year contract was supposed to be announced in 2012. None of the employees thought BEA had a chance in hell to get a 5-year extension due to their horrible safety record. When an announcement didn't come from DOE officials that year, we all wondered what the holdup was. Not long after BEA announced that the ZPPR workers received low doses, BEA was announced as the winner of the 5-year contract extension. The DOE is supposed to look into how these doses were constructed, but because they had blood on their hands by allowing nuclear material handling to be performed without mitigations being in place, it's my

opinion that they gave as much latitude to BEA to be as creative in our dose constructions as they needed to be.

By employing everyone contributing to our dose assignments and no oversite from the DOE, BEA had everything they needed in place to assure that our doses would be low, and no questions would be asked. The one thing that BEA didn't count on was a couple of my coworkers and me legally forcing them to give us our dose data after they had assigned our doses.

When an airborne release occurs in a nuclear facility and workers receive an internal exposure, the internal dosimetry department is assigned to reconstruct the exposure and assign a dose to the exposed workers. In order for the Internal Dosimetrist to accurately construct the workers dose assignment, he must gather ALL the medical and radiological survey evidence surrounding the accident to give him a reference of how high the workers radiological exposure might be. As you will see below, there are many variables that can alter a workers assigned dose by many factors, that's why it is very important for the Internal Dosimetrist to use the available evidence and apply "***sound technical practices***" when constructing the dose of the workers to get an accurate result.

To help understand the concept of how these variables can be manipulated, you can compare an internal dosimetrist working the figures on a dose assessment to an accountant working the figures on your taxes. Your accountant can take the same data and show that you owe 10,000 dollars or use unethical acts to show that you will get a 10,000-dollar refund. The same applies to BEA's internal dosimetrist working the data on your dose construction. He can show that you received a dose of 100 rem or manipulate the same data and show you received a dose of 1 mrem, which is 100,000 times lower. Another thing in common is that they both have legal standards that they are mandated to follow the accountant is under the scrutiny of the IRS and the tax laws to keep him in compliance and BEA's Internal Dosimetrist has industry standards and legal models to follow but a very complicit DOE. The IRS can afford to hold an accountant accountable for fraud because the IRS will always have funding to operate no matter how many accountants they charge with fraud. However, the funding to operate the DOE's nuclear sites can dry up very quickly when they criminally charge nuclear contractors with willful negligence and dose falsification.

The most important evidence in constructing an internal dose includes these variables, the **Pathway Of The Contamination Into The Body (Inhalation or Ingestion), Lung Counts, Breathing Rate, Breathing Space, Effectiveness Of The Chelation Treatment, Solubility Of The Material, Particle Size, Urine Samples, Fecal Samples, Nasal Smears, Contamination levels In The Work Area Of The Exposed Workers, Survey Results Of The Exposed Workers, Clinical Symptoms of The Worker After Exposure, Isotopic Breakdown Of The Source Of The Contamination, Effectiveness Of The Chelation Treatment.**

At the INL, Dosimetrist's don't typically utilize blood counts or other biomarkers of dose. The cost of some tests may be a factor, but methods that can't be easily manipulated to lower the estimated dose seem to be favored. REACTS states that the Oak Ridge Cytogenetic Biodosimetry Laboratory is equipped to perform state-of-the-art techniques, such as multicolor fluorescence in situ hybridization (FISH) which can accurately estimate radiation dose. These state-of-the-art techniques are not used at the INL. (See https://orise.orau.gov/reacts/cytogenetic-biodosimetry-laboratory.html)

The Internal Dosimetrist should use the physical evidence to assess these variables and use "***sound technical practices***" to give him a basis of what legal dose models and other decisions to use in his dose calculations. Since final dose assignments are used for health studies, Workers' Compensation claims and other possible future medical claims, BEA's lead Internal Dosimetrist, was **required to document all the steps and decisions in his calculations, so the doses of the ZPPR exposed workers could be reconstructed in the future if needed.**

Below are two of the regulations and radiological standards that require an internal dosimetrist to verify how he came up with a particular dose assignment, BEA ignored them both.

A) DOE-STD- 1098-99 (722 PERSONNEL RADIOLOGICAL RECORDS)

"Procedures data and supporting information needed to reconfirm an individual's dose at a later date shall be maintained" [SEE 835.702{G}

B) RADIOLOGICAL CONTROL MANUAL (LRD 15001) ARTICLE 722

"In those cases where recordable doses are determined to have occurred, the result of these evaluations, consisting of a summary report that (1)

Describes the Data, (2) Explains the techniques used to evaluate the Data and, (3) Lists the doses to be assigned, are required to be provided to the Radiological organization"

One of the best ways to conceal unethical dose construction practices is to ignore the industry standards that require the internal dosimetrist to create a blueprint of how he came up with the dose number he assigned you. BEA's Internal Dosimetrist knew that there was no credible way to explain how he came to my dose assignment, so the industry standards were not applied, and no blueprint was left behind.

BEA worked for 10 and a half months in secret manipulating each one of the dose variables to show a low worker doses starting with the three variables that would be the biggest dose hitters, they were the **PATHWAY OF THE CONTAMINATION INTO THE BODY, (Inhalation or Ingestion), THE SOLUBILITY OF THE ALPHA PARTICLES, THE POSITIVE LUNG COUNTS.**

Because "inhalation" exposures generally cause assigned doses to be many times higher than "ingestion" exposures, BEA had to manipulate the evidence to show that our exposures were due to an "ingestion" exposure. BEA next had to declare my positive November 8, 2011, lung count a false positive and conceal the data from the Oakridge Independent Dose Verification Team so it could not be assessed in their dose estimates for me. Next BEA had to create a way to change the legal solubility type of the Americium-241 from type "M" to type "S". This change would allow them to **assume** that the americium-241 cleared the body quickly therefore adding very little if any dose.

According to one of the national dose experts conducting the peer review on the ZPPR exposures, the ingestion factor would reduce the worker doses by **a factor of 15.**

PATHWAY DESIGNATION

Alpha Contamination can enter the body in three ways: inhalation, ingestion, or through a wound in the skin. The evidence in the ZPPR Accident strongly supported that the workers were exposed internally by way of an "inhalation" pathway into the body due to the airborne contamination. When an "inhalation" exposure is assumed by the Internal Dosimetrist, the doses would be much higher because the inhalation legal Dose Models will reflect that the contamination stays

in the lungs for a long time, damaging cells and lung tissue resulting in cancer and other medical issues. If the contamination is assumed to enter the body by Ingestion, the legal dose model will demonstrate that it passes through the digestive tract and leaves the body quickly through the urine and fecal process resulting in a low dose. To keep all ZPPR workers under the federal dose limit, BEA ignored the overwhelming evidence showing that the ZPPR workers were exposed by way of an "inhalation pathway" into the body.

Physical evidence of "inhalation" exposures:

> ***1) The Contamination Air Monitor (CAM) alarmed about 5 minutes after the release. (DOE Report)***
>
> ***2) ZPPR workers tested positive for contaminated nasal smears.***
>
> ***(DOE, BEA, BEA Dose Report)***
>
> ***3) ZPPR workers had positive lung counts for Americium-241.***
>
> ***(DOE, BEA Dose Report, Oakridge Independent Dose Review)***
>
> ***4) I had a positive fecal sample on day 224 after my exposure. (Fecal Sample Documentation)***

My fecal sample evidence shows that I had an "inhalation exposure." Numerous documents explain why this is so.

> **(ICRP) ANNALS OF THE PUBLICATION 103)**
>
> ***"Material in the feces after the second week (day 14) will originate mainly from the respiratory tract"***
>
> **(ICRP) INTERPRETATION OF BIOASSAY DATA)**
>
> ***"Material in the feces after the second week will be exclusively from the respiratory tract"***
>
> **(RC-6 INTERNAL DOSIMETRY)**
>
> ***"Material in the feces after the second week will be exclusively from the respiratory tract"***

The Independent Team of Internal Dosimetrists from the Oakridge Laboratory also had the opinion that our exposure was likely the result of an Inhalation.

(OAKRIDGE INDEPENDENT DOSE REVIEW, PG-3)

"As this event involved the airborne release of radioactive materials, personnel exposures are likely the result of inhalation"

The physical evidence overwhelmingly supported an **"Inhalation"** exposure. The **International Commission on Radiological Protection (ICRP)** legal dose models all agreed that any positive fecal samples after the second week came from the respiratory tract. The fact that my fecal samples were nearly as hot on day 224 after my exposure as they were on day 6 was a big indication that the pathway of the contamination into my body was by "inhalation." This evidence was not good for BEA … or for me either.

The evidence in the email correspondence between the national dose experts and BEA's lead internal dosimetrist revealed that when the national dose experts suggested to him using data that would result in a higher dose assignment to the worker, he ignored it, even though it would result in a more accurate dose assignment.

BEA took this matter a lot further by altogether changing the pathway of the contamination into the worker's bodies from Inhalation to Ingestion without any basis to do so. This new assumption was added just two weeks before DOE enforcement hearings on the ZPPR Accident where the doses of the ZPPR workers would be center stage. BEA knew that in order for the ZPPR worker doses to be low, the pathway assumption had to be changed to ingestion, this new assumption drastically lowered our doses. Below is the July 12, 2012 email from BEA's lead internal dosimetrist to one of the national dose experts, informing him of this new assumption.

July 12, 2012 email from BEA's lead internal dosimetrist to Oakridge independent dose expert,

"The most significant changes in my dose estimates is going to be in the assumption that a good portion of the pathway is going to be ingestion"

The email below is the national dose expert's reaction after being informed of BEA's new un-conservative assumption.

July 20, 2012 ***Subject: RE: INL Dose Estimates***
?The assumption of an ingestion intake is non-conservative. How do you support that?

In the end, BEA once again ignored the opinion of the national dose expert that would have caused the ZPPR worker doses to be significantly elevated and instead made the non-conservative assumption of an Ingestion Pathway without any basis that resulted in an unreasonably low dose assignment for the exposure situation.

This is an email sent January 11, 2012 from Oakridge National Dose Expert to INL Lead Internal Dosimetrist. This email demonstrates that BEA has manipulated other airborne exposures and altered them to reflect Ingestion Exposures to drastically reduce the assigned doses of other workers. I find this email very curious because the much more experienced Oakridge Internal Dosimetrist, is asking the inexperienced INL Lead Internal Dosimetrist, how he justified modeling an airborne exposure as ingestion.

January 11, 2012 ***Subject: Ingestion Question***

Quick question. I believe that you told me that in your most recent event involving elevated transuranic fecal results that the release was airborne, but that you modeled exposure as ingestion. How did you justify that?
Thanks,

According to the BEA dose report, they justified changing the pathway designation of the ZPPR workers to ingestion/inhalation by stating in my dose report that workers were seen on the security video footage drinking and touching their faces after they evacuated to the ZPPR Control room. A BEA press release from November 15, 2011 says that, ***"One person waived his gloved hands excessively."***

BEA must have assumed their fictitious justification for changing the pathway designation would never be able to be verified by anyone because they were the only ones who possessed the security video. After my lawsuit to attained a copy of the security video, my lawyers and I sat down and watched it and my gut feelings were confirmed that BEA had been untruthful regarding workers drinking and touching their faces with gloved hands and waiving contaminated gloves excessively after the evacuation, and even if they were, it still would not have justified ignoring the Inhalation evidence and changing the pathway designation.

One of many examples that point out BEA not using industry standards is on page 39 of my BEA dose report, where Lead Internal dosimetrist for BEA says he did not know what percentage of my dose was attributed to inhalation or ingestion. The

International Commission on Radiological Protection (ICRP) defines what the industry standards are and what legal models are acceptable to be used in an internal exposure dose construction. The ICRP is clear on how to treat this situation,

"If the percentage of the material attributed to ingestion or inhalation is unknown, "it should be assumed an Inhalation Exposure"

The assumption that the ZPPR workers received an inhalation exposure would have been accurate, but it would have caused several of the ZPPR workers to have assigned doses considerably higher than the federal dose limit. The evidence, ICRP legal models and all common sense had to be ignored to keep the ZPPR worker doses low.

In the end, BEA once again ignored the opinion of the national dose expert that would have caused the ZPPR worker doses to be elevated and instead made the non-conservative assumption of an "Ingestion" Pathway without any basis that helped result in an unreasonably low dose assignment for the exposure situation.

SOLUBILITY STUDY

The Solubility Type of the Pu-239 and Am-241 particles inside the body determines how the material will pass through and clear the body.

Now that BEA changed the assumption of the contamination pathway into the body to "Ingestion" they had to change the solubility type of the Americium-241. The Oakridge National Dose Expert suggested to BEA's Lead Internal Dosimetrist that he look into acquiring an experienced researcher or laboratory who had performed solubility studies previously, but that suggestion was ignored because in order for BEA to control the study outcome, it would have to be performed in house. BEA assigned an inhouse researcher to perform this study who had never performed a solubility study before. As the evidence showed, BEA wasn't looking for an accurate study anyway, because they already had a pre-determined result in mind. It was obvious from reading his report that this researcher was under a lot of pressure to come up with BEA's desired results, to his credit, he documented the obvious credibility issues with this study, and there were many.

1) **Pg-7 of the BEA Solubility Study Report**

"This study was conducted in 90 days due to the constraints of time" "The lack of data beyond 90 days, limits the ability to clearly define the long dissolution fraction constants"

(The constraints of time were put on the researcher by BEA Management. This prevented the study to have the required amount of time to be credible.)

2) <u>Pg-6 of the BEA Solubility Study Report</u>
"these studies are properly conducted in 6 to12 months"

3) <u>Pg-12 of the BEA Solubility Study Report</u>
"There should be no less time that six months leaching time."

In the three statements above the researcher is clearly stating that he needed 6 months to a year to properly conduct this study for accurate results; BEA didn't give it to him. BEA needed to have the dose assignments completed before the DOE Enforcement hearing to be awarded the lucrative 5-year contract extension, I guess BEA needed the study performed very quickly instead of accurately.

September 12, 2012 email from Oakridge Independent Dose Expert to INL Lead Internal Dosimetrist:

I mostly concerned about the deadlines set by INL management. Any luck validating the calculations?

This email sent from Oakridge National Dose Expert, to BEA Lead Internal Dosimetrist, reveals that the Independent experts performing the dose verifications were also very concerned about BEA management setting deadlines to have the dose assignments completed instead of taking the time to accurately assess them.

4) <u>Pg-9 Of the Oakridge Independent Peer Review</u>
"The question of solubility typically, does not apply to Americium 241, as it is assigned to type "M"

This statement in the Oakridge Independent Dose Verification Report shows that the Independent experts that BEA touted were in place to assure an accurate

dose assignment, didn't agree with BEA's solubility study assessment to change the Industry Standard assigned type (M) to the americium-241.

5) (REACTS) NCRP-161, Table 4 (legal dose model)
Reflects one type of solubility for Americium 241 as solubility M.

6) The Human Respiratory Tract Model of ICRP 66 (1994b) (legal dose model)
Assigned absorption Type M (for moderate rate of solubilization) to all forms of americium.

Statements 5 and 6 are different regulations and legal dose models that reflect the only accepted solubility type for Americium-241 is type "M"; BEA has to ignore this evidence to keep the ZPPR workers under the yearly federal dose limit.

7) DOE-STD- 1128-2013 PG-5- 13
"Americium may naturally clear from the lungs and translocate among internal organs at a rate different than that of Plutonium."

In statement 7 above, this DOE Dose Standard acknowledges that research has shown that americium clears the body differently than plutonium does. That is why the legal dose models above all reflect one industry standard for the solubility of Americium-241, and that is type "M" and not the type "S" that BEA used to drastically reduce our doses.

Knowing the Particle Size of the internal contamination is vital to accurately assessing the solubility of the material as indicated by the researcher in this report. The 5um particle size is not conservative and the only time that it should be used is if there is not enough contamination for a sample to analyze and assign the actual particle size. **After the accident, it took a decontamination crew 9 months to clean the vast amounts of contamination in the ZPPR Workroom that could have been used to get the correct particle size.** The failed plutonium plate responsible for the airborne release was reactor grade, and smaller particle sizes than the 5um size used by BEA are known to be found in reactor grade material. Smaller particles sizes lead to higher dose assignments to workers. The bottom line is the particle size information was easily attainable and was critical to perform an accurate solubility study. Getting worker dose assignments past DOE

Regulators without performing the due diligent of scientifically determining the particle size so that an accurate dose assignment could be made is only more evidence of DOE's complicit behavior.

Below are the researchers own words of how important knowing the particle size is to performing an accurate Solubility Study Assessment

PARTICLE SIZE

8) PG-1 and 2, of the BEA Solubility Study Report
"Dissolution rate is affected by (particle) size and shape"

9) PG-2 of the BEA Solubility Study Report
"Particle size and shape can combine with various biological processes to dramatically change the rates of absorption and elimination."

World Renown Dose Expert **Tom LaBone** also gave his input on how important knowing the Particle Size is to perform an accurate Solubility Study.

10) FCOGG-2004

Tom LaBone *stated," **Particle size** is very important for dissolution rate*" **(Tom LaBone)** was one of the national experts assessing BEA's construction of my dose.

11) BEA Solubility Report

"One should note that dissolution rates can also be affected by the initial particle size and shape which affect the surface area and may change with time as the particles become smaller increase in surface area.

There are many factors which can affect the dissolution rate of an element from a particular matrix including such things as the chemical forms) containing the element of interest, the particle size distribution.

12) INL training material documents the particular importance of Solubility and Particle Size.

MFC INL TRAINING

TRU Materials and Hazards

- Review TRU Hazards
- Internal hazards
- Of particular importance for radiological safety considerations are the solubility and particle size and surface area of plutonium compounds.....

In #13 below, the researcher states that there is no way that he can conduct an accurate solubility study without knowing what the particle size is.

13) PG-6 of the BEA Solubility Study Report

"Without knowing what the particle count and particle size distribution of the filter sections actually was, there is no way to state why the mean total activities vary by 20% to 50% on the filters"

In statement 14 below, the researcher states that solubility studies are subject to many sources of errors and uncertainty, and that his study supports that criticism.

14) PG-11 Of the BEA Solubility Study Report

"Dissolution rate experiments such as these are subject to many sources of errors and uncertainty. Among the uncertainty is the biological fluid itself." "This study supports that argument."

15) BEA Solubility Study Report

a) "Since the experiment was terminated at 90 days due to time constraints, the lack of data beyond 90 days limits the ability to clearly define the long dissolution fraction constants"

b) These types of studies are properly conducted over 6-12 months, or more, when the dissolution rates are quite slow as is the case for Pu. In general, this study supports that criticism.

c) Dissolution rate experiments such are this are subject to many sources of error and uncertainty. Among the sources of uncertainty is the biological fluid stimulant itself the addition of ABDC and/or DTPA to the SUP prevented "clouding" up of the solution over time but may have also

altered the dissolution profile by enhancing a moderate dissolution rate component forcing a three-term exponential decay model to be required. However, it is unclear what dissolution processes and chemicals are really occurring in a live biological system.

However, no matter what biological simulant solution is used, the study should use no less than 6 months leaching time.

With all of the credibility issues of this baseless study, BEA still uses this flawed study to justify changing the legal solubility type of the Am-241 to their desired result. In the end the change was made, and none of the ZPPR workers exceeded the federal dose limit.

16) <u>December 9, 2011, Email</u> from the Oakridge Dose Expert to BEA Lead Internal Dosimetrist, where he shares his concerns about the BEA Lead Internal Dosimetrist not sharing information with the Oakridge Dose Verification Team and BEA managements desires to hurry instead of getting an accurate dose assessment.

"You contacted me on Thursday, December 8th regarding an urgent need to revise the bounding dose estimates associated with the November 8th ZPPR event for inclusion in a DOE accident investigation report. As we discussed, I strongly recommend withholding such information as the circumstances surrounding the dose assessment are fluid and significant changes are to be expected as additional workplace and bioassay data become available. However, as you are being pressured to provide dose values, and you prefer to release estimates of your own calculation rather than an investigation team-generated value, I (and other colleagues) believe that the current best estimate of exposure potential should be based on the lung count results assessed against the assumed source term mixture.

For me, the kicker was an email sent from BEA Rad-Con management to the researcher and his team after he turned in the fictitious solubility study, it says:

"I would like to express our appreciation and gratitude regarding your team's herculean efforts to complete the ZPPR solubility study. The study was critical to Rad-Con being able to reduce personnel doses by at least 50% and in many cases even more." ***She then ends by saying****, "Without the work you performed, INL*

employees might have been assigned much greater doses and as a result, BEA could have been facing steeper PAAA penalties."

This email states BEA's real reason for conducting this bogus solubility study.

SUMMARY OF SOLUBILITY STUDY

This solubility study has so many credibility issues that it is hard to know where to begin, but I will begin with the email above because it says everything you need to know, ***"The study was critical to Rad-Con being able to reduce personnel doses by at least 50% and in many cases even more."*** The real reason for this bogus study was to keep the doses low for the ZPPR workers to avoid huge financial issues.

LUNG COUNTS

After a worker is exposed to airborne radionuclides containing a plutonium-239 and americium-241 mixture, a lung count machine is used to detect the amount of americium-241 in the lungs. After the level of americium-241 had been determined, a calculation can be made determining the level of the other isotopes inhaled from the source based on assumed composition of the radionuclides inhaled, scaled to the americium-241 level. The composition of the plutonium plates is known and inhaled particles have been assumed to have the same proportions as the plutonium plate. The lung counts (also known as chest counts) for all 16 exposure victims had detectable radionuclides in their lungs, and this meant that there was going to be some very big doses far over the federal limit. BEA was lucky enough that they didn't need to have credible reasons for throwing out the lung counts as far as DOE Idaho was concerned — after all no one had ever challenged BEA's unreasonable dose assignments in the past. Due to the email correspondence, it was very obvious that the national dose experts BEA touted were verifying their dose assignments did not agree with their very unreasonable assessments. National Dose Expert, Tom LaBone told BEA Lead Internal Dosimetrist in a September 12, 2012 email***, "I don't think the chest counts are used to full advantage in the current evaluations. I think the chest counts should be given more weight than they are currently given."***

This opinion from the national dose expert didn't sway BEA's Lead Internal Dosimetrist and none of the lung counts were used from the ZPPR exposure victims in the final dose evaluations to keep the dose assignments low.

My initial lung count on the day of the accident, November 8, 2011, was by far the biggest lung count out of all the 16 ZPPR exposure victims and was valid and credible evidence that I had received a large inhalation exposure. BEA performed three lung counts on me after my exposure and they were all positive and far over the decision level which meant that they could be used as strong evidence to demonstrate that my exposure was due to an inhalation pathway which would have put my assigned dose far over the federal dose limit. If BEA had provided Oak Ridge with the data from my first lung count, that would have put my dose estimate by Oak Ridge that were based on the lung count results significantly over the federal dose limit. In order for BEA to keep my dose low and justify their ingestion pathway assumption, they manipulated the data on all of the lung counts to demonstrate that they were all under the decision level. The full extent of the lung count manipulations won't be discussed here, but examination of the lung count reports reveals many irregularities that point to actions taken to reduce the lung count results.

Below is BEA's own documentation showing that my November 8, 2011 lung count, which they did not provide to Oak Ridge for the initial dose estimate based on lung counts, was positive.

DOCUMENTATION OF MY POSITIVE LUNG COUNT

1) **PG-14 of the INL Dunn 2011 internal report**
Documents my positive lung count on November 8, 2011, of 1.3nC of Am-241
2) **PG-59 of the DOE report**
Documents my positive lung count on November 8, 2011, of 1.3Nc of Am-241.
3) **PG-46, 47 lung counting medical documents, Form 441.05**
Documents my positive lung count on November 8, 2011, of 1.3nC of Am-241.
4) **PG-3, 4 of the BEA dose report**

Documents my positive lung count on November 8, 2011, of 1.3nC of Am-241.

5) DOE Employees Concerns report from March 10, 2014

"the initial Lung counting survey on November 8, 2011, detected 1.3nC of Am-241. Since the Am-241 energy peaks were below 60 Kev were not discernable, the presence of several centimeters of shielding is indicated. In this instance, the only shielding present was chest, nasal passage or intestinal tissue. Therefore, the initial lung counting results that confirm the identified lung counter activity was solely due to internal contamination"

6) Doctor medical dictations from November 9, 2011

Documents my positive lung count on November 8, 2011.

My November 8, 2011 lung count was documented as being a valid positive lung count by BEA and yet it was not used in my dose assessment.

ORAUT-TKBS-0010-5 INFERENCES AND UNCERTAINTIES

"Unless the lung count was invalidated or noted as being influenced by such interferences such as external contamination, radon, medical diagnostic or therapeutic procedures involving radionuclides that can cause interference to in-vivo measurements; however, unless the count was invalidated, the results should be used as recorded."

My November 8, 2011 lung count was documented as being a valid positive lung count by BEA. The above lung count protocol dictated that my initial lung count results should have *been* ***"used as recorded."***

After BEA reported my initial lung count as being positive to local and national news outlets and even documented it as being positive in several of their own documents, they figured out that they would have to find a way to declare it a false positive if they were going to keep my dose assignment under the federal limit.

BEA'S sole reason for discrediting my positive lung count:

1. **Pg-3 of the BEA dose report**

BEA used (ICP procedure TPR-6739, routine lung counting) to dismiss my positive November 8, 2011, lung count of 1.3 nano-Curies (nCi) of Am 241. (A nano-Curie, nCi, is 1.0E-9 Curies.)

This lung counting procedure is a type 2 procedure, meaning it must be followed step-by-step and performed as written. On the front of the procedure, in the precautions and limitations section, it states:

"MCP-135, "Document Management"

mandates step-by-step adherence to the technical procedures (TPR's) for use type 2, unless stipulated; otherwise, RDR procedures should be followed as written for best performance results".

BEA didn't even come close to following these procedures, and even if they had, they would not have been able to use it to invalidate my initial lung count.

INTERNAL DOSIMETRY PROGRAM DOE G 441.1-1B 5.0

"Written policies and procedures covering essential steps in the activities used to determine worker internal doses"

BEA ignored the required "essential steps" that validated using this procedure but still referenced it as the reason for throwing out my initial lung count.

BEA touted that they were also using a team from the Oakridge Laboratory to independently validate the ZPPR worker dose assessments. In order for the Independent verification to be accurate and credible, the individual or team performing this validation must have access to the same data that BEA had available to them to perform our dose constructions. According to the evidence in the Oakridge Report, the team was not given access to my first lung count or medical data. Out of 16 ZPPR exposure victims, the only initial November 8, 2011 lung count data missing from their report was mine and it showed twice the radiation level as any of the other ZPPR workers. Since BEA controlled all of the dose data, they could pick and choose what data they wanted to manipulate or pass along to be independently verified by the Oakridge Team and what information they would keep to themselves. On page 7 of the Oakridge Dose Verification Report, it states***: "Bioassay results are considered to be positive when the net result exceeds the sample-specific decision level (DL)".***

Since my initial lung count from November 8, 2011 was confirmed to be well over the decision level and in fact, nearly twice the level of the second highest count,

the independent team from Oakridge would have declared this lung count as positive per its own protocol and that determination would have destroyed BEA's "Ingestion" assumption. BEA knew that they could not give a credible reason for invalidating my initial November 8, 2011 lung count so the only way to keep it from being independently assessed by the Oakridge Team was to simply not send the data. Further evidence that BEA concealed this critical lung count from the Oakridge Team is reflected in this November 15, 2011 email from BEA Internal Dosimetry Manager to Lead Internal Dosimetrist which documents that it was the opinion of BEA that three of ZPPR exposure victims had positive lung counts, ***"3 of 16 workers had detectable radioactivity in their first lung scans."***

The contradiction is that BEA announced publicly that only two workers had initial lung counts that were considered positive for detected radioactivity. The Oakridge Report also reflects that two individuals had positive lung counts but my initial lung count data is missing from that report. The Oakridge Independent verification Team depended entirely on BEA to be ethical and send them all of the dose data to be evaluated so they could perform an accurate and ethical verification of BEA's dose evaluations. BEA had a tremendous motive to keep this data away from the Oakridge Verification Team because if my first lung count had been used, the federal whole body and organ dose limits would have been exceeded.

The overwhelming evidence shows that BEA concealed my initial lung count data from the Oakridge Team to prevent many new holes in their baseless assumptions so they could sell their narrative that the doses of the ZPPR workers were low.

NOVEMBER 9, 2011 — LUNG COUNTS

The day after our exposure, a co-worker and I traveled back out to the site for more lung counts due to having positive lung counts the day before. Two more lung counts were performed on me that day and I was told that they both came back as undetected. After being told about this result, I was very relieved.

I had a very high lung count on November 8, 2011 and two lung counts a day later on November 9 that BEA said were "Undetectable". This scenario was not typical, and I always wondered about it. BEA had directed other employees as well as myself to falsify documents in the past and it made me wonder if BEA was falsifying my dose data. Several years had gone by and I was reading some

interviews from former Rocky Flats Workers who were sent for lung counts after being exposed to airborne plutonium and americium. The worker being interviewed explained that her first lung count was positive and needed to be recounted again, the second lung count was negative. The worker being interviewed said that it was well known throughout the site workforce that after an initial positive lung count the lung count machine operator would just manually kick up the back-ground radiation in the computations so that enough gross counts could be subtracted from the now higher background to show a low lung count under the decision line. I noticed a similarity with my initial lung count being positive and the company recounting them the next day and the following lung counts coming back under the decision line. This got me thinking about how I could check my lung counting data since the reduced second day results were so untypical. I decided to take my lung count data sheet to an individual who could give me some answers.

I was told by BEA that my two November 9 lung counts showed a drastic drop in the detectable radioactivity from my initial November 8 lung count 24 hours earlier. It didn't take this individual long to find the answer by examining the gross counts and background counts on the various lung count reports. The data clearly indicated that my next day lung counts actually showed slightly **larger** gross counts than the positive lung count the day before. This individual looking at my data also pointed out that the reason for the lower lung count results on the second day was entirely due to the subtraction of background counts. Because of the manipulations that BEA made to the first lung count, the program could not recognize the expected curve shape and therefore could not calculate background counts. For this reason, the software program did not subtract background counts for americium-241 in the first lung count on the day of the accident. The gross count result from the first November 9 lung count was the same as it had been on November 8, indicating that the very high level of americium-241 and plutonium-239 was not clearing from my lungs and indicating a very dangerous inhalation exposure.

The manipulation of the lung counts actually was botched on the first day because our intakes of plutonium and americium were even higher than expected. The manipulation of the first day's lung counts should have assured that our lung counts would come back as non-detect. But not only was my first

day's lung count a strong detect despite the fudging in the way of applying a negative gain setting that affected gross counts and background counts, the fudging was so extreme that the software program could no longer recognize the americium-241 gamma peak at 59.5 keV. Because the software could not recognize the normal peak shape for americium-241, the program could not properly estimate the background counts. For this reason, the program had not subtracted the background counts for americium-241 on the November 8 lung count.

Due to the fudge factors applied to lower my lung count results, the fact is that my first lung count actually underestimated my dose. That initial result would have exceeded 5 rem whole body and would put the bone organ dose many times over the federal dose limit. This would explain some of my Acute Radiation Syndrome symptoms and my respiratory issues soon after my exposure and why the BEA medical staff stopped drawing blood after only one CBC blood cell count. With these two lung counts designated as un-detectable, BEA could keep their "Ingestion" pathway assumption.

FICTITIOUS LUNG COUNT NOVEMBER 15, 2011

After BEA made my November 8, 2011 positive lung count disappear, they only had data for the two lung counts instead of the required three. To avoid any questions from peer reviewers at Oakridge labs, BEA created a **fictitious lung count** for me they claim was performed on November 15, 2011, but never was. One of the measurements used in the calculation of a lung count is the thickness of your chest wall, and is based on height and weight. Chest wall thickness is used to calculate the shielding of tissue from your lung area, and the error caused BEA to perform additional fudging around with the lung count results.

Form 441.5

Form 441.5 documents the difference of the Chest Wall Thickness for the fictitious 11/15/2011 lung count, and the three-actual lung counts that were in fact performed on 11/8/2011 and 11/9/2011.

I had three different lung counts performed on me, one on November 8, 2011 and two more on November 9, 2011. The chest wall thickness for the fictitious November 15, 2011 lung count was a larger value than documented in my

November 8, 2011 lung count, and the two lung counts performed on November 9, 2011. My weight was input as 280.00 as the earlier lung counts but my height was input incorrectly as 73.0 inches instead of 75.0 inches. Mistakes can happen. But what the lung count results review is additional manipulations to try to get the results to conform to the earlier results for americium-241.

The other discrepancy is that all three lung counts performed on me from November 8, 2011 and two more on November 9 were all documented in my medical dictations as protocol dictates it should be, however, the fictitious November 15 lung count is nowhere to be found in my medical dictations or records.

OAKRIDGE DOSE REVIEW TEAM REPORT

In a press conference shortly after our exposures, a question was asked to BEA regarding how they would assure the accuracy of our dose constructions. BEA touted:

"We are using a DOELAP-accredited process which includes the laboratory performing the analysis. Additionally, we have brought in a national expert to help us perform the radiological dose evaluations. We also have a national expert performing a peer review to ensure results are accurate.

BEA also touted that they would be using a team of internal dosimetrists from the Oakridge lab to independently verify and assure the accuracy of our final dose assessments. But email exchanges between the two independent national dose experts, and BEA's Lead Internal Dosimetrist clearly indicated that BEA ignored the opinions of the national dose experts regarding decisions and assumptions on the dose constructions of the ZPPR workers whenever using them would increase a worker's dose. There was a lot of evidence that showed that the Oakridge Team and the National Dose Experts were a lot more interested in producing an accurate dose assessment than BEA was. Due to this conflict of interest, very crucial and incriminating exposure and medical data was missing in the Oakridge Independent Dose Verification Report indicating that BEA did not share crucial exposure evidence with the Oakridge Team.

Another big discrepancy between BEA and the Oakridge dose experts was that BEA initially put out that two workers could possibly exceed the federal dose limit, while the Oakridge Experts said that 4 of the ZPPR Workers could exceed the federal dose limit.

BEA treats any lung count data under the decision level as undetectable and therefore does not assign any dose to the lungs which is very inaccurate. The evidence of this difference of opinion can be found in an email from world renown dose expert, **Tom LaBone** to the inexperienced INL Lead Internal Dosimetrist, when he tells the him that he needs to give more weight to the lung counts and that he is not using them to the full advantage. BEA's Lead Internal Dosimetrist ignores the world renown dose experts' opinion and still decides not to use them in his calculations due to this decision greatly increasing the ZPPR worker doses. More evidence of this difference of opinion is illustrated in the Oakridge Dose assessment when they assessed my bone dose at 49.7 rem and the INL bone dose assessment for me was only 1.2 rem. Oakridge's dose assessment of my exposure was 47 times higher than the INL assessment using the same false data. The DOE was very complicit with BEA's dose assessments even though the national dose experts were supposed to be helping and verifying BEA's dose assignments, email correspondence evidence indicates they were very far from agreeing.

Most compelling email from National Dose Expert to BEA's Lead Internal Dosimetrist, about his issues with BEA's final dose assignments.

July 20, 2012 email from Dose Expert to BEA's Lead Internal Dosimetrist
Subject: RE: INL Dose Estimates
I haven't looked at this data for about 6 months, so I have to re-familiarize myself with it. I also have to emphasize that I don't have any answers at this point. However, in preparation for your Enforcement
Conference I'll play devil's advocate. Here are some questions I'd be asking if I were on the DOE side of the table:

?The assumption of an ingestion intake is non-conservative. How do you support that?

?The assumption of insoluble material is non-conservative. How do you support that?

?Based on your americium intake estimate the standard respiratory tract model predicts that americium should have remained above detection. It did not. Why?

?Your assessment relies heavily on fecal sampling results. However, there is at least a two-day gap in sample collection. How does this affect your assessment?

?The magnitude of your total intake estimate (~0.065 uCi) [A micro-Curie, 1.0 uCi, is 1.0E-6 Curies] differs significantly from that predicted based on air monitoring results. How would you explain this?

?Am-241 is above detection in the most recent urine sample whereas plutonium is not. Is this consistent with your modeling? If not, why?

?The plutonium to americium activity ratio has changed significantly in the latest fecal sample. This differs from that predicted by you modeling. How is this explained?

I don't think that a compelling narrative has been developed to support the current assessment. Furthermore, the prospects of developing a defensible basis over the next two weeks are likely bleak.

I know that's not what you wanted to hear….. Sorry,

This email above is a great example of the frustration by the independent national dose expert who appears to be at odds with BEA's dose assessment of the ZPPR workers. Email evidence indicated that the two national dose experts were not even close to being on the same page with BEA's assessments of the ZPPR worker doses, in the end, it didn't matter that the very unreasonable low dose assignments for our exposure situation were allowed to stand without question.

Ultimately, both of the National dose experts signed off on the dose assignments, One of the National Experts was employed by Battelle which is a parent company of Battelle Energy Alliance (BEA), and the other National Expert worked for a private company that I assume relied on DOE money to keep afloat, another words, sign the final dose assignments or become unemployed.

CHELATION THERAPY

Ca-DTPA Chelation Therapy is an experimental drug medically administered through an IV drip by nuclear contractors to remove radionuclide particles from the exposed workers blood. This is a very time sensitive treatment designed to be

administered within the first hour to be most effective. According to national Dose Expert, Tom LaBone, Chelation Therapy is not effective for "Inhalation" Exposures.

On page 5 of my dose report from BEA, it is documented on the executive summary that, ***"Medical intervention through the administration of Ca-DTPA was mostly ineffective and resulted in a negligible dose savings."***

After receiving this email below from the Oakridge dose expert, telling BEA's Lead Internal Dosimetrist that he could decrease our doses by a total factor of 30 if he were to adopt a Chelate influenced model along with the assumption of the Americium being insoluble, BEA's Lead Internal Dosimetrist disregards his own evidence that the chelation therapy did not result in any dose savings and used Chelation models to drastically reduce my dose by a factor of 30 as indicated in the BEA Dose Report on my dose construction.

Email from national dose expert, (Oakridge Independent Review). The email states: ***"Impact of Insoluble Americium:" "The adoption of insoluble americium decreases both the committed effective and the committed equivalent doses." Note that the chelate-influenced model applying insoluble americium decreases both dose quantities by about a factor of 15.)***

Despite the evidence, BEA's Lead Internal Dosimetrist, apparently forgot that he stated on page-5 of my dose report that the Chelation Therapy resulted in no dose savings and still included the Chelation model in my dose assessment to decrease my final dose assessment by a factor of 30 without any basis to do so.)

SUMMARY OF CHELATION THERAPY

The pattern of BEA ignoring the evidence and using assumptions that would drastically lower my dose was no different when the Chelation Therapy results were applied.

BREATHING RATE AND BREATHING SPACE

The Breathing Rate and the Breathing Space of a worker during an airborne radiological exposure are both very important variables used by the internal dosimetrist in the calculation of the worker's dose. According to one of National

Dose Experts on my assessment, these dose assessment variables can change the dose of a worker by a factor of 20. It is important for the internal dosimetrist to use the physical and medical evidence available to support the decisions used.

BEA ignored the medical evidence that showed very high stress, (high blood pressure, heart rate) and used a low breathing rate to demonstrate that only small amounts of airborne contamination entered my body. An email from the National Dose Expert to BEA's Lead Internal Dosimetrist, pointed out how much dose he could save by ignoring the evidence that indicated high breathing rates and assuming low breathing rates.

Email (Oakridge Independent Review) to BEA Lead Internal Dosimetrist

"If airborne concentrations are not uniform and that breathing rates likely increase during an evacuation, these values can be expected to increase." Assuming a factor of 20 (10x difference in airborne concentrations and 2x difference in breathing rates."

BEA's Lead Internal Dosimetrist not only ignores the medical evidence indicating much faster breathing rates in favor of a slow rate but also manipulates the physical evidence by not using the physical survey results of my clothes or the survey results of the area where I was working for an accurate assessment of airborne radiation levels.

BEA ignored the very high and dangerous levels of contamination on our clothing that would have accurately demonstrated the representative level of airborne contamination in my breathing space. I was standing at the point of the release, (which was the most contaminated spot) despite this fact, BEA used the filter on the Contamination Air Monitor (CAM) located 15 to 20 ft behind me and upstream of the ventilation to use as a representation of my breathing space for the calculation of my exposure. The airborne contamination level captured by the Contamination Air Monitor (CAM) would have reflected only a fraction of the contamination level of my actual breathing space, BEA's misrepresentation of my breathing space was done to drastically lower my dose.

PG-50 BEA DOSE REPORT

"Given that (OP-1) was in the immediate area of release where airborne concentrations are expected to be significantly higher, and that the

subject's exposure interval could have been longer than a few minutes, the bioassay-based intake are within reasonable agreement with the air monitoring results."

By falsifying the "bioassay-based intake" (Lung Counts) The BEA Lead Internal Dosimetrist, grossly underestimated my radiological airborne intake by using the CAM survey results.

July 20, 2012 email sent by the national dose expert to BEA Lead Internal Dosimetrist, calls him on it.

?The magnitude of your total intake estimate (~0.065 uCi) differs significantly from that predicted based on air monitoring results. How would you explain this?

PG-51 BEA DOSE REPORT

"The intake estimates predict that americium lung burdens will be below detection levels which are consistent with monitoring results."

The "Bioassay-based intake" that BEA's Lead Internal Dosimetrist is referring to here on pg. 50 and 51 of his dose report, are the lung counts which strong evidence showed were manipulated. An internal Dosimetrist conducting an internal Dose Construction has no business using an area 15 to 20 ft away from a worker to determine the contamination intake.

REACTS-Dose Magnitude Estimation

"Contamination of the clothing near the breathing zone or neck may be an appropriate indicator."

SUMMARY OF BREATHING ZONE

The radiological protocols of REACTS were not followed. By using the contamination surveys of my clothing near my breathing zone, BEA had all the evidence they needed to accurately calculate my exposure levels. The HP who took a survey of my lab coat after the airborne release stated that my lab coat survey pegged his survey meter. This was the biggest reason BEA used unrepresentative CAM air data 15 to 20 ft away instead of realistic surveys of my clothes or the clothes of co-workers standing shoulder to shoulder with me that

would have accurately shown my exposure. This behavior was in line with BEA's unethical attempt to conceal my dose evidence.

PARTICLE SIZE

BEA used a default particle size of 5um instead of using the CAM filters full of contamination to acquire the actual particle size. Studies have shown that reactor grade Pu-239 particle sizes are smaller than 5um (5 micrometer), and because the legal models reflect that smaller particle sizes will result in much higher doses, BEA used the unconservative default particle size of 5um to lower our doses. This 5um default particle size is only supposed to be used if there is no material to test. The contamination in the ZPPR workroom took 9 months to clean up indicating that a vast amount of material was available to use in the determination of the particle size.

The ICRP 66 lung model (ICRP 1994b) reflects that it is appropriate to use the substitute particle size of 5um in place of the actual particle size of the material "In the absence of more specific information" This means that if there is not enough material to analyze the particle size, then you can use the 5um particle size. This was not the case for the ZPPR Accident.

In the absence of more specific information. For occupational exposure circumstances, a reference AMAD of 5-um was recommended, and a 1-um AMAD was recommended for the public.

DOE-STD-1128-2013

Particle size is an important consideration for inhalation exposures. The normal practice for an aerosol is to identify the activity median aerodynamic diameter and its associated particle size distribution.

ANNALS OF ICRP

The particle size can be an important source of uncertainty because it influences the assumed deposition of the respiratory tract. The urinary and fecal excretion rates depend of the particle size because the size influence the transfer of unabsorbed particles to the alimentary tract. In some

working environments, multimodal aerosols exist within the respirable size range.

ICRP-66 (legal dose model)

Particle size is an important parameter in determining internal dose from inhalation of radionuclides.

ZPPR INTERNAL DOSIMETRY UPDATE-FEB 7, 2012
"Size of particle determines how deep it goes into the lung"

MFC INL TRAINING

TRU Materials and Hazards
- Review TRU Hazards
- Internal hazards
- Of particular importance for radiological safety considerations are the solubility and particle size and surface area of plutonium compounds.....

The MFC INL Training items listed above are part of the TRU Materials and Hazards training by BEA. In this training, BEA states that particle size is of particular importance to an internal exposure, but they ignore their own stated protocol.

SUMMARY OF PARTICLE SIZE ISSUES

The legal dose models, DOE standards, and BEA training material all state that determining the particle size is of high importance in determining an accurate dose assessment. BEA ignores its own protocol and other legal dose models above and assumes a unconservative default particle size. BEA has never given a reason for not following through with internal dosimetry protocol by determining the actual particle size among many other questionable practices.

URINE SAMPLES — FIRST AND MOST IMPORTANT URINE SAMPLES LOST

The DOE Standard 1128-2013 said that, ***"The first urine samples may provide the most accurate assessment of intake."*** On December 1, 2011, BEA informed me that my first urine samples after my exposure were ruined and unusable to use in the calculation of my dose due to a miscommunication with Gel Labs, who was the lab that BEA was using to process our samples. This miscommunication was very suspicious since the four biggest dose hitters were the only workers who were affected by this so-called miscommunication. The Oakridge independent dose team report says that 4 workers had the potential to exceed the federal dose limit, which makes the destruction of the data for our first urine samples even more suspicious.

> **PG-60 BEA DOSE REPORT**
>
> ***"Because miscommunications with the laboratory were verbal, the cause of the miscommunication could not be determined".***
>
> **DOE-STD- 1128-2013**
>
> ***"The first urine samples may provide the most accurate assessment of intake."***
>
> **ORAUT-TKBS-0010-5**
>
> ***"These Oxides typically exhibit a lower than expected Urine excretion rate, and the total lung burden might not be adequately predicted using standard excretion equations"***

BEA's Lead Internal Dosimetrist ignored the ORAUT-TKBS-0010-5 scientific reason for the lower than expected Urine excretion as BEA not adequately predicting the total lung burden.

BEA's Lead Internal Dosimetrist ignored the national dose expert hired by BEA to help with the dose assessment and instead explains the reasoning of the ratio not adding up and being "lower than expected" as effects of the Chelation Therapy administered to me. The problem with BEA's Lead Internal Dosimetrist using

Chelation Therapy to explain this result is that chelation therapy increases the urine ratio and is not consistent with "lower than expected" ratio found in samples.

This is why BEA's Lead Internal Dosimetrist documented in his dose report that the Chelation therapy administered to us had no dose savings. This is more proof that BEA ignored their own evidence and used a Chelation model to reduce our doses by a factor of 30.

Email from Gel Labs to BEA:

"We received 391g of sample which is less than our contractual minimum volume. Per the directions on the Release email, we will proceed with analysis".

I filled all Urine Samples full. This is an email from gel labs indicating that a sample of mine was below the contract minimum, what happened to the rest of it?

FECAL SAMPLES

BEA created fictitious fecal samples for me, 1 sample they claim I gave on November 11, 2011 and 2 more samples on November 13. After my initial sample on the night of November 8, 2011, the same day of my exposure, I was not able to give BEA any more until November 14 due to my radiation sickness and severe diarrhea. BEA also ignored protocol requiring them to keep monitoring my fecal samples until I was no longer producing positive samples.

BEA put the word out publicly that the ZPPR workers were exposed to low level airborne contamination and claimed our fecal samples were in line with that. I did not trust anything BEA told us, so I sent data from my first fecal sample to Dr. Marco Kaltofin, a radiological contamination expert from Boston, to see if his opinion agreed with BEA's assessment. Below is Dr. Marco Kaltofin's assessment of my first fecal sample.

DR. MARCO KALTOFIN ANALYSIS ON MY FIRST NOVEMBER 9, 2011 FECAL SAMPLE

"Ralph Stanton donated a fecal sample on November 9, 2011, one day after his exposure event at ZPPR. His 100-gram fecal sample contained 1,070 pico-Curies of plutonium239/240 and 693 pico-Curies of americium-241. (See page RS-

051412-19, Feb. 20, 2012 In-Vitro Analysis Laboratory report) Normal fecal mass per day for an adult male is 350 grams. This converts to a daily discharge of 3700 pico-Curies of plutonium 239/240 and 2400 pico-Curies of americium-241. Consider the following example. I have a 5000 pico-Curie americium standard source for use in my nuclear physics laboratory at Worchester Polytechnic Institute. From a regulatory perspective, the standard source and the feces very similar, high level nuclear materials. In fact, my NRC-licensed source is less contaminated than Ralph's fecal mass.

Of course, the fecal matter with the plutonium is more dangerous, as it is loose in the domestic environment, while my americium-241 standard is kept under lock and key. The americium-241 is a regulated source, licensed by the Nuclear Regulatory Commission. If I were unable to account for it, please trust me that all heck would break out, and I would have (at the very least) an interview with inspectors from DC to worry about.

I strongly suspect that, if Ralph Stanton had tried to cross into the USA with his own fecal sample, he would have set of an enormous homeland security mobilization. Instead Mr. Stanton was sent home, potentially exposing his family to high levels of plutonium contamination. For example, his family might have been exposed if they were needed to assist Mr. Stanton with his hygiene.

The one thing that was very consistent throughout my investigation was that BEA's assessments were very different from that of every expert used in our dose assessment, whether it was their experts or ours.

MEDICAL SYMPTOMS AFTER ZPPR EXPOSURE

The clinical symptoms that manifest themselves in an individual after they have been exposed to very high levels of radiation, are the earliest and best indicators on how significant the exposure is. The U.S. Department of health and human services report on the Toxicological profile for ionizing radiation, states:

"A great degree of over exposure is necessary to cause the clinical signs of radiation exposure".

Unlike figures and dose variables that can be manipulated, the blood cell counts drawn from a worker within hours after they have been exposed to very high-levels of radiation don't lie. I was taken to the site medical facility about 5 hours after my exposure for treatment. The first thing that the BEA medical staff did was

make me fill out Workers' Compensation paperwork before they would administer the time sensitive Chelation Treatment to me. After I filled out the paperwork, I gave them a urine sample that showed levels of Americium-241. Next, a Physician Assistant (PA) on duty drew my blood and explained that they were performing this procedure to look for cell irregularities which would tell them how significant my exposure was. The CBC Blood Count taken after my exposure that day revealed that my Lymphocyte blood cell count was depleted to just under one half of their normal levels. On the day of our exposure, the BEA medical staff was in contact with The Radiation Emergency Assistance Center Training Site (REACTS) for medical assistance for the ZPPR workers. This center is on call 24 hours a day for radiological medical assistance. REACTS also provides medical training to BEA medical staff on how to look for these medical signs and treat workers after they have been exposed to radiation. REACTS training guide states***: "A drop in Lymphocyte count to 1 half or 1 third of baseline values within 24 hours signals a potentially lethal situation."***

Medical Dictations from the medical physician and staff employed by the nuclear contractors are used for future claims by exposed workers. Even though the blood doesn't lie, a physician employed by the nuclear contractor can explain downplay medical symptoms by telling a very small part of the story. The following medical dictation is a great example of a company physician manipulating the blood results to show that there is no medical issue from the exposure.

A medical dictation written by BEA's Lead Medical Physician on November 15, 2011 acknowledges that he had looked at my blood count from November 8, his only comment on my CBC count was about my neutrophil count being "minimally elevated" from a bad tooth that I had removed approximately a week earlier. BEA's Lead Physician stated: "it would be my suspicion that the elevated white count might be from that event"

All of my White Blood Cells except for my Neutrophil count were depleted to 50% of normal levels or less. According to the US National Library of Medicine National Institutes of Health, Endodontic infections increase leukocyte and lymphocyte levels in the blood, this medical fact contradicts my CBC count from the day of my exposure.

BEA's Lead Medical Physician ignores the fact that the rest of my white blood cells are at 50% or less of their normal levels and the fact that elevated neutrophils will

usually increase during the early stage of Acute Radiation Syndrome or radiation sickness. He also ignores his medical training for radiologically exposed workers and does not acknowledge the depleted lymphocyte count which is the most accurate early indicator of how high my dose was.

NASA studies conducted at the Oakridge Associated Universities, determined that the "Neutrophil count usually increased during the early part of Acute Radiation Syndrome," but the company physician decides not to use the evidence of ARS and cherry picks this data to direct attention elsewhere even when my Lymphocyte count indicated "a potentially lethal situation" according to REACTS who provided the radiation medical training for BEA medical staff.

After I was able to attain my medical records and view the results from my CBC Blood Count drawn only 5 hours after my exposure, I learned that my lymphocyte count dropped to just less than half in a very short time. This certainly explained the medical symptoms I experienced from radiation sickness in the following hours and days after my exposure.

During my Chelation Treatment the PA informed me that BEA medical staff would be drawing my blood several times a week for a couple weeks to monitor my blood cells as medical protocol dictated after receiving a substantial radiation exposure. CBC counts are available in just minutes after the blood is drawn, BEA must have seen the depleted white blood cells and determined not to create any more evidence of a very high exposure by not performing any more blood draws to monitor my cells. The CBC count taken from me that day, was the first and the last.

The Medical Aspects of Radiation Incidences in section 2 under Initial Medical Responses, "serial blood CBC counts are required every 6 hours to monitor lymphocyte cell levels. These counts should be monitored for at least two weeks following exposure"

The local hospitals in my area had these CDC procedures to treat contaminated individuals. It is very curious to me that a regular hospital that does not have special training for radiologically exposed individuals keeps these procedures handy in-case they are needed, and the Idaho National Laboratory who is supposed to specialize in this type of care, disregards the medical protocol all together when the evidence indicates a very substantial exposure. My

Lymphocyte count has been low for over 7 years now since the accident and has never recovered after I was exposed.

On November 9, 2011, co-worker Brian Simmons and I had to drive back out to the lung counting facility to have another lung count performed due to both of us having positive lung counts the day before. On this day we met with Dr. Johns, at the lung counting facility. Dr. Johns asked us how we were feeling, I told Dr. Johns that we were up all night with *vomiting, nausea,* and *diarrhea.* Without any hesitation or medical test of any kind, Dr. Johns instantly told us that the physical symptoms we were experiencing, were due to *"INFLUENZA"* and because Brian and I carpooled together, one of us gave the influenza to the other. This diagnosis from Dr. Johns could have been medically verified quickly and inexpensively with a medical test but wasn't. After my lawyer was finally able to obtain the medical dictations from medical staff taken on my visits, I noticed that most of the symptoms that I reported to them were documented except for the vomiting I experienced on the first night after my exposure. In fact, the dictations specifically stated the opposite, that I had never vomited, this was very puzzling to me. Through some research, I learned that ***"VOMITING"*** is a major symptom of a very large radiological exposure. It all became clear to me that by documenting, incorrectly, that I had never vomited, BEA was trying to conceal substantial medical evidence of a very large dose. The Workers' Compensation investigators recorded my testimony to them about the clinical symptoms that I experienced after the exposure. I told them that I had vomited, and it is documented in that record. Vomiting is also a major symptom of Acute Radiation Syndrome**.**

The CDC, REACTS, NIOSH, DOE, document that medical symptoms of Acute Radiation Syndrome are dependent on doses of ***100 to 200 rem*** before they will manifest themselves. This dose level is at least 20 to 40 times greater than the yearly federal dose limit of 5 rem. However, this guidance is based on external radiation, evenly distributed throughout the body and not in intake of radionuclides.

And, as BEA demonstrated in my medical dictations, the results of the CBC blood cell counts can be misrepresented. It is documented in ***The Medical Aspects of Radiation Incidences (section 2) under Initial Medical Responses***, that the clinical symptoms and especially the blood cell counts are dose dependent, meaning that

it takes a specific high-level amount of radioactive exposure to cause certain medical symptoms and manifestations. This is why BEA medical staff would document other miscellaneous reasons for the medical symptoms that I experienced and stopped drawing my blood after the initial results indicated a large dose, analogous to an external radiation whole body dose of 100 to 200 rem, because the CBC counts indicated serious medical issues and they could not give credible reasons to downplay them. The intake of actinides is strongly taken up in bone marrow and strongly affect the blood.

DOE G 440.1-1B

"The results of evaluations of workplace exposures and controls and the results of medical surveillance and epidemiology studies provide management for essential feedback for improvement. Additionally, this information is used to monitor the workforce for signs or symptoms of occupational disease, to prevent future disease cases, and to base workers' compensation decisions."

In my experience, the last thing that the DOE wants, is honest exposure information to document in their medical surveillance or epidemiology studies because valid information will reflect the truth about worker exposures. The DOE pays safety bonuses to their contractors based on employees not injuring their selves on the job and nuclear workers not having doses over the federal limit, because of this setup, accurate information pertaining to epidemiology studies and results of medical evaluations of workplace exposures will never be attained. In turn there will be no information to monitor the workforce for signs or symptoms of occupational disease, to prevent future disease cases and to base Workers' Compensation decisions. I can present evidence from my case that BEA is already keeping vital medical and exposure information from the Workers' Compensation company who they have a policy with.

Several of my co-workers and I experienced **ACUTE RADIATION SYNDROME (ARS**) following our exposure.

The symptoms of ARS according to the center for disease and control (CDC), the radiation emergency assistance center/training site (REACTS), DOE Brookhaven Laboratory, are as follows: ***Nausea, Vomiting, Diarrhea, Fatigue, loss of appetite, fever, confusion, inflammation, depleted Lymphocyte (White Blood Cell) count.***

A vast amount of research has determined that it takes a certain very high level of radiation exposure to an individual for them to manifest changes in the lymphocyte blood cell count as my count demonstrated.

On November 9, 2011, BEA's Lead Medical Physician states in his dictations, ***"nares quite inflamed with scant watery mucus"*** and ***"throat mildly inflamed"*** He diagnoses this condition as a, ***"PROBABLE viral infection."*** Inflammation is another symptom of Acute Radiation Syndrome. Once again, these medical symptoms were a quick inexpensive simple medical test that would have verified if it was a viral infection or not. also states that it was ***"unclear"*** if any of these symptoms had any connection to the airborne exposure event."

On November 15, 2011, Medical Dictation from BEA's PA Joyner:

"The diarrhea COULD BE from anxiety"

Diarrhea is another symptom of ARS after a large radiation exposure.

The physical symptoms that I experienced after my radiological exposure were **NAUSEA, VOMITING, SEVERE DIARRHEA, BODY ACHES, FEVER, INFLAMED THROAT AND NARES, LYNPHADENOPATHY, BLOODY NOSES, BONE MARROW SUPPRESION, LACK OF ENERGY, LOSS OF APPETITE, HEAVY SWEATING, CONFUSION, INFLAMATION, HARD TIME KEEPING HYDRATED, WHITE BLOODCELLS REDUCED TO 50% OF NORMAL LEVELS ONLY 5 HOURS AFTER I WAS EXPOSED**.

The above medical symptoms that I experienced have been identified by the **CDC, REACTS, NIOSH, DOE**, as Acute Radiation Syndrome symptoms that are dependent on doses of ***100 to 200 rem*** before they will manifest themselves. BEA used words like, **"Probable", "Suspicion" "Could Be"** to muddle the real reasons for my clinical symptoms. This evidence was out in the open for BEA medical staff, but instead of using this blood cell count to determine that I was in a potentially lethal medical situation, BEA medical staff concealed it and rolled the dice on my outcome instead of acknowledging and treating it. After a big radiation exposure, your Lymphocyte blood cells start to die because they are the most sensitive cells to radiation in your body. My Lymphocyte count is still low and had never recovered from my exposure.

The REACTS training also has a simple quick equation for assessing how significant the dose is. You take the **Neutrophil cell count** and divide it by the **lymphocyte cell count** and add two if **vomiting** occurred. The equation says that if your total is **3.7** or more, further medical treatment is needed. My **Neutrophil count** just 5 hours after my exposure was **81.6, my Lymphocyte count was 14.2. When you divide 14.2 into 81.6, you get 5.7, when 2 more is added because I vomited, my total for this equation was 7.7. This score is more than twice the 3.7 score that indicated that further medical treatment was needed. The problem with us needing further medical treatment is that it catches the attention of a lot of people including family members and the press which makes a very large dose much harder to conceal. I assume this is why BEA just ignored these symptoms and kept us at home while telling the press that everyone was back to work the next day.**

EXPOSURE DATA CONCEALED OR DESTROYED

The more I kept digging for dose information, the more fraud I kept finding. Shortly after I settled my Whistleblower Lawsuit with BEA, I resumed my quest for dose information. I FOIA requested a copy of the facility survey results along with my survey results from the handwritten logbooks that were used by Rad-Con during my evacuation from the ZPPR Facility. BEA gave me computer printouts of low contamination survey results they claimed belonged to me. These computer-generated survey results were far too low to be in line with the dose related medical symptoms I suffered or the 5 ½ million DPM swipe taken in my breathing space.

In July of 2016, I sent the **BEA legal department** a request for copies of the handwritten log books that were used by Rad-Con Techs on November 8, 2011, in the ZPPR Facility to document radiological contamination/worker surveys. This should have been a very simple request for BEA, because they always claimed that they had nothing to hide. On July 14, 2016, BEA emailed me and told me that my attorney already had copies of the handwritten logbooks, I was sure that this was untrue, but I checked my records to be absolutely sure and I was right, no records of handwritten logbooks anywhere. After being given the run around, the **DOE FOIA Officer**, sent me an email on August 11, 2016, stating that he had

received my FOIA request. On August 19, 2016, the DOE FOIA Officer sent me an email telling me again that my lawyer was given copies of the handwritten logbooks that I requested and that he had the receipts to prove it. After consulting with my attorney again, I knew that he was not being truthful with me.

A couple days later it started to get bizarre, on August 21, 2016, the **DOE FOIA Officer** wrote, ***"there are no handwritten logbooks. There are only computer entries per BEA directives"*** he then wrote, ***"BEA says they don't exist because all data is entered electronically per BEA procedure"*** I immediately wrote back and asked him, "Where are the handwritten log books? What happened to them?

The DOE FOIA Officer answered by saying that he was just the FOIA guy who responded to records request. He was never straight forward with answers, he went from saying my attorney already had copies of the handwritten logbooks, to saying that they never existed, then pleading that he is just the FOIA guy who just responds to record requests. I was playing along with the DOE FOIA Officer to see if he was going to be ethical but it was obvious that BEA and DOE were going to keep playing games, so I sent him an email back on August 21, 2016 telling him that I know the logbooks exist because on the Security Video footage of the ZPPR Accident, two Rad-Con Techs can be plainly seen documenting survey results by handwriting them in logbooks during our evacuation. The DOE FOIA Officer, writes me back with more BS stating, ***"Records have a very specific definition. Logbooks can fall outside the definition of a record"***

After nailing him down and letting him know that I could prove that he was lying to me, he sent me a letter in the mail on August 23, 2016, denying my FOIA request, stating that my request for my coworker's survey results were an invasion of their privacy, (which it is not, as long as their names are not included with the request). The DOE FOIA Officer changed my FOIA Request from requesting copies of the logbooks to requesting my co-workers survey results because he was running out of excuses and was doing anything he could to discourage me from pursuing the logbooks that were very incriminating for BEA and DOE.

I wrote the DOE FOIA Officer back telling him that he got the request wrong and I told him that I requested a copy of the handwritten logbooks used during our evacuation and had the documentation of that request, I told him that I could not

make it any clearer for him and that this was a very simple request. On September 1, 2016, he wrote back saying that I would have my answer after Labor Day.

LAST FOIA REQUEST RESPONSE ANSWER

On September 9, 2016, the DOE FOIA Officer responded by telling me that, my FOIA Request for ***"The handwritten logbooks that were used by Rad-Con techs to document the ZPPR facility surveys on November 8, 2011, including those maintained by the ZPPR Rad-Con Manager, were in the room with you at the time of the contamination event. "Battelle has performed a thorough search of its records and has determined that the documents no longer exist"***

This was the admission I wanted from the DOE FOIA Officer, I was finding that anytime you FOIA information that is incriminating to BEA, it will always be that the information no longer exists. This was very incriminating to BEA and the DOE because these logbooks are legally required to be readily available for 10 years after The DOE ZPPR Nuclear Accident Investigation had concluded. This puts BEA on the hook to have these logbooks readily available until sometime in 2023.

BEA admitted that the log books did exist, only after I pointed out that Rad-Con Tech's could be seen documenting data in the log books, while watching the security video that we had to take them to federal court to get.

HANDWRITTEN LOGS DESTROYED

The logbooks used by Rad-Con personnel to document radiological surveys of the workers and the ZPPR facility after the 11/8/2011 airborne release, contained critical exposure/dose evidence needed to accurately construct the doses of the ZPPR workers.

In January 2014, I met a Rad-Con Tech that responded to the site medical facility on the day of our exposure, he recognized my name as being one of the 16 workers involved in the ZPPR Facility Accident. He told me about his experience when he was directed to respond to the INL Medical Facility on the day of the ZPPR Accident and provide rad-con support. He mentioned that the next day he and a co-worker were directed to go look for a logbook that was possibly left in a government vehicle used by one of the Rad-Con Managers to drive over to the

medical facility after the accident. The Rad-Con Tech found the logbook of the manager in the vehicle and agreed to write a sworn declaration of what he witnessed that day. The Rad-Con Tech testified:

The Rad-Con Tech says that he and another health physicist were told that the Radiation Control Manager at the ZPPR facility, had recorded radiation contamination data in a note book after the accident and may have left the notebook in the vehicle.

The Rad-Con Tech states, "On November 8, 2011, I was dispatched to the INL Medical Facility after several workers were exposed to airborne contamination at the Zero Power Physics Reactor Facility (ZPPR) at INL. When I arrived at the INL Medical Facility, I was shocked by the chaos and disorganization witnessed there. It was obvious to me that BEA was totally unprepared for the contamination event. Exposed workers were standing around in hospital greens. Some of the workers were vomiting into trash cans. Other workers expressed frustration and anger. They complained that BEA's emergency response was disorganized, that they had been waiting around doing nothing for long periods of time, and that they were cold, tired, and hungry. I eventually helped obtain food and clothing for several of the workers. Because my supervisor had told me that the exposed workers had been decontaminated and "surveyed out" before they arrived at the medical facility and, therefore, didn't need to undergo additional decontamination or radiation detection before they were permitted to go home, I did not survey any of the exposed workers at the medical facility. I also did not see any one else survey any of the exposed workers at the medical facility. A day or so after the exposure event, I was sent out to the vehicle that was used to transport several of the workers to the medical facility following the exposure event. Another health physicist and I were told that the Radiation Control Manager at the ZPPR Facility, had recorded radiation contamination data in a notebook after the incident and may have left the notebook in the vehicle. ***"When we searched the vehicle, we found a notebook inside. To make sure we had the notebook we had been sent to locate and retrieve, I looked inside. I recall being shocked by the high contamination counts in the post-exposure nasal and sputum smears that were obtained from the exposed workers and recorded in the book. After we found the notebook, we returned to the medical facility with it and gave it to BEA management"***

"I heard that BEA had told the exposed workers and the press that the contamination levels detected, and exposure data obtained immediately after the incident showed little contamination and little to no risk of harm to the exposed workers. BEA's contentions are not consistent with the high levels of contamination that I saw were documented in the notebook that I found in the vehicle that was used to transport the exposed workers to the medical facility".

"The contamination levels I saw in the notebook that I found in the vehicle that was used to transport the exposed workers to the medical facility were very high and potentially very dangerous to the health of the exposed workers".

This legal declaration from this Rad-Con Tech took a lot of guts, he had nothing to gain and everything to lose by getting involved and doing the right thing. Unfortunately, doing the right and ethical thing can be hazardous to your career when you work for a DOE Nuclear Contractor, He was fired just months after disclosing this information to me, he had 17 years of service as a senior Rad-Con Tech. The DOE claims that they have laws in place to prevent this kind of retribution from happening, but the evidence shows that there is no enforcement of these laws and regulations and the DOE only protects the contractor.

After I listened to this Rad-Con Tech tell me about witnessing the shocking high levels of contamination documented in the personal logbook of the ZPPR Rad-Con Manager, I highly suspected that BEA may have already destroyed all of the handwritten logbooks or would at the very least concealed them. Below are some more Code of Federal Regulations (CFR) that BEA apparently ignored.

> ***10 CFR 851.26, RECORD KEEPING AND REPORTING***
>
> ***(a) "Recordkeeping, contractors must:"***
>
> ***(1) "Establish and maintain complete and accurate records of all hazard inventory information, exposure measurements"***
>
> ***(4) "Not conceal nor destroy any information concerning non-compliance or potential non-compliance with the requirements of this part"***

The logbooks contained all of the exposure measurements taken on November 8, 2011, during the worker evacuation of the ZPPR Accident. Destroying or concealing these logs is against the law and DOE was complicit.

After the ZPPR Accident, The BEA legal department emailed all individuals that may have evidence pertaining to the ZPPR Accident to instruct them of their legal obligation to preserve and protect all possibly relevant evidence pertaining to the ZPPR Accident.

November 16, 2011 email from BEA Legal to all personnel involves in the ZPPR accident:

"BEA IS UNDER A LEGAL DUTY TO PRESERVE, RETAIN AND PROTECT ALL POSSIBLY RELEVANT EVIDENCE, BOTH HARD COPY (Handwritten logbooks) AND ELECTRONIC EVIDENCE"

Below, is a second email was sent to the same personnel involved with the ZPPR Accident.

April 23, 2013 email from BEA Legal to all personnel involved in the ZPPR accident:

"You previously received from the office of general counsel a data preservation/notice of litigation hold pertaining to the preservation of information pertaining to the exposure incident at MFC in November of 2011. Since that time, our office has received notice of legal action that has been filed pertaining to the incident. The purpose of this email is to remind you that the litigation hold remains in effect and that no information related in any way to the incident is to be destroyed, deleted or altered, without the written prior permission of the office of the General Counsel. If you have any doubt whatsoever, please seek advice before you take any action.

The evidence indicated it was very clear that all personnel involved in the ZPPR Accident had a legal duty to protect all documentation pertaining to this accident.

> ***DOE ORDER 225.1A, ACCIDENT INVESTIGATIONS***
>
> ***Permanent records must be maintained for Type A (ZPPR was a type A accident) and Type B accident investigations in accordance with DOE record retention requirements. Investigation records are retained for ten years following the date of the final report. Accident investigation reports do not contain all records and backup data associated with the investigation; therefore, the records that form the basis for the facts in***

the report should be kept in an investigation file for future reference. Examples of the type of records that should be retained in the file include: witness statements; stenographic transcripts of interviews; videotapes; photographs; analytical test results; policies and procedures pertinent to the investigation or referenced in the report; daily logs; training records; job or work records; and checklists.

Only the computer logs remained without any documentation to form the basis of the low contamination levels that they reflected. Apparently, BEA did not read:

DOE Order 225 1A

"the records that form the basis for the facts in the report should be kept in an investigation file for future reference"

According to FOIA emails, BEA claims that the handwritten logbooks that formed the basis for the worker and facility survey measurements, were not required to be retained even though legal documents were sent to everyone involved saying so and everyone had access to DOE Order 225.1-1.3 that spells it out clearly. BEA has stored handwritten logbooks for decades. Why was BEA in such a rush to destroy these particular logbooks if they nothing to hide, especially when the DOE orders specifically said these log books must be kept readily available for 10 years after the accident? Things that make you go HMMMMMM.

DOE Order 225.1-1.3 COLLECTING AND CONTROLLING EVIDENCE

There are three types of evidence: physical, human (given through witness statements or interviews), and documentary (including photographic media). The collection and control of physical evidence is an important element of preserving the accident scene and an important role of readiness teams. Physical and documentary evidence should be preserved and secured as it is collected. These steps are necessary to prevent alteration and to establish the accuracy and validity of collected evidence.

DOE Order 225.1-1.3 above, mentions how important it is to collect and preserve documentary evidence to prevent alteration and establish the accuracy and validity of the evidence.

DOE-STD- 1035-93, 4.7 STORAGE OF COMPLETED LOGS

"Logs should be preserved in a manner that will preserve them throughout the expected life of the facility. The method of storage for the logs to be readily retrieved if they are needed for reference"

Logs taken by facility operators are legal records that document the conditions and events that took place in that facility. The ZPPR Facility logs contained critical dose data, in my opinion, this is a prime example of a nuclear contractor breaking the law and concealing or destroying evidence that is very incriminating to them. The logbooks contained critical dose data for the ZPPR workers that will never be known. The evidence shows that the DOE is very complicit in this type of behavior from its contractors which also is a big reason that the public is so untrusting of nuclear power. There is a long pattern throughout the decades in the DOE Nuclear world of lost worker dose and exposure data, this was always thought to be a case of records just getting misplaced by accident. The ZPPR Accident demonstrates that it didn't just happen a long time ago by accident, the practice of concealing or destroying dose and exposure information that contradicts DOE's claims that their nuclear facilities are safe seems to be alive and well today.

SELECTED REFERENCES

Department of Energy, Office of Health, Safety and Security (HSS), Accident Investigation Report, "Plutonium Contamination in Zero Power Physics Reactor Facility (ZPPR) at the Idaho National Laboratory" Accident November 8, 2011 at the Materials and Fuels Complex (MFC).
http://energy.gov/hss/downloads/investigation-november-8-2011-plutonium-contamination-zero-power-physics-reactor

SUMMARY

My years spent working at the Idaho National Laboratory showed me that there was the way it was supposed to be, and then there was the way it was.

THE WAY IT WAS SUPPOSED TO BE

1) *In order to protect the worker, public, and environment from the very toxic and highly radioactive nuclear materials stored at the ZPPR Facility, strict laws and guidelines were enacted to govern how we were to handle this material.*
2) *The international community of nuclear nations came together years ago and developed scientific methods for determining the dose assignments to exposed workers base on their combined knowledge and experience, BEA's internal dosimetrist are trained on these methods.*
3) *The Radiation Emergency Assistance Center Training Site (REACTS) provides medical training to BEA medical staff on how to treat radiologically exposed workers, so they were familiar with all the potential signs and symptoms.*
4) *The medical documentation and final dose assignments are used for epidemiology studies, Workers' Compensation claims and other possible future medical claims*.
5) *A code of ethics was developed for all nuclear professionals to guide their behavior due to the catastrophic potential of working around nuclear material and to instill public confidence. The DOE is mandated to provide oversight to ensure that the contractor obeys the laws and regulations set forth.*

THE WAY IT WAS

In my experience, it wasn't that there wasn't enough laws and regulations, it was that there was not any enforcement of these laws and regulations. I believe the biggest problems are caused simply by greed. The DOE uses private corporations such as BEA to operate the Idaho National Laboratory,

BEA management has shareholders they answer to who are pushing for big profits. BEA's contract rewards them for completing jobs by a certain date and financially rewards them for safe operations and keeping costs down. In my experience, safety rules and regulations always went out the door when profits came into play. For example, I was directed to handle weapons/reactor grade plutonium on two different occasions without being permitted to use any lead shielding so the job would be completed on time and the company would receive the milestone bonus. I was directed to perform this job against the rules, policies, and training I received from this very same company in the name of profit. I was also directed by BEA management to commit multiple felonies by falsifying documents. This was the very same company that gave me a copy of the Code of Ethics to follow that said this type of behavior would result in being fired, but after I reported this behavior, the two managers that directed a co-worker and myself to commit these felonies were eventually promoted. The DOE says that anytime an employee feels that he/she is being directed to perform an unsafe act, they have the right to call a stop work without any retribution. In my experience, this is not true, even after it was shown that the stop work was justified. The ZPPR Documented Safety Analysis (DSA) is a legal contract between BEA and the DOE on how they will safely operate the ZPPR Facility. BEA documented in the DSA that they would keep the Facility Ventilation System, Up-stream Alpha/ Beta Contamination Alarms, Workroom Hood, Stainless Steel Cladded Jackets operable to protect the worker while handling nuclear material. On the day of the ZPPR Accident, none of these mitigations were operable. The DOE Report said that the failing Contamination Monitor was removed and not replaced due to cost. In the end, BEA was not punished by the DOE in any way for operating the ZPPR Facility unsafely or illegally, the money they fined BEA for the penalties was just for show as the DOE returned the money the following year.

The DOE claims that it is firmly committed to maintaining a culture of scientific integrity. Scientific Integrity would also include ensuring that radiological measurements, analyses, worker monitoring results, are accurately and appropriately made. The DOE says that having the capability to accurately determine personnel radiation exposures based on sound technical practices, is fundamental to safe conduct of radiological operations.

The evidence in my dose investigation overwhelmingly demonstrated that BEA never once used sound technical practices to conduct my dose assessment accurately. The evidence showed that BEA ignored accepted internal dose construction protocol and falsified and manipulated the data in each of the dose variables to attain a low dose assignment and avoid big PAAA fines. Email evidence also shows that the dose experts conducting the independent dose assessment did not agree with BEA on the methods they used in the dose construction. The medical staff ignored medical protocol that would produce evidence of how big our dose was. For example, it was medical protocol for BEA staff to draw my blood several times a week after my exposure to monitor my blood cell count. After my initial blood draw 5 hours after I was exposed indicated a dose of a hundred rem or more, they never took any more samples. When medical staff and internal dosimetrist who have a professional duty to exposed workers have to answer to company CEO's and shareholders to keep their jobs, it becomes a huge conflict of interest.

The DOE uses the assigned doses and medical data generated by BEA in epidemiology studies, Workers' Compensation claims and other possible future medical claims. The fact that the DOE is complicit with the knowledge that BEA directed employees to falsify documents is shocking. The DOE was also complicit with BEA breaking CFR's by concealing or destroying logbooks used in the ZPPR Accident that contained critical dose and exposure data. These facts take any credibility away from every radiological dose assessment ever constructed by BEA. The tainted information is then used in health studies and statistics making them inaccurate and not credible.

Due to the catastrophic potential to the safety and health that the nuclear material being stored at the INL has on its workers, the public, and the environment, I felt compelled to share information that could affect the workers, their families, and nuclear communities around the nation.

Ralph Stanton

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