

## **Gegg, Diana**

---

### **CAUSAL RELATIONSHIP**

**Psychologist**

### **EXPERT TESTIMONY**

**Scope of expertise**

Psychologist diagnoses of certain mental health conditions not listed in DSM-IV were within the psychologists' scope of practice and were valid diagnoses of the worker's conditions caused by the exposure at work. ....*In re Diana Gegg, BIIA Dec., 08 16647 (2010)*

Scroll down for order.



1 We strongly agree with our industrial appeals judge's decision to allow this claim. We believe we  
2 have the jurisdiction to determine all of Ms. Gegg's industrially related conditions. Based on the  
3 evidence in our record, we have concluded that all of the five diagnoses made by  
4 Raymond M. Singer, Ph.D., are correct and we have ordered the Department to allow the claim for  
5 these conditions.

6 The evidence in our record strongly supports a conclusion that Ms. Gegg developed organic  
7 brain damage and other conditions due to exposure to toxic chemicals that leaked from one of the  
8 storage tanks on the Hanford reservation. The Proposed Decision and Order contains a thorough  
9 and accurate factual summary, so this decision only contains a summary of the salient facts  
10 relevant to our decision.

11 Prior to July 27, 2007, Ms. Gegg was a highly capable heavy equipment operator. She  
12 worked in this capacity from 1974 until August 2007. She had become a supervisor and was highly  
13 respected by the men she supervised. At that time, she was around 55 years old and was one of  
14 the most competent heavy equipment operators in the Tri-City area. She was in good health: even  
15 though she had been previously diagnosed with hypertension, she was taking medication that kept  
16 her cholesterol under control. She had no mental health or cognitive impairments.

17 On July 27, 2007, workers at Hanford were engaged in an ongoing project of transferring the  
18 contents of single shell tanks holding toxic chemicals in the "tank farm" to double shell tanks. At  
19 2:00 a.m., Cheryl A. Edden, a nuclear chemical operator, went to check on a malfunctioning pump  
20 being used to transfer the contents of Tank S-102. The precise contents of Tank S-102 are  
21 unknown, but it is undisputed that it contained 1,200 to 1,400 toxic chemicals. The tank definitely  
22 contained toxic solvents, heavy metals, and radioactive waste. Mary C. DeVany, the industrial  
23 hygienist who testified for Ms. Gegg, stated it contained "[s]ome of the most dangerous waste  
24 material" anywhere in the United States. DeVany Dep. at 38. Ms. Edden discovered the contents  
25 of Tank S-102 had leaked onto the ground: she noted a dark area on the ground when she walked  
26 into a "wall of vapor." The Geiger counter on her protective gear went off the charts. The leak  
27 clearly contained radioactive emitters.

28 Accordingly, by 2:30 a.m. on July 27, 2007, it was obvious the contents of Tank S-102 had  
29 spilled onto the ground right by the tank and vaporized into the air. This was a major spill: 85 to  
30 115 gallons of high-level radioactive and chemical waste spilled, covering a 200 square foot area.  
31 Additionally, fumes and gases that had been contained in the tank were released into the air.  
32

1 However, no one immediately sounded any alarms, covered the spill, conducted any sampling of  
2 the spilled liquid contents, or tested the air space near the spill.

3 On July 27, 2007, Ms. Gegg was employed bulldozing land to prepare well pads on which  
4 additional tanks would be placed. She arrived at work at 6:00 a.m., about one-half mile away from  
5 her jobsite. She drove her bulldozer to the jobsite and arrived there around 6:30 a.m. She worked  
6 clearing three pads right outside the southern fence surrounding the tank farm until 10:30 a.m. One  
7 of the pads was approximately 600 yards from Tank S-102, and another was only slightly further  
8 away. There were light breezes that morning, as well as gusts of wind coming from the direction of  
9 Tank S-102. Ms. Gegg reported being covered in dirt as she bulldozed, but also reported smelling  
10 strong chemical odors as she worked.

11 At 10:30 a.m., an alarm finally sounded. Ms. Gegg and her construction company coworkers  
12 were told to take cover. They were instructed to remain in their vehicles, with the windows shut and  
13 the air conditioning off, at a location right outside the eastern boundary of the tank farm. The  
14 workers were directed to remain in their vehicles until approximately 1:15 p.m. In other words, they  
15 were supposed to remain in small enclosed spaces in the direct sun on July 27, 2007, without  
16 opening their windows or using ventilation, for almost three hours. Ms. Gegg took cover in the cab  
17 of a truck driven by Woodruff R. Stanley, Jr.: they both smelled strong odors of ammonia and other  
18 chemical fumes. They had to open their window during this three-hour period because it was hot.  
19 Expert witnesses confirmed the odors Ms. Gegg and her coworker smelled were consistent with  
20 toxic chemicals contained in Tank S-102.

21 Around 1:15 p.m., Ms. Gegg was allowed to leave and go into a building just outside  
22 Hanford's east entrance. Soon afterward, she was transported to a medical clinic approximately  
23 45 minutes away. She remained in the clinic until 5:00 or 6:00 p.m. By then, she began feeling  
24 serious symptoms consistent with chemical exposure, including severe nausea, abdominal pain,  
25 dizziness, and disorientation. Blood tests taken at the clinic showed Ms. Gegg had elevated liver  
26 enzymes, consistent with an exposure to toxic chemicals, according to Ms. DeVany. By the  
27 evening, Ms. Gegg had developed a severe headache, which lasted for several days. She was  
28 unable to work for more than 2 half-days following the spill, because of her headache and "flu-like"  
29 symptoms. As time passed, she has developed more serious chronic cognitive and mental health  
30 symptoms. Dr. Singer testified her symptoms are consistent with organic brain damage due to  
31 exposure to toxic substances. Ms. Gegg's life has been upended since July 27, 2007. She has  
32

1 been unable to work or pursue numerous hobbies she previously enjoyed, and she has major  
2 emotional problems that impair her relationships with her family and friends.

3 The Department's case relies primarily on a flawed study conducted by CH2M, which  
4 concluded that neither the fumes nor the chemicals spilled out of Tank S-102 could have reached  
5 Ms. Gegg. There were numerous flaws in this study. For example, the study assumes there was  
6 no wind on July 27, 2007, when weather data clearly showed it was breezy, with wind gusts. The  
7 study was based on very limited sampling. Only two toxic chemicals were tested in air sampling,  
8 which was conducted on the afternoon of July 27, 2007. No testing of the liquid contents of the spill  
9 was done. Soil testing of the contaminated area was not conducted until November 2007,  
10 approximately four months later. Again, that testing was limited: only soil within 10 meters of the  
11 spill was tested. We agree with our industrial appeals judge's determination that Ms. DeVany's  
12 testimony effectively undermined the testimony of the Department's experts, because they relied on  
13 the flawed CH2M study.

14 We found the testimony of Ms. Gegg's expert witnesses very persuasive. Ms. DeVany and  
15 Dr. Singer are both very well-qualified, and there is a credible factual basis for their opinions. In  
16 short, Ms. Gegg has major cognitive and emotional impairments, consistent with exposure to toxic  
17 chemicals. Ms. Gegg was clearly exposed to fumes stemming from the leak at Tank S-102,  
18 because she and her coworkers could smell the fumes. She also was possibly exposed to  
19 windborne dust to which chemicals had adhered. She developed symptoms consistent with  
20 exposure to toxic chemicals by the afternoon of July 27, 2007. There is simply no other causative  
21 agent other than the chemical spill that could account for her symptoms. We do not believe she  
22 simultaneously developed unrelated mental health disorders (anxiety and panic attacks) starting on  
23 July 27, 2007, as suggested by Dennis Stumpp, M.D., the Department's medical witness. Although  
24 we cannot specify the toxins which caused Ms. Gegg's symptoms, Tank S-102 definitely contained  
25 dangerous chemicals and radioactive waste materials. There is credible expert testimony tying  
26 Ms. Gegg's mental health and cognitive impairments to her exposure to chemicals released from  
27 Tank S-102. Accordingly, her claim should be allowed, even though we cannot specify which toxins  
28 caused Ms. Gegg's symptoms. *Intalco Aluminum Corp. v. Department of Labor & Indus.*, 66 Wn.  
29 App. 644 (1992), *review denied*, 120 Wn.2d. 1031 (1993).

30 The only remaining question we must address involves our authority to determine which  
31 conditions should be allowed in our order. Our judge believed we only had authority to adopt one of  
32

1 the five diagnoses made by Dr. Singer of Ms. Gegg's industrially related conditions. We believe we  
2 have the authority to adopt all five of his diagnoses.

3 In an appeal from an order rejecting the claim, we clearly have the jurisdiction to determine  
4 which conditions were proximately caused by the industrial injury. *In re Darlene Ross*, BIIA Dec.,  
5 88 4379 (1990). Both parties presented testimony regarding the correct diagnoses and causes of  
6 Ms. Gegg's mental health and cognitive problems. We therefore not only have the authority, but  
7 also the duty, to make a complete determination of which conditions were industrially related.  
8 RCW 51.52.104 and RCW 51.52.106 require our decisions to contain findings and conclusions  
9 regarding each contested issue.

10 We have concluded that all five of Dr. Singer's diagnoses for Ms. Gegg's industrially related  
11 conditions are appropriate. Accordingly, we order the Department to allow all these conditions in  
12 this claim. Our industrial appeals judge limited allowance to a condition diagnosed as  
13 substance-induced dementia. He did not include conditions that he believed were not listed in the  
14 DSM-IV or because they were, in fact, not listed in the DSM-IV. There are two reasons this is  
15 incorrect. First, two of the diagnoses made by Dr. Singer are found in DSM-IV. Dr. Singer also  
16 diagnosed Ms. Gegg as having developed an avoidant personality disorder due to her chemical  
17 exposure, and this is a diagnosis found in DSM-IV. Our record confirms that Dr. Singer's remaining  
18 three diagnoses of Ms. Gegg's industrially related conditions are also valid. Neuropsychologists  
19 such as Dr. Singer are commonly used to diagnose and treat brain disorders stemming from either  
20 toxic exposure or a brain injury. DSM-IV contains diagnoses used by many types of mental health  
21 professionals, but it is published by the American Psychiatric Association. As such, it contains  
22 diagnoses originating from the work of psychiatrists, and may not contain all the diagnoses  
23 appropriate for individuals exposed to toxic chemicals. Dr. Singer testified Ms. Gegg had also  
24 developed toxic encephalopathy, an organic brain dysfunction, and neurotoxicity syndrome due to  
25 her chemical exposure. Kenneth R. Still, Ph.D., a toxicologist and industrial hygienist who testified  
26 for the Department, was familiar with all three of these neuropsychological diagnoses. Both  
27 Dr. Singer and Dr. Still defined these conditions similarly in their testimony. Neurotoxicity syndrome  
28 involves harm to the nervous system from chemical exposure; organic brain syndrome involves  
29 dysfunction of neuropsychological functions due to brain damage; and toxic encephalopathy  
30 involves brain changes caused by a toxin. These diagnoses are therefore clearly accepted and  
31 used by neuropsychologists and toxicologists. Dr. Still did not dispute the general validity of these  
32 diagnoses, he disputed their appropriateness in this particular case. As stated above, we found

1 Dr. Singer's testimony persuasive and therefore believe all five of his diagnoses accurately describe  
2 Ms. Gegg's industrially related conditions.

3 We have therefore amended Finding of Fact No. 7 and Conclusion of Law No. 3 in the  
4 Proposed Decision and Order. We also have corrected Finding of Fact No. 4 to clarify when and  
5 where Ms. Gegg first developed symptoms consistent with her toxic exposure. With these  
6 corrections, we adopt the remaining findings and conclusions in the Proposed Decision and Order  
7 as our own.

### 8 **FINDINGS OF FACT**

- 9 1. The claimant, Diana R. Gegg, filed an Application for Benefits with the  
10 Department of Labor and Industries on October 11, 2007, in which she  
11 alleged she sustained an industrial injury on July 27, 2007, during the  
12 course of her employment with Contractors Equipment Maintenance  
13 Co., Inc.

14 On November 6, 2007, the Department issued an order in which it  
15 rejected the claim as neither an industrial injury nor an occupational  
16 disease. On January 2, 2008, Ms. Gegg appealed this order. On  
17 January 10, 2008, the Department issued an order in which it  
18 reassumed jurisdiction over the claim.

19 On July 3, 2008, the Department issued an order in which it affirmed its  
20 prior order of November 6, 2007. Ms. Gegg filed a Notice of Appeal  
21 from this order on July 17, 2008. On August 5, 2008, the Board granted  
22 the claimant's appeal under Docket No. 08 16647, and agreed to hear  
23 the appeal.

- 24 2. On July 27, 2007, Ms. Gegg was employed by Contractors Equipment  
25 Maintenance Co., Inc., as a heavy equipment operator. Her shift began  
26 at 6:00 a.m. Earlier that day, at approximately 2:00 a.m., a spill of  
27 chemical waste from a tank, No. S-102, containing nuclear waste  
28 product and toxic chemicals, had occurred near Ms. Gegg's work  
29 location. When she started her shift, and until a take cover alarm went  
30 off at 10:30 a.m., she was unaware of the spill.

- 31 3. On July 27, 2007, during her morning shift, Ms. Gegg was driving a  
32 bulldozer to move dirt. This machine did not have an enclosed cab.  
Ms. Gegg had no protective gear or clothing. The work was kicking up  
dust. Ms. Gegg was working downwind from the spill, as close as 600  
yards from it. She noticed the smell of ammonia and chlorine.

4. At 10:30 a.m. on July 27, 2007, a take cover alarm went off. Ms. Gegg  
entered the closed cab truck of a coworker, Woodruff Stanley, remaining  
there until approximately 1:15 p.m. During this period, Ms. Gegg and  
Mr. Stanley had to open their windows occasionally to ventilate the cab  
and to talk to coworkers.

- 1 Ms. Gegg arrived at a medical clinic 45 minutes from the job site the  
2 afternoon of July 27, 2007. At that building, medical and radiation tests  
3 were performed. While there, Ms. Gegg experienced several  
4 symptoms, including disorientation, lower abdominal pain, severe  
5 nausea, right-sided tingling of the face and arm, a metallic taste in her  
6 mouth, mental fogginess, and dizziness.
- 6 The events surrounding the chemical spill of July 27, 2007, at  
7 Ms. Gegg's workplace, constitute a sudden and tangible happening of a  
8 traumatic nature that produced the immediate onset of several  
9 symptoms.
- 9 The industrial spill and Ms. Gegg's exposure to toxic chemicals on  
10 July 27, 2007, proximately caused her to develop conditions diagnosed  
11 as substance-induced persisting dementia, avoidant personality  
12 disorder, toxic encephalopathy, an organic brain dysfunction, and  
13 neurotoxicity syndrome.

### CONCLUSIONS OF LAW

- 13 1. The Board of Industrial Insurance Appeals has jurisdiction over the  
14 parties to and the subject matter of this appeal.
- 15 2. On July 27, 2007, Ms. Gegg sustained an industrial injury, as defined by  
16 RCW 51.08.100.
- 17 3. The order of the Department of Labor and Industries dated July 3, 2008,  
18 is incorrect and is reversed. The claim is remanded to the Department  
19 with directions to allow Ms. Gegg's claim for an industrial injury occurring  
20 on July 27, 2007. The Department is ordered to allow the following  
21 conditions in this claim: substance-induced persisting dementia,  
22 avoidant personality disorder, toxic encephalopathy, an organic brain  
23 dysfunction, and neurotoxicity syndrome. The Department is thereupon  
24 ordered to take such further actions as are required by the law and the  
25 facts.

26 Dated: April 16, 2010.

27 BOARD OF INDUSTRIAL INSURANCE APPEALS

28 /s/ \_\_\_\_\_  
29 DAVID E. THREEEDY Chairperson

30 /s/ \_\_\_\_\_  
31 FRANK E. FENNERTY, JR. Member

32 /s/ \_\_\_\_\_  
LARRY DITTMAN Member