

BEFORE THE INDUSTRIAL ACCIDENT BOARD
OF THE STATE OF DELAWARE

SARAH GOODCHILD,)
)
 Employee,)
)
 v.)
)
 STATE OF DELAWARE)
 (UNIVERSITY OF DELAWARE),)
)
 Employer.)

Hearing No. 1307835

*Board rejects claim
of RAD and toxic
encephalopathy based
on toxic exposure
and testimony of
Dr. Lem*

DECISION ON PETITION TO DETERMINE COMPENSATION DUE

Pursuant to due notice of time and place of hearing served on all parties in interest, the above-stated cause came before the Industrial Accident Board on December 16, 2008 and March 2, 2009, in the Hearing Room of the Board, in New Castle County, Delaware. An extension of time for issuance of the decision was then taken pursuant to DEL. CODE ANN. tit. 19, § 2348(k).

PRESENT:

ROMAYNE SEWARD

ALICE M. MITCHELL

Christopher F. Baum, Workers' Compensation Hearing Officer, for the Board

APPEARANCES:

Stephen T. Morrow, Attorney for the Employee

Dennis J. Menton, Attorney for the Employer

NATURE AND STAGE OF THE PROCEEDINGS

On June 18, 2008, Sarah Goodchild (“Claimant”) filed an initial Petition to Determine Compensation Due, alleging that she developed an occupational illness while working for the University of Delaware (“UD”). Claimant seeks only a finding of compensability. UD denies that Claimant’s illness arose out of her employment.

A hearing on the merits of Claimant’s petition was begun on December 16, 2008, when testimony was taken from four medical witnesses. Due to time constraints, the hearing was unable to be concluded on that day and the parties reconvened on March 5, 2009, to present the remainder of their witnesses. This is the Board’s decision on the merits.¹

SUMMARY OF THE EVIDENCE

Dr. Grace E. Ziem, who specializes in occupational medicine and toxicology, testified on behalf of Claimant. The primary focus of her practice is on illness from exposures to toxic chemicals. She began to provide treatment to Claimant on July 12, 2007, and she reviewed pertinent medical records. In her opinion, Claimant has developed Reactive Airways Disease and toxic encephalopathy as a result of her work for UD at Sharp Lab.

On July 12, 2007, Dr. Ziem received an account of Claimant’s past medical history. Claimant completed a questionnaire and the doctor took an exposure history from her. Claimant reported that she was in good health prior to 1987. She had smoked up to one pack of cigarettes per day from 1973 to 1987, when she stopped for a time. She then started again from 1990 to 1999, smoking up to one pack per day. The records of Claimant’s family doctor (Dr. Sachdev) reflected a dramatic change and increase in Claimant’s health problems after 1995. She had many visits for both upper and lower respiratory problems. She had sinus inflammation and

¹ Normally, decisions are to be issued within fourteen days of the close of the hearing. *See* DEL. CODE ANN. tit. 19, § 2348(k). Because of workload demands and other time constraints, it was necessary to take an extension of time to issue this decision in accordance with title 19, section 2348(k) of the Delaware Code.

periodic infections (although, because of the lack of fever, Dr. Ziem thought these were more signs of irritation than bacterial infection). On December 2, 1996, Dr. Sachdev noted throat swelling as part of respiratory inflammation. Claimant had irritations of her nose, throat, ear and Eustachian tubes. She reported that, at times, her throat swelled so much that she could not get enough oxygen. In June of 2000, Claimant saw Dr. James Ley, an infectious disease consultant. Claimant expressed concern that chemicals in her workplace were causing her symptoms. Dr. Ley thought it possible that Claimant had sick building syndrome and chronic sinusitis. In June of 2002, Claimant saw Dr. Brian Schwartz, who documented that Claimant was concerned at that time that her respiratory problem may be related to work. According to Dr. Schwartz's report, Claimant stated that she did not work directly with chemicals but was in the same area with them. Dr. Schwartz was provided with an MSDS sheet from UD. Dr. Schwartz only evaluated Claimant's condition over the prior three months and concluded that her problem was not related to work.

Dr. Ziem stated that it was her understanding that Claimant initially started working at UD in the purchasing department. During that period, she just had intermittent problems with rashes and gastrointestinal complaints. In 1995, she transferred to Sharp Lab, a physics laboratory. Dr. Ziem believes that Claimant had been working with "NCR paper" which releases sensitizing agents. A huge exposure over a long period can create chronic problems. Prior to working at Sharp Lab, Claimant did not work enough with NCR paper for a chronic problem to develop. In addition, Dr. Ziem thought that Claimant had been exposed to many potent irritants while at Sharp Lab. She walked through laboratories as part of her job duties. According to UD's MSDS sheet, sulphuric acid, hydrochloride acid and many other irritants of varying strength were being used at the time Claimant was there.

Dr. Ziem testified that, on July 12, 2007, Claimant had persistent (but not severe) neurologic symptoms; upper and lower respiratory symptoms; and sinus, throat, bronchial tube and Eustachian tube irritation. The examination of Claimant noted severe tenderness of the sinus area to gentle percussion (indicating inflammation); significant reduced hand grip strength bilaterally (a test for toxic encephalopathy); reduced vibratory perception to a tuning fork at 128 cycles/second (indicative of toxic-related peripheral nerve damage); very slight reduction of touch perception in the palms (indicative of peripheral neuropathy); and a mild reduction in cognitive function on neurocognitive testing, such as doing Serial 7s and the like. The doctor also did urine testing, as inflammation makes urine more acidic and it can also show mineral loss. Neurophysiologic testing was limited. Claimant had a prior knee injury, which meant that balance testing could not be done. However, her reaction time testing was in the diminished range. These are all United States Government approved tests for toxic encephalopathy.

Dr. Ziem stated that, in determining causation, she considered the duration and intensity of the exposure. There is an epidemiological instrument developed at Johns Hopkins to evaluate patients by dose-response. Another epidemiological instrument looks at what product produces what response. These instruments allow for a standardized evaluation of patients through the use of standardized questions. According to UD's MSDS sheets, Claimant was exposed to dozens of irritants as she walked through the areas where the chemicals were being used. She also reported that she worked below a vent that dropped "black stuff" on her desk. She went into laboratories where chemicals were being used and with a strong chemical odor in the air. In addition, the air would circulate from the area where the chemicals were used to Claimant's work area. Air Handler #6 mixed air from the area where chemicals were present with the office where Claimant was located. Dr. Ziem agreed that, while she believes that Claimant was exposed to

dozens of different substances, no sampling was ever done so that the doctor is unable to determine the dosages that Claimant received.

The doctor concluded that Claimant had upper and lower Reactive Airways Disease (“RAD”), which is a permanent change in the way the airways respond to subsequent exposures to irritants.² Once such a condition is initiated, it becomes permanent. It is a progressive condition. The doctor relates it to Claimant’s time at Sharp Lab from a combination of Claimant’s history, the use of the epidemiological instruments and the clinical findings. Claimant was healthy prior to exposure, then had a history of exposure at Sharp Lab, followed by the development of irritation. Initially, Claimant would improve away from the exposure, but then the condition worsened with repeated exposures until it finally developed into a permanent respiratory change. Claimant underwent a recent lung function test that documented low airflow, but it got worse with use of a bronchodilator which means it is not allergic asthma.

Dr. Ziem also concluded that Claimant had toxic encephalopathy. This is toxic-caused damage to the brain and nerves coming from the brain. Claimant’s degree of encephalopathy is relatively mild and has been improving with treatment. In Dr. Ziem’s opinion, Claimant is disabled because of her severe RAD, not because of the mild toxic encephalopathy or peripheral neuropathy. It is because it is such a mild case that normal neurologic examinations would not detect it. One has to do the testing that Dr. Ziem did to detect such a mild case.

Dr. Ziem agreed that Claimant is a smoker. The doctor has seen tens of thousands of smokers and has not yet seen one where smoking caused an irritant response such as Claimant has. Smoking does expose one to a large amount of chemicals and carcinogens, but one does not

² Dr. Ziem noted that different doctors will refer to this condition by different terms, such as RAD or “irritant asthma” or “occupational asthma.” However, it is not the same as “allergic asthma” which involves different antibodies. Bronchodilators, for example, would help an allergic condition but did not help Claimant because her condition is not an allergy.

see RAD develop from smoking. Having stated this, the doctor agreed that smoking can cause chronic obstructive pulmonary disease (“COPD”) and chronic bronchitis, and RAD is a form of COPD. Dr. Ziem clarified that she did not think that smoking a pack a day was a cause of Claimant’s RAD. The doctor cannot completely rule out that smoking plays some role in Claimant’s irritation, but she believes that smoking did not amount to a disabling contribution to the condition. Even heavy smoking does not create a condition where the smoker develops an intolerance to lower dosages, which is the type of RAD that Claimant has.

Dr. Ziem firmly believes that there is an epidemic of toxic exposures in this country. Many illnesses are related in various ways to toxic exposures and these illnesses are preventable.

Dr. Frederick C. Cogen, an allergist/immunologist/asthma specialist, testified on behalf of UD. About 95% of his practice is clinical for patients with asthma and chronic lung diseases. Most allergy patients have environmental issues, including occupational exposures. He examined Claimant on November 20, 2007, and September 15, 2008, and he reviewed pertinent medical records. In his opinion, Claimant has chronic rhinitis, COPD and “Idiopathic Environmental Intolerance,” but none of these diagnoses can be linked to her employment.

Dr. Cogen reviewed Claimant’s history from childhood. She grew up on a farm with dogs and poultry. She had been exposed to passive smoke from both her father and her spouse. In her teen years, she began to smoke about a pack a day. In childhood, she had fainting spells. There was a history of imbalance and coordination problems. It was reported that she had difficulty with math. Claimant’s health during the 1980s was excellent. There was no history that she had any inhalant allergies during her early life. Antibiotics reportedly made her itch. Claimant had a history of spousal abuse and her family doctor rendered a diagnosis of depression

in 1991 because of home stress. Prozac was prescribed. In July of 1995, there was a hospital record that she sustained soft-tissue bruising.

Dr. Cogen stated that, in March of 1995, Claimant was working at UD at a desk on the second floor. An air duct was above the desk and the HVAC vent exchanger was under or near the desk. In December of 1996, Claimant had a sensation of throat swelling, although it was noted that it occurred at home, independent of her workplace. No trigger for this swelling was identified. Claimant had gone to an ENT doctor, who found a normal examination. Claimant was sent to an allergist, but allergy testing in 1997 was also negative. Claimant's family doctor's notes reflected that Claimant developed recurrent rhinitis, sinusitis and an exaggerated sense of smell. Claimant told Dr. Cogen that she could smell things in the workplace that nobody else could smell. She also told Dr. Cogen that she had an aversion to air conditioning.

Dr. Cogen noted that, in March of 1999, Claimant went to a neurologist (Dr. Paul Melnick) with complaints of dizziness. She reported that the dizziness was preceded by throat swelling. There was still no report that the symptoms were connected to the workplace and no occupational illness was diagnosed. In June of 2000, Claimant saw Dr. James Ley complaining of intermittent chest symptoms and this time she expressed concern that chemicals in her building were causing her respiratory problems. Dr. Ley's examination of Claimant was normal but he raised the possibility of a "sick building" problem and tested for sinusitis. Dr. Ley did not render any occupational illness diagnosis.

Dr. Cogen stated that Claimant then went to Dr. John Goodill for a pulmonary examination. Claimant had wheezes on examination and the doctor initially thought that it was asthma or allergies. However, further testing showed that Claimant had findings consistent with a panic disorder. Once again, Dr. Goodill did not give any diagnosis of an occupational illness.

Dr. Cogen stated that, in late 2001, Claimant had harassment problems with her supervisor. Then, in 2002, she slipped and fell on ice, hurting her kneecap. She ultimately received a diagnosis of fibromyalgia and reflex sympathetic dystrophy (“RSD”). In June of 2004, Claimant saw Dr. Brian Schwartz, an occupational consultant. While Claimant expressed concern about exposure to chemicals in the workplace, Dr. Schwartz found that Claimant had no direct contact with chemicals and her fears about the air vent above her desk were not well connected. Dr. Schwartz concluded that Claimant was not breathing toxic levels of chemicals and he thought it unlikely that her respiratory problems were related to exposures in the building. However, he did suggest that working at another location would alleviate her concerns.

Dr. Cogen related that, in the summer of 2007, a CT scan of Claimant’s chest was read as abnormal. There was air trapping and pulmonary function tests revealed that Claimant had COPD: reduced volume, no reversibility and vocal chord dysfunction. In November of 2007, Claimant saw an allergist and had skin tests that were generally negative for allergies.

When Dr. Cogen examined Claimant on November 20, 2007, her clothing smelled of nicotine, suggestive that there is a significant amount of smoke in her life. She looked tired and depressed. She complained of burning in her throat. She was lucid and her memory was good. Her nasal membranes were inflamed and mucus was in the nose. She had signs of COPD. The mucus was tested and no allergy cells were found. An allergy skin test was also negative. A pulmonary function test showed signs of chronic lung disease.

Dr. Cogen concluded that Claimant had both upper and lower respiratory disease. In the doctor’s opinion, the upper respiratory disease is non-allergenic in nature and comes from smoking and stress. Claimant has chronic rhinitis and bacterial sinusitis. When a nose does not work properly because of rhinitis, it leads to bacterial sinusitis. Non-allergic rhinitis is

psychosomatic in origin: Stress triggers the reaction. Irritant rhinitis is related to smoke exposure. Smoke (either active or passive) paralyzes the hairs in the nose, which is the defense mechanism in the nostrils. Thus, both active and passive smoking leads to bacterial sinusitis in both children and adults. This is not an occupational illness. It happens away from the workplace. Claimant has had at least ten occurrences of it since she left UD in 2002.

In Dr. Cogen's opinion, based on the spirometry testing and examination, Claimant's lower respiratory disease is COPD. There are three types of COPD. One is emphysema while another is chronic bronchitis. The third type of COPD is a mixture of emphysema and chronic bronchitis. It notoriously comes from smoking (both active and passive) and it tends to strike adults at just about the time it struck Claimant—in her forties. The fact that Claimant did not respond to the use of bronchodilators is consistent with the COPD diagnosis.

Finally, in Dr. Cogen's opinion, Claimant has Idiopathic Environmental Intolerance ("IEI") also known as Multiple Chemical Sensitivity ("MCS"). IEI is a psychiatric condition, not a medical disease. The term IEI is from the allergy field and it applies when a patient has a normal physical examination and normal laboratory studies and the subjective symptoms do not respond to standard therapy. A heightened sense of smell ("cacosmia") is an identifier of IEI. Dr. Cogen is unaware of any other case where cacosmia occurs. It is a classic sign of IEI. In such cases, patients look for a cause outside of themselves for the cause of their problems when the actual cause is internal psychiatric issues. In Claimant's case, she does have irritant rhinitis and COPD (true physiologic problems) but she also has IEI on top of that. A patient with only IEI would have a completely normal examination, but Claimant does not because she does have chronic rhinitis and COPD.

With respect to Dr. Ziem's opinions, Dr. Cogen opined that to prove toxic causation medically there must be (1) an identifiable toxin, (2) an established dose-response relationship (*i.e.*, how large a dose is needed of the toxin to create a response), and (3) a resultant disease that is known to be caused by the toxin. In Claimant's case, no toxin has been identified and there is no known dose-response level.

With respect to RAD, in Dr. Cogen's opinion Claimant does not have it. RAD is not a term used by asthma specialists. Rather, it is a colloquial term usually used by pediatricians to describe a wheezing child. It is something of a "garbage can" diagnosis. He does not know if the term has some other meaning for an occupational medicine specialist. Dr. Cogen is aware of another diagnosis called Reactive Airways Dysfunction Syndrome ("RADS"), but that arises from an acute and massive toxic exposure, such as happened at Bhopal, India. The exposure overwhelms the airways and results in permanent damage. It would not apply to Claimant's case.

Dr. Cogen agrees with Dr. Ziem that Claimant does have upper and lower airways disease, but he disagrees that it is related to her occupation. There is no evidence to link Claimant's work at UD to her condition. He is not familiar with the epidemiological instruments from Johns Hopkins discussed by Dr. Ziem, but to apply causation to a specific individual requires a proper scientific challenge test rather than depending on a patient's response. In his opinion, Dr. Ziem's conclusions are unscientific speculation. Dr. Cogen was also unfamiliar with many of the tests administered by Dr. Ziem, such as determining toxic encephalopathy by testing hand grip strength. Peak flow testing is a very crude test and not a good way to measure COPD. Using spirometry and a full pulmonary function study is more valuable for that. However, Dr. Cogen

had more concerns about Dr. Ziem's conclusions than her actual tests. A toxicologist should be able to identify the toxin and the dose-response level.

Dr. Cogen agreed that he never asked for a list of the chemicals present at Sharp Lab. An air quality report from Sharp Lab in 2006 was performed. It was a swab bulk sample and it found the presence of a common mold. A tiny bit of asbestos was also noted, but nothing toxic was identified. The doctor agreed that such a bulk sample would not tell what was in the air.³

Dr. Neil Kaye, a psychiatrist, testified on behalf of UD. He evaluated Claimant on September 2, 2008, and reviewed pertinent medical records. In his opinion, Claimant suffers from a somatoform disorder that she has had symptoms of from childhood.

Dr. Kaye stated that, when he interviewed Claimant, she gave a list of her multiple problems (such as bladder problems, reflex sympathetic dystrophy, fibromyalgia and the like) which she attributed to fumes in the building where she had worked. She stated that she had days where her brain just did not work right and would have days with temporary amnesia. She wore a face mask and walked with a cane. She spoke slowly and deliberately. She stated that she could not tolerate fumes and perfumes. As an example, she stated that when she hugs her niece she would develop facial numbness three minutes later. She believes that her problems are

³ Dr. Ziem was later called in rebuttal to address a comment made by Dr. Cogen that RAD did not have a recognized medical numerical code. Dr. Ziem repeated that RAD is known by many different names. She specified that Code 506.4 refers to chronic respiratory conditions due to fumes and vapors while 506.2 pertains to chronic upper respiratory inflammation due to fumes and vapors. She noted that, by contrast, IEI is not found in any code book and opined that it is a nonsense diagnosis. Dr. Cogen was then called in rebuttal. He agreed that IEI would not be found in any medical code book because it is a psychiatric diagnosis. It is not an occupational illness, so naturally it would not be in the medical code book. He also observed that codes 506.2 and 506.4 are for acute exposures. The Board has looked at the codes in question. Dr. Ziem is correct that 506.4 specifies that it is for *chronic* respiratory conditions due to fumes and vapors. Code 506.4 is also known as chronic diffuse emphysema, chronic obliterative bronchiolitis and chronic pulmonary fibrosis all due to "inhalation of chemical fumes and vapors." Code 506.2 is just used generally for "upper respiratory inflammation due to fumes and vapors" with no specific designation of either acute or chronic. However, 506.0 is for acute chemical bronchitis, 506.1 is for acute pulmonary edema due to fumes and vapors, and 506.3 is for "other acute and subacute respiratory conditions due to fumes and vapors," so it is reasonable to conclude that 506.2 (which is mixed in amongst these) is also meant for an acute condition, as Dr. Cogen stated. While this is an interesting detour through the complexities of medical coding, none of it is particularly relevant to the specific question before the Board, namely what Claimant has and what caused it.

permanent and that she will never get better. She denied getting depressed, stating that it was a relief to have a diagnosis and that she was glad to know that she was “right” about it being the building that damaged her. She asserted that she needed three calendars to manage her day when she used to remember perfectly. She commented that the doctors at Johns Hopkins would not talk to her about her injuries. She felt that the doctors did not take her seriously because UD was too powerful.

Dr. Kaye stated that he found Claimant to be alert in all spheres. She made good eye contact and had no unusual mannerisms or tremors. Her speech was soft but fluent and coherent. She had no psychosis or paranoid ideation. Her mood was normal. She reported that she had “no appetite” but her weight remained stable. She denied having any suicidal or homicidal ideation. She was able to do Serial 7s quickly but without really trying. She got the numbers wrong, but she was clearly not trying to get them right. Her insight was fair and her intelligence was average.

In Dr. Kaye’s opinion, Claimant has a somatoform disorder. This is a sub-type of an anxiety disorder. It is used when the presence of physical symptoms is not explained by any known medical disorder. People with somatoform disorder make broad claims but specific facts are lacking. Their claimed symptoms are in excess of expectations from laboratory tests. Using a checklist of problems is not useful for such people because they tend to “over-check.” Anxiety and depression are common. There are three indicators to look for for a somatoform disorder: (1) there is involvement of multiple organ systems; patients whose complaints span the cardiac, neurologic and respiratory systems have a high percentage of somatoform disorder; (2) there is

early onset of problems without physical abnormalities; and (3) there is an absence of laboratory abnormal findings, such as when allergy testing rules out the presence of organic diseases.⁴

In Claimant's case, she was on Prozac for depression in 1991. She has had psychological stressors in her life. In 1995, she was allegedly assaulted by a police officer in connection with a DUI arrest. She then went to an allergist, who documented complaints of a nasal condition, lightheadedness, black-out periods and rashes. Thus, the nasal, neurologic and dermatologic systems were all involved. She had three incidents of "throat swelling." This is a sign of a hysterical conversion disorder. It is a classic case of the "lump in the throat" when a person gets anxious.

Dr. Kaye stated that, in March of 1999, Claimant went to a neurologist, Dr. Melnick. He noted that Claimant appeared depressed. She stated that she had "attacks" that started with her throat swelling and she had these "attacks" for years. However, she never fell down, hurt herself, lost continence or bit her tongue during these attacks, so from the clinical history these were not seizures. They seemed to be describing a panic attack ("*globus hystericus*"). Claimant told Dr. Melnick that she had a gynecological exam and that she had a uterine tumor and could not straighten up for four years. Dr. Melnick called this a misattribution because (a) she does not have a tumor and (b) even if she did it would not affect her ability to stand straight. This note from Dr. Melnick is a classic presentation for a somatoform disorder. He did further tests to rule out physical problems but suggested that Claimant had a "panic disorder," which is in the same ballpark as a somatoform disorder.

Dr. Kaye further explained that Claimant went to Dr. Ley (the infectious disease doctor) in June of 2000 and gave her impression that her problems were caused by chemicals in the

⁴ Dr. Kaye clarified that Claimant does have a breathing problem and has COPD. She also had other objective problems, such as her 2002 knee injury. By suggesting that she has a somatoform disorder, he does not mean to suggest that she does not have actual physical problems as well.

building where she worked. Then, in July of 2000, she had two episodes where she fell to the ground. She reported that she could feel and hear everything but could not move her extremities. The only physical cause for something like that would be a pontine-level stroke and a person does not recover from something like that. Thus, again, this is a psychiatric-based problem.

In 2001, Claimant had another stressor in the form of harassment at work. In January of 2002, she went for treatment of RSD and fibromyalgia. In June of 2002 she went to Dr. Schwartz at Johns Hopkins. He noted that her conditions occur in everyday life and are not related to the building. Claimant reported that she developed a cyst in her thyroid duct that had not been present when she went to work but was there when she left. Cysts, however, do not occur over night. In July of 2002, Claimant stopped working at UD.

Dr. Kaye stated that a questionnaire that Claimant filled out in 2007 contained many inconsistencies and conflicts with what is known from the historical records. For example, Claimant stated that driving in traffic with the windows open would cause her problems, but she had no problems sitting next to a smoker. She reported that drinking city water got her sick from the chlorine, but she had no problem filling up a gas tank. Claimant listed problems with almost all her organ systems. She stated that she was taking oxycodone; could not sit, stand, bend or twist over an hour; could not think straight; and had trouble socializing, and that her symptoms "increased by eating," which makes no sense.

Dr. Kaye noted that Dr. Lanny Edelson, who saw Claimant on UD's request, performed a mini mental status test and Claimant performed normally. Cognitive testing was normal. There is no evidence that Claimant has any neurological disorder and no evidence that she has toxic encephalopathy.

Dr. Kaye stated that toxic encephalopathy is an acquired condition arising from toxic exposure. To determine it, one must have a known toxin in sufficient quantity to result in a specific illness (such as changes in cognition or possible structural problems on diagnostic testing). There is no evidence that Claimant had an exposure to a known toxin. If she did, there is no evidence as to whether the exposure was in sufficient quantity to cause a health problem. Claimant also has no specific illness to support a finding of toxic encephalopathy. Her cognitive testing was normal. Dr. Ziem's conclusions operate backward in an unscientific manner. She decided that because Claimant has symptoms she must have been exposed to a toxin even though the specific one cannot be identified. This is "junk science." Scientifically, to establish causation, one must establish first that there was a sufficient exposure to a toxin that could cause such symptoms. Dr. Kaye is familiar with epidemiological instruments. These are questionnaires that are used. Epidemiology looks at effects on large groups—they are not designed to translate to individual cases.

In Dr. Kaye's opinion, Claimant's presentation fits a somatoform disorder. Typically such a disorder occurs prior to the age of twenty-five, but by Claimant's history she had symptoms as far back as childhood. Normally the onset of multiple medical problems does not occur until late in life (70 to 80 years). In Dr. Kaye's opinion, Claimant is being harmed because she is now putting her faith in a wrong diagnosis from Dr. Ziem, and that is preventing her from getting the proper psychiatric treatment for her true problem. Claimant has lost hope of getting better because she believes in Dr. Ziem's diagnosis of a "permanent" injury which she does not have. Claimant had already asserted her personal belief that her work building was the source of her problems to Dr. Ley and Dr. Schwartz because she was hoping to find somebody to validate

her beliefs. Neither did. It was not until she came to Dr. Ziem that she found somebody to validate the conclusion Claimant had already formed for herself.

Dr. Kaye observed that testing grip strength would not supply information concerning the function of the central nerves of the brain because grip strength is a function of peripheral nerves. The central nerves would only be involved if Claimant had a stroke, which she did not. Similarly, testing with a tuning fork tests the vibratory nerve fibers. Once again, this would test for a sensory neuropathy involving peripheral nerves. It is not a valid test of the central nerves of the brain. Having stated this, Dr. Kaye acknowledged that he did not do a neurological examination of Claimant himself.

Dr. Lanny Edelson, a neurologist, testified by deposition on behalf of UD. He examined Claimant on November 7, 2007, and September 3, 2008, and he reviewed pertinent medical records. In his opinion, Claimant does not have toxic encephalopathy.

When Dr. Edelson first examined Claimant in November of 2007, she brought a list of diagnoses from Dr. Ziem which included RAD, toxic encephalopathy, chemical sensitivity, neural sensitization, asthma, chronic sinus and respiratory irritation and disease, chronic eye irritation, toxoplasmosis, amoeba infection, bacteria in the blood, visual problems related to macular and brain visual tract problems, gut dysbiosis, and an abnormal glucose insulin interaction. Dr. Ziem apparently felt that all of these diagnoses were secondary to chemical injuries.

On November 7, 2007, Claimant complained of right lower extremity pain, left thigh pain, memory lapses, and occasional intermittent episodes of blurred vision. She was wearing a charcoal mask. She reported that she had smoked half a pack per day for about ten years but she quit in 1998-1999. Her prior medical history included surgeries for an appendectomy, removal

of gall bladder, hysterectomy and a right patella repair. On examination, blood pressure and pulse were normal. Her head, ear, nose, throat, neck, chest, heart and abdomen were all normal. Neurologically she was awake, alert and well-oriented. Speech and comprehension were normal. The cranial nerves functioned normally. Motor examination was normal for both upper extremities and the left lower extremity. Because of Claimant's right knee injury and subsequent pain syndrome, it was difficult to assess the right lower extremity. The right calf did show some atrophy connected to that knee injury. Reflexes at the right ankle were somewhat diminished. She had a mild degree of allodynia in the right lower extremity. The doctor was unable to find other clear indicators of RSD, such as excessive sweating, hair growth changes, discoloration or skin atrophy. Vibratory sensation and pin sensation in the left foot was normal. Testing with a monofilament, sensation was slightly diminished in the right foot. Coordination testing was normal. She had an antalgic gait.

On a mini mental status examination, Claimant scored 29 out of 30. This tests a patient's orientation as to date and place and checks memory. Claimant did very well. The doctor also administered a Boston Naming Test, where a person is shown pictures of objects to name. Claimant scored perfectly, 15 out of 15. Dr. Edelsohn asked Claimant to name animals within a certain amount of time. An average person can name about 18 and Claimant named 17. She also had no difficulty with the clock-drawing test. She also was able to relate her very complicated medical history including the names of doctors she had seen. Thus, in Dr. Edelsohn's assessment, Claimant's mental status was perfectly normal.⁵

Dr. Edelsohn reviewed diagnostic testing that had been done. A March 1999 EEG and

⁵ Dr. Edelsohn examined Claimant a second time on September 3, 2008. The findings at this examination were essentially the same as at the November 2007 examination, so no purpose would be served by repeating those findings here. What is significant is that the findings were the same in two appointments done roughly ten months apart.

MRI were both normal. A February 2007 CT scan of the low back showed multilevel degenerative disk disease. An EMG taken at about the same time showed changes consistent with bilateral L5-S1 radiculopathy.

In Dr. Edelsohn's opinion, there is no evidence that Claimant has toxic encephalopathy. That condition happens when a toxin has effect on brain functioning. A person will have clearly abnormal cognitive functioning such as confusion, lethargy and coma. Once the toxin is removed, the patient improves. In Claimant's case, her cognitive functioning was normal. There was no evidence of any disability or dysfunction of the brain.

Dr. Edelsohn was not convinced that Claimant has RSD, but if she does that would be a peripheral nerve problem related to the knee injury and not the result of any alleged exposure at UD. Other than that, there is no evidence from which to conclude that Claimant has a peripheral neuropathy. Claimant has no neurologic condition that would be associated to any exposure to chemicals, mold or anything of a toxic nature.

Dr. Edelsohn considers Dr. Ziem's reports and conclusions to be "outrageous." For example, Dr. Ziem reports a "NTI Reaction Time Test" that she interpreted as being "very abnormal—toxic encephalopathy." Dr. Edelsohn did not know what sort of test this was, but at the bottom there is a list of very toxic chemicals that could damage reaction time (such as chlorine, vinyl chloride, triorthocresyl phosphate and tetraethyl lead). These are very toxic chemicals and Claimant was never exposed to such things. The records reflect no documented exposure to any toxins. Secondly, Claimant's neurological functioning is normal, so Dr. Edelsohn puts no credence in this Reaction Time Test as being an indicator of toxic encephalopathy. It is "crazy science" or "junk science."

Claimant testified on her own behalf. She is fifty-three years old and has been married for thirty-five years. She is a high school graduate and has an associate's degree from Cecil Community College.

Claimant explained that she started working at UD in 1987 as a clerk/typist in the purchasing department. She worked in the General Services Building until 1995. She had no specific health problems while she was there that she would attribute to the building itself. In 1995, she transferred to Sharp Lab, which was for physics and astronomy. She thinks she started there as an executive secretary, but a couple years later her position was upgraded to "staff assistant." Her job duties included scheduling classes, handling drop/add, did budget work and payroll, handled inventory, ordered textbooks and supplies and the like. She did not handle the chemicals at Sharp Lab. Chemicals would be delivered to the office and she would check them in and take inventory, but she did not handle them. She worked Monday through Friday, 37.5 hours per week. Sharp Lab consists of three floors plus a basement. The actual labs were mostly in the basement. Classrooms were on the first floor. Office space was on the second floor. Her office was on the second floor and she shared it with two other people in addition to work-study students. Her desk was just inside the main door. There was an air intake under the desk and an air conditioning vent over the desk. This vent was always dirty and "nasty stuff" fell out of it. The tiles around it were black and dirt would fall on her desk. She would call the custodians to clean it but, after cleaning, it would be dirty again four or five days later.

Claimant noted that she first noticed a change in her health by the end of 1996. She was having sinus and throat infections and bronchitis. She went to her primary care doctor, Dr. Sachdev. In December of 1996, she complained to the doctor that the inside of her throat would swell and she would need to gasp to get air in. Indeed, at times she had black-outs from this

problem. In May of 2000, she was hospitalized for breathing problems. Bronchitis changed to pneumonia and a bacterial blood infection. She stayed at the hospital for about a week. When she was released, she returned to Sharp Lab and her breathing problems noticeably worsened within the first day.

Claimant stated that it was a long time before she associated her health problems with the building. She did not make the association until after she was hospitalized. Prior to that, she did not concern herself with the chemicals present in the building although there were incidents where the building had to be evacuated because of chemical fumes or spills. In 1995, there was an incident of a spill that led to people being taken to the emergency room. When she first came to Sharp Lab, there was a situation where the lab hoods were installed at the wrong height and were venting into the air that was circulating in the building. They have been modified since then.

After she was hospitalized in 2000, Claimant noticed that she developed headaches when she entered the building and her throat became raw by lunch time. In June of 2000, she saw Dr. Ley and mentioned to him that she thought there was a connection between her symptoms and the chemicals at work. Her symptoms were chills, hoarseness, earaches and sinus problems. Dr. Ley referred her to a pulmonologist (Dr. Goodill), whom she saw in 2001.

Claimant stopped working at Sharp Lab in 2002, after she had slipped on ice, broke her kneecap and damaged nerves in her leg. After that, she made an attempt to return to work for a few hours, but she eventually just retired. In June of 2002, she saw Dr. Brian Schwartz at Johns Hopkins to see if he could do anything for her problems. She told him that she had a cyst in her thyroid duct. She stated that it had not been there when she had gone to work, but was present when she left. He told her that her condition was probably not connected to Sharp Lab, but by

then she had been away from Sharp Lab for three months and the doctor was only considering her condition right then. He was not interested in her history even though she gave him the MSDS sheets from Sharp Lab.

Claimant continued to have breathing problems from 2002 until 2007, although not as frequently as when she was at Sharp Lab. About every three months she would get antibiotics. In May of 2005, for example, she had coughing, congestion and a sore throat and Dr. Sachdev gave a diagnosis of acute sinusitis.

Claimant confirmed that she went to Dr. Ziem in July of 2007. Dr. Ziem did an extensive examination with computerized testing, blood work and the like. Claimant noted that the exam that Dr. Ziem administered was very similar to the examination that was later performed by Dr. Edelson. Dr. Ziem has been treating her with vitamins and herbal medication that is compounded individually for her condition. She is slowly improving and the frequency of her infections has slowed. Dr. Ziem is the first doctor who identified her work at Sharp Lab as the source of Claimant's problem.

Claimant confirmed that she has sensitivity to certain smells (perfume, fabric softener, diesel fumes). She wears a mask to filter chemicals out of the air. Dr. Ziem suggested using the mask. It is a specially designed mask for people with chemical injuries. Claimant told Dr. Ziem about her smoking history, but the doctor told her that she had not smoked enough to cause her problems. She smoked as a teen, then quit but started again after she came to Sharp Lab. In total, she smoked for ten to twelve years.

Dennis Collins testified on behalf of UD. He is the assistant to the department chair for the Department of Physics and Astronomy at UD. He works at Sharp Lab and has been there for thirteen years. Mr. Collins supervises the office and staff, is concerned with the facility and

renovations, and handles human resource issues. He was Claimant's supervisor for six and a half years. Claimant worked on the second floor and her job responsibilities were on that floor. There would be no particular reason why she would be down in the labs unless it was to drop something off or she wanted to talk to somebody down there.

Mr. Collins stated that the labs are in the basement of Sharp Lab. Classrooms and a few faculty offices are on the first floors. The second floor consists of a meeting room and faculty offices. The third floor has graduate student offices and there are a couple labs up there. The labs are inspected three times per year and the building is inspected quarterly. The chemical supplies are kept in secured cabinets and there are protocols for their use. The vent hoods in the labs are inspected twice a year. The basement labs use chemicals but in fairly modest amounts. After all, this is the physics and astronomy department, not the chemistry department. A fair amount of acetone is used, as well as helium, nitrogen, argon and oxygen.

Mr. Collins stated that Sharp Lab has seven air handlers. The handlers that circulate air in the basement are different than those that handle the air on either the first or second floor. Laboratory air would not be circulated up to the second floor. While there have been some renovations to Sharp Lab (such as moving department offices down the hall or refurbishing a lab for a new faculty member), the air handlers have remained the same for the thirteen years that Mr. Collins has been there. He does not recall any vents being moved. General maintenance has been done on the handlers and vents over the years. With respect to the hoods in the basement labs, the ductwork for those hoods goes out through the roof. A new hood was added about a year and a half ago. Mr. Collins does not recall any such renovation project as Claimant described.

Mr. Collins testified that he was aware that Claimant had illness, particularly in 2000. He had no detailed knowledge, but just generally knew she was ill. Claimant never suggested to him that the problems she was having were associated with the building. After her knee injury, Claimant returned to work a total of twenty-five hours from April to July. He believes that the last day she worked was July 15 and she stopped working because of her painful knee. Mr. Collins walked out of the building with Claimant on her last day and she did not mention anything to him about having breathing problems.

As for Claimant's story of a chemical leak that led to people being taken to the hospital, Mr. Collins cannot recall any such event. About thirteen years ago there was a situation when there were odors related to the tarring of the roof and a person was taken to the hospital with respect to that, but that was specific to the tarring of the roof. Between 1995 and 2000, air quality tests were done for particles in the air. Those tests always came back negative.

Juanita Crook testified on behalf of UD. She is a senior administrative assistant. She handles workers' compensation matters. She processed Claimant's claim concerning her knee injury and had communications with her about that. Claimant never mentioned having any respiratory problems associated with Sharp Lab.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

Compensability

The Delaware Workers' Compensation Act provides that employees are entitled to compensation "for personal injury or death by accident arising out of and in the course of employment." DEL. CODE ANN. tit. 19, § 2304. Because Claimant has filed the current petition, she has the burden of proof. DEL. CODE ANN. tit. 29, § 10125(c). "The claimant has the burden of proving causation not to a certainty but only by a preponderance of the evidence." *Goicuria v.*

Kauffman's Furniture, Del. Super., C.A. No. 97A-03-005, Terry, J., 1997 WL 817889 at *2 (October 30, 1997), *aff'd*, 706 A.2d 26 (Del. 1998). The Board finds that Claimant has not met her burden of proof.

Perhaps the first issue to be addresses is whether Claimant had any exposure to toxins. The Board finds that Claimant has not provided sufficient evidence to establish that, more likely than not, she even had an exposure to a toxic substance.

Dr. Ziem referenced an MSDS sheet received from UD of chemicals present at Sharp Lab. However, a sheet documenting that chemicals are present in a building is not the same as evidence that Claimant was actually exposed to any of those chemicals. Claimant admitted that she never handled the chemicals. Claimant suggests that she was exposed to fumes. She draws attention to the air vent above her desk and air intake below her desk. However, Mr. Collins explained that the air handlers for the labs (where the chemicals are) run separately from the air handlers that serve the classrooms and the offices. This is believable because it is how one would reasonably expect the air handlers to be designed. Dr. Ziem was under the impression that one of the air handlers mixed air from the labs with the air from Claimant's office. The Board finds that to be highly unlikely. Thus, while Claimant discusses dark material from the vents, it is pure speculation that that dark material was in any way toxic.

Claimant also asserts that she, on occasion, would walk through the labs where she breathed fumes. This highlights the second weakness in Claimant's case. As Dr. Cogen testified, to establish causation it is not enough to just establish an exposure. The exposure must also be in a sufficient dose to create a response (a dose-response relationship). Dr. Ziem agreed that she had no evidence to establish what dose Claimant may possibly been exposed to. This, in itself, is a major weakness in Claimant's case. The Board also notes that it was provided with no

evidence that any other person in Sharp Lab has sustained inhalation injuries. If the people who were actually working with the chemicals and breathing the fumes for a prolonged time did not receive a sufficient dose to trigger a response, it seems unlikely that Claimant's occasional presence in the labs would expose her to a toxic dosage.⁶ *See Yang v. E.I. DuPont de Nemours & Co.*, Del. Super., C.A. No. 04A-01-008, Johnston, J., 2004 WL 3029943 at *4 (December 3, 2004)(lack of other reports of inhalation injuries supports conclusion that causation not established), *aff'd*, 877 A.2d 53 (Del. 2005).

The Board agrees with Dr. Kaye's comment that Dr. Ziem's causation opinion is the result of backward reasoning. Having determined that Claimant sustained chemical inhalation injuries, she is just speculating that the chemical exposure happened at Sharp Lab and that it was in sufficient dosage to have caused the problem. There is no actual evidence of either exposure or dosage to support this speculation. At best, Dr. Ziem's conclusions propose only a theoretical possibility of how Claimant came by her illnesses. Claimant's burden of proof, though, is to establish something more than a mere theoretical possibility. She must show more likely than not (*i.e.* by a preponderance of the evidence) that she had an injurious exposure while at Sharp Lab. This is what Claimant has failed to do.

The Board is not suggesting that, to establish her case, Claimant needed to identify a *specific* toxin that she was exposed to. Certainly, identifying the specific contaminant would make finding causation easier, but the Board is aware that there is case law to the effect that causation can, in some cases, be established without such evidence. *See Griglione v. Verizon Delaware Inc.*, Del. Super., C.A. No. 05A-12-002-JOH, Herlihy, J., at 8-9 (July 14, 2006).

⁶ The Board is not suggesting that other occurrences of inhalation injuries are necessary for a claimant to establish causation. The Board is merely reviewing the evidence and determining whether the evidence presented by Claimant is sufficient to say that "more likely than not" she sustained an inhalation injury at Sharp Lab. If there had been other instances of similar injuries, it would have seemed more likely that Claimant has such an injury as well. When there is no evidence of other such problems, it seems less likely that Claimant does.

However, to establish causation, Claimant must still meet the standard set out by the Delaware Supreme Court for finding causation of an occupational disease.

[F]or an ailment or disease to be found to be a compensable occupational disease, evidence is required that the employer's working conditions produced the ailment as a natural incident of the employee's occupation in such a manner as to attach to that occupation a hazard distinct from and greater than the hazard attending employment in general.

Anderson v. General Motors Corp., 442 A.2d 1359, 1361 (Del. 1982)(rejecting work causation when evidence showed claimant's allergic rhinitis resulted from the "stimuli (of) the everyday world" and claimant failed to establish that the ailment came "from the peculiar nature of the employment rather than from his own peculiar predisposition"). The formulation of this causation rule does not mean "that a person predisposed to a disability may, in no event, establish disability from an occupational disease. As stated, if there had been evidence of any incidence of allergic rhinitis within the employee's work force . . . or other evidence of a causal connection, the case would be different." *Anderson*, 442 A.2d at 1361.

Thus, as *Anderson* recognized, there can be "other evidence of a causal connection" beyond identification of a specific toxin or examples of other members of the work force having similar conditions. For example, causation might be established if there is a compelling circumstantial case that links a claimant's symptoms to the claimant's presence in a specific building. See *Lewis v. State*, Del. IAB, Hearing No. 1285928, at 40-42 (December 13, 2007).

Claimant's situation lacks such compelling evidence. Even Claimant admitted that she did not connect her symptoms to the building for several years. Dr. Cogen observed that the doctor notes from Claimant's 1996 incident of throat swelling indicate that it occurred at home, not at the work place. The Board understands that years later, in 2000, Claimant felt there was a relationship between her presence in Sharp Lab and her symptoms. However, it must be clearly

understood that the causation standard is *not* whether Claimant contracted or aggravated her condition at work. This is legally insufficient to establish a compensable work injury. See *Anderson*, 442 A.2d at 1360. The standard is whether Claimant's working conditions *produced* the ailment. See *Anderson*, 442 A.2d at 1361. The fact that the initial onset of symptoms was not linked to Claimant's presence in the building argues against the building having *produced* the ailment. Claimant's case more closely resembles that of *Minner v. Dean Witter/Discover Card*, Del. Supr., No. 87, 1998 (November 24, 1998)(ORDER), where the evidence established that the claimant also exhibited sensitivity to stimuli outside of work; that she was not sensitized to anything in particular; and that there was no evidence that the work air filtration system was harmful. The Supreme Court agreed that under such circumstances causation to employment could not be established.

Accordingly, Claimant has failed to prove by a preponderance of the evidence that she was actually exposed to any toxin; nor that (if she had been exposed) it was in a sufficient dosage to cause any illness; nor, lacking such direct evidence, that there is any sufficient circumstantial evidence from which a causal link between her work and her illness can reasonably be implied.

Up to this point, the Board's analysis has operated under the assumption that Claimant has a chemical inhalation illness. Even assuming that, the Board finds that Claimant has not established causation to her work. However, the Board also notes that it finds the evidence to be insufficient to establish that Claimant actually has a chemical inhalation injury.

First, the Board agrees with Dr. Edelson that Claimant does not have toxic encephalopathy. Claimant stated that Dr. Edelson and Dr. Ziem both did similar types of examinations. Dr. Edelson thoroughly examined Claimant in November of 2007 and September of 2008 and found no neurologic injury of the brain. The cranial nerves all

functioned normally; Claimant's mental status was normal; and she exhibited good memory (being able to relate her complicated medical history). The only deficits were in the right leg and were related to Claimant's knee injury, not to a chemical exposure. A March 1999 EEG was normal. Claimant had no signs of abnormal cognitive functioning that showed the effect of a toxin on brain functioning.

The Board is not convinced by Dr. Ziem's findings. She discussed finding that Claimant had a significantly reduced hand grip as an indicator of toxic encephalopathy. However, there are multiple possible causes for a reduced hand grip. The doctor also noted a mild reduction in cognitive testing that Dr. Edelsohn was unable to confirm on two separate examinations. Dr. Ziem also had findings for a mild peripheral neuropathy (based on a tuning fork and touch sensation), but there is no support for this diagnosis in the form of more objective tests like an EMG. Dr. Ziem's suggestion that Claimant's case is so mild that a "normal" neurologic examination would not find it demonstrates just how tentative the diagnosis is. When you add to this the fact, as discussed above, that any toxic exposure of Claimant is strictly conjectural, the conclusion that Claimant has a toxic encephalopathy (undetectable by normal neurologic tests) is unpersuasive.

The Board also agrees with Dr. Kaye that Claimant's history and reports of symptoms are more consistent with the diagnosis of a somatoform disorder. Dr. Kaye went through the medical records and identified several instances of hysterical conversion disorder and panic attacks. The Board agrees that Claimant's presentation fits the classic definition of somatoform disorder, a psychiatric diagnosis unrelated to chemical exposure. The Board finds that some of the factors that Dr. Ziem thought were evidence of toxic encephalopathy were actually the manifestation of the somatoform disorder, as explained by Dr. Kaye.

The parties are agreed that Claimant has a legitimate upper and lower respiratory disease, although they disagree on the proper terminology to characterize the disease. The parties are in agreement that this disease is not the result of allergies. Dr. Ziem concludes that Claimant has an occupational disease (RAD) while Dr. Cogen opined that Claimant has chronic rhinitis and COPD.⁷ Dr. Cogen's diagnosis takes into account Claimant's significant smoking history (both active and passive). He notes that irritant rhinitis can be related to smoke exposure, which Claimant undoubtedly has, and that can lead to bacterial sinusitis. This accounts for the upper respiratory disease. He considers the lower respiratory problem to be COPD, noting that COPD in the form of emphysema and chronic bronchitis notoriously comes from smoking and tends to strike adults at just about Claimant's age level. Dr. Ziem does not disagree that Claimant has COPD, as RAD is a form of COPD. She just does not think that Claimant's history of smoke exposure was significant enough to cause COPD.

The disagreement between the doctors really is not over the fact that Claimant has respiratory problems but over the cause of those problems. Dr. Cogen proposes a causation that fits the known facts and is unrelated to work. Dr. Ziem proposes a work relation but that conclusion is based on the assumption that Claimant was exposed to toxic chemicals at work. Once again, the evidence does not support that assumption. Dr. Ziem is using a bootstrap argument: she determined that Claimant had an occupational disease; then used that conclusion to decide that Claimant must have been exposed to chemicals at work; then used that "finding" of exposure to validate the diagnosis that Claimant has an occupational disease. The Board does not find this approach to be persuasive. Dr. Cogen's conclusion is more believable. It is straightforward and is based on the acknowledged fact of Claimant's smoke exposure. The

⁷ Dr. Cogen also added a psychiatric diagnosis of IEI. The Board prefers the diagnosis from the actual psychiatrist, Dr. Kaye, of somatoform disorder, although it acknowledges that Dr. Cogen's description of IEI is not inconsistent with that of a somatoform disorder.

Board finds that, more likely than not, that is the correct diagnosis for Claimant rather than the diagnosis rendered by Dr. Ziem.

This is Claimant's petition. As such, she has the burden of proof of establishing that, more likely than not, she has an occupational disease that is causally related to her employment (using the causation standard articulated in *Anderson*). For the reasons set forth above, the Board finds that Claimant has not met her burden of establishing either that she has an occupational disease or (if she did) that it is related to her employment.

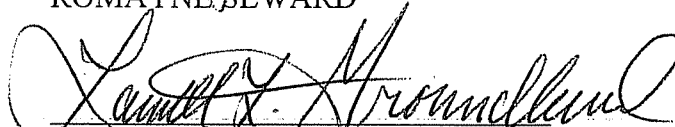
STATEMENT OF THE DETERMINATION

Claimant's petition is denied.

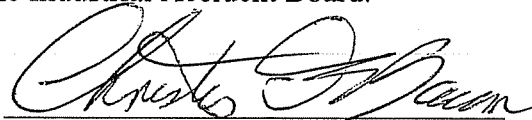
IT IS SO ORDERED THIS 12th DAY OF JUNE, 2009.

INDUSTRIAL ACCIDENT BOARD


ROMAYNE SEWARD


ALICE M. MITCHELL

I, Christopher F. Baum, Hearing Officer, hereby certify that the foregoing is a true and correct decision of the Industrial Accident Board.



Mailed Date:

6/16/09



OWC Staff