BEFORE THE INDUSTRIAL COMMISSION OF THE STATE OF IDAHO

BILLIE JO MAJOR, Claimant, v. IDAHO DEPARTMENT OF CORRECTIONS, Employer, and IDAHO STATE INSURANCE FUND, Surety, and STATE OF IDAHO, INDUSTRIAL SPECIAL INDEMNITY FUND, Defendants.	**IC 2009-002735** **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** **FILED MAY 5 2014**

INTRODUCTION

Pursuant to Idaho Code § 72-506, the Industrial Commission assigned the above-entitled matter to Referee Douglas A. Donohue who conducted a hearing in Boise on October 15, 2012. Darwin Overson represented Claimant. Gardner Skinner represented Defendants Employer and Surety. Kenneth Mallea represented Defendant ISIF. The parties presented oral and documentary evidence. After a lengthy post-hearing deposition period the parties submitted briefs. The case came under advisement on December 9, 2013 and is now ready for decision.

ISSUES

The sole issue to be decided is causation:

> Whether the condition for which Claimant seeks benefits was caused by the alleged industrial accident or arises having been caused by occupational chemical exposure under a theory of occupational disease.

All other issues are reserved.

CONTENTIONS OF THE PARTIES

Claimant contends she suffers from a disabling chronic cough, esophageal dysmotility, and vocal cord dysfunction. A training exercise on March 3, 2008 exposed her to pepper spray

which acutely caused her condition or exacerbated, aggravated, and accelerated a preexisting bronchial condition. Alternatively, repeated exposure to pepper spray during her employment from June 2004 into March 2008 caused her condition under an occupational disease theory. Her respiratory system was hypersensitive to pepper spray before she was first exposed or has become sensitized to it through repeated exposure.

(Note: hereinafter, any date occurring in 2008 will be identified without specifying the year.)

Employer and Surety contend Claimant has not shown a likely causal link between her condition and either the March 3 training or between her condition and repeated or chronic exposure to pepper spray.

ISIF contends Claimant's experts' opinions represent the logical fallacy *post hoc ergo propter hoc*. Claimant has failed to prove an accident caused an injury or aggravated a preexisting condition.

EVIDENCE CONSIDERED

The record in the instant case included the following:

1. Oral testimony at hearing of Claimant, Sgt. Nicholas Doan, Sgt. Joshua Overgaard, Lt. Bret Kimmel, Sgt. Daniel Schaffer, and Sgt. Timothy Higgins;
2. Claimant's exhibits 1 through 45;
3. Employer and Surety's exhibits 1 through 49;
4. ISIF's exhibits 1 and 2; and
5. Post-hearing depositions of IDOC records keeper Carol Spencer, toxicologist and occupational medicine fellow Brent Burton, M.D., and pulmonologist Emil Bardana, M.D.

All objections raised in depositions are overruled. Caution is suggested regarding the scientific articles which comprise Claimant's Exhibit 10: Yellow highlights and to a

lesser extent blue underlining have been added by an unknown hand, by context, possibly Dr. Yost's. Some of these highlighted portions tend to emphasize support for Claimant's argument but ignore adjacent relevant contradictory information also presented; some of them appear to be potentially related to Claimant's products liability case; some of them are tangentially or less directly related to the causation issue at hand. The fact of highlighting is not basis for assigning greater or lesser evidentiary weight to those portions.

Having reviewed all evidence of record—except for portions of Claimant's Exhibit 10 which are written in the (presumably) Dutch language and brief portions of Claimant's Exhibit 40 in French—the Referee submits the following findings of fact and conclusions of law for the approval of the Commission and recommends it approve and adopt the same.

FINDINGS OF FACT

Initial Background Facts

1. Employer ("IDOC") operates the Idaho Maximum Security Institution ("IMSI") and the South Boise Women's Correctional Facility ("WCF"). Beginning July 2004 Claimant worked for IDOC. From July 2004 to July 2006 she worked at IMSI. From July 2006 to about August 2007 she worked at WCF. From about September 2007 to March 3 she again worked at IMSI. IMSI is comprised of six separate cell blocks which are capable of housing inmates.

2. IMSI uses separate air handling equipment in each of its six cell blocks. To avoid collateral exposure, standard operating procedure requires air handling equipment of a cell block to be shut down before pepper spray is used in a planned deployment; for a reactive deployment air handlers are shut down immediately afterward. After the quelling the situation requiring its use, the area—usually a cell—is washed down before air handling equipment is turned back on.

3. Throughout IMSI, situations requiring pepper spray use occur erratically, sometimes two or three times in one week, sometimes more than one month apart. Except for

specific pepper spray deployments in which Claimant was personally involved, a report of pepper spray deployments was not provided nor correlated with whether Claimant worked a specific cell block at the time of any specific deployment.

Claimant's Termination

4. Claimant was terminated in May as a disciplinary action for using pepper spray on an inmate back in January. In part, disciplinary action was based upon video evidence that Claimant smiled immediately after she sprayed the inmate. Claimant testified inconsistently about when she learned of the disciplinary investigation and when she became aware she might be fired.

5. Employer informed Claimant on Friday, February 29, that disciplinary action for the January incident could include termination. Claimant knew she was on probationary status pending final disciplinary action before and during the Monday, March 3, training. Returning from the weekend, she attended the March 3 training and did not perform any regular work for Employer afterward. She recorded a few hours of work time on March 14 and 21 when she was interviewed regarding the disciplinary investigation. She also recorded a few hours of work time while preparing or reviewing paperwork associated with her termination in May. The March 21 interview report notes, "Major said that the investigation is not helping her medical condition."

OC Generally

6. Oleoresin capsicum ("OC"), casually referred to as pepper spray, is sometimes used to subdue inmates. OC products can be administered as a fog, stream, spray, or foam.

7. A Level 1 exposure to OC products, the most difficult to tolerate, involves a stream of OC targeted directly at one's face. A Level 2 exposure occurs when one makes physical contact with a person who has been sprayed. Inhaling OC fog is a Level 3 exposure.

8. Capsaicin is the major active ingredient of OC. One of the many scientific studies proffered by Claimant stated: "Capsaicinoids, in the form of oleoresin capsicum, are classified as *GRAS* (Generally Regarded As Safe) substances by the United States Food and Drug Administration (FDA) and are approved as food additives or as topical analgesics without extensive toxicological profiling."

9. Capsaicin is what makes chili peppers "hot." It is commonly used as a spice.

10. Capsaicin is commonly used as an active ingredient in topical analgesics. It desensitizes nerves and thereby relieves pain.

11. Capsaicin is commonly used in medical clinical practice to provoke respiratory reactions to test for asthma and other conditions.

OC Training Generally

12. IMSI standard operating procedure requires a trainer at the start of any training to request trainees to acknowledge any medical or other physical condition which might excuse a trainee from any part of the exercise. This request may be made orally, in writing, or both. Written documentation is of record showing similar requests for some of Claimant's prior trainings, but not for the March 3 training.

13. A trainer, Sgt. Bret Kimmell, testified that he has excused other officers from other training upon excuses of having a cold or flu. Throughout his years as a trainer, Sgt. Kimmell recalled two training incidents in which officers' cosmetics had reacted with the carrier—the solvent or propellant—in the OC product, not with the OC itself, and that these trainees had been affected more significantly to the exposure. They required medical care; Workers' compensation claims were filed. Neither of these showed any residual problem by the end of the day. Sgt. Kimmell could not recall any other trainee responding unusually to OC exposure.

14. Sgt. Kimmell was not present for the March 3 training.

15. In his years as a trainer, Sgt. Joshua Overgaard recalled only a single incident of a trainee having an unusual reaction to OC exposure. One trainee showed undue anxiety upon OC exposure and was helped from the exposed area. Neither this nor any other trainee whom he has observed has showed effects lasting more than one hour after exposure.

16. Except for Employer's version of SWAT team members, no corrections officer is directly sprayed with an OC product in any training. Trainees use an inert spray to practice spraying each other in the face.

The March 3 Training Exercise

17. On March 3 Claimant was part of a training exercise which included Level 3 exposure to an OC fog.

18. Claimant had been working light duty before March 3 because of bronchitis and a sinus infection. She was using prescribed steroid inhalers. Claimant testified that she inquired about being excused from training. IDOC officers testified that they did not recall her doing so.

19. For the March 3 exercise, the OC fog was repeatedly sprayed in a cell. Trainees received a Level 3 exposure. They were in the cell for an average exposure of 30 seconds up to a maximum of one minute. Hallway fans were set up to blow away any OC odor which might escape the cell. Upon leaving the cell, trainees then briefly demonstrated some defensive tactics before they were allowed outside to hose off and get fresh air. The tactics portion lasted for no more than a few minutes.

20. Before being released from the training each trainee was debriefed and individually observed by Sgt. Overgaard, Sgt. Nicholas Doan, or both, to verify the absence of lingering effects. While neither of the trainers specifically recalled this training,

neither recalled Claimant complaining of any ill effects in the debriefing. A third officer, Sgt. Timothy Higgins, testified at hearing that he was "99 percent" sure he acted as a safety officer during that training; he described the training consistently with the trainers and similarly did not recall Claimant having problems or voicing any reservations.

21. Claimant's description of the March 3 training differs from other officers' recollections: She testified that in addition to exposure to OC fog, she would spray and be sprayed by a partner as they handcuffed each other; that after the OC exposure she was inside an area without ventilation for two to two and one-half hours continuously before allowed out to fresh air; and that no fans were present.

22. The March 3 training did not involve partners spraying each other at all. No spray, neither active nor inert, was used for this exercise.

23. Claimant recalled that on March 3 she subjectively noticed a physiological difference from exposure to the fog versus exposure to other OC delivery methods, that her lungs burned, and that she went home and did not work again.

Claimant's Exposures to Oleoresin Capsicum

24. For purposes of Claimant's occupational disease theory, her personal encounters with OC were documented. Mild ambiguity in the record about exact dates or locations of such encounters does not materially affect any analysis.

25. Claimant reported that she was never exposed to OC while working at WCF.

26. All training exposures were Level 3 exposures. Claimant never received a Level 1 exposure.

27. Claimant's Level 2 and 3 exposures to OC occurred as follows:

a. In her initial August 20, 2004 training, Claimant was exposed to OC in a fog and possibly in a PepperBall deployment;

b. In an October 22, 2004 incident Claimant sprayed OC on an inmate;

c. A February 14, 2006 training exposed Claimant to OC;

d. A July 2007 training is erroneously recorded as having occurred over two nonconsecutive days; actually it was only a single day. Trainees sprayed OC into a bucket. This training occurred while Claimant worked at WCF. Sgt. Schaffer recalled Claimant bragging that at IMSI "they use OC for breakfast";

e. On November 21, 2007 Claimant was part of a planned extraction team which used OC on an inmate. Because Claimant wore protective gear it is uncertain whether she was actually exposed;

f. Although Claimant did not describe it, Employer's records show that in a January 14 incident OC was used on an inmate when Claimant was present.

g. In a January 31 incident Claimant sprayed OC on an inmate. This incident was the primary stated cause of her termination in May;

h. The March 3 training is the subject of Claimant's accident claim.

28. In addition Claimant testified she was exposed to OC odor, particularly for at least one day afterward, whenever it was used at IMSI.

29. Other employees characterized it differently; such odor never migrated between cell blocks; such odor was seldom noticeable beyond the immediate area of application or immediately surrounding the inmate on whom OC had been used, and both the area and inmate were decontaminated within the hour; officers so exposed had the option of using an employee locker room to shower and change clothes if needed and upon occasion have been sent home to change clothes; if an inmate returning to his cell complained of lingering OC odor, he was given a sponge and a bucket to clean the area himself; otherwise, such OC odor was deemed either not noticeable or not a problem by other officers whose testimony is of record. When questioned, they generally described the lingering odor when noticeable as "citrusy" or "not quite citrusy," suggesting that the odor of the carrier was more prominent than the OC odor.

30. Finally, Claimant testified that IMSI generally smelled of OC. Her testimony was inconsistent with other officers' testimony.

Claimant's Respiratory Condition

31. Claimant generally associates her history of increased coughing with episodes of OC exposure at work. She associates her weight gain to inactivity caused by her coughing. She sees herself as being substantially disabled. She has been approved for Social Security Disability ("SSD"). In her SSD application Claimant asserted her disability began in December 2007.

32. In March she filed for short-term disability. The record ambiguously indicates she did so on March 4 or 12.

33. Currently Claimant associates increased coughing with activity or trying to talk. On cross-examination Claimant admitted she also associates increased coughing with diesel fumes, Windex, household cleansers, some perfumes, and smoke from chimneys or wildfires. Inconsistently at different times, she has confirmed and denied to physicians that perfumes and/or other specific potential irritants have triggered coughing episodes.

34. Sgt. Doan worked with Claimant before the March 3 training. He testified that Claimant coughed at work "about the same level" as she coughed at hearing; he could not recall how frequently she coughed when asked to compare frequency.

35. Sgt. Overgaard also worked with Claimant before March 3. He testified that she "usually coughed" and spoke with a "very raspy" voice; he testified Claimant's coughing at hearing was "much more" severe than when he observed her at work.

36. In deposition for the products liability case, Sgt. Daniel Schaffer testified Claimant coughed "every day" he worked with her at WCT.

37. No officer recalled Claimant ever complaining about OC exposure or OC odor.

38. The earliest record of Claimant associating OC exposure to her condition occurs on March 21 during the disciplinary investigation; Claimant is recorded as saying "that she might have smiled as a reaction to the OC. . . . Major said that she has never felt the effects of OC until this incident so she thinks she may have been coughing and it just looked like she was smiling. . . . Major said that the investigation is not helping her medical condition."

39. On May 12 in rebuttal to being notified that she would be fired for the January incident, Claimant wrote, "The shift commander had to be notified under this circumstance, and while I was placing the call, my lungs started to burn and I started to cough." After addressing an issue about absenteeism, she concluded, in part, as follows:

> In the light of everything I have just discussed above and other repeated incidents that have taken place over the period of my employment, I respectfully submit that I am being discriminated against because of my current disability. That disability started on March 3, 2008, after a mandatory training in cell extraction and OC training. Prior to March 3rd, I called Sgt. Overgaard and informed him I was being treated for Bronchitis and on light duty. He told me the training was low impact. He told me to come to the training. I assumed we would be using inert or a lower form of OC as in the last couple of OC training sessions I have been to. I had not thought of applying for Workman's Comp after the OC training of March 3rd. I was at the doctor on March 4th in which I was completely removed from work and do not know when I will be able to return. I cannot exclude other basis of discrimination at this time.

Medical Care Prior to Employment (July 2004)

40. A June 1996 paranasal sinus CT scan was taken after a six-month sinus infection.

41. As early as August 1996 for a history taken by James Johnston, M.D., Claimant reported chronic sinusitis. Dr. Johnston remarked, "Environmental allergies are suspected, but not determined yet." She complained of weight gain from inactivity associated with an injury. Her weight was recorded at 160 pounds, consistent with a 1989 record.

42. In November 1996 allergist Joseph Callanan, M.D., opined, "Billie probably has underlying allergy primarily to house dust causing recurrent symptoms of nasal congestion, sinus infections, and headaches."

43. In December 1996 Dr. Callanan recorded, "She does seem to have quite a bit of irritants at work and they were able to clean some ducts out." Referring to this time period elsewhere in the record, Claimant described by history that she had endured "sick building syndrome."

44. A December 1997 visit to Matthew Schwarz, M.D., showed chronic allergic rhinitis well controlled by medication.

45. A July 1998 medical record characterized Claimant's condition as chronic nasal obstruction. In November 1998 she reported continued symptoms despite medication.

46. In January 1999 Dr. Schwarz performed a radiofrequency procedure to relieve sinus symptoms. By April she reported that the procedure had improved her condition but some symptoms remained.

47. Also in January 1999 Claimant was treated for epigastric pain and related gastrointestinal symptoms. Dr. William Loveland, M.D., noted her weight at 223 pounds. Reflux was discussed.

48. In February 1999 Claimant was treated for various symptoms including chronic reflux, mild shortness of breath, cough, and pharyngitis. Dr. Loveland noted a history of chronic sinusitis. One X-ray was normal, one showed possible pneumonia.

49. In June 2000 she reported an exacerbation of sinus symptoms to Dr. Schwarz and a separate exacerbation in July which resolved by the end of August.

50. A February 2001 note records a two-week cough. Dr. Loveland's PA diagnosed bronchitis. Dr. Loveland noted a "greater than one year history of coughing associated with laughing." Lung function testing was negative for reactive airways disease, but Dr. Loveland remained suspicious. The coughing continued into May 2001.

51. Claimant underwent a sleep study in March 2001. It was performed by Stephen Asher, M.D. It showed abnormal results including "a moderate to marked increase in the patient's Respiratory Disturbance Index." Sleep apnea was diagnosed. A CPAP machine was recommended. Her weight at that time was recorded at 242 pounds.

52. A May 2001 CPAP test showed it helped generally and eliminated the respiratory abnormalities. She was intolerant of the CPAP because she reported an inability to breathe through her nose. Dr. Asher recommended use of an oral appliance. Additional sleep studies were performed on Claimant in January 2002 and August 2003. The August 2003 study reported "moderately severe upper airway resistance syndrome."

53. In May 2002 Claimant returned to Dr. Loveland's clinic with complaints of cough and other respiratory symptoms. Asthma had been ruled out by this time. She returned in September and again in December 2002 with a recurrent bout of respiratory symptoms including cough. Her weight was noted at 267 pounds in December.

54. A chest X-ray was taken on January 6, 2003 for wheezing, coughing and shortness of breath which had persisted for one week. It revealed new nodular opacities in the right upper lung. Dr. Loveland diagnosed pneumonia.

55. In February 2003 Claimant underwent jaw repositioning surgery to help alleviate her sleep apnea and, to a lesser extent, her reflux. Dr. Schwarz performed surgery and provided follow-up care. As part of her pre-operative history, Claimant noted chronic bronchitis and pneumonia.

56. In March 2003 Dr. Loveland's PA again diagnosed bronchitis, possible pneumonia. A chest X-ray was interpreted as showing distally "coarse lung markings" but the pneumonia had cleared.

57. In June 2003 Dr. Loveland again treated her for reflux symptoms.

58. An August 2003 polysomnography report found evidence of moderately severe upper airway resistance syndrome. Thus, despite surgery, Claimant's objective clinical picture was substantially unchanged.

59. In September 2003 Dr. Schwarz opined, "She does have some upper airway resistant syndrome which is probably related to her weight."

60. In February 2004 Dr. Loveland first noted complaints of depression and restless legs. Reflux problems continued.

61. Claimant's testimony is inconsistent with these medical records: She testified she had bronchitis and pneumonia only once before her employment with IDOC.

62. Dr. Loveland's and other physicians' records show multiple diagnoses of recurrent bronchitis, pneumonia, and respiratory symptoms including cough before Claimant began working at IDOC around July 2004.

Respiratory and Related Medical Care, July 2004 – March 3, 2008

63. Beginning January 11, 2005 to February 26, 2008, Glenn Moldenhauer, D.C., provided frequent chiropractic care. He noted her complaints, including occasional respiratory issues, whether he treated these conditions or not. His notes show she frequently mentioned her work activities in conjunction with various ailments, but do not mention OC exposure. He was involved in restricting her duties or excusing her entirely from work for an arm injury and an ankle injury in 2005.

64. In January 2005 Dr. Loveland continued to treat various symptoms including reflux, sinusitis, and restless legs.

65. In April 2005 Dr. Loveland recorded complaints including two months of shortness of breath with exertion. He noted abnormal spirometry results. By mid-May

symptoms had improved some and spirometry results were negative.

66. In July 2005 her bronchitis with cough and congestion had returned.

67. In October 2005 he noted "possible sensitivity to electromagnetic emissions from computer" after Claimant complained to him of headaches worsening at work.

68. In November 2005 she visited Dr. Loveland for other conditions but also complained of intermittent rhinorrhea.

69. In February 2006 her major complaint was bronchitis.

70. In May and June 2006 visits she mentioned continuing complaints of reflux and restless legs.

71. In November 2006 Claimant visited Dr. Loveland with another bout of bronchitis.

72. Claimant returned to Dr. Loveland's clinic in January 2007 with another bout of bronchitis.

73. In March 2007 she reported strep throat, but was diagnosed with bronchitis.

74. In October 2007 her recurrent cough and symptoms was again diagnosed as bronchitis.

75. In January 2008 she again had bronchitis and sinusitis.

76. On February 22 Dr. Loveland's office recorded another bout of recurrent bronchitis and sinusitis, as well as reactive airway disease. A lung X-ray showed new nodular opacities.

77. Around February 26 Claimant underwent significant respiratory testing. Spirometry showed some abnormalities. A chest CT was essentially normal but for some nodular opacification in both lungs which the radiologist suggested "may be secondary to infection such as scattered bronchopneumonia." A sinus CT showed some chronic sinusitis.

Dr. Loveland's office recorded that she complained of a 2-month history of cough and shortness of breath. Bronchitis was again diagnosed. Claimant was given a work restriction of desk work only.

78. Claimant visited Dr. Moldenhauer on February 26. She mentioned she had some lung tests performed elsewhere.

79. Where it was noted, Claimant's weight remained relatively stable, up and down between 250 and 270 during these years.

Medical Care, March 3 2008 – September 2008

80. Claimant's testimony about her March 4 visit differs from Dr. Loveland's notes: She testified that she coughed, experienced nausea and burning lungs, and had a runny nose continuously after the training through the doctor's visit. She testified that she told Dr. Loveland she had these complaints since the OC training.

81. On March 4 Dr. Loveland's notes show Claimant reported a cough for 6 weeks with shortness of breath and a fever. She complained of fatigue and being depressed and upset over being sick and missing work. He noted a cough, but on examination found no bronchial symptoms. He released her from work through March 12. Dr. Loveland's note contains no other mention of work, and no mention of OC exposure.

82. On March 12 Claimant visited pulmonologist Danny Hendrickson, M.D. By history she reported "She has had a severe cough since at least early Dec. 2007." She did not mention exposure to OC or the March 3 training. A sinus CT suggested mild chronic sinusitis.

83. On a March 14 visit Dr. Hendrickson noted, "I strongly suspect that the cause of this patient's protracted cough is secondary to sinus disease." He referred Claimant to Lance Coleman, M.D., for a consultation.

84. On March 26 Dr. Coleman noted a history of a cough for six months. He was

aware of the presence of pulmonary nodules. A fiberoptic examination of her vocal cords found them functioning normally, with minimal edema. He recommended medication changes in the event one of these was a factor causing her cough. Among potential causes, he rated sinusitis as a "very low suspicion."

85. An April 1 visit to Dr. Loveland showed no change in her cough. He extended her work release through May 1.

86. On April 24 an upper GI test failed to show gastroesophageal reflux disease ("GERD") or a hiatal hernia. Spirometry showed normal results. A methacholine challenge test was negative for airway hyper-responsiveness.

87. Claimant visited Dr. Moldenhauer on April 14 and 16. These notes show she mentioned tests for her cough, but these notes do not mention work at all. Similarly, notes dated 5/22, 5/29, 7/10, 8/11, 9/30, 10/6, 10/13, 12/2, 12/8, 12/9, 12/16, 12/29 and 12/30 appear in 2008. None of these mention OC exposure or work.

88. A May 1 chest CT showed no lung abnormalities despite Claimant's reports of cough for three months, shortness of breath, and chest pain.

89. On May 8 Dr. Hendrickson expressed pessimism about the potential value of a bronchoscopy. Nevertheless, Claimant insisted.

90. A May 15 fiberoptic bronchoscopy showed normal larynx and bronchial tubes. Tissue biopsies were taken which showed mild nonspecific submucosal chronic inflammation.

91. Seen by Dr. Loveland on June 3 for other things, she complained that her cough had not changed. On examination, he noted her lungs sounded clear. On July 1 he extended her work release for another month. His notes do not indicate whether he was aware that she had been fired in May.

92. On June 17 Nic Cordum, M.D., performed an upper endoscopy. He reported this as normal, including the absence of a hiatal hernia.

93. Seen by Dr. Loveland on July 28 for other things, he noted her continued cough on examination.

94. A 24-hour pH study performed August 4 showed mild to moderate GERD, but the testing physician, Dr. Cordum, opined it unlikely that acid reflux was inducing Claimant's chronic cough.

95. According to his notes, as of a September 2 visit neither Dr. Loveland nor Claimant had mentioned OC exposure or a possible link to her cough.

96. Despite multiple visits and extensive testing Claimant did not mention OC exposure or the March 3 training until September 2. On that date she suggested to Dr. Hendrickson that "frequent exposure" to OC may have caused her cough. Dr. Hendrickson expressed doubt but began to follow-up on the possibility.

97. In notes of a September 15 visit to Dr. Loveland for recurrent bronchitis, there is still no recorded mention to him or by him of OC exposure. Indeed, the first such note from Dr. Loveland's office was recorded by Andrew Cron on May 7, 2011 which states, "no Occup. Exposure." This note is presumed to have arisen in response to a question about then current work during Claimant's first visit with Mr. or Dr. Cron; it is not deemed evidence of a causation opinion by Dr. Loveland or Cron.

Medical Care, October 2008 – Hearing

98. During this time period the medical records occasionally refer to additional bouts of recurring bronchitis apart from evaluation and treatment of Claimant's chronic conditions.

99. On a November 17 visit Dr. Hendrickson diagnosed likely reactive airway dysfunction syndrome ("RADS") secondary to pepper spray exposure. He noted, "There is

no good objective testing that will confirm this."

100. From December 16, 2008 to September 18, 2012, Dr. Moldenhauer provided frequent chiropractic care. In 2009 he attributed her need for chiropractic care to her chronic coughing.

101. In June 2009 Reese Verner, M.D. evaluated Claimant. He offered no opinion about causation. He addressed the possibility of surgery, a Nissen fundoplication, to alleviate her reflux but acknowledged this would be contraindicated if her esophageal dysmotility were significant. He suggested further testing. In November, after a September esophageal function test which produced normal results, he noted Claimant had gained 33 pounds up to 292. Claimant's weight was now a contraindication to fundoplication and he recommended a lap band or similar procedure.

102. In a June 2009 visit Dr. Loveland first noted a "hoarse voice." In a quarterly follow-up visit in July 2009 Dr. Hendrickson's nurse practitioner noted a new symptom, voice changes.

103. At the next quarterly follow-up visit, Janat O'Donnell, M.D., took over for Dr. Hendrickson who had left the clinic. Dr. O'Donnell evaluated diagnoses of chronic cough, hypersomnia, GERD, and depression.

104. On October 12, 2009 Claimant returned to visit Dr. Schwarz on referral from Dr. O'Donnell to evaluate laryngeal dysfunction. Upon laryngoscopy, Dr. Schwarz noted "very minimal erythema." His assessment recorded no overt laryngeal pathology.

105. On a December 2009 follow-up visit Dr. O'Donnell evaluated diagnoses of chronic cough, hypersomnia, hypertension and restless legs. A December 8, 2009 visit contains the first note under Dr. O'Donnell's care in which Claimant suggested a link between

the March 8 training and any respiratory condition.

106. Karin Pacheco, M.D., is board certified in occupational medicine, allergy and immunology, and internal medicine. Originally a treating physician beginning late-March 2009, Dr. Pacheco was retained by Claimant for this litigation and a related products liability lawsuit against the OC manufacturer. She predominantly treats patients with respiratory conditions through National Jewish Health ("NJH"). Claimant is the first patient Dr. Pacheco has treated who claimed lingering symptoms after an OC exposure.

107. On March 30, 2009 Claimant visited Dr. Pacheco upon referral from Dr. Hendrickson. Dr. Pacheco took a history which was consistent with other evidence of record, except that Claimant reported daily exposure to OC spray, that she was not allowed to change clothes after exposure, that she personally sprayed inmates on five occasions, that her cough and respiratory episodes gradually increased in frequency to a chronic intermittent cough, and that she developed a chronic cough during the March 3 training which did not resolve.

108. Dr. Pacheco examined Claimant, reviewed limited medical records, and performed tests which included a methacholine challenge with nasolaryngoscopy, body plethysmography, esophagram X-ray with barium swallow, and CT chest scan. Dr. Pacheco did not perform a capsaicin challenge test. Her report is dated April 20, 2009, with an addendum.

109. Dr. Pacheco stated her diagnoses as follows:

a. Irritant-triggered vocal cord dysfunction and secondary cough attributable to [OC] exposure at work . . .

b. Esophageal dysmotility and reflux, aggravated by occupational exposure to [OC], weight gain due to lack of exercise, and medications . . .

c. Chronic, severe cough, multifactorial.

d. Restless legs syndrome.

110. Before arriving a these diagnoses, Dr. Pacheco refers to "vocal cord dysfunction

and irritant-triggered vocal cord dysfunction" (elsewhere in the record referred to as "irritant-associated" or "irritant-exposed") ("IVCD") as separate diagnoses. When NJH coined the diagnosis, it set forth the criteria which distinguish IVCD from vocal cord dysfunction generally. Among these, IVCD requires exposure to an irritant within 24 hours of the onset of the dysfunction; it requires an absence of any history of vocal cord dysfunction symptoms before the exposure.

111. Dr. Pacheco noted "that chronic cough causes chronically irritated trachea and vocal cords that then easily respond to nonspecific irritants causing a persistent cough."

112. Dr. Pacheco opined that a methacholine challenge is the definitive test to rule out asthma, and it did so for Claimant. She further opined that Claimant's medications for restless legs syndrome also aggravated her esophageal dysmotility and reflux, that esophageal dysmotility and reflux "is the likely cause of the patient's chronic, intermittent and severe cough", that Claimant's respiratory condition had not improved despite treatment and being removed from OC exposure, and that Claimant has a small hiatal hernia.

113. In a July 22, 2009 letter Dr. Pacheco maintained her diagnoses and causation opinion, having reviewed unspecified additional medical records.

114. A November 11 ER visit records that Claimant was hit by a horse. She complained of chest pain. X-rays were normal.

115. On January 19, 2010 Dr. O'Donnell again visited Claimant. The emphasis was on Claimant's sleep disorder. Claimant reported that her cough did "not particularly keep her awake." Additional follow-up visits were not germane to the issue of causation until March 5, 2012 when Claimant told Dr. O'Donnell that the inversion affected her breathing.

116. A February 4, 2010 polysomnography showed such a poor sleep pattern that

other measurements were difficult to assess.

117. Dr. Pacheco performed two follow-up visits in 2010. Additional testing was consistent with initial testing.

118. On April 19, 2010 a pulse oximetry test was taken as ordered by Dr. O'Donnell. Dr. O'Donnell did not describe the findings in her notes.

119. On January 11, 31, and August 15, 2011 Dr. Pacheco discussed the PPI rating she provided Claimant. As of January 11, Dr. Pacheco had added obstructive sleep apnea, severe weight gain, and chronic depression to the list of diagnoses and, where possible, included these in the PPI rating.

120. According to Dr. Loveland's records, Claimant's weight rose between June 2009 and September 2010 from 273 to 311 pounds and peaked in December 2010 at 327.

121. Except for Dr. Loveland's note of a flare-up on November 17, 2011, Dr. Loveland's records are consistent with occasional bouts of bronchitis without any specific indication of a general worsening of Claimant's cough from 1999 through 2011.

122. On May 10, 2012 Dr. Loveland noted Claimant "just became disabled as a result" of her chough and chronic laryngeal spasm. On May 12, 2012 Dr. Loveland referred to Claimant's cough and noted, "This is a recurrent problem. The current episode started in the past 7 days. The problem has been gradually worsening." He diagnosed bronchitis.

123. Claimant underwent a gastric bypass September 10, 2012.

Experts' Opinions

Dr. Loveland

124. In deposition for the products liability lawsuit, Dr. Loveland testified that he is trained to document a patient's references to work accident or injury and the absence of such a notation in Claimant's records is significant although not dispositive. He opined that

Claimant's negative methacholine challenge test indicated she did not have asthma and that her lungs were not hypersensitive to irritants. He opined the most common cause for GERD is a hiatal hernia; GERD can be aggravated by excess weight and other factors; GERD is one cause of chronic cough; postnasal drip could cause chronic cough; scar tissue from recurrent lung infections could cause chronic cough; Hiatal hernia can also cause esophageal dysmotility. He opined it extremely unlikely that exposure to fumes could cause chronic esophageal dysmotility although fumes could cause a discrete episode. He opined that acid reflux and postnasal drip are the most common causes of vocal cord dysfunction; a primary symptom is vocal cord dysfunction is a hoarse voice; Chronic coughing could cause vocal cord dysfunction.

125. Dr. Loveland opined that a negative methacholine challenge test would tend to rule out toxic chemical exposure as a cause of chronic cough, but he would defer to a pulmonologist on this point. He opined it unlikely that Claimant's use of Klonopin, Restoril and Neurontin contributed to her cough; while her use of Zestoretic could do so, it was discontinued for a time without any noticeable effect to her cough.

Dr. Hendrickson

126. Dr. Hendrickson is board certified in pulmonary medicine and in internal medicine.

127. In deposition for the products liability lawsuit, Dr. Hendrickson opined that the question of long-term harm from OC exposure remains a scientific controversy; the literature supports possible long-term harm to asthmatics which is termed "occupational asthma." He opined that there are many potential causes for a person's chronic cough; Claimant had a chronic cough; The cause of Claimant's cough was "multifactorial." Dr. Hendrickson testified about his process in forming a differential diagnosis about Claimant's conditions. A diagnosis of RADS essentially requires a positive methacholine challenge test. Claimant's methacholine

challenge test was negative. He considered possible GERD, and other factors and causes. Based largely upon the history Claimant provided, he opined it likely that Claimant's belief was reasonable that her OC exposure at work exacerbated her vocal cord dysfunction and her respiratory and related conditions. Regarding specifics of the extent and number of OC exposures, Dr. Hendrickson did not "go into all of that in great detail" with Claimant. When specifically asked, Dr. Hendrickson noted there was a "correlation," but would not opine that OC exposure was a likely cause of her conditions.

128. The history Claimant provided Dr. Hendrickson was inconsistent with her other medical records. For example, she stated she had never smoked, had never been diagnosed with asthma, and she also denied ever having a sore throat or hoarse voice. Medical records contradict each of these assertions.

Dr. Pacheco

129. In deposition for the products liability lawsuit, Dr. Pacheco opined that the most common causes of chronic cough are asthma, chronic sinusitis with post nasal drainage and GERD. She opined that based upon Claimant's medical records, before March 3 Claimant had recurring sinusitis and bronchitis but not chronic sinusitis or bronchitis. She opined that RADS is a type of asthma; Claimant does not have asthma; Claimant does have GERD.

130. Dr. Pacheco first reviewed OC literature for Claimant's treatment. Dr. Pacheco testified there is no literature on multiple discrete OC exposures.

131. Literature does exist regarding long-term effects of other, non-OC, irritants in people with higher receptor expression—meaning people who, because of their physiology, have a greater chance of developing a chronic cough from irritant exposure.

132. Of the 11 initial cases which NJH researchers studied, one patient was exposed to a noxious odor while cooking "Cajun Salmon." This may represent capsaicinoid exposure.

The other 10 cases were unrelated to capsaicinoids. In this initial presentation of IVCD, the researchers acknowledged but did not study possible relationships between IVCD and psychiatric conditions, GERD, and/or RADS.

133. Dr. Pacheco also reviewed literature of studies in which subjects with chronic cough were challenged with capsaicin irritants; those with chronic coughs were shown to have more or more sensitive receptors which resulted in a temporarily enhanced cough immediately after exposure. These studies did not directly address whether OC exposure could cause or permanently aggravate a chronic cough. Dr. Pacheco does not opine whether Claimant had more receptors versus more sensitive receptors.

Dr. Yost

134. Claimant retained Garold Yost, Ph.D., to opine in both the workers' compensation and products liability litigation. Dr. Yost is a professor of pharmacology and toxicology. He is a published author of medical journal articles relating to certain neural receptors and the effects of capsaicinoids. He opined Claimant's "training exposure to Sabre Red (a 10% product) in an enclosed, non-ventilated room for two and a half hours on March 3 certainly caused acute adverse health responses, and greatly exacerbated her underlying respiratory diseases."

135. Dr. Yost essentially limited his opinions about long-term harm to humans to instances in which OC use was linked to a death. He opined that the studies he relied upon suggested that long-term harm to living humans might be a possibility.

136. Dr. Yost was careful not to suggest that any exacerbation of Claimant's preexisting respiratory conditions was more than temporary.

137. In deposition, Dr. Yost acknowledged that "individual variability is a hallmark of health science. Yes, individuals respond differently."

138. The scientific articles in evidence were relied on by Dr. Yost in forming

his opinions in this case. Generally, they provide foundational support for Dr. Yost's opinions by establishing the physiological mechanism of how capsaicinoids affect rats, other mammals, and people generally. They show that that some creatures, including humans, can be more sensitive or react more than other members of their species to exposure to capsaicinoids.

Christopher Reilly, Ph.D.

139. Dr. Reilly is a colleague of Dr. Yost and holds similar credentials. They wrote scientific papers together which discuss, among other things, the biological mechanism of capsaicin exposure. Dr. Reilly reviewed Claimant's medical records and the underlying scientific literature upon which Dr. Yost relied. Dr. Reilly criticized Dr. Yost's opinions. Dr. Reilly opined, "The worsening of her health conditions as a result of the exposures to OC is inconsistent with medical records."

Dr. Negron

140. Roberto Negron, M.D., performed a psychiatric evaluation at Claimant's request. He reviewed reports by Drs. Yost and Pacheco, National Jewish Health medical records, and interviewed Claimant. His Axis I diagnosis was recurrent major depression, severe. He recommended counseling and medication. He opined Claimant to be psychiatrically stable and rated her permanent impairment at 15% compared to mental function, not whole person.

Dr. Burton

141. Brent Burton, M.D., is board certified in occupational medicine, medical toxicology, and emergency medicine. He also holds a Master's of Public Health with specialty in occupational health. He reviewed records and examined Claimant at the request of Surety.

142. Dr. Burton diagnosed vocal cord dysfunction of which coughing is a symptom. While vocal cord dysfunction is a significant cause for Claimant's cough, he identified other potential contributors to her cough which showed up in her records and on examination.

Dr. Burton opined that Claimant's vocal cord dysfunction preexisted her work at IMSI and is entirely unrelated to OC exposure. He opined there is no toxicologic, allergenic or other physical explanation to link Claimant's vocal cord dysfunction to OC exposure. He opined vocal cord dysfunction is a manifestation of stress and psychological dysfunction.

143. Dr. Burton opined that Claimant's report of a coughing reaction delayed by a few hours from an exposure is inconsistent with any known physical response to such exposure.

Dr. Bardana

144. Emil Bardana, M.D., is board certified in internal medicine as well as in allergy and immunology. The Commission is well familiar with Dr. Bardana's resume' and distinguished career. He thoroughly evaluated Claimant's medical records, as well as certain depositions and documents in evidence at the request of ISIF.

145. Dr. Bardana opined that he agreed with Dr. Burton's causation opinions and disagreed with Dr. Pacheco's. He delineated his reasons for doing so at length in his report. He opined that Dr. Pacheco's causation opinions were "speculative and unfounded." He opined that even if OC exposure might have contributed to "transitory" symptoms, their continuation after exposure ceased was unprecedented and not a "biologic plausibility."

146. In deposition Dr. Bardana opined that Claimant's medical records are inconsistent with her claim that lingering exacerbation of her condition was caused by the March 3 training exercise. He opined it extremely unlikely that Claimant would not immediately know and associate a dramatic worsening of her condition with the March 3 training, if in fact the training exposure had affected any part of her condition when seen by Dr. Loveland on March 4. The absence of a corresponding note shows it likely that Claimant did not mention her work to Dr. Loveland on March 4. He opined that the negative methacholine challenge test shows Claimant's condition is not related to OC exposure.

147. Dr. Bardana opined the causes of Claimant's chronic cough syndrome are multifactorial and include recurrent viral and bacterial infections which manifest as bronchitis or pneumonia, GERD which is exacerbated by her weight and hiatal hernia, chronic rhinosinusitis also known as postnasal drip, an allergy to house dust, and her high blood pressure medication, with other lesser potential causes also present.

148. Dr. Bardana opined that pre-2004 diagnoses of asthma likely represent preexisting vocal cord dysfunction. Claimant's case would be the first in history to attribute her vocal cord dysfunction to OC exposure. He opined that the medical indicators are insufficient to establish that such a link is probable.

149. Dr. Bardana explained at length why Dr. Pacheco's opinions were faulty. He frankly criticized Dr. Pacheco's opinions with an enthusiasm which we have not previously seen. Dr. Bardana's cogent explanation is entitled to significant weight.

Claimant's Exhibit 10 Studies

150. About 2500 pages of scientific journal articles were admitted into evidence on disk as Claimant's Exhibit 10. These articles were provided by Dr. Yost to show what he relied upon in forming his opinions. These articles include studies and reviews of studies. Unfortunately, these articles appear to have been saved to disk without discrimination. All but a handful of these articles appear at least twice, some as many as four times. Additionally, extra copies of several of these articles have been included in hard copy as part of Claimant's exhibits 12 and 13. This unnecessary duplication involving thousands of pages is not well looked upon, but is not a factor in our analysis.

151. The scientific quality of these articles is generally very good and without apparent bias. However, two articles opposing OC use by law enforcement are criticized below while a third which argued for OC use by law enforcement contains conclusions which stray

from the scientific into the political advocacy realm.

152. First, an article published in 2001 reviewed various studies and compared mace, other tear gasses, and OC products. It identified one study which reported support for possible long-term neuro-respiratory effects at "suprathreshold" exposures; it did not quantify how much overdose is too much. Generally, the tenor of the article fails to maintain the scientific objectivity described in the studies it reviewed. This review stated one of its major findings as follows, "Substantial evidence suggests that riot control agents are safe when used as intended." Expressly referring to OC products among the riot control agents considered, this review concluded "not enough is known concerning the long-term/chronic effects" and "there is considerable need for additional research."

153. Second, one article referred to a collection of accounts of pepper spray training by North Carolina corrections officers. Up to 5% of trainees reported various symptoms after exposure, some lasting "one week or more." Among the many lingering symptoms listed, the only respiratory or related symptom identified was "shortness of breath." The article did not further specify what portion of this 5% had shortness of breath or how long any of those complaints lasted. This article admitted there have been no clinical studies related to the use of pepper spray. Moreover, by equating pepper spray use with "abuse" and "torture" the author revealed an agenda apart from scientific objectivity.

154. Third, authors of literature concerning the Texas Youth Commission reviewed and reported studies, but did so with such apparent selective bias that the article represents a political—not a scientific—viewpoint and deserves little weight.

155. To the extent that Dr. Yost relied upon these articles for a foundation of his opinions, the weight given his opinions is undercut.

156. All other articles objectively reported a study conducted or objectively reviewed studies performed by others. While a thorough analysis of each study is beyond the scope of these findings of fact, some details of certain studies constitute miscellaneous relevant facts useful to mention below.

157. One article reviewed multiple other studies which, when combined, involved 6000 law enforcement officers exposed to OC products in training exercises. It noted that medical attention was required for 61 law enforcement trainees exposed to OC products, with only 7 of the 6000 reported symptoms lingering after one week. Of the 6000 trainees, only 2 reported respiratory sensitization to OC. The reviewers noted that one of these studies (probably the North Carolina study) reported a significantly higher proportion of subjects requiring medical attention than did the other studies; the reviewers—although they noted that OC products may have variable strength due to uncertain quality control in manufacturing—did not have data and did not speculate about why the one study showed this inconsistency in the rate of medical attention.

158. Studies show it likely that asthmatics cough more and react to smaller exposures to OC than people without respiratory conditions; the confidence level as this proposition may relate to people with chronic bronchitis instead of asthma is less well documented. These responses, when they occur, are temporary and generally subside within minutes after the exposure is discontinued.

159. Topically applied capsaicin may, in a few instances, produce a cough in humans.

160. One study reported:

> The initial observations in this study confirm previous findings that patients with IPF [impaired pulmonary function] have greater cough reflex sensitivity to inhaled capsaicin than healthy control subjects and that this cough response is highly reproducible. . . .Acid reflux is a recognized cause of chronic dry cough even in the absence of dyspeptic

> symptoms, and it enhances cough reflex sensitivity in patients without cough. It has also been proposed that GER may be an etiologic factor in IPF. Furthermore, GER [gastroesophageal reflux] is common in patients with systemic sclerosis, many of whom have esophageal dysmotility.

161. Studies suggest that spice workers who are chronically exposed to capsaicin show an initial increase in coughing and respiratory symptoms for about three weeks; thereafter, workers' systems adjust and they show no increase in coughing and respiratory symptoms compared to non-exposed workers.

162. No study has shown RADS resulting from OC exposure alone. One individual is claimed to have developed RADS after exposure to a combination tear gas product which included a 1% OC component with other active chemicals. This study categorized RADS separately from asthma and other respiratory conditions.

163. The articles also describe how capsaicinoids are also used therapeutically. An early study reported, "Repeated capsaicin treatments lead to desensitization of skin and airways as well." Thus, whether capsaicin creates hypersensitivity or desensitization in airways appears highly dependent upon a myriad of factors.

164. The major thrust of Dr. Yost's opinions and of the articles upon which he relied pertains to the biological mechanism—how capsaicin physiologically plays out in a body as described below.

165. These articles show that certain chemicals, particulates, pH ranges, and temperature ranges bind with or activate specific transient receptor potential ("TRP") calcium channels. TRP receptors are categorized into multiple families (one article says 5, another 7) which are further subdivided into 30 or more members by assigning numbers by family, i.e. TRPV1 through TRPV4, TRPA1, etc.

166. Transient receptor potential vanilloid 1 ("TRPV1") involves a particular

subdivision of a particular type of receptor to which capsaicinoids and certain other chemicals and particulates readily bond. TRPV1 receptors also react to a specific pH range and temperature range. Capsaicinoids cause immediate biological responses in humans when they bind with TRPV1 receptors. The biological responses resulting from TRPV1 sensitivity include respiratory and related symptoms and conditions.

167. The articles establish that capsaicinoids are among several agonists—including other chemicals, particulates, pH ranges, and temperature ranges—to TRPV1 receptors which may cause cough or other respiratory and related symptoms and conditions. They show that hypersensitive TRPV1 receptors exposed to capsaicinoids will likely cause significant, prompt exacerbation of such symptoms and conditions when such symptoms and conditions are present before the exposure.

168. The articles also show that other TRP receptors mentioned act similarly. For example transient receptor potential ankyrin 1 ("TRPA1") binds with mustard oil, wasabi, cinnamon, other particulates, pH ranges, and temperature ranges to produce, *inter alia*, respiratory and related symptoms and conditions.

169. One article concluded, "COPD is an airway disease characterized by chronic inflammation, and airflow obstruction that is usually progressive, and not reversible; the disease state is often associated with the presence of emphysema or chronic bronchitis. To our knowledge, there is no existing evidence indicating a direct link between TRP channels and the pathogenesis of COPD."

170. Capsaicin has been used in laboratories to ablate neural lung fibers in neonatal rats. The authors of this study state that a possible link to human chronic bronchitis is speculated but not established as likely. Other studies use neonatal mammals, mostly rats, similarly.

Most of these studies use capsaicin to cause overexpression of TRPV1, but some, including at least one study ascribed, *inter alia*, to Dr. Yost, used another chemical agonist to cause the death of lung cells.

171. Blood and tissue samples of mice showed capsaicinoids after inhalation exposure. But where the mice were allowed to live for 24 or 48 hours after exposure, these later taken samples did not show the presence of capsaicinoids.

172. The articles suggest that some specific long-term changes may occur in human epithelial lung cells in Petri dish cultures, in flies' eyes, in rodents, and in certain other mammals. The evidence does not directly support the proposition that it can cause long-term harm to the neuro-respiratory systems of living humans. Cross-species generalizations are speculative. As one study stated, "the dose of capsaicin that can kill the guinea pig almost instantaneously is well tolerated by the hamster." We may take judicial notice that a guinea pig and a hamster are more closely taxonomically related than either is to a human.

173. Further application of any specific study in evidence to Claimant's facts and circumstances would require us to speculate. Further explanations were not offered by Dr. Yost.

Other Experts and Studies

174. Robert Nance is the vice-president of the manufacturer of the OC product used in the March 3 training exercise. He was deposed for purposes of the products liability lawsuit. His deposition with exhibits was admitted as an exhibit in this matter. The bulk of the exhibits appended to the Nance deposition comprised industry studies involving rats and rabbits. Some articles summarized various experiences and data from various law enforcement organizations. The Referee reviewed this material and found one study duplicated from Claimant's Exhibit 10. The Nance deposition and appended evidence was only marginally relevant to the causation issue to be decided here.

175. Written reports of additional experts retained for the products liability lawsuit are in evidence. These are cumulative and redundant of the opinions of the experts included in these findings of fact above. The weight of evidence of assigned to each of these and to all of them together is less than any opinion expressed by any of the named physicians above.

DISCUSSION AND FURTHER FINDINGS OF FACT

176. The provisions of the Idaho Workers' Compensation Law are to be liberally construed in favor of the employee. *Haldiman v. American Fine Foods*, 117 Idaho 955, 956, 793 P.2d 187, 188 (1990). The humane purposes which it serves leave no room for narrow, technical construction. *Ogden v. Thompson*, 128 Idaho 87, 88, 910 P.2d 759, 760 (1996).

177. Facts, however, need not be construed liberally in favor of the worker when evidence is conflicting. *Aldrich v. Lamb-Weston, Inc.*, 122 Idaho 361, 363, 834 P.2d 878, 880 (1992). Uncontradicted testimony of a credible witness must be accepted as true, unless that testimony is inherently improbable, or rendered so by facts and circumstances, or is impeached. *Pierstorff v. Gray's Auto Shop*, 58 Idaho 438, 447−48, 74 P.2d 171, 175 (1937). *See also Dinneen v. Finch*, 100 Idaho 620, 626−27, 603 P.2d 575, 581−82 (1979); *Wood v. Hoglund*, 131 Idaho 700, 703, 963 P.2d 383, 386 (1998).

Causation

178. A claimant has the burden of proving the condition for which compensation is sought is causally related to an industrial accident. *Callantine v Blue Ribbon Supply*, 103 Idaho 734, 653 P.2d 455 (1982). Further, there must be evidence of medical opinion—by way of physician's testimony or written medical record—supporting the claim for compensation to a reasonable degree of medical probability. No special formula is necessary when medical opinion evidence plainly and unequivocally conveys a doctor's conviction that the events of an industrial accident and injury are causally related. *Paulson v. Idaho Forest Industries, Inc.*, 99 Idaho 896,

591 P.2d 143 (1979); *Roberts v. Kit Manufacturing Company, Inc.*, 124 Idaho 946, 866 P.2d 969 (1993). Proof of a possible causal link is not sufficient to satisfy this burden. *Beardsley v. Idaho Forest Industries*, 127 Idaho 404, 406, 901 P.2d 511, 513 (1995). A claimant is required to establish a probable, not merely a possible, connection between cause and effect to support his or her contention. *Dean v. Dravo Corporation*, 95 Idaho 558, 560-61, 511 P.2d 1334, 1336-37 (1973).

179. Claimant was familiar with the possibility that environmental factors at work could affect her respiratory problems because she had claimed to be a victim of "sick building syndrome" while working for a prior employer. She had also once attributed her headaches to her computer at work.

180. Claimant did not mention the possibility that the March 3 training worsened her condition when she sought further medical treatment for her longstanding recurrent bronchitis on March 4.

181. The first written evidence that Claimant linked any condition to OC exposure occurred during the disciplinary investigation. She made an initial assertion that security video did not show her smiling after spraying OC on an inmate but that it showed her coughing. She quickly abandoned this excuse.

182. A few days later, Claimant blamed the disciplinary investigation itself as "not helping [her] medical condition."

183. The first medical record in which Claimant raised the possibility of a link between OC exposure and her respiratory condition is dated September 12. Claimant offers no explanation for such delay, particularly in light of her earlier comments to Employer during the disciplinary investigation.

184. Claimant repeatedly testified, speaking generally, that she had no quarrel with accuracy of the content of her medical records. However, wherever specific medical records are inconsistent with her testimony or inconvenient to her case, she quibbles with whether the doctor got it right.

185. A claimant's belief and testimony is not determinative of causation, for or against. However, the facts and circumstances surrounding her assertions of events in hindsight vis-à-vis contemporaneously made medical records undercut the weight assigned to her testimony about whether, when, and how much her condition worsened.

186. The medical causation opinions upon which Claimant mostly bases her case come from Dr. Pacheco. Dr. Pacheco first saw Claimant more than one year after Claimant's last work exposure to OC. She largely relies upon the history provided by Claimant to arrive at her opinions. Claimant failed to provide Dr. Pacheco significant facts and did provide a history that, on several points, is inconsistent with contemporaneously made medical records and other evidence as follows:

a. The extent of Claimant's exposure to OC products has been shown to be significantly less than the "almost daily" exposure she reported to Dr. Pacheco.

b. The record does not show that, while actually working on Employer's premises, Claimant complained of occasional lingering odor of an OC product or that she experienced contemporaneous temporary exacerbation of any condition in the presence of occasional lingering odor or and OC product. No medical record, dated during the period she was actually present on Employer's premises, records that she experienced such an exacerbation. To the contrary, Claimant bragged about her tolerance for this occasional lingering odor when she commented that at IMSI they had OC for breakfast.

c. Claimant's testimony that she smelled OC odor every time it was deployed at IMSI is inherently improbable. The six separate cell blocks have independent air handling systems. Even if she meant to limit that testimony to deployment in her cell block, that proposition is inconsistent with the testimony of every other officer of record on that point. Moreover, the record is absent of any contemporaneous showing that she complained about any deployment or

experienced any exacerbation of any condition. The record fails to show that she sought medical care for that purpose at or near the time it occurred.

d. Claimant experienced no Level 1 exposure; she was never directly sprayed in the face with any OC product. Claimant's Level 2 and 3 exposures in training and during planned or reactive deployments are documented. Again, the record does not support any contemporaneously made complaints of unexpected physical reactions, lingering symptoms, or need for medical care.

e. Due to a bout of recurrent bronchitis, Claimant was limited to light duty—desk work with avoidance of "strenuous physical activity"—by Dr. Loveland on February 26. This evidence supports Claimant's testimony that she inquired about being excused from OC training then upcoming on March 3. The record does not support Claimant's testimony that she informed Sgt. Overgaard or any other supervisor that bronchitis was her limiting condition. While Sgt. Overgaard did not consider the training to involve strenuous physical activity, he and other trainers testified that colds, flu, other respiratory or even orthopedic conditions would be an allowable basis for being excused from part of all of an OC training.

f. Claimant was first informed on February 29 that IDOC considered termination among its options because she sprayed the inmate on January 31.

g. Clamant attended the previously scheduled March 3 training. No contemporaneously made record supports a finding that Claimant's immediate reaction was greater than the usual reactions from other trainees or that Claimant's recovery time was longer than usual among the trainees. Instructors who cleared Claimant and other trainees after the training do not recall any unusual reactions.

h. On March 4 Claimant sought medical attention for her lingering bronchitis. She did not mention any untoward or lingering effects of the OC exposure the day before.

i. The record shows Claimant's first mention of coughing from OC exposure was made on March 21 as an excuse for why she appeared to be smiling after spraying the inmate in January. In later defense of her continued employment Claimant dropped this excuse.

j. Tellingly, at that March 21 interview she stated that the *investigation* was not helping her medical condition.

k. Claimant next connected OC exposure and her conditions when she filed a rebuttal to a notice that termination had been recommended. She wrote that after the incident was over she placed a call to a supervisor to report the deployment of OC and *at that time* her lungs began to burn and she began to cough. This characterization is inconsistent with evidence which shows physical responses to OC exposure will always begin immediately.

187. The foregoing are not exhaustive of significant facts which Claimant failed to provide Dr. Pacheco or of the inconsistencies between the history which Claimant provided Dr. Pacheco and documents of record. Dr. Pacheco's opinions are entitled to less weight as a result.

188. Dr. Pacheco diagnosed Claimant with IVCD and attributed it to Claimant's work. However, Drs. Burton and Bardana identified medical records prior to Claimant's employment with Employer and her first exposure to OC which describe symptoms consistent with vocal cord dysfunction.

189. Dr. Yost's opinions serve to provide a scientific underpinning to the notion that long-term injuries from capsaicin exposure are possible. His opinions do not go so far as to establish it probable that Claimant suffered long-term injury from either the March 3 exposure or from repeated exposures.

190. The medical literature in evidence which underlies the opinions of Claimant's experts supports their causation opinions but only to a point. Yes, OC spray *can* cause or temporarily exacerbate the conditions of which Claimant complains if and when TRPV1 receptors become hypersensitized or a person has a relative abundance of such receptors. However, the literature shows that TRPV1 receptors can be sensitized by other causes, and that other receptors can be sensitized by other causes as well; the literature frankly reports studies which show that different pathways and mechanisms can produce similar respiratory and related symptoms and conditions. Claimant's experts choose to assume that because Claimant identifies exposure to only one possible cause—OC exposure—then that must be the likely source and mechanism for her symptoms. No clinical treatment or testing has verified OC exposure as the likely cause. Indeed, Claimant's lack of improvement after

substantial time away from OC exposure suggests that espousing such a causal link is a tenuous proposition at best.

191. Of particular interest is the study in which 29 human subjects with chronic coughs averaging 6.7 years were exposed to capsaicin in order to generate a heightened response. The study does not indicate that the scientists were worried about inducing permanent harm nor that permanent harm resulted to any subject. Indeed, using capsaicin to challenge human respiratory systems for study is deemed safe. A review of studies involving capsaicin challenge tests concluded:

> *Results:* One hundred twenty-two published studies since 1984 described 4,833 subjects (4,374 adults, 459 children) undergoing capsaicin cough challenge, with no serious adverse events reported. Subjects included healthy volunteers as well as patients with asthma, COPD, pathologic cough, and other respiratory conditions. Minor complaints described in a small fraction of studies consisted mainly of transient throat irritation. Personal communication with the authors of > 90% of the studies confirmed an absence of any serious adverse events. Furthermore, these investigators have performed thousands of additional capsaicin challenge studies not reported in the literature, also without any associated serious adverse events.
>
> *Conclusions:* A review of the 20-year clinical experience has failed to uncover a single serious adverse event associated with capsaicin cough challenge testing in humans. Given the need for better antitussive therapies, capsaicin represents a vital component of future scientific inquiry in the field of cough.

192. Moreover, the literature shows that exacerbation of respiratory and related symptoms and conditions should be prompt—virtually immediate—and significant. Here, the evidence suggests the facts are otherwise. The trainers testified that they had no recollection of any trainee showing lingering effects of the OC exposure on March 3. Operations protocols required observations by multiple trainers before clearing a trainee after the exercise. Medical records beginning March 4 show Claimant was not substantially worse than on her February 26 doctor visits; they show Claimant did not attribute her symptoms to the training exercise until several weeks and multiple doctors' visits afterward. Claimant's experts place too much weight

on Claimant's remote hindsight recollections which are inconsistent with contemporaneously made medical records.

193. Finally, Claimant's experts' opinions about Claimant's TRPV1 receptors are speculative. The studies which observed and measured numbers and reactivity of TRPV1 receptors accomplished it by procedures akin to autopsy on the small mammals tested, procedures obviously not available for clinical confirmation of Claimant's diagnoses. Because the animals were sacrificed for the study, the question of whether the physiological effects are permanent or temporary could not be addressed. Relatedly, although some studies do refer to obtaining airway mucosal tissue biopsies in living humans to evaluate TRPV1 receptors, the medical records in evidence do not show biopsies were performed on Claimant to support her experts' speculation.

194. Observable symptoms of Claimant's cough, bronchitis, and other respiratory conditions—however affected immediately and temporarily by the March 3 training—had not, to training officers' perceptions, noticeably increased at the time Claimant was released from the training versus her symptoms before the training began.

195. Claimant's cough, bronchitis and other respiratory conditions did not objectively increase or worsen during her employment or after the March 3 training.

CONCLUSIONS

1. Claimant failed to show her exposure to OC during the March 3 training probably caused an injury or aggravated, exacerbated, or accelerated her preexisting condition;

2. Claimant failed to show her repeated exposures to OC while employed by Employer probably caused any occupational disease or aggravated, exacerbated, or accelerated her preexisting condition.

RECOMMENDATION

Based upon the foregoing Findings of Fact, Conclusions of Law, and Recommendation, the Referee recommends that the Commission adopt such findings and conclusions as its own and issue an appropriate final order.

DATED this 21ST day of April, 2014.

INDUSTRIAL COMMISSION

/S/_____
Douglas A. Donohue, Referee

ATTEST:
/S/_____
Assistant Commission Secretary dkb

CERTIFICATE OF SERVICE

I hereby certify that on the 5TH day of MAY, 2014, a true and correct copy of **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** were served by regular United States Mail upon each of the following:

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/S/_____

BEFORE THE INDUSTRIAL COMMISSION OF THE STATE OF IDAHO

BILLIE MAJOR, Claimant, v. IDAHO DEPARTMENT OF CORRECTIONS, Employer, and IDAHO STATE INSURANCE FUND, Surety, and STATE OF IDAHO, INDUSTRIAL SPECIAL INDEMNITY FUND, Defendants.	**IC 2009-002735** **ORDER** **FILED MAY 5 2014**

Pursuant to Idaho Code § 72-717, Referee Douglas A. Donohue submitted the record in the above-entitled matter, together with his recommended findings of fact and conclusions of law to the members of the Idaho Industrial Commission for their review. Each of the undersigned Commissioners has reviewed the record and the recommendations of the Referee. The Commission concurs with these recommendations. Therefore, the Commission approves, confirms, and adopts the Referee's proposed findings of fact and conclusions of law as its own.

Based upon the foregoing reasons, IT IS HEREBY ORDERED that:

1. Claimant failed to show her exposure to OC during the March 3 training probably caused an injury or aggravated, exacerbated, or accelerated her preexisting condition;

2. Claimant failed to show her repeated exposures to OC while employed by Employer probably caused any occupational disease or aggravated, exacerbated, or accelerated her preexisting condition.

3. Pursuant to Idaho Code § 72-718, this decision is final and conclusive as to all matters adjudicated.

DATED this 5TH day of MAY, 2014.

INDUSTRIAL COMMISSION

/S/_____
Thomas P. Baskin, Chairman

/S/_____
R. D. Maynard, Commissioner

/S/_____
Thomas E. Limbaugh, Commissioner

ATTEST:

/S/_____
Assistant Commission Secretary

CERTIFICATE OF SERVICE

I hereby certify that on the 5TH day of MAY, 2014, a true and correct copy of **ORDER** were served by regular United States Mail upon each of the following:

DARWIN L. OVERSON
1366 MURRAY-HOLLADAY ROAD
SALT LAKE CITY, UT 84117

GARDNER W. SKINNER, JR.
P.O. BOX 359
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dkb /S/_____