

IN THE WORKERS' COMPENSATION COURT OF THE STATE OF MONTANA

2011 MTWCC 3

WCC No. 2009-2398

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JANE INGLE

Petitioner

vs.

MONTANA STATE FUND

Respondent/Insurer.

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FINDINGS OF FACT, CONCLUSIONS OF LAW AND JUDGMENT

**APPEALED TO MONTANA SUPREME COURT 03/02/11**  
**APPEAL DISMISSED 05/26/11**

**Summary:** Petitioner alleges that she has suffered medical problems caused by carbon monoxide exposure at her workplace. Respondent denied liability for Petitioner's injuries, alleging that she has not proven that her medical conditions occurred as a result of carbon monoxide poisoning.

**Held:** Although the Court finds that Petitioner was exposed to a small amount of carbon monoxide at her workplace, the Court concludes Petitioner did not meet her burden of proof regarding the relationship of that exposure to the symptoms she has exhibited.

**Topics:**

**Witnesses: Credibility.** Although the Court found the witnesses credible, and they testified to a temporal relationship regarding the claimant's employment and the development of her symptoms, none but the claimant could testify as to whether she suffered exposure to carbon monoxide at the place of employment and whether that exposure caused the claimant's condition.

**Medical Conditions (By Specific Condition): Chemical Exposures: Carbon Monoxide.** While the Court found it was more probable than not that the claimant was exposed to some carbon monoxide while at work,

the evidence presented indicated that any exposure lasted for a few seconds at most.

**Causation: Medical Condition.** Where one doctor opined that the claimant's symptoms were caused by carbon monoxide exposure, but another physician offered a persuasive critique of that opinion and several others concluded that no connection existed between Petitioner's symptoms and carbon monoxide poisoning, the Court concluded the claimant had not met her burden of proving that she suffered a work-related injury or disease.

**Proof: Conflicting Evidence: Medical.** Where one doctor opined that the claimant's symptoms were caused by carbon monoxide exposure, but another physician offered a persuasive critique of that opinion and several others concluded that no connection existed between Petitioner's symptoms and carbon monoxide poisoning, the Court concluded the claimant had not met her burden of proving that she suffered a work-related injury or disease.

¶ 1 The trial in this matter began on September 2, 2010, at the Workers' Compensation Court and continued and concluded on September 9, 2010, at the office of Charles Fisher Court Reporting in Helena. On September 2, 2010, Petitioner Jane Ingle was present and was represented by Sydney E. McKenna. On September 9, 2010, Ingle was not present, but was represented by Justin Starin. William Dean Blackaby represented Respondent Montana State Fund (State Fund).

¶ 2 Exhibits: Exhibits 1 through 18 were admitted without objection.

¶ 3 Witnesses and Depositions: The Court admitted the depositions of Ingle, Richard Gill, Ph.D., Thomas H. Swanson, M.D., Raymond Singer, Ph.D., Michael J. Kosnett, M.D., Mark Gronley, and Clay Nelson. Jeff Tone, Jefferson Bridger Tone, and Ingle were sworn and testified at trial on September 2, 2010. Clay Nelson was sworn and testified via video conferencing on September 9, 2010.

¶ 4 Issues Presented: The Final Pretrial Order sets forth the following issue:<sup>1</sup>

Is Petitioner suffering from a work-related injury or disease as a result of working at the Piggyback Barbeque?

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<sup>1</sup> Final Pretrial Order at 2, Docket Item No. 57.

## FINDINGS OF FACT

¶ 5 Petitioner Jane Ingle testified at trial. I found Ingle to be a credible witness. Ingle worked at Piggyback Barbeque, LLC, from June 2008 until November 2008.<sup>2</sup> Ingle worked as a prep cook and also shopped for supplies, waited tables, and washed dishes. Ingle testified that she did any job at the restaurant that needed to get done.<sup>3</sup>

¶ 6 In the summer of 2008, Ingle's shifts were split approximately equally between prep work in the kitchen and working in the front of the restaurant.<sup>4</sup> In August 2008, Ingle began having migraine headaches. At first, she believed they were caused by working night shifts. Her boss and the owner of Piggyback Barbeque, Clay Nelson, cut her night-shift hours. Ingle testified that she still worked day shifts four or five days a week, but no longer worked full-time.<sup>5</sup>

¶ 7 Ingle testified that in approximately September 2008, the pilot light on the water heater began going out twice a day.<sup>6</sup> Ingle stated that she came into the restaurant one morning and there was a "wall of toxic fumes." She feared the restaurant would blow up.<sup>7</sup> She talked to a co-worker, who thought the odor smelled like burning plastic, but Ingle never smelled anything like that. Ingle could not identify the odor she smelled.<sup>8</sup> Ingle told Nelson about the odor, but he did not do anything about it.<sup>9</sup>

¶ 8 When the pilot light went out on the water heater, Ingle boiled water on the stove. Ingle testified that Nelson was irritated with her for refusing to light the water heater, and he was angry when she later called NorthWestern Energy to report problems with the water heater.<sup>10</sup> Ingle testified that during one of her calls to NorthWestern Energy, she asked the operator to tell her the side effects of carbon monoxide poisoning. The operator informed her that the side effects of carbon monoxide poisoning included nausea, headaches, and irritated eyes. Ingle became upset because she had those symptoms and knew she was being poisoned.<sup>11</sup> Ingle testified that in addition to

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<sup>2</sup> Uncontested Facts, Final Pretrial Order at 1.

<sup>3</sup> Trial Test.

<sup>4</sup> Ingle Dep. 15:7-21.

<sup>5</sup> Ingle Dep. 17:1 – 18:6.

<sup>6</sup> Ingle Dep. 42:5-9.

<sup>7</sup> Ingle Dep. 46:6-11.

<sup>8</sup> Ingle Dep. 47:3-15.

<sup>9</sup> Ingle Dep. 48:1-5.

<sup>10</sup> Trial Test.

<sup>11</sup> Trial Test.

NorthWestern Energy, she contacted the Whitefish health department, the Whitefish building inspector, and OSHA.<sup>12</sup>

¶ 9 Ingle testified that she occasionally suffered from non-migraine daytime headaches and that she also suffered from migraine headaches at night. Ingle testified that her migraine headaches and her daytime headaches subsided after she stopped working at Piggyback Barbeque.<sup>13</sup> Ingle testified that she never had migraine symptoms while at work, never vomited, and never lost consciousness either during her work shift or immediately after a shift.<sup>14</sup> Ingle acknowledged that, prior to working for Piggyback Barbeque, she had sought medical treatment for nausea and headaches but both resolved with treatment.<sup>15</sup>

¶ 10 On April 6, 2009, Ingle signed a First Report, alleging a work-related injury. Her accident description states:

While I was working in the Kitchen, was exposed to a toxic smell (it smelled like burning plastic). I called NW Energy to have the situation checked out. The pilot light for the gas hot water tank would not stay lit and when they would get it lit then a back draft would occur and push the fumes into the room. I have experienced headaches and other health problems.<sup>16</sup>

¶ 11 State Fund initially denied Ingle's claim on April 24, 2009, due to lack of information necessary to render a compensability determination.<sup>17</sup> On August 6, 2009, State Fund again denied Ingle's claim, stating that all of her medical records indicated normal test results and no medical provider had related Ingle's medical conditions to any exposures at Piggyback Barbeque.<sup>18</sup>

¶ 12 Jeff Tone testified at trial. I found Tone to be a credible witness. Tone is Ingle's former husband. Tone testified that he and Ingle have been divorced for approximately eleven years, but they maintained a cordial relationship and kept in contact with each

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<sup>12</sup> Ingle Dep. 53:7-12; 55:14-16.

<sup>13</sup> Ingle Dep. 38:11-14.

<sup>14</sup> Ingle Dep. 22:5-16.

<sup>15</sup> Trial Test.

<sup>16</sup> Ex. 14 at 2.

<sup>17</sup> Ex. 15 at 20.

<sup>18</sup> Ex. 15 at 27.

other. Tone testified that he saw Ingle three or four times a year, and he visited Ingle twice during the time she worked at Piggyback Barbeque.<sup>19</sup>

¶ 13 Tone testified that Ingle had a good work ethic and was an active person who enjoyed cross-country skiing, softball, and other outdoor activities. After Ingle began working at Piggyback Barbeque, Tone spoke to her by telephone; she complained of headaches and worried that she might be being exposed to something at work. Ingle suspected that the water heater was releasing “fumes.” Tone believed Ingle might be being exposed to carbon monoxide and he sent Ingle a carbon monoxide detector and suggested that she install it at work. However, he does not think she did so because she had a volatile relationship with the owner of the business and was afraid to cause trouble.<sup>20</sup>

¶ 14 Tone testified that he saw Ingle in the beginning of September 2008, and then saw her at a family gathering in late November 2008. In September, Ingle appeared tired and weak and complained of a headache and light-headedness. In November, she was sluggish, weak, and pale. Tone next saw Ingle in mid- to late-December 2008 and noticed that she was developing some sort of twitch and she walked slowly. She also seemed more emotional.<sup>21</sup>

¶ 15 Tone did not see Ingle again until the spring of 2009. At that time she was weaker and was exhibiting jerking or twitching movements. Tone further noticed that Ingle had a difficult time talking and her concentration was poor. He explained that she had difficulty explaining things and she would lose track of what she was saying.<sup>22</sup>

¶ 16 Jefferson Bridger Tone (Bridger) testified at trial. I found him to be a credible witness. Bridger is Ingle’s son and alternately resides with Ingle in Belgrade, Montana, and his grandfather in Bozeman. Bridger was 20 years old at the time of trial. Prior to his graduation from high school, he and Ingle resided in Whitefish in a trailer behind Piggyback Barbeque.<sup>23</sup>

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<sup>19</sup> Trial Test.

<sup>20</sup> Trial Test.

<sup>21</sup> Trial Test.

<sup>22</sup> Trial Test.

<sup>23</sup> Trial Test

¶ 17 Bridger testified that Ingle held various jobs throughout his childhood and she enjoyed recreational activities including hiking, biking, and sewing. Bridger described Ingle as a busy person who enjoyed shopping and spending time with friends.<sup>24</sup>

¶ 18 Bridger and Ingle believed she might have food allergies when she became ill with flulike symptoms in August or September of 2008. A day or two before Thanksgiving in 2008, Bridger noticed that Ingle was twitching. By Thanksgiving, Ingle seemed exhausted and she wanted to rest and watch television.<sup>25</sup>

¶ 19 At some point, Ingle decided to move from Whitefish to Belgrade. Bridger remained in Whitefish for several months. However, his mother wanted him to move to Belgrade to help her and his father wanted him to move to the area so that they could ski together. Bridger also felt obligated to help his grandfather, who lived in Bozeman. Bridger testified that Ingle needs help with household tasks and shopping. She has gotten forgetful, cannot multi-task, and has become overly sensitive to lights and noise.<sup>26</sup>

¶ 20 Clay Nelson testified at trial via video conferencing. Nelson owned Piggyback Barbeque during the time Ingle worked there.<sup>27</sup> Nelson testified that when he first hired Ingle, he assigned her “front of the house” tasks such as ringing up customers. Ingle also did some prep cook work. Nelson found that Ingle was a very thorough cleaner, so he often had her do detailed cleaning of the establishment.<sup>28</sup> Nelson testified that Ingle was a good, helpful employee. Nelson gave Ingle a few raises because of her ability to fill in wherever she was needed.<sup>29</sup>

¶ 21 Nelson testified that the busy season for Piggyback Barbeque ran from June through August, although the restaurant did a fair amount of business in September as well. Ingle worked more hours during the summer than she did in the off season, and Nelson estimated that at the peak season, she worked approximately 30 hours per week.<sup>30</sup> Nelson estimated that during September and October of 2008, Ingle spent approximately 75% of her shifts in the front of the restaurant and the other 25% in the kitchen.<sup>31</sup> Nelson recalled that in the fall of 2008, Ingle never worked alone in the

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<sup>24</sup> Trial Test

<sup>25</sup> Trial Test

<sup>26</sup> Trial Test

<sup>27</sup> Nelson testified that he sold the business in March 2010.

<sup>28</sup> Trial Test

<sup>29</sup> Trial Test

<sup>30</sup> Nelson Dep. 25:10-21.

<sup>31</sup> Nelson Dep. 26:10-25.

kitchen, but one or two other employees were always in the kitchen.<sup>32</sup> Nelson testified that no other employee ever complained to him about fumes from the water heater.<sup>33</sup> Nelson testified that he did not personally experience headaches, nausea, or vomiting while he worked at Piggyback Barbeque during the fall of 2008. Nelson further testified that no employee except for Ingle complained about headaches, nausea, or vomiting while working at Piggyback Barbeque.<sup>34</sup>

¶ 22 Nelson testified that Ingle complained about several health problems while she worked at the restaurant, but he could not recall the specific nature of her complaints. He further recalled that Ingle mentioned going to a doctor, but he does not think she told him the reason for her doctor visits.<sup>35</sup>

¶ 23 Nelson testified that in approximately September 2008, he noticed that the water heater pilot light periodically went out. Prior to the fall of 2008, he believed the water heater was working normally.<sup>36</sup> At trial, Nelson testified that the pilot light went out about twice a week and that he generally was the person who relit it.<sup>37</sup>

¶ 24 Nelson testified that he was never concerned about the pilot light going out on the water heater because the heater's thermocouple cut the gas off whenever the pilot light went out. Eventually, Nelson replaced the water heater not only because of the pilot light problems, but also he learned that the water heater was burning the floor underneath it. The building had an unused electric water heater in the basement, so he switched the plumbing to the one in the basement. Nelson testified that he understands that the water heater was "unsafe" because it made the floor hot and not because of any other problem.<sup>38</sup>

¶ 25 Nelson testified that he was on vacation in October 2008 when Ingle called NorthWestern Energy and reported that she smelled fumes in the restaurant. Ingle told Nelson that NorthWestern Energy found a problem with the water heater.<sup>39</sup> Nelson stated that after that incident, he was never contacted by NorthWestern Energy.<sup>40</sup> At the time of his deposition, Nelson testified that he was unaware that Ingle had called

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<sup>32</sup> Nelson Dep. 27:1-19.

<sup>33</sup> Trial Test

<sup>34</sup> Trial Test

<sup>35</sup> Trial Test

<sup>36</sup> Nelson Dep. 30:5 – 31:3.

<sup>37</sup> Trial Test

<sup>38</sup> Trial Test

<sup>39</sup> Nelson Dep. 32:7-13.

<sup>40</sup> Nelson Dep. 32:15-21.

NorthWestern Energy a second time on October 28, 2008, although he did have a technician from NorthWestern Energy talk to him on one occasion when someone other than Ingle apparently called the company. Nelson stated that the technician asked him if there was a problem with the restaurant and Nelson responded that he was not aware of any. The technician ran some tests and reported to Nelson that the results were negative.<sup>41</sup>

¶ 26 NorthWestern Energy's maintenance records indicate that on October 23, 2008, Ingle reported an electrical smell coming from the closet that housed the water heater. NorthWestern Energy's dispatch suggested Ingle call 911 and Ingle advised the dispatcher that she would call her boss. NorthWestern Energy's dispatcher then called Flathead Electric, which provided electrical services to Piggyback Barbeque, to advise them of the situation.<sup>42</sup>

¶ 27 On October 24, 2008, NorthWestern Energy's dispatcher noted that Ingle called on that date and reported that she could smell a "mild odor" when the water heater turned on, but Ingle was unsure if the smell was gas. Ingle also reported that the pilot light was repeatedly going out on the water heater. The dispatcher sent NorthWestern Energy service personnel to investigate. The serviceman reported:

CHECK AMBIENT, CUSTOMER HAD TURNED GAS OFF TO WATER HEATER, COMBUSTION AIR BLOCKED OFF, EXHAUST FAN WAS BACK DRAFTING ENTIRE BUILDING, RECOMMENDED ADDITIONAL COMBUSTION AIR INTO WATER HEATER ROOM, DOOR MUST BE SHUT TO ROOM, RECOMMEND OPENING A WINDOW TO ASSIST MAKE UP AIR FOR EXHAUST FAN, 0 PPM AMBIENT.<sup>43</sup>

¶ 28 On December 8, 2008, the NorthWestern Energy dispatcher noted:

KRISTA CALLED FROM THE CITY[.] A[N] UNNAMED WOMAN WHOM WORKS FOR PIGGY BACKED BBQ AND HAS REPORTED GAS ODOR[.] . . . SHE HAS SMELLED THIS FOR SOME TIME[.] KRISTA BELIEVES THAT THIS UNNAMED WOMAN CALLED AND REPORTED THIS TO US ON ABOUT 10/28. . . .

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<sup>41</sup> Nelson Dep. 33:2-20.

<sup>42</sup> Ex. 3 at 2-3.

<sup>43</sup> Ex. 3 at 4-5.

12/9/08 [A NORTHWESTERN ENERGY SERVICEMAN] CHECKED AT CAFE, NO ONE CALLED IN ODOR, DON'T KNOW ANY KRISTA, FOUND NO LEL OR CO IN BUILDING[.] 0 PPM AMBIENT[.]<sup>44</sup>

¶ 29 Mark Gronley, Kalispell district manager for NorthWestern Energy, testified via deposition taken March 22, 2010. Gronley testified that NorthWestern Energy provides natural gas service to Piggyback Barbeque.<sup>45</sup> Gronley testified that on the first service call, NorthWestern Energy found some backdrafting down the water heater. Gronley explained that backdrafting occurs when a building is starved for air because more air is being exhausted out than is coming in.<sup>46</sup>

¶ 30 Gronley testified that on October 24, 2008, NorthWestern Energy responded to Ingle's report of a gas odor at Piggyback Barbeque. Ingle reported that she smelled a mild odor when the water heater turned on and the pilot light on the water heater kept going out. The NorthWestern Energy personnel who responded to the call found that someone had turned off the gas to the water heater and the combustion air was "blocked off." Gronley explained that the situation caused the kitchen's exhaust fan to pull air down the flue pipe, creating a backdraft in the building. NorthWestern Energy's responding personnel recommended that the restaurant bring additional air into the water heater room and to keep the door to the water heater room closed. They further recommended temporarily opening a window in the kitchen to make up for the exhaust fan.<sup>47</sup> Gronley testified that the NorthWestern Energy personnel brought testing instruments with them and checked the ambient air for natural gas and carbon monoxide. Neither was present.<sup>48</sup> Gronley further testified that it was unlikely that exhaust gases would have remained in the kitchen because the exhaust fan would have rapidly exhausted the building's air.<sup>49</sup>

¶ 31 Gronley testified that it is not uncommon to find negative pressure problems in restaurants.<sup>50</sup> Gronley testified that modern water heaters include a safety device called a thermocouple which is heated by the flame of a pilot light and which expands to complete the circuit which keeps the pilot safety open.<sup>51</sup> If the pilot light goes out, the

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<sup>44</sup> Ex. 3 at 8-9.

<sup>45</sup> Gronley Dep. 6:2-5.

<sup>46</sup> Gronley Dep. 7:2-13.

<sup>47</sup> Gronley Dep. 9:23 – 10:20.

<sup>48</sup> Gronley Dep. 10:22-25.

<sup>49</sup> Gronley Dep. 11:6-11.

<sup>50</sup> Gronley Dep. 18:1-6.

<sup>51</sup> Gronley Dep. 18:15-25.

thermocouple cools and in a few seconds it contracts, breaking the circuit and causing the pilot safety valve to close, cutting off the flow of gas.<sup>52</sup>

¶ 32 Gronley testified that a properly burning gas appliance completely combusts its fuel and the emissions are almost entirely carbon dioxide and water vapor. If incomplete combustion occurs, carbon monoxide and aldehyde can be produced. When the NorthWestern Energy service personnel inspected the water heater at Piggyback Barbeque, they found no evidence of incomplete combustion. Gronley explained that, even with the gas turned off, an appliance which had been experiencing incomplete combustion would show some evidence, such as a carbon buildup in the appliance. No evidence of incomplete combustion was observed on the Piggyback Barbeque water heater.<sup>53</sup>

¶ 33 Gronley testified that NorthWestern Energy personnel responded to another call about Piggyback Barbeque on December 8, 2008.<sup>54</sup> At that time, the gas was turned on to the water heater, which the serviceman found was functioning properly.<sup>55</sup> Gronley later spoke to the serviceman who responded to that call, and the serviceman explained that it was a “strange call” because it originated at the city building department and when he arrived at Piggyback Barbeque, no one there knew why he had been called out.<sup>56</sup> Per NorthWestern Energy’s policy, the serviceman tested the ambient air even though no one on the premises was aware of a problem. The serviceman found no natural gas or carbon monoxide present.<sup>57</sup>

¶ 34 In response to a subpoena for its records from Ingle’s counsel, Driscoll Plumbing and Heating, LLC, responded with service records and a cover letter which stated, in part:

The first service call dated 1/7/09 was from Clay Nelson to check a problem with a natural gas water heater burning the floor underneath it. Our serviceman told Mr. Nelson that was not safe to have a water heater that is burning the floor, and then disconnected the natural gas water heater and hooked up an existing electric water heater.<sup>58</sup>

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<sup>52</sup> Gronley Dep. 19:1-17.

<sup>53</sup> Gronely Dep. 20:2-20.

<sup>54</sup> Gronley Dep. 11:19-22.

<sup>55</sup> Gronley Dep. 28:9-16.

<sup>56</sup> Gronley Dep. 13:3-13.

<sup>57</sup> Gronley Dep. 21:1-25.

<sup>58</sup> Ex. 5 at 1.

¶ 35 A January 13, 2009, invoice from Driscoll Plumbing states that on January 7, 2009, a worker “Checked natural gas water heater. Not safe. Disconnected natural gas water heater and hooked up electric water from down in the crawl space.”<sup>59</sup>

¶ 36 Richard Gill, Ph.D., CHFP, CXLT, President and Chief Scientist of Applied Cognitive Sciences: Human Factors Engineering, reviewed a file regarding Ingle’s claims at the request of Ingle’s counsel. On April 23, 2010, Dr. Gill reported his conclusions to Ingle’s counsel via letter. In the letter, Dr. Gill noted that he reviewed the information provided to him by Ingle’s counsel, and he personally inspected Piggyback Barbeque. At Piggyback Barbeque, Dr. Gill took photographs, made measurements, conducted tests, and “made a number of observations concerning the general design, layout, and condition of the facility.”<sup>60</sup>

¶ 37 Dr. Gill reported that his inspection of Piggyback Barbeque revealed that the doors and windows were well-sealed and the facility did not have an independent fresh air intake.<sup>61</sup> During his deposition testimony, Dr. Gill described Piggyback Barbeque as a very small airtight facility with an exhaust fan which moves a large volume of air which creates a negative pressure within the building exhausting more air than seeps into the building.<sup>62</sup> Dr. Gill could not test the carbon monoxide levels the gas water heater may have produced because it had been removed.<sup>63</sup> Although the gas water heater had been replaced by an electric water heater located elsewhere in the building, its exhaust flue remained; however, the flue had been sealed. Dr. Gill noted that the kitchen exhaust fan had an air flow rate of up to 250 cubic feet per minute. He closed the building’s windows and exterior doors, and then opened one window in a location remote from the kitchen fan to simulate the type of opening which the exhaust flue would have provided. He found:

With the kitchen exhaust fan on, it created such a strong negative pressure that the back draft through the opened window was so strong that it would immediately extinguish the flame on a heavy duty butane lighter, set on high. In fact, even with the window opened such that it created 10 times the cross sectional area of the 4½ inch flue, the back

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<sup>59</sup> Ex. 5 at 3.

<sup>60</sup> Ex. 8 at 1.

<sup>61</sup> Ex. 8 at 1-2.

<sup>62</sup> Gill Dep. 7:17-22.

<sup>63</sup> Ex. 8 at 4.

draft coming into the facility was so strong that it would immediately extinguish the flame.<sup>64</sup>

¶ 38 Dr. Gill testified that his test results were consistent with Gronley's conclusion that the exhaust fan created negative pressure and backdrafting of the water heater.<sup>65</sup> Dr. Gill concluded that the gas water heater backdrafted when the exhaust fan was on. He opined that the backdraft would have been strong enough to extinguish the pilot light. He further opined that the backdraft would have created negative airflow within the flue, causing exhaust gases – including carbon monoxide – to be forced out into the kitchen rather than exhausted out the flue. He further explained:

The strong back draft will compromise combustion efficiency in that the fresh air supply that normally draws into the burner from the bottom, will be replaced in part by the oxygen starved exhaust gases being forced back down the flue and into the general area surrounding the burner. Such a disruption of the fresh air "intake" to the burner reduces combustion efficiency thereby creating elevated levels of carbon monoxide and other noxious gases.<sup>66</sup>

¶ 39 Dr. Gill noted that the venting of exhaust gases would have occurred only when the water heater was actively heating water. At other times, the backdraft would only cause the pilot light to extinguish, and the extinguished pilot light would not cause any significant amount of carbon monoxide to accumulate within the building.<sup>67</sup> Dr. Gill explained that there are two different reasons why a pilot light would go out in a backdrafting situation: either the airflow is high enough to blow out the flame, or the backdrafting pushes down the air from which the burner has already consumed the oxygen, and the pilot light extinguishes because it is oxygen-starved.<sup>68</sup> Dr. Gill further noted that the thermocouple on the water heater would close whenever the pilot light extinguished, and therefore unburned gas would not escape into the building when the pilot light went out.<sup>69</sup>

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<sup>64</sup> Ex. 8 at 2.

<sup>65</sup> Gill Dep. 8:23 – 10:9.

<sup>66</sup> Ex. 8 at 2.

<sup>67</sup> Ex. 8 at 3.

<sup>68</sup> Gill Dep. 13:15 – 14:1.

<sup>69</sup> Ex. 8 at 3.

¶ 40 Dr. Gill opined, however, that “a significant influx of carbon monoxide” would occur when the water heater was active.<sup>70</sup> He noted:

[B]oth the physical evidence and eyewitness testimony overwhelmingly supports the conclusion that the back drafting created by the kitchen exhaust fan was sufficient to: (1) redirect exhaust gases from the water heater burner back into the facility; and (2) such a disruption in the air flow to the burner would compromise combustion efficiency thereby creating increased levels of carbon monoxide within the exhaust gases.<sup>71</sup>

¶ 41 Dr. Gill testified that he was not surprised that NorthWestern Energy personnel did not find any carbon monoxide on their inspection of Piggyback Barbeque on October 24, 2008, because he would only expect carbon monoxide to be present in significant quantities while the water heater was heating water. Dr. Gill opined that an insignificant amount of carbon monoxide would be created from the pilot light alone. If the gas is turned off to the water heater, no carbon monoxide will be generated.<sup>72</sup> Dr. Gill opined that the kitchen exhaust fan would have quickly exchanged the building’s air and the carbon monoxide levels would have dissipated within 10 to 15 minutes of turning off the gas to the water heater.<sup>73</sup>

¶ 42 Dr. Gill further opined that, although the gas was turned on to the water heater when NorthWestern Energy’s serviceman inspected it on December 8, 2008, if the water heater was not actively heating water at the time, but only had a lit pilot light, it would not have created carbon monoxide even if it was incompletely combusting.<sup>74</sup> Dr. Gill explained that, if the water heater was incompletely combusting its fuel, excess levels of carbon monoxide would only be created while it was actively heating water and not from merely having a lit pilot light.<sup>75</sup>

¶ 43 Dr. Gill further noted that Ingle took contemporaneous notes detailing her experiences and he found “a hundred percent correlation” between her notes and what he would expect to see in a carbon monoxide exposure situation involving a backdrafting appliance in a building with negative pressure.<sup>76</sup>

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<sup>70</sup> Ex. 8 at 3.

<sup>71</sup> Ex. 8 at 3-4.

<sup>72</sup> Gill Dep. 14:16 – 15:14.

<sup>73</sup> Gill Dep. 15:15 – 16:8.

<sup>74</sup> Gill Dep. 49:3-19.

<sup>75</sup> Gill Dep. 51:20 – 52:7.

<sup>76</sup> Gill Dep. 64:21 – 65:8.

¶ 44 On April 20, 2009, Daniel E. Munzing, M.D., examined Ingle and reviewed a recent MRI. Dr. Munzing noted that the MRI was fairly unremarkable and did not show an obvious cause for Ingle's symptoms. Dr. Munzing could not opine the cause of Ingle's symptoms and recommended that she see a neurologist.<sup>77</sup> Dr. Munzing noted that carbon monoxide poisoning could account for some of her symptoms. He recommended further evaluation, including a brain MRI and blood testing, noting:

According to her history it is more probable than not that these symptoms are related to work and possible exposure. However, this is not conclusive at this time.<sup>78</sup>

¶ 45 On April 22, 2009, Patrick J. Burns, D.O., issued a report on a neurological evaluation he performed of Ingle on referral from Dr. Munzing. Dr. Burns noted that Ingle complained of involuntary jerking of her legs, particularly at night. Ingle informed Dr. Burns that she believed her symptoms were due to exposure from fumes from the water heater at the Piggyback Barbeque. Dr. Burns reviewed a CT scan of Ingle's head, which he found unremarkable. After examination, Dr. Burns noted that he saw nothing neurological regarding her symptoms. He recommended an EEG.<sup>79</sup>

¶ 46 A May 8, 2009, EEG was interpreted as a normal study with no evidence of focal, lateralized, or epileptiform activity.<sup>80</sup>

¶ 47 Thomas H. Swanson, M.D., testified by deposition on August 20, 2010.<sup>81</sup> Dr. Swanson is a faculty member at the University of Montana and is the director of the Comprehensive Epilepsy Center of Montana.<sup>82</sup> He is board-certified by the American Board of Psychiatry and Neurology and the American Board of Clinical Neurophysiology. He also has additional qualifications in neurophysiology through the American Board of Psychiatry and Neurology.<sup>83</sup> Dr. Swanson saw Ingle for an evaluation of her tremors on August 5, 2009, at the request of Theodore R. Preiss, PA-C, of the Bozeman Deaconess Health Group. Dr. Swanson noted that Ingle had been experiencing tremors since November 2008. A May 2009 EEG was normal, but Ingle reported that she had steadily worsened since the EEG. Ingle also reported "difficulty putting her thoughts into words" beginning in November 2008. Ingle told Dr. Swanson

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<sup>77</sup> Ex. 10 at 28.

<sup>78</sup> Ex. 10 at 31.

<sup>79</sup> Ex. 10 at 19-20.

<sup>80</sup> Ex. 10 at 63.

<sup>81</sup> Swanson Dep. 4:1-5.

<sup>82</sup> Swanson Dep. 5:3-5.

<sup>83</sup> Swanson Dep. 5:10-15.

that the water heater at her former place of employment was responsible for her conditions. Dr. Swanson noted that by Ingle's report, her frequent headaches ceased when she ceased working at Piggyback Barbeque, but her tremors began shortly afterward. Dr. Swanson further noted that Ingle had an MRI of her brain which was normal.<sup>84</sup>

¶ 48 Dr. Swanson found no objective medical findings to indicate that Ingle suffered from a neurologic condition as a result of carbon monoxide exposure.<sup>85</sup> Dr. Swanson testified that he observed violent and coarse whole-body jerking sporadically throughout Ingle's examination which he could not correlate to any known neurologic abnormality.<sup>86</sup> Dr. Swanson opined that these movements were "definitely not" myoclonic in nature because they were not brief and were not regionally isolated in the body.<sup>87</sup>

¶ 49 Except for the jerking movements, Dr. Swanson found very little abnormal in his examination of Ingle. Dr. Swanson diagnosed Ingle with "movement disorder, NOS." He observed:

She has a very odd movements [sic], which were captured on EEG and non-electrical. I have a high suspicion that this is a functional movement disorder. I can not make a neurological diagnosis. I suggested she have a complete psychiatric evaluation. She and her mother were clearly not satisfied with the lack of neurological diagnosis.<sup>88</sup>

¶ 50 Dr. Swanson was unable to make a neurologic diagnosis because his examination revealed no neurologic abnormalities. Dr. Swanson characterized Ingle's history as "vague and odd and not in keeping with a neurologic disease."<sup>89</sup> He recommended that Ingle undergo a psychiatric evaluation because he believed she had a functional movement disorder – a movement disorder not due to organic brain disease but due to a psychiatric disease.<sup>90</sup> Dr. Swanson testified that Ingle's complaints did not fit the pattern of carbon monoxide exposure.<sup>91</sup> Dr. Swanson further opined that if jerking symptoms or tremors could be attributed to carbon monoxide exposure, those

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<sup>84</sup> Ex. 10 at 36.

<sup>85</sup> Swanson Dep. 21:12-16.

<sup>86</sup> Swanson Dep. 13:11-21.

<sup>87</sup> Swanson Dep. 13:22 – 14:20.

<sup>88</sup> Ex. 10 at 36-37.

<sup>89</sup> Swanson Dep. 17:1-11.

<sup>90</sup> Swanson Dep. 17:12-22.

<sup>91</sup> Swanson Dep. 19:15 – 20:10.

symptoms would have arisen contemporaneous with the exposure and not at a later date.<sup>92</sup>

¶ 51 On September 30, 2009, Ingle attended a psychiatric evaluation with Linda Keddington, APRN. Keddington assessed Ingle as having anxiety and depression.<sup>93</sup>

¶ 52 On October 16, 2009, neuropsychologist Carol V. Anderson, Ph.D., issued an evaluation report concerning Ingle's condition. Dr. Anderson took a history both from Ingle and from Ingle's mother. Dr. Anderson administered several tests to aid in evaluating Ingle's condition. She found Ingle's full scale IQ to be 102 and found Ingle's basic academic functioning to be in the superior range. She also found Ingle to be somewhat depressed and significantly anxious. Dr. Anderson noted that Ingle's test results were consistent with impairments known to be caused by carbon monoxide exposure.<sup>94</sup>

¶ 53 Dr. Anderson found Ingle to have very significant deficits in immediate/working memory and significant impairments in executive functioning. However, she noted that Ingle's physical limitations, high anxiety, and fatigue may have influenced her cognitive profile. Dr. Anderson also noted that Ingle's basic motor skills were compromised, with particular deficits in strength and fine motor control on her left side. Dr. Anderson further opined that Ingle's decline in cognitive functioning could be related to psychological factors as well as neurological dysfunction.<sup>95</sup>

¶ 54 Dr. Anderson concluded that Ingle had undergone a significant decline in psychological, motor, and cognitive functioning in the year prior to her evaluation. Dr. Anderson noted that Ingle's debilitating problems with chorea might be "a clinical manifestation of delayed neurological sequelae of carbon monoxide exposure." Dr. Anderson also noted that Ingle's memory skills, impairments in executive functioning, and emotional lability are consistent with known effects of carbon monoxide poisoning. Dr. Anderson noted, however, that other neurological problems could cause the same symptoms, and Dr. Anderson's evaluation did not rule out those differential diagnoses.<sup>96</sup> Dr. Anderson recommended a second opinion regarding neurological functioning, further evaluation for potential medications to aid with the movement disorder, a

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<sup>92</sup> Swanson Dep. 20:20 – 21:3.

<sup>93</sup> Ex. 10 at 66-67.

<sup>94</sup> Ex.1 at 1-6.

<sup>95</sup> Ex. 1 at 6.

<sup>96</sup> Ex. 1 at 6.

cognitive rehabilitation program, and psychological counseling for depression and anxiety.<sup>97</sup>

¶ 55 Raymond Singer, Ph.D., testified via telephonic deposition taken August 27, 2010. Dr. Singer is a neuropsychologist and neurotoxicologist. His specialty in neurotoxicology includes the study of the effects of carbon monoxide poisoning.<sup>98</sup> Dr. Singer is board-certified in neuropsychology with added qualifications in forensic neuropsychology and is a fellow of the National Academy of Neuropsychology, the American Psychological Association, and the Association for Psychological Societies. He is also a full member of the American Academy of Clinical Toxicology and the Society of Toxicology and a former member of the American College of Toxicology.<sup>99</sup>

¶ 56 On May 27-28, 2010, Dr. Singer evaluated Ingle to determine if she had suffered from carbon monoxide poisoning.<sup>100</sup> Dr. Singer also reviewed a copy of Dr. Gill's report and considered Dr. Gill's findings.<sup>101</sup> Dr. Singer also interviewed Bridger, who corroborated his mother's description of the onset and progression of her symptoms.<sup>102</sup>

¶ 57 On August 3, 2010, Dr. Singer issued a report entitled "Neuropsychological, Neurotoxicological, and Neurobehavioral Assessment of Jane Ingle."<sup>103</sup> Dr. Singer noted that Ingle experienced nausea, day headaches, night migraines, and irritated eyes during the time she worked at Piggyback Barbeque. Ingle reported symptoms of myoclonic jerks, short-term memory loss, confusion, mood swings, hypersensitivity to sound and light, depression, anxiety, poor sleep, bad dreams, lack of appetite, constipation, and loss of sexual desire.<sup>104</sup> Dr. Singer conducted a series of tests and assessments.<sup>105</sup> Dr. Singer testified that he administered a neurotoxicity screening survey which is a screening device that is about 80% accurate in predicting patients with diagnosed neurotoxicity. Ingle scored borderline indications of neurotoxicity with no indications of symptom distortion or malingering.<sup>106</sup> His diagnosis of Ingle included:

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<sup>97</sup> Ex. 1 at 7.

<sup>98</sup> Singer Dep. 8:16 – 10:19.

<sup>99</sup> Singer Dep. 12:9-25.

<sup>100</sup> Singer Dep. 12:1-4; 13:22-24.

<sup>101</sup> Ex. 9 at 3-4.

<sup>102</sup> Ex. 9 at 9; Ex. 9 at 44-45.

<sup>103</sup> Ex. 9.

<sup>104</sup> Ex. 9 at 5.

<sup>105</sup> Ex. 9 at 10-13.

<sup>106</sup> Singer Dep. 30:18 – 31:3.

[S]ignificant decline in cognitive function consistent with and caused by exposure to excessive amounts of carbon monoxide and other combustion products, specifically affecting Processing Speed, Working Memory and Executive Function. The declines in neuropsychological function have resulted in emotional anxiety, sadness, and at time depression, to the extent that it is present.<sup>107</sup>

¶ 58 Dr. Singer testified that some people are more susceptible to carbon monoxide poisoning than others.<sup>108</sup> Early symptoms of carbon monoxide exposure include headache, dizziness, fatigue, nausea, and occasionally changes in heart rate.<sup>109</sup> Delayed symptoms include cognition and short-term memory problems, psychosis, irritability, gait disorders, speech disturbances, Parkinson's disease-like syndromes, and depression.<sup>110</sup> Movement disorders can be a delayed symptom.<sup>111</sup> Dr. Singer disagreed with Dr. Swanson's opinion that tremors or jerks are not consistent with carbon monoxide exposure.<sup>112</sup> He also disagreed with Dr. Swanson's opinion that any tremors or jerks which occurred from carbon monoxide poisoning would occur during the exposure.<sup>113</sup> Dr. Singer testified that movement disorders tend to occur as a delayed reaction to carbon monoxide poisoning.<sup>114</sup>

¶ 59 Dr. Singer further opined that the results of intelligence testing he conducted on Ingle indicated that her functional levels have declined. He found the decline to be consistent with carbon monoxide poisoning.<sup>115</sup> He further found that her working memory and processing speed had declined.<sup>116</sup>

¶ 60 Dr. Singer acknowledged that neither of the neurologists who examined Ingle concluded that she had neurological damage. However, he maintained that while he did not believe he was qualified to identify what specific type of movement disorder Ingle might have, that he did believe that he was qualified to diagnose Ingle's condition as being some sort of movement disorder. Dr. Singer pointed out that both neurologists

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<sup>107</sup> Ex. 9 at 13.

<sup>108</sup> Singer Dep. 16:11-13.

<sup>109</sup> Singer Dep. 17:11-17.

<sup>110</sup> Singer Dep. 17:20-24.

<sup>111</sup> Singer Dep. 17:25 – 18:1.

<sup>112</sup> Singer Dep. 18:12-21.

<sup>113</sup> Singer Dep. 18:22 – 19:4.

<sup>114</sup> Singer Dep. 19:7-12.

<sup>115</sup> Singer Dep. 48:6-15.

<sup>116</sup> Singer Dep. 48:21-25.

believed that the possible psychological origins of Ingle's symptoms needed to be explored; Dr. Singer asserted that his investigation proved that Ingle's symptoms were not psychological in origin.<sup>117</sup>

¶ 61 Dr. Singer concluded that Ingle was exposed to "excessive amounts" of carbon monoxide and other combustion products. He noted that doctors who have diagnosed Ingle with a movement disorder have not ruled out carbon monoxide poisoning as a possible cause. Dr. Singer opined that Ingle's movement disorder was consistent with carbon monoxide poisoning. He further opined that the results of the neurobehavioral toxicity evaluation he performed found symptoms and signs of brain dysfunction consistent with carbon monoxide toxicity. Noting that he found no alternative explanation for the cause of Ingle's symptoms, he ultimately opined that Ingle was injured by her exposure to carbon monoxide, resulting in neuropsychological dysfunction and other impairment.<sup>118</sup>

¶ 62 Michael J. Kosnett, M.D., M.P.H., testified via deposition on September 1, 2010. Dr. Kosnett specializes in occupational and environmental medicine and medical toxicology.<sup>119</sup> He is board-certified in internal medicine, medical toxicology, and preventative medicine/occupational medicine.<sup>120</sup> He has served on the board of directors and as president of the American College of Medical Toxicology.<sup>121</sup> Dr. Kosnett is an associate clinical professor at the University of Colorado School of Medicine and at the Colorado School of Public Health.<sup>122</sup> He teaches in the University of Colorado medical toxicology fellowship training program and serves as an attending physician at the Rocky Mountain Poison and Drug Center.<sup>123</sup>

¶ 63 Dr. Kosnett testified that carbon monoxide exposure is a common issue in medical toxicology.<sup>124</sup> He has evaluated cases of potential carbon monoxide exposure on multiple occasions.<sup>125</sup> Dr. Kosnett assessed Ingle to determine whether she developed medical problems from carbon monoxide exposure at the Piggyback

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<sup>117</sup> Singer Dep. 139:10 – 141:24.

<sup>118</sup> Ex. 9 at 14.

<sup>119</sup> Kosnett Dep. 4:10-12.

<sup>120</sup> Kosnett Dep. 5:9-11.

<sup>121</sup> Kosnett Dep. 5:22 – 6:2.

<sup>122</sup> Kosnett Dep. 8:11-17.

<sup>123</sup> Kosnett Dep. 8:19-23.

<sup>124</sup> Kosnett Dep. 7:9-13.

<sup>125</sup> Kosnett Dep. 7:17-21.

Barbeque.<sup>126</sup> Dr. Kosnett reviewed Ingle's medical records and conducted a detailed history and physical examination of Ingle on July 19, 2010.<sup>127</sup>

¶ 64 On August 13, 2010, Dr. Kosnett issued a medical toxicology report on Ingle's case. He noted that he reviewed medical records, depositions, toxicology literature, and other documents, and spent four hours conducting an in-person evaluation of Ingle.<sup>128</sup> Dr. Kosnett set forth four investigative questions which he considered in determining whether carbon monoxide poisoning caused Ingle's medical problems: (1) Did Ingle develop medical problems known to be associated with indoor air emissions; (2) did Ingle sustain a dose of the emissions of sufficient magnitude to cause such problems; (3) was the temporal pattern between Ingle's development of medical problems and the exposure consistent with a causal relationship; and (4) are there other factors in Ingle's history as likely or more likely to be responsible.<sup>129</sup> Based on his analysis of these questions, Dr. Kosnett concluded:

[I]t is possible that inadequate indoor ventilation and odors may have contributed to Ms. Ingle experiencing episodic self-limited mild headaches during certain workdays at the Piggyback restaurant. It cannot be concluded with reasonable medical certainty or on a more probable than not basis that she sustained significant occupational exposure to carbon monoxide, or that she developed a movement disorder or neurocognitive deficits as a consequence of her employment at the facility.<sup>130</sup>

¶ 65 Dr. Kosnett explained that the air quality in Piggyback Barbeque could have been compromised by carbon monoxide, but also could have been a general air quality issue from inadequate ventilation. He noted that the gas water heater was evidently scorching the floor underneath it, which would explain both Ingle's headaches and the odor of scorching plastic she reported.<sup>131</sup> Dr. Kosnett noted that Ingle reported to him that the water heater's pilot light went out on a daily basis, yet she experienced headaches approximately two out of every five days. Dr. Kosnett found the pattern of Ingle's headaches to be inconsistent with an elevation of carbon monoxide in the

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<sup>126</sup> Kosnett Dep. 15:3-9.

<sup>127</sup> Kosnett Dep. 15:11-22.

<sup>128</sup> Ex. 17 at 22.

<sup>129</sup> Ex. 17 at 38-39.

<sup>130</sup> Ex. 17 at 41-42.

<sup>131</sup> Kosnett Dep. 24:15-25.

ambient air since Ingle's headaches did not occur with the same frequency or regularity as the pilot light extinguishing.<sup>132</sup>

¶ 66 Dr. Kosnett testified that he "strongly disagree[d]" with Dr. Gill's conclusion that backdrafting likely caused elevations in carbon monoxide inside the Piggyback Barbeque to levels which could cause the types of neurological problems Ingle experienced.<sup>133</sup> Dr. Kosnett testified that he reviewed a scientific study of backdrafting and carbon monoxide levels which indicated that elevations of carbon monoxide in the ambient air of a room from a backdrafting appliance are negligible. The study discussed a Canadian study in which experimenters created situations in which gas water heaters' backdrafting was increased through the use of high-volume fans and yet carbon monoxide levels never reached more than 5.3 parts per million. Dr. Kosnett stated that the permissible occupational exposure limit set by OSHA is 50 parts per million, and that 5.3 parts per million would be insufficient to trigger medical problems beyond a very small increase in carboxyhemoglobin.<sup>134</sup>

¶ 67 Dr. Kosnett testified that, although movement disorders rarely occur as a result of carbon monoxide poisoning, when they do occur, about 75% of them are a Parkinson's-type disorder, commonly referred to as Parkinsonian or Parkinsonism.<sup>135</sup> The remaining movement disorders are dystonia, chorea, or myoclonus.<sup>136</sup> Ingle's movement disorder was not consistent with Parkinsonism.<sup>137</sup> Dr. Kosnett testified that Ingle's report that the onset of her movement disorder occurred shortly after she ceased working at Piggyback Barbeque is consistent with reports of other victims of carbon monoxide poisoning who experienced an onset of movement disorder symptoms days or weeks after their exposure.<sup>138</sup> However, individuals who were diagnosed with movement disorders after carbon monoxide poisoning all experienced mild to severe impairment of their cognitive function during or immediately after their carbon monoxide poisoning, and this did not occur with Ingle.<sup>139</sup> All the individuals cited in the studies Dr. Kosnett reviewed who suffered from movement disorders after carbon monoxide poisoning were either rendered unconscious or required emergency medical treatment at the time of their

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<sup>132</sup> Kosnett Dep. 32:8 – 33:1.

<sup>133</sup> Kosnett Dep. 31:12-22.

<sup>134</sup> Kosnett Dep. 28:21 – 30:14.

<sup>135</sup> Kosnett Dep. 33:16-22.

<sup>136</sup> Kosnett Dep. 34:5-22.

<sup>137</sup> Kosnett Dep. 34:1-4.

<sup>138</sup> Kosnett Dep. 35:12-24.

<sup>139</sup> Kosnett Dep. 37:7-17.

exposure.<sup>140</sup> Dr. Kosnett further noted that in the medical literature he referenced, the individuals who suffered from movement disorders after carbon monoxide poisoning all recovered within two to eight weeks for the non-Parkinsonism disorders and within six months from Parkinsonism.<sup>141</sup> In Ingle's case, her movement disorder symptoms were present 18 months after they initially developed, and Ingle reported that they continued to worsen.<sup>142</sup>

¶ 68 Dr. Kosnett further testified that Ingle's report of developing memory deficits in April 2009 which she attributed to her fall 2008 exposure are inconsistent with reported cases of cognitive deficits from carbon monoxide exposure, which typically arise within a month and a half of exposure.<sup>143</sup> Dr. Kosnett opined that "it would be distinctly unusual" for someone to function normally for months after carbon monoxide poisoning and then begin developing progressively worsening memory problems.<sup>144</sup>

¶ 69 Dr. Kosnett further testified that he found it significant that in a published study about psychogenic movement disorders, between 2.6% and 25% of movement disorders in neurology clinics are determined to be psychogenic; 38% of patients with psychogenic movement disorders also suffer from anxiety; and 19% of patients with psychogenic movement disorders also suffer from major depression. He noted that prior to working at Piggyback Barbeque, Ingle had been diagnosed both with anxiety and depression.<sup>145</sup>

¶ 70 Dr. Kosnett testified that while he cannot opine with a reasonable degree of medical certainty whether Ingle has a psychogenic movement disorder, he believes this has not been adequately ruled out as the possible cause of Ingle's movement disorder symptoms.<sup>146</sup> Dr. Kosnett further testified that many causes for movement disorders other than carbon monoxide poisoning exist, including genetic, degenerative, and post-infection causes, and Ingle has not undergone the type of workup which would have adequately ruled out these other causes.<sup>147</sup>

¶ 71 Dr. Kosnett stated that it is unclear to him whether Ingle suffers from cognitive deficits. Dr. Kosnett opined that IQ tests are the best overall global assessment of a

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<sup>140</sup> Kosnett Dep. 39:15-23.

<sup>141</sup> Kosnett Dep. 38:4-10.

<sup>142</sup> Kosnett Dep. 38:17-24.

<sup>143</sup> Kosnett Dep. 40:12 – 41:11.

<sup>144</sup> Kosnett Dep. 41:12-19.

<sup>145</sup> Kosnett Dep. 47:4 – 48:8.

<sup>146</sup> Kosnett Dep. 51:9-23.

<sup>147</sup> Kosnett Dep. 52:8-22.

person's intelligence and function. He noted that Ingle took an IQ test in the fall of 2009 which measured her IQ at 102, and he does not believe that someone with a higher-than-average IQ can be said to have a disabling cognitive deficit. He further noted that while another test measured her IQ at 90 that is still within the normal range for the U.S. population<sup>148</sup>

¶ 72 Dr. Kosnett identified several factors which he believes may have affected the validity of the neurocognitive testing performed by Drs. Anderson and Singer: Ingle was anxious and depressed during the testing; during Dr. Anderson's testing, Dr. Anderson noted that Ingle's psychological stress influenced her performance; and Ingle was taking three prescription medications at the time of her testing which all are known to have detrimental effects on memory.<sup>149</sup> In particular, Dr. Kosnett noted that Ingle had been taking lorazepam at least since 2009,<sup>150</sup> and lorazepam is known to potentially cause dizziness, headache, transient memory impairment, sedation, somnolence, or depression.<sup>151</sup> Dr. Kosnett opined that evaluators must take lorazepam's potential side effects into account when evaluating neuropsychological test results on a person using the drug, and a failure to do so would render the test results unreliable.<sup>152</sup>

¶ 73 Dr. Kosnett testified that Ingle also took baclofen, which is known to cause confusion, problems with concentration, and memory impairments.<sup>153</sup> Dr. Kosnett further disagreed with Dr. Singer's opinion that Ingle's muscle spasms must have an organic origin since Ingle reported an improvement in her symptoms when she began taking baclofen. Dr. Kosnett noted this could have been a placebo effect.<sup>154</sup>

¶ 74 Dr. Kosnett further noted that Ingle has a medical marijuana card and reported that she used medical marijuana approximately once a week. He noted that marijuana is also known to have detrimental effects on short-term memory, and that studies have indicated that chronic marijuana use may hasten age-related memory loss.<sup>155</sup> Dr. Kosnett opined that Ingle's marijuana use was a "very important" fact to consider when interpreting her neuropsychological testing.<sup>156</sup>

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<sup>148</sup> Kosnett Dep. 53:12 - 54:12-13.

<sup>149</sup> Kosnett Dep. 54:14 – 57:15.

<sup>150</sup> Kosnett Dep. 58:16-22.

<sup>151</sup> Kosnett Dep. 59:3-17.

<sup>152</sup> Kosnett Dep. 59:18 – 60:3.

<sup>153</sup> Kosnett Dep. 61:12-15.

<sup>154</sup> Kosnett Dep. 62:10-24.

<sup>155</sup> Kosnett Dep. 63:21 – 64:23.

<sup>156</sup> Kosnett Dep. 64:23 – 65:1.

¶ 75 Dr. Kosnett stated that he was very surprised to discover that Dr. Singer had not recorded which medications Ingle was taking at the time of her evaluation.<sup>157</sup> Dr. Kosnett opined that Ingle's use of lorazepam, baclofen, and medical marijuana clearly reduce the reliability of the neuropsychological testing she underwent to investigate organic brain damage from carbon monoxide exposure.<sup>158</sup>

¶ 76 Dr. Kosnett agreed with Dr. Singer that MRIs are not always sensitive enough to record brain damage caused by carbon monoxide poisoning.<sup>159</sup> However, Dr. Kosnett noted that there are other degenerative neurological disorders which may not be picked up by an MRI in the early stages and a negative MRI does not rule those out as differential diagnoses for carbon monoxide poisoning.<sup>160</sup>

¶ 77 Dr. Kosnett further opined that Dr. Singer mischaracterized Dr. Swanson's diagnosis when Dr. Singer stated that Dr. Swanson had diagnosed a movement disorder, because Dr. Swanson had actually opined that Ingle had a **functional** movement disorder, and "functional" is a synonym for psychogenic. Therefore, Dr. Kosnett believes Dr. Swanson did not conclude that Ingle had brain damage from a toxic exposure, and Dr. Singer mischaracterized Dr. Swanson's diagnosis when he recorded that Dr. Swanson found Ingle to have a movement disorder.<sup>161</sup> Dr. Kosnett's assessment of Dr. Swanson's diagnosis of a "functional movement disorder" was borne out by Dr. Swanson's own testimony, in which he clarified that a "functional movement disorder" is nonorganic and "more in the realm of psychiatric disease."<sup>162</sup>

¶ 78 Dr. Kosnett further opined that Ingle's stress levels negatively impacted her ability to make her best effort on the testing which the various evaluators performed. He noted, for example, that when he asked her to perform simple arithmetic, she was unable to do so, and yet her tested IQ was at least 90 points, which meant that she had the intellectual capacity to complete simple arithmetic, yet her stress levels prevented her from making the effort to do so.<sup>163</sup> Dr. Kosnett opined that Ingle's anxiety and depression greatly impaired her performance on the neuropsychological tests and

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<sup>157</sup> Kosnett Dep. 65:7-16.

<sup>158</sup> Kosnett Dep. 66:5-13.

<sup>159</sup> Kosnett Dep. 67:4-9.

<sup>160</sup> Kosnett Dep. 67:15-21.

<sup>161</sup> Kosnett Dep. 68:3-18.

<sup>162</sup> Swanson Dep. 17:17 – 18:5.

<sup>163</sup> Kosnett Dep. 71:10 – 72:2.

therefore the results are not a reliable reflection of brain damage that may or may not have been caused by carbon monoxide exposure.<sup>164</sup>

¶ 79 Ultimately, Dr. Kosnett testified that he could not conclude on a more-probable-than-not basis that Ingle had sustained medical problems as a result of carbon monoxide poisoning.<sup>165</sup>

¶ 80 Ingle, Tone, and Bridger were all credible witnesses. All three testified to a temporal relationship between the initial symptoms Ingle developed and her employment at Piggyback Barbeque. They further testified that she began exhibiting signs of a movement disorder in the months following her employment there. However, neither Tone nor Bridger could know whether Ingle was exposed to carbon monoxide at her workplace, nor whether that exposure caused her symptoms. Although Ingle testified – and I do not doubt – that she believes she was exposed to carbon monoxide and that the exposure caused her present medical conditions, her testimony as to the cause of her injuries must be weighed along with the other causation evidence presented. Several additional witnesses, both lay and expert, testified regarding whether Ingle was exposed to carbon monoxide, and if so, the levels of her exposure, and whether that exposure caused her to suffer an industrial injury or occupational disease.

¶ 81 Based on the evidence presented, I find that it is more probable than not that Ingle was exposed to **some** carbon monoxide while working at Piggyback Barbeque. It is clear from the evidence presented that the kitchen exhaust fan caused a backdraft down the gas water heater's exhaust flue and that this backdraft caused the water heater's pilot light to extinguish on a regular basis in the fall of 2008. Gronley confirmed that the appliance backdrafted. He also testified that NorthWestern Energy's personnel never found natural gas or carbon monoxide in the ambient air because the exhaust fan would have quickly removed those gases from the building. Most pertinently, he stated that carbon monoxide would only be produced if the water heater was incompletely combusting its fuel, and the appliance showed no evidence of incomplete combustion, such as carbon build-up.

¶ 82 I found Dr. Gill's experiment at the Piggyback Barbeque compelling; however, Dr. Gill explained that the **only** time that carbon monoxide would backdraft would be if the water heater was both incompletely combusting and actively engaged in heating water. Dr. Gill further testified that the backdraft was so strong that it would almost immediately extinguish the water heater's pilot light, and that when the pilot light would blow out, the

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<sup>164</sup> Kosnett Dep. 72:3-8.

<sup>165</sup> Kosnett Dep. 75:10-17.

thermocouple would cool and cut off the gas flow within seconds. He further testified that the kitchen exhaust fan was so strong that it would completely exchange the restaurant's air every 10 to 15 minutes. Therefore, from Dr. Gill's testimony and the lack of carbon build-up found by NorthWestern Energy's personnel, it appears that at most, incomplete combustion occurred and produced carbon monoxide for a few seconds each time the exhaust fan was activated.

¶ 83 Ingle testified that in the fall of 2008, the pilot light on the water heater extinguished approximately twice per day. She further testified that she typically worked in the kitchen for approximately 50% of each of her shifts. Even if Ingle coincidentally happened to be present in the kitchen every time the backdrafting occurred, she still would, at most, be exposed to the water heater incompletely combusting for a few seconds twice per day. According to research cited by Dr. Kosnett, the amount of carbon monoxide present under these circumstances would be well below the danger threshold. The kitchen exhaust fan would then draw that contaminated air out of the establishment within minutes. I therefore find that the amount of carbon monoxide to which Ingle was exposed while working at Piggyback Barbeque was both short in duration and small in quantity.

#### CONCLUSIONS OF LAW

¶ 84 This case is governed by the 2007 version of the Montana Workers' Compensation Act since that was the law in effect at the time of Ingle's industrial accident.<sup>166</sup>

¶ 85 Ingle bears the burden of proving by a preponderance of the evidence that she is entitled to the benefits she seeks.<sup>167</sup> Ingle has not met his burden.

#### **Is Petitioner suffering from a work-related injury or disease as a result of working at the Piggyback Barbeque?**

¶ 86 Ingle alleges that she was exposed to dangerous levels of carbon monoxide while working at Piggyback Barbeque, and that this exposure caused her to suffer either an industrial injury or occupational disease. Under § 39-71-119(1)(a), MCA, an injury is defined as internal or external physical harm to the body that is established by objective medical findings. Section 39-71-116(19), MCA, defines "objective medical findings" as medical evidence, including range of motion, atrophy, muscle strength, muscle spasm, or other diagnostic evidence, substantiated by clinical findings. Under § 39-71-

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<sup>166</sup> *Buckman v. Montana Deaconess Hosp.*, 224 Mont. 318, 321, 730 P.2d 380, 382 (1986).

<sup>167</sup> *Ricks v. Teslow Consol.*, 162 Mont. 469, 512 P.2d 1304 (1973); *Dumont v. Wickens Bros. Constr. Co.*, 183 Mont. 190, 598 P.2d 1099 (1979).

116(20)(a), MCA, “occupational disease” is defined as harm, damage, or death arising out of or contracted in the course and scope of employment caused by events occurring on more than a single day or work shift.

¶ 87 As set forth in the findings above, I found that Ingle was more probably than not exposed to some carbon monoxide during the fall of 2008 while she worked at Piggyback Barbeque. However, based on her testimony and the testimony of the expert witnesses, I further found that any exposure was more probably than not of very short duration and in amounts below the “danger threshold” identified by Dr. Kosnett.

¶ 88 I note that no evidence suggests that **any** doctor who examined Ingle thought she was malingering. The question for me to address is whether Ingle met her burden of proof that she suffered **physical** harm as a result of exposure to carbon monoxide in the workplace.

¶ 89 Although I have found Ingle’s exposure to carbon monoxide to be minimal, as Dr. Singer noted, some people are more susceptible to carbon monoxide poisoning than others. I therefore consider whether, based on the evidence before the Court, it is more probable than not that Ingle suffered an industrial injury or occupational disease as a result of her exposure to carbon monoxide at Piggyback Barbeque.

¶ 90 Ingle has been evaluated by a number of medical experts since she first complained of symptoms she believed were caused by her work at Piggyback Barbeque. As set forth in the findings above, Dr. Munzing examined Ingle and reviewed an MRI. Although he noted that carbon monoxide poisoning could account for some of her symptoms, he could not opine as to the cause of her symptoms and recommended further evaluation. Dr. Burns examined Ingle and reviewed a CT scan. He concluded that her symptoms were not neurological in origin and he recommended an EEG. The EEG was performed and was interpreted as normal. Dr. Swanson evaluated Ingle and found no objective medical findings to indicate that she suffered from a neurologic condition as a result of carbon monoxide exposure. He opined that her movement disorder was functional – not due to organic brain disease, but rather to a psychiatric disease. When she later underwent a psychiatric evaluation, Ingle was found to have anxiety and depression.

¶ 91 Dr. Anderson likewise found Ingle to be depressed and anxious. While she noted that Ingle’s test results were consistent with impairments known to be caused by carbon monoxide exposure, she found that differential diagnoses had not been ruled out and recommended that Ingle undergo a second opinion regarding neurological functioning. Dr. Kosnett evaluated Ingle, and concluded, in pertinent part: “It cannot be concluded . . . on a more probable than not basis that she . . . developed a movement

disorder or neurocognitive deficits as a consequence of her employment at [Piggyback Barbeque].”<sup>168</sup>

¶ 92 Dr. Singer disagreed with the conclusions of the other evaluators. Dr. Singer found that Ingle exhibited borderline indications of neurotoxicity from his testing. He opined that Ingle experienced a significant decline in cognitive function and a decline in neuropsychological function resulting in emotional anxiety, sadness, and occasionally depression. He further concluded that Ingle’s movement disorder occurred as a delayed symptom from carbon monoxide exposure, and opined that his evaluation of Ingle addressed and ruled out the possibility that Ingle’s movement disorder was psychogenic.

¶ 93 Neither Dr. Singer nor Dr. Kosnett are Ingle’s treating physicians. In weighing the evidence presented by each, I found that Dr. Kosnett offered a persuasive critique of some of the conclusions reached by Dr. Singer. Dr. Kosnett noted that Dr. Singer did not take into account that some of Ingle’s test results may have been affected by prescription medications she was using at the time of Dr. Singer’s examination. Dr. Kosnett noted that Dr. Singer’s conclusion that Ingle had experienced a significant decline in cognitive function was inconsistent with her IQ test results. Dr. Kosnett stated that the particular details of Ingle’s movement disorder were inconsistent with reports of the manifestation and exhibition of movement disorders which occurred in other carbon monoxide exposure cases. Dr. Kosnett took issue with Dr. Singer’s opinion that Dr. Swanson had diagnosed Ingle with a movement disorder, because Dr. Swanson had actually opined that Ingle had a **functional** movement disorder, which is synonymous with a psychogenic movement disorder. Dr. Kosnett’s assessment of Dr. Swanson’s diagnosis of a “functional movement disorder” was borne out by Dr. Swanson’s own testimony, in which he clarified that a “functional movement disorder” is nonorganic and “more in the realm of psychiatric disease.”

¶ 94 Neither Drs. Munzing, Burns, Swanson, Anderson, nor Kosnett were able to opine that Ingle’s symptoms were caused by carbon monoxide poisoning. Although Dr. Singer opined to the contrary, I found Dr. Kosnett’s critique of Dr. Singer’s conclusions to be persuasive. In light of the medical evidence presented, I cannot conclude that Ingle has proven that a causal connection exists between her symptoms and any exposure to carbon monoxide she may have experienced while employed at Piggyback Barbeque. Therefore, I conclude that Ingle has not met her burden of proving that she suffered a work-related injury or disease from her employment at Piggyback Barbeque.

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<sup>168</sup> Ex. 17 at 41-42.

JUDGMENT

¶ 95 Petitioner is not suffering from a work-related injury or disease as a result of working at Piggyback Barbeque.

¶ 96 Pursuant to ARM 24.5.348(2), this Judgment is certified as final and, for purposes of appeal, shall be considered as a notice of entry of judgment.

DATED in Helena, Montana, this 3<sup>rd</sup> day of February, 2011.

(SEAL)

/s/ JAMES JEREMIAH SHEA  
JUDGE

c: Sydney E. McKenna  
William Dean Blackaby  
Submitted: January 14, 2011