ALASKA WORKERS' COMPENSATION BOARD

P.O. Box 115512 **Juneau, Alaska 99811-5512**

MICHELLE KEENE, Employee, v. CITY OF NOME, Employer, and ALASKA MUNICIPAL LEAGUE JOINT INSURANCE ASSOCIATION, Insurer, Defendants.	)	FINAL DECISION AND ORDER AWCB Case No. 200717364 AWCB Decision No. 13-0120 Filed with AWCB Fairbanks, Alaska on September 30, 2013

Michelle Keene's (Employee) March 10, 2009 workers' compensation claim was heard on July 25, 2013, in Fairbanks, Alaska. The matter was set for hearing on January 29, 2013. Attorneys Michael Schneider and Herman Walker represented Employee. Attorney Bob Griffin represented the City of Nome and Alaska Municipal League Insurance Association (Employer). Employee and Lara Williams, M.D. appeared in person and testified. Nelson Isada, M.D. and Jose Gonzalez, M.D. testified by video-taped deposition. The record was held open to allow the panel to review the video-taped depositions of Drs. Isada and Gonzalez. The record closed after the panel next met and deliberated, on September 11, 2013.

ISSUES

Employee contends she was exposed to chlorine gas on March 20, 2007 while working for Employer. Employee further contends this exposure was the substantial cause of her preterm labor and subsequent preterm delivery of her son and her associated disability and need for medical care.

Employer concedes Employee was exposed to toxic chlorine gas in the course and scope of her employment with Employer, but contends there is no causal relationship between the chlorine exposure and Employee's preterm labor and delivery.

Is the March 20, 2007 chlorine exposure the substantial cause of Employee's preterm labor and delivery and associated disability and need for medical treatment?

FINDINGS OF FACT

A review of the record establishes the following facts and factual conclusions by a preponderance of the evidence:

1) In 1987, at age 19, Employee underwent an elective pregnancy termination at approximately three months gestation. (Prenatal Care Record, January 3, 2007; Employee).

2) In 1994, at age 26, Employee underwent an elective pregnancy termination at approximately six to seven weeks gestation. (Prenatal Care Record, January 3, 2007; Employee).

3) On December 1, 2006, Employee underwent a pelvic sonogram which showed a normal viable pregnancy at approximately seven weeks four days gestation. (Sonogram report, December 1, 2006).

4) On January 3, 2007, Employee was evaluated at Norton Sound Regional Hospital for her first routine obstetrical physical exam. Deborah Flint-Daniel, M.D. found no abnormalities, but noted Employee's advanced maternal age (38) and history of depression as potential risk factors. Dr. Flint-Daniel estimated a fetal due date of July 16, 2007. (Prenatal Care Record, January 3, 2007).

5) On January 22, 2007, Employee reported she had fallen a few days prior and had "started spotting again." Employee reported she had been spotting "2-3 weeks ago" as well. (Norton Sound Health Corp. Outpatient Clinic note, January 22, 2007).

6) On February 13, 2007, Employee reported she had felt a "gush of fluids" the night before and "leakage during the night," but had no cramping or bleeding. Employee was diagnosed with bacterial vaginosis and prescribed a course of antibiotics. (Norton Sound Health Corp. Outpatient Clinic note, February 13, 2007).

7) On February 13, 2007, Employee underwent a second pelvic sonogram which showed a viable pregnancy at approximately 19 weeks 2 days gestation. Cervical length was approximately five centimeters. (Sonogram report, February 13, 2007).

8) On March 9, 2007, Employee underwent a routine fetal anatomy survey by pelvic ultrasound. The ultrasound showed no fetal or maternal abnormalities. Cervical length was measured at 3.3 centimeters. (Fetal Survey, Sonogram report, March 9, 2007).

9) On March 21, 2007, Employee inhaled chlorine fumes while inspecting chlorine tanks at the Nome swimming pool. Employee was approximately 23 weeks pregnant at the time. (Report of Injury, October 22, 2007; Workers' Compensation Claim, March 10, 2009; Isada Deposition 37:4-7, May 3, 2011).

10) On March 21, 2007, Sai-Ling Liu, M.D. treated Employee at the Nome Emergency Room (ER) and diagnosed preterm labor. Employee was medevaced to Anchorage. (Dr. Liu report, March 21, 2007).

11) On March 26, 2007, Employee's son was born at approximately 24 weeks gestation. He weighed one pound six ounces at birth and was hospitalized for four months. (Dr. Flint-Daniel clinic note, October 30, 2007; Employee).

12) On April 13, 2007, Employee saw Dr. McCreary for a three-week post-partum follow-up appointment. Dr. McCreary noted "[t]he cause of the preterm delivery has not been determined." She assessed extremely premature delivery of unclear etiology. As to causation, Dr. McCreary noted:

> Though the placental pathology shows acute chorioamnionitis, it is very unclear if this was the inciting factor for her preterm delivery or if she developed an intrauterine infection as her cervix dilated. The lack of funisitis makes me suspect that this is likely an intrapartum occurrence and not the inciting factor, but is impossible to say. We discussed her first-trimester bacterial vaginosis. BV has clearly been implicated with preterm delivery, and I cannot say one way or the other if this also led to her preterm delivery. As we have documented before, it is very unclear if the chlorine exposure that she acutely had prior to the onset of abdominal contractions may have set off her labor. There is no documentation in any of the human or animal literature that this occurs even with high exposures of chlorine gasses…. We discussed the possible inciting etiology of cervical incompetence, although three weeks prior, her cervix was documented as closed and long and she has no other risk factors. She may have other vaginal pathogens that caused intrauterine infection and low-grade chorioamnionitis with delivery. It is also feasible that she has a uterine anomaly that has predisposed her to this delivery.

Dr. McCreary recommended Employee undergo a hysterosalpingogram (HSG) or uterine MRI

"to rule out uterine anomaly." (Dr. McCreary chart notes, April 13, 2007).

13) On July 8, 2008, Leroy Casperson, M.D., completed a records review employer's medical evaluation (EME). Dr. Casperson opined Employee's chlorine exposure was not a cause of Employee's premature labor and delivery:

> I find it impossible to fault the substance in question, in other words chlorine exposure, as a cause of claimant's' premature labor for the following reasons:
>
> A. To have any effect on a person, the substance would have to be either inhaled or ingested. The latter is obviously out of the question. If the chlorine fumes were to be inhaled it would be extremely irritating and would have to pass through the respiratory system, causing severe reaction to the lungs, bronchi, and throat with resulting shortness of breath, severe coughing, and probably retching, none of which apparently occurred. The claimant simply began experiencing abdominal pain and bleeding as an unrelated incidence.
>
> B. Another strong argument against the chlorine exposure causing her premature labor is the fact that she carried two other pregnancies to term while working in the same environment and without any apparent consequence.[1]

(Dr. Casperson EME Report, July 8, 2008).

14) On August 8, 2008, Employer controverted all benefits based on Dr. Casperson's EME report. (Controversion, August 8, 2008).

15) On March 10, 2009, Employee filed a workers' compensation claim (WCC) seeking temporary total disability (TTD) and temporary partial disability (TPD) benefits, permanent partial impairment (PPI), medical costs, transportation costs, penalty, interest, attorney's fees and costs, and a finding of unfair or frivolous controversion. (WCC, March 10, 2009).

16) On March 31, 2009, Employer controverted all benefits based on Dr. Casperson's EME report. (Controversion, March 31, 2009).

17) On February 20, 2011, Lara Williams, M.D. evaluated Employee's medical records and opined Employee's chlorine exposure was not the substantial cause of her preterm delivery. Dr. Williams opined the most likely cause of Employee's preterm delivery was cervical shortening, compounded by uterine infection. (EME Report, Dr. Williams. February 20, 2011).

18) On May 3, 2011, Employer deposed Employee's treating perinatologist, Nelson B. Isada,

[1] The parties agreed at hearing this assertion is factually inaccurate. Employee has only carried one child, her son Joshua, to term. Because of this major factual error, the panel disregards Dr. Casperson's report and does not rely on it in making its decision.

M.D. Dr. Isada opined Employee's chlorine inhalation was the substantial cause of Employee's preterm labor and delivery:

> Q. [By Mr. Griffin] Let's go back – we have listed substantial factors here. We have listed age. We have listed a bacteria.
>
> A. Vaginosis.
>
> Q. Bacteria infection of the vagina. Is that a yes?
>
> A. Yes.
>
> Q. We have listed spotting. Is that a yes?
>
> A. Yes.
>
> Q. We have listed two prior abortions. That's a factor?
>
> A. A maybe.
>
> Q. A maybe factor. We have listed cervical insufficiency? ... That's a factor? …
>
> A. Yes.
>
> Q. We have listed the infection of the placenta? …
>
> A. Yes.
>
> Q. Do you understand it was no more than one breath?
>
> A. That's what she said.
>
> Q. Through a respirator?
>
> A. That didn't fit.
>
> Q. That may or may not have fitted. If you have to look at all of those factors –
>
> A. Which would I rank first?
>
> Q. Which would you say was the substantial cause?

A. I would still have to go with chlorine, but the second would be bacterial vaginosis. We have a new computer program at Providence where you have to rank things. I would probably put the chlorine at the top and bacterial vaginosis as a number two. And then the other ones would be uncharacterized, but as I told them, it's up in the air.

Q. What is the substantial cause, is up in the air? …

A. Yes, that's what I told them. That's why I put the question mark in front of my comment, occupational exposure, question mark.

Q. It's still up in the air today?

A. I'm still – I still wonder about it. If I had to put, what you're asking me to put a number there or put a rank, I would say that's the rank I would put.

…

Q. [By Mr. Schneider] Despite the possibilities that have been thrown out here, is it still your testimony that if you had to rank these possible causes or substantial factors, you would still rank her chlorine exposure at the top of the list?

A. Yes. It would be a "yes, question mark," and then number two would be BV.

…

Q. [By Mr. Griffin] Just a brief follow-up on Mr. Schneider's last question. The bacterial vaginitis that's number two, there is just a ton of literature about that, isn't there?

A. Yes, sir.

Q. And you even wrote some of it?

A. Or read it, or know some of the folks who discovered it.

Q. And the number one that you answered would be a "yes, question mark," there is not a shred of literature about that, is there?

A. That's absolutely correct.

(Dr. Isada Deposition 45-47, 53, May 3, 2011).

19) On October 8, 2012, Dr. Gonzalez conducted a records review second independent medical evaluation (SIME):

1. This case is about whether the exposure to chlorine in (sic) March 21, 2007 (sic) by Ms. Keene was the cause for her delivery preterm.

2. On March 21, 2007 (sic) Ms. Keene allegedly inhaled chlorine while at work reporting breathing difficulty. Later that evening she started experiencing abdominal pain and vaginal bleeding. Eventually she delivered prematurely. Based on my review of all the records provided and after performing an extensive search of available medical literature, it is my opinion that the inhalation-exposure to chlorine had no relationship to Ms. Keene (sic) premature labor. I could not find a single medical report published in English were (sic) inhalation of chlorine has been associated to premature labor. The symptoms of preterm labor occurred several hours after the exposure.

3. In reviewing Ms. Keen (sic) records, I could identify several episodes of vaginal bleeding and an episode of bacterial vaginosis. It has been reported that vaginal bleeding during pregnancy and or bacterial vaginosis may be associated factors to the development of preterm labor. The chlorine exposure had no time relationship to the reported episodes of bleeding prior to March 21, 2007 or to the bacterial vaginosis.

4. Unfortunately it is impossible to know the immediate cause of Ms. Keene (sic) preterm delivery. Preterm delivery has been associated to risk factor including previous history of preterm birth, bleeding during the second trimester, genitourinary infections, smoking and others. Acute chlorine exposure is not a recognized cause of preterm birth. I do not need to perform a physical exam of Ms. Keene to assist me in offering my expert opinion.

5. It is my opinion that Dr. Leroy Casperson's evaluation and opinion is correct. Ms. Keene did not report the typical acute symptoms associated to a severe reaction secondary after chlorine inhalation. The spontaneous preterm birth syndrome usually results from a chronic intrauterine inflammatory insult leading to the production of cytokines (interleukins). In order for this to occur, the insult has to be chronic which obviously was not what happened here. It is my opinion that the acute exposure-inhalation of chlorine had no relationship to Ms. Keene (sic) premature birth.

20) On March 12, 2013, Employer deposed SIME physician Dr. Gonzalez.

Q. [By Mr. Griffin] … [Y]ou read Dr. Williams' – she thinks that cervical shortening might have been the cause?

A. Maybe. My recollection of the records is that at some point, somebody did an ultrasound, and the cervical length was reported as five centimeters.

Q. That was February 13?

A. Right. Then later on, the cervical length was reported as 3.3 centimeters.

Q. On March 9, prior to the exposure?

A. Correct. So, obviously, if you believe those measurements, there was some sort of shortening of the cervix in that period of time. Assuming that that is true, maybe there was already contractions going on. We just don't know that.

Now, if you only give me the cervical length of 3.3 centimeters and no previous history of a longer cervical length, I would still – that is still within the normal range. In fact, the average cervical length at 24 weeks is around 3.5, 3.6 centimeters. It is a little short, but not dramatically short. So without knowing the 5 centimeters from before, I would not have been too concerned about it. Now, knowing the 5 centimeters before, that has some significance.

Q. It was Dr. Williams' determination that the substantial cause here was the cervical shortening, because she did know about the 5 centimeters on February 13, down to the 3.3 centimeters on March 9, she said it was that and was compounded by her uterine infection, that is what led to the preterm delivery?

A. That is what she says.

Q. What do you think?

A. I think people – I want to step back a little bit, and people need to understand preterm delivery is not a disease. It is the result of multiple pathways or problems. You can have preterm delivery because you have a multiple gestation. You can have preterm delivery because the doctor creates contractions in order to alleviate a pregnancy complication. You can have preterm delivery because of an infection.

You can have – there are so many pathways that lead to preterm delivery, and in the vast majority of the cases, we can't pinpoint a single factor. That is the reality.

There is something called idiopathic preterm delivery, which nobody really knows what caused it – what caused the preterm delivery. So I honestly don't think that we will ever know anything – what was the real reason why this lady got into preterm delivery.

Now, having said that, in my opinion, she has some of the risk factors that are associated to preterm delivery, and the ultimate question here is whether or

not the chlorine inhalation contributed to that. That is the ultimate question.

Q. The ultimate question in Alaska is whether the chlorine inhalation was the substantial cause.

A. And it is my opinion that it was not.

…

Q. [By Mr. Schneider] All right. Can you and I agree given what we know and what we don't know about this case that Ms. Keene's inhalation of chlorine, followed immediately by the symptoms she describes in the ultimate premature delivery of Joshua, if nothing else, is one hell of a coincidence?

A. Sure. I don't know many patients that inhale chlorine, so absolutely.

(Dr. Gonzalez Deposition, 41-43, 45-46, March 12, 2013).

21) Employee credibly testified about her pregnancy, chlorine exposure and the preterm labor and delivery of her son. On March 20, 2007, Employee was working her regular shift at the Nome City Pool. She was "feeling good" and had taught a morning water aerobics class. She swam laps for about ten minutes. At about 4:00 pm, Employee informed her co-worker she was going to check the level of chlorine pellets in the tanks. She took a respirator and went downstairs to the mechanical room, placed the respirator on her face and descended the stairs. Upon lifting the lid of the chlorine tank, she immediately breathed in "one strong whiff" of chlorine and instantly began coughing. She ran up the ladder as fast as she could, removed the respirator and went outside, where she tried to catch her breath. She continued coughing and was having trouble breathing. She made a notation in the employee logbook that she had breathed in a strong whiff of chlorine. She then drove home. On the drive home, she was nauseated and felt a strange movement in her belly. She "was trying to breathe" and "was afraid something was wrong with the baby." (Employee).

22) When Employee returned home, she told her significant other she wasn't feeling well, but did not tell him about the chlorine exposure because she felt guilty. She began experiencing abdominal cramping "by 5:00 or 6:00." At about 10:00, she went to the bathroom and "saw a lot of blood." Her significant other then drove her to the hospital. (*Id.*)

23) Employee met with Dr. Liu at the emergency room, who told her she was in labor and arranged the medevac flight. Employee believes she told Dr. Liu about the chlorine exposure and that she was having trouble breathing, "but the focus was on getting me out of there." (*Id.*)

24) When asked about how her pregnancy was before the March 20, 2007 incident, Employee stated it was normal and there were "no concerns about preterm labor." She had a slip and fall one

day, but there were no concerns. She had a "mild case" of bacterial vaginosis, which was cleared with antibiotics. She had planned to deliver the baby in Anchorage "because I was over 35," which was a risk factor for complications. (*Id.*)

25) Employee discussed the chlorine exposure with Dr. Isada on two occasions. The first discussion was when she was admitted to Providence Medical Center on March 21, 2007. "He said he didn't know" if the chlorine exposure could have caused the preterm labor. The second conversation was after Employee's son was born, and "he told me he was absolutely certain it was nothing but the chlorine" that caused the preterm labor and delivery. (*Id.*)

26) Dr. Williams credibly testified at hearing Employee had several risk factors for preterm labor and delivery unrelated to the chlorine exposure. The first risk factor was the change in cervical length between the February 13, 2007 and March 9, 2007 ultrasounds. While 3.3 centimeters itself was not concerning, the change from 5 centimeters the month before was a cause for concern. Dr. Williams also testified Employee's history of two pregnancy terminations, especially the one at twelve weeks, was a risk factor for preterm labor. Advanced maternal age and Employee's history of depression were also potential risk factors. Dr. Williams opined it was likely the rapid increase of adrenaline Employee experienced after the chlorine exposure which caused the increased fetal movement, rather than any abnormality or trauma. There is simply no medical evidence linking chlorine exposure to preterm labor and delivery, in Employee's case or in any other case. Dr. Williams believes Employee's labor and delivery was simply coincidental in time with the chlorine exposure. (Dr. Williams).

27) At hearing, the parties stipulated that because notice of the injury was not timely filed, Employee is not entitled to the presumption of compensability and the burden shifts to Employee to prove her case by a preponderance of the evidence. (Oral stipulation, July 25, 2013).

PRINCIPLES OF LAW

> **AS 23.30.001. Intent of the legislature and construction of chapter**. It is the intent of the legislature that
>
> 1) this chapter be interpreted so as to ensure the quick, efficient, fair, and predictable delivery of indemnity and medical benefits to injured workers at a reasonable cost to the employers who are subject to the provisions of this chapter….

The board may base its decision not only on direct testimony, medical findings, and other tangible evidence, but also on the board's "experience, judgment, observations, unique or peculiar facts of the case, and inferences drawn from all of the above." *Fairbanks North Star Borough v. Rogers & Babler*, 747 P.2d 528, 533-34 (Alaska 1987).

AS 23.30.010. Coverage.
Except as provided in (b) of this section, compensation or benefits are payable under this chapter for disability or death or the need for medical treatment of an employee if the disability or death of the employee or the employee's need for medical treatment arose out of and in the course of the employment. To establish a presumption under AS 23.30.120(a)(1) that the disability or death or the need for medical treatment arose out of and in the course of the employment, the employee must establish a causal link between the employment and the disability or death or the need for medical treatment. A presumption may be rebutted by a demonstration of substantial evidence that the death or disability or the need for medical treatment did not arise out of and in the course of the employment. When determining whether or not the death or disability or need for medical treatment arose out of and in the course of the employment, the board must evaluate the relative contribution of different causes of the disability or death or the need for medical treatment. Compensation or benefits under this chapter are payable for the disability or death or the need for medical treatment if, in relation to other causes, the employment is the substantial cause of the disability or death or need for medical treatment.

AS 23.30.045. Employer's liability for compensation.

(a) An employer is liable for and shall secure the payment to employees of the compensation payable under AS 23.30.041, 23.30.050, 23.30.095, 23.30.145, and 23.30.180 - 23.30.215….

AS 23.30.095. Medical treatments, services, and examinations.

(a) The employer shall furnish medical, surgical, and other attendance or treatment, nurse and hospital service, medicine, crutches, and apparatus for the period which the nature of the injury or the process of recovery requires, not exceeding two years from and after the date of injury to the employee. However, if the condition requiring the treatment, apparatus, or medicine is a latent one, the two-year period runs from the time the employee has knowledge of the nature of the employee's disability and its relationship to the employment and after disablement. It shall be additionally provided that, if continued treatment or care or both beyond the two-year period is indicated, the injured employee has the right of review by the board. The board may authorize continued treatment or care or both as the process of recovery may require….

Under the Act, an employer shall furnish an employee injured at work any medical treatment "which the nature of the injury or process of recovery requires" within the first two years of the injury. The medical treatment must be "reasonable and necessitated" by the work-related injury. Thus, when the board reviews an injured employee's claim for medical treatment made within two years of an indisputably work-related injury, "its review is limited to whether the treatment sought is reasonable and necessary." *Philip Weidner & Associates v. Hibdon*, 989 P.2d 727, 731 (Alaska 1999).

AS 23.30.095(a) requires employers to pay for treatment necessitated by the nature of injury or the process of recovery up to two years after the injury date. After two years the board may authorize treatment necessary for the process of recovery or to prevent disability. In *Hibdon,* the Alaska Supreme Court noted "when the Board reviews a claim for continued treatment beyond two years from the date of injury, it has discretion to authorize 'indicated' medical treatment 'as the process of recovery may require.'" *Id.*, citing *Municipality of Anchorage v. Carter*, 818 P.2d 661, 664 (Alaska 1991). "If the treatment is necessary to prevent the deterioration of the patient's condition and allow his continuing employment, it is compensable within the meaning of the statute." *Leen v. R.J. Reynolds Co.*, AWCB Dec. No. 98-0243 (September 23, 1998); *Wild v. Cook Inlet Pipeline*, 3AN-80-8083 (Alaska Super. Ct. Jan. 17, 1983); *see accord Dorman v. State*, 3AN-83-551 at 9 (Alaska Super. Ct., February 22, 1984).

> **AS 23.30.100. Notice of Injury or Death.**
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> (a) Notice of an injury or death in respect to which compensation is payable under this chapter shall be given within 30 days after the date of such injury or death to the board and to the employer.
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> (b) The notice must be in writing, contain the name and address of the employee, a statement of the time, place, nature, and cause of the injury or death, and authority to release records of medical treatment for the injury or death, and be signed by the employee or by a person on behalf of the employee, or, in case of death, by a person claiming to be entitled to compensation for the death or by a person on behalf of that person….
>
> **AS 23.30.120. Presumptions.**
>
> (a) In a proceeding for the enforcement of a claim for compensation under this chapter it is presumed, in the absence of substantial evidence to the contrary, that

> (1) the claim comes within the provisions of this chapter.
>
> (2) notice of the claim has been given…
>
> (b) If delay in giving notice is excused by the board under AS 23.30.100(d)(2), the burden of proof of the validity of the claim shifts to the employee notwithstanding the provisions of (a) of this section….

Under AS 23.30.120, an injured worker is afforded a presumption the benefits he or she seeks are compensable. The Alaska Supreme Court held the presumption of compensability is applicable to any claim for compensation under the workers' compensation statute, and applies to claims for medical benefits and continuing care. *Meek v. Unocal Corp*., 914 P.2d 1276, 1279 (Alaska 1996); *Municipality of Anchorage v. Carter*, 818 P.2d 661, 664-665 (Alaska 1991). An employee is entitled to the presumption of compensability as to each evidentiary question. *Sokolowski v. Best Western Golden Lion Hotel*, 813 P.2d 286, 292 (Alaska 1991).

Application of the presumption to determine the compensability of a claim for benefits involves a three-step analysis. *Louisiana Pacific Corp. v. Koons*, 816 P.2d 1379, 1381 (Alaska 1991). First, the claimant must adduce "some" "minimal," relevant evidence establishing a "preliminary link" between the disability and employment, or between a work-related injury and the existence of disability, to support the claim. *Cheeks v. Wismer & Becker/G.S. Atkinson, J.V.*, 742 P.2d 239, 244 (Alaska 1987). The evidence necessary to raise the presumption of compensability varies depending on the claim. In claims based on highly technical medical considerations, medical evidence is often necessary to make that connection. *Burgess Construction Co. v. Smallwood*, 623 P.2d 312, 316 (Alaska 1981). In less complex cases, lay evidence may be sufficiently probative to establish causation. *VECO, Inc. v. Wolfer*, 693 P.2d 865, 871 (Alaska 1985). The presumption of compensability continues during the course of the claimant's recovery from the injury and disability. *Olson v. AIC/Martin J.V.*, 818 P.2d 669, 675 (Alaska 1991). Witness credibility is not weighed at this stage in the analysis. *Resler v. Universal Services Inc*., 778 P.2d 1146, 1148-49 (Alaska 1989). If there is such relevant evidence at this threshold step, the presumption attaches to the claim. If the presumption is raised and not rebutted, the claimant need produce no further evidence and the claimant prevails solely on the raised but un-rebutted presumption. *Williams v. State*, 938 P.2d 1065 (Alaska 1997).

In *Runstrom v. Alaska Native Medical Center,* AWCAC Decision No. 150 (March 25, 2011), the Alaska Workers' Compensation Appeals Commission held the 2005 legislative amendment to AS 23.30.010 altered the longstanding presumption analysis: "…[W]e conclude that the legislature intended to modify the second and third steps of the presumption analysis by amending AS 23.30.010 as it did." *Runstrom,* AWCAC Decision No. 150, at 3. The Commission held the second stage of the presumption analysis now requires the employer

> "rebut the presumption with substantial evidence that excludes any work-related factors as the substantial cause of the employee's disability, etc. In other words, if the employer can present substantial evidence that demonstrates that a cause other than employment played a greater role in causing the disability, etc., the presumption is rebutted. However, the alternative showing to rebut the presumption under former law, that the employer directly eliminate any reasonable possibility that employment was *a factor* in causing the disability, etc., is incompatible with the statutory standard for causation under AS 23.30.010(a). In effect, the employer would need to rule out employment as *a factor* in causing the disability, etc. Under the statute, employment must be more than *a factor* in terms of causation. *Id.* at 7 (emphasis in original).

"Substantial evidence" is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. *Tolbert v. Alascom, Inc.*, 973 P.2d 603, 611-612 (Alaska 1999).

Since the presumption shifts only the burden of production and not the burden of persuasion, the employer's evidence is viewed in isolation, without regard to any evidence presented by the claimant. *Id.* at 1055. Credibility questions and weight to give the employer's evidence are deferred until after it is decided if the employer has produced a sufficient quantum of evidence to rebut the presumption the claimant is entitled to the relief sought. *Norcon, Inc. v. Alaska Workers' Comp. Bd.*, 880 P.2d 1051 (Alaska 1994); *Wolfer*, 693 P.2d at 869.

Runstrom held once the employer has successfully rebutted the presumption of compensability,

> [the presumption] drops out, and the employee must prove, by a preponderance of the evidence, that in relation to other causes, employment was the substantial cause of the disability, need for medical treatment, etc. Should the employee meet this burden, compensation or benefits are payable. *Id.* at 8.

In 2005, the legislature amended the statutory language to require an employee prove his work injury was "the substantial cause" of his disability or need for treatment. The Alaska Workers'

Compensation Appeals Commission recently addressed the 2005 statutory amendments to AS 23.30.010 in *City of Seward v. Hansen*, AWCAC Decision No. 146 (January 21, 2011):

> In view of the language in the last two sentences of AS 23.30.010(a), the purpose of SB 130, that is, to try to control workers' compensation insurance premiums, and the legislative history pertaining to the amendment of AS 23.30.010, which reflects a deliberate attempt to limit benefits, the commission concludes that the legislature's intent was to contract coverage under the Act. Accordingly, we interpret the last two sentences in AS 23.30.010(a) as requiring employment to be, more than any other cause, the substantial cause of the employee's disability, death, or need for medical treatment. It no longer suffices that employment is a substantial factor in bringing about the harm.

Hansen, AWCAC Decision No. 146, at 14; *see also, Uresco Construction Materials, Inc. v. Porteleki*, AWCAC Decision No. 152 (May 11, 2011).

The AWCAC recently clarified the standard for proving "combination" claims for injuries occurring after the 2005 amendments. An injured worker must demonstrate 1) the work injury is the substantial cause in bringing about the disability and need for treatment; and 2) the need for medical treatment would not have happened but for the work incident and reasonable persons would regard the injury as a cause in bringing about the need for that medical treatment and attach responsibility to it. *City of Juneau v. Olsen*, AWCAC Decision No. 185, (August 21, 2013), at 20.

> **AS 23.30.122. Credibility of witnesses.** The board has the sole power to determine the credibility of a witness. A finding by the board concerning the weight to be accorded a witness's testimony, including medical testimony and reports, is conclusive even if the evidence is conflicting or susceptible to contrary conclusions. The findings of the board are subject to the same standard of review as a jury's finding in a civil action.

ANALYSIS

Is the March 20, 2007 chlorine exposure the substantial cause of Employee's preterm labor and delivery and associated disability and need for medical treatment?

The Act provides benefits, including medical costs and time loss benefits, when an employment injury is the substantial cause of the need for the benefits. Typically an employee is entitled to a

presumption of compensability as to all factual questions related to her claim for benefits. However, based on the parties' oral stipulation at hearing, Employee did not timely notify Employer of her injury and therefore does not enjoy the presumption of compensability. Employee must prove by a preponderance of the evidence the March 20, 2007 chlorine exposure was the substantial cause of her preterm labor and delivery and subsequent disability and need for medical care. As this is a "combination" case, meaning a variety of factors combined to cause Employee's preterm labor, Employee must also demonstrate her preterm labor and delivery would not have happened but for the chlorine exposure, and reasonable persons would regard the exposure as a cause in bringing about the preterm labor and delivery, and attach responsibility to it. *Olsen.*

All the medical professionals who reviewed Employee's case agree there is no known causal connection between chlorine exposure and preterm labor. No cases exist in the medical literature even documenting chlorine exposure in pregnancy. The sole objective evidence Employee relies on in making the causal link is the near contemporaneous chlorine exposure and vaginal bleeding and contractions. Employee credibly testified she suffered the chlorine exposure at about 4:00 pm, immediately felt a shifting in her belly and was afraid there was something wrong with the baby. Within hours she had vaginal bleeding and painful contractions and by the time she was medevaced to Anchorage in the early hours of the next morning, she was fully in labor. While medication and bed rest delayed her delivery, her son was born four days later, severely premature.

Employee had a number of risk factors for preterm labor, including advanced maternal age, history of prior elective terminations, particularly the first which occurred at 12 weeks gestation, vaginal spotting early in the pregnancy, diagnosis and treatment for bacterial vaginosis, and a history of depression. There is documented cervical shortening in the three-week period between her two ultrasounds. Both Drs. Williams and Gonzalez testified while a 3.3 centimeter cervical length at 21 weeks in itself would not ordinarily be concerning, the decrease between 5 centimeters on February 13, 2007 and 3.3 centimeters on March 9, 2007 would have been cause for concern. The physicians agree placental abruption and chorioamnionitis can either cause or be caused by preterm labor, and it is impossible to determine which occurred first in Employee's case. Dr. Gonzalez clarified preterm labor is not a disease with a clear cause, but rather a series

of concurrent processes, many with causes unknown, that combine to result in premature delivery. Even Employee's treating physician Dr. Isada, though opining the chlorine exposure is the substantial cause of Employee's preterm labor, agreed Employee had a number of risk factors and conceded the substantial cause is "up in the air" and he "still wonder[s]" about it. Dr. Isada's equivocal opinion is insufficient upon which to find a link between Employee's chlorine exposure at work and the preterm labor and delivery of her son.

Employee has failed to prove by a preponderance of the evidence her work-related chlorine exposure is the substantial cause of her preterm labor and delivery and associated disability and need for medical treatment. Her claim for benefits will be denied.

CONCLUSION OF LAW

The March 20, 2007 chlorine exposure is not the substantial cause of Employee's preterm labor and delivery and associated disability and need for medical treatment.

ORDER

Employee's March 10, 2009 claim is denied.

Dated at Fairbanks, Alaska on September 30, 2013.

ALASKA WORKERS' COMPENSATION BOARD

/s/
Amanda Eklund,
Designated Chair

/s/
Krista Lord, Member

/s/
Zebulon Woodman, Member

APPEAL PROCEDURES

This compensation order is a final decision and becomes effective when filed in the board's office, unless it is appealed. Any party in interest may file an appeal with the Alaska Workers' Compensation Appeals Commission within 30 days of the date this decision is filed. All parties before the board are parties to an appeal. If a request for reconsideration of this final decision is timely filed with the board, any proceedings to appeal must be instituted within 30 days after the reconsideration decision is mailed to the parties or within 30 days after the date the reconsideration request is considered denied because the board takes no action on reconsideration, whichever is earlier.

A party may appeal by filing with the Alaska Workers' Compensation Appeals Commission: (1) a signed notice of appeal specifying the board order appealed from; 2) a statement of the grounds for the appeal; and 3) proof of service of the notice and statement of grounds for appeal upon the Director of the Alaska Workers' Compensation Division and all parties. Any party may cross-appeal by filing with the Alaska Workers' Compensation Appeals Commission a signed notice of cross-appeal within 30 days after the board decision is filed or within 15 days after service of a notice of appeal, whichever is later. The notice of cross-appeal shall specify the board order appealed from and the grounds upon which the cross-appeal is taken. Whether appealing or cross-appealing, parties must meet all requirements of 8 AAC 57.070.

RECONSIDERATION

A party may ask the board to reconsider this decision by filing a petition for reconsideration under AS 44.62.540 and in accordance with 8 AAC 45.050. The petition requesting reconsideration must be filed with the board within 15 days after delivery or mailing of this decision.

MODIFICATION

Within one year after the rejection of a claim, or within one year after the last payment of benefits under AS 23.30.180, 23.30.185, 23.30.190, 23.30.200, or 23.30.215, a party may ask the board to

modify this decision under AS 23.30.130 by filing a petition in accordance with 8 AAC 45.150 and 8 AAC 45.050.

CERTIFICATION

I hereby certify the foregoing is a full, true and correct copy of the Final Decision and Order in the matter of MICHELLE KEENE, employee v. CITY OF NOME,employer, ALASKA MUNICPAL LEAGUE JOINT INSURANCE ASSOCIATION, insurer; Case No. 200717364; dated and filed in the office of the Alaska Workers' Compensation Board in Fairbanks, Alaska, and served upon all parties, on September 30, 2013.

/s/
Nicole Hansen, Office Assistant II