

## Noteworthy Decision Summary

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**Decision:** WCAT-2006-01155-RB **Panel:** Marguerite Mousseau **Decision Date:** March 9, 2006

***Occupational exposure – Skin and respiratory reactions – Chemical sensitivity – Jurisdiction over new diagnosis***

This decision is noteworthy as it provides an overview of WCAT's jurisdiction to consider a new diagnosis and gives a detailed analysis of a chemical sensitivity claim.

The worker, a magnetic resonance imaging (MRI) technologist, stated that there was a new MRI scanner with a faulty ventilation system blowing directly overhead of the technologists in the area. All of the technologists working in the area with the new scanner and processor eventually developed respiratory and/or skin conditions. The worker submitted an application for compensation on June 10, 1995 for sensitization to air borne substances. The worker appeals decisions regarding her entitlement to compensation for her symptoms.

The panel noted that it was submitted that the technologists had developed multiple chemical sensitivities, but with one exception, there was no documentation indicating that the Workers' Compensation Board (Board) was requested to adjudicate the issue of multiple chemical sensitivity nor was evidence submitted to the Board that would support such a diagnosis. The panel found that it did not have the jurisdiction to decide whether the individual technologists had developed multiple chemical sensitivity as a result of their occupational exposures, except where that matter appeared to have been considered at the time the decision was made that forms the basis of the appeal.

The panel concluded that the worker had developed a sensitivity to film processing chemicals which is likely permanent. There are no policies that deal specifically with the development of a chemical sensitivity due to occupational exposures. The policies dealing with compensation for asthma and dermatitis address situations that are most analogous to the development of a chemical sensitivity in that they deal with the existence and/or development of an underlying condition which results in either respiratory or skin reactions under certain conditions that would not elicit these reactions in individuals who do not have this underlying condition.

The panel concluded that the worker's rosacea was caused by her occupational exposures, and her symptoms of rhinitis/sinusitis and pharyngitis are likely chronic symptoms resulting from her permanent chemical sensitivity and allowed that aspect of her appeal. On the issue of vocational rehabilitation, the panel denied the appeal, concluding that the worker was not entitled to preventative vocational rehabilitation in February 2000 as the employer had taken steps to accommodate the worker. However, but that would not preclude the Board from exercising its discretion under section 16 of the *Workers Compensation Act* should it be deemed appropriate at some point in the future.

**WCAT Decision Number :** WCAT-2006-01155-RB  
**WCAT Decision Date:** March 09, 2006  
**Panel:** Marguerite Mousseau, Vice Chair

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## Introduction

The worker appeals decisions regarding her entitlement to compensation for symptoms that developed following occupational exposures to film processing chemicals. These decisions were communicated in three letters of the Workers' Compensation Board (Board) over the course of several years.

In the decision letter of March 27, 1996 the worker's claim for compensation was accepted for temporary respiratory irritation and skin irritation up to and including May 16, 1995. She was told that subsequent symptoms were not due to occupational exposures given that the causative agent had been removed.

In the decision letter of September 11, 1998, the Board officer informed the worker it was unlikely that occupational exposures had caused her rosacea but they may have caused temporary exacerbations of this condition. Similarly, the occupational exposures were accepted as causing temporary exacerbations of her sinusitis or rhinitis and pharyngitis. These were accepted as temporary exacerbations following exposure to unbagged x-ray films until November 17, 1997. Her claim was reopened for health care benefits.

In the decision letter of February 29, 2000 the worker was informed that she is not entitled to vocational rehabilitation assistance on a preventative basis since the x-ray processing methods have changed and she is no longer exposed to chemicals.

The worker's appeal of these decisions was filed with the Workers' Compensation Review Board (Review Board). On March 3, 2003, *the Workers Compensation Act* (Act) was amended to replace the Appeal Division and Review Board with the Workers' Compensation Appeal Tribunal (WCAT). As this appeal had not been considered by a Review Board panel before that date, it has been decided as a WCAT appeal. (See the *Workers Compensation Amendment Act (No. 2), 2002*, section 38.)

Oral hearings were held over a three-day period from November 14 to 16, 2005 with respect to the worker's appeal and the appeals of five co-workers with similar claims histories related to the same occupational exposures. All of the workers are represented by legal counsel retained by their union. They all attended during their representative's opening statements and during the final submissions. Each worker gave evidence at a separate hearing, unattended by any co-workers. The employer is participating and is represented by a management consultant. Prior to the hearings, the employer's representative advised WCAT that he would not attend the hearings nor make any submission with respect to the workers' appeals.

Documents pertaining to a particular claim have not all been maintained on the file of the individual technologist. One file was maintained as a “master” file at least for some period of time by one of the Board officers and copies of most documents were placed on that file. However, documents were also found on the files of the two supervisors, who have also made claims, which were relevant to the claims of the technologists they supervised, but these documents were not always also found on the appropriate claim file. Each of the technologists was asked by WCAT to sign a waiver of confidentiality so that they could have access to each other’s files and that documents on all files could be used in the adjudication of each file.

**Issue(s)**

The issues on this appeal are:

- Did occupational exposures have causative significance in the development of the worker’s rosacea, sinusitis/rhinitis, and pharyngitis?
- Did the worker have symptoms beyond November 17, 1997 due to occupational exposures?
- Does the worker meet the criteria for preventative vocational rehabilitation assistance?

**Background**

The worker submitted an application for compensation on June 10, 1995. She gave the date of injury as June 1994 to the present and indicated that she had reported the injury to her employer in February/March 1995.

She described her injury or disease as a sensitization to air borne substances, particularly chemicals and pollens resulting in hay fever type symptoms, irritated eyes, occasional rashes on her face, hives on her forehead, some occasions of tightness in her chest, headaches, occasional vertigo, sore throat, “chemical” taste in her throat, one episode of wheeze in her chest and pressure behind the sternum.

She stated that there was a new magnetic resonance imaging (MRI) scanner with a faulty ventilation system blowing directly over head to the technologists in the area. It was probably blowing recycled air from the film processing area and therefore contained film processing chemicals.

At the time that the worker made her application for compensation, she was one of six MRI technologists who worked in an MRI department in a newly renovated building which had been occupied since June 1994. The department housed a new scanner and film processor. All of the technologists working in the area with the new scanner and processor eventually developed respiratory and/or skin conditions.

The employer undertook a series of investigations to determine the cause of the problems. In March 1995 a maintenance mechanic conducted an inspection and noted problems with temperature control in the scanner and control rooms. The heating and cooling systems were described as running against each other due to some cross-wiring. In addition, the air-conditioning unit in one area was cycling too often and overheating in two rooms. A number of recommendations were made, including the installation of an exhaust over the processor.

In April 27, 2005 a Board officer conducted an inspection. The report of the inspection and an email memorandum of the same date document a number of steps which have been taken to reduce possible exposures to chemicals. These included heating the carpet and furniture to high temperatures on two weekends to hasten the gassing-off process, changing the ventilation to positive pressure in the control room, changing the fresh air ratio from 30 to 35% to 50%.

It had been noted during the inspection that the film processor was not on a 24-hour exhaust fan and was hooked into other rooms and the ventilation system was off between 8 p.m. and 6 a.m. This would have resulted in the exhaust going above the ceiling tiles every night and all day Sunday. It was recommended that the fresh air be increased to 100% and that the ventilation system run 24 hours a day. In addition, it was recommended that exhaust ventilation be added at the fixer/developer chemical area and at the drying end of the processor.

There is also a memorandum from a Board engineer regarding an inspection on April 27, 1995. He notes that, at the time of inspection, the air flow in the exhaust duct off the processor was much less than would be required to prevent the escape of odours. In addition, there were deposits on the outside of one tank indicating that one tank had leaked and that some of the liquid had evaporated. The engineer recommended that a cover be installed over the slots in the dry end of the processor. He stated that the covers on the chemical tanks fit reasonably well and an air flow hose should be installed which would control vapour emissions from the drain.

On May 9, 1995 the employer's occupational health and safety officer wrote to the division head of the MRI unit describing the concerns about air quality and the steps that had been taken to improve ventilation. He noted that the workers had found the air quality greatly improved and that hives had not been reported since the latest changes had been made but the workers continued to report dry, sore and itchy eyes.

There is also a record of a meeting held on May 25, 1995 which was attended by Dr. P, the employer's employee health physician, a Board occupational health physician, the division head of the MRI unit and others. A list of affected workers was set out in the memo, which included the worker. Dr. F, the MRI division head, stated that the carpet had been removed and the film development processor had been drained of chemicals two weeks earlier. Since then, only one person had had symptoms. It was believed

that the affected workers had likely developed a sulphide/metabisulphite sensitivity which had caused asthma-like effects. It was stated that an overriding concern was that the affected workers were now sensitized. Dr. P recommended that the workers undergo methacholine and metabisulphite testing and pulmonary function testing. The sensitizing material remained unclear.

Appended to this document was a list of affected workers, which includes the worker, with a list of dates when something was reported (presumably symptoms) and the dates when time was lost.

On June 16, 1995 the employee health physician wrote to a registered nurse in the employee health unit stating that the workers, including the worker, were still having sensitivity occurrences while processing films in the main radiology department. He recommended that the film processor in the MRI area continue to not be utilized and that it remain off indefinitely. He also recommended that the workers not process MRI film in the radiology department either as they had become sensitized. His recommendation was largely implemented. For awhile though some of the technologists continued to transport x-ray films to the radiology department and to process the films there. However, it was noted that those who did this, continued to have symptoms which seemed attributable to that activity and the procedures were changed so that the MRI unit technologists no longer transported the film or performed the processing.

In or around March 1996 the procedures were change to ensure that all x-rays films were encased in plastic (bagged). There were still, however, some exposures to unbagged films and some of the workers had symptoms which appeared directly attributable to exposures to unbagged films.

In the course of investigating the causes of the symptoms, the Board undertook discussions with the film manufacturer. In November 1997 the film manufacturer advised the Board's occupational health physician that the Material Safety Data Sheets (MSDS) for photo chemicals that contain sulphite and bisulphite salts were being revised to add that sulphites, in contact with strong acids or if heated, could liberate sulphur dioxide gas which is irritating to the respiratory tract. On inhalation, some asthmatics or sulphite-sensitive individuals could experience wheezing and chest tightness.

Under "ingestion" the MSDS was being revised to add that the product might be harmful if swallowed. Some asthmatics or sulphite-sensitive individuals "may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea." The manufacturer noted that this information appeared consistent with the statements made by the technologist(s) and that, although the incidence of such reactions was "extremely low," it was felt that current science supported the addition of this information to the MSDS.

On May 22, 1998 the film manufacturer responded by letter to previously held discussions between a Board occupational health medical advisor and the manufacturer. Two x-ray film samples had been sent to the manufacturer for investigation and quantities of sulphite had been extracted from both samples. One sample had been processed in late 1997 and the other sample was an older film taken from the hospital library. The amounts found were described in ug/cm<sup>2</sup>, which is micrograms per square centimeter; there was more sulphite found on the older films.

The manufacturer described these amounts as “minute traces” and said that normally it would be expected that even these minute traces would be removed in the washing process of the processor. It was thought that there may have been an insufficient wash to remove the sulphite at the time the films were developed. A person with hypersensitivity to sulphite could possibly have a reaction to these amounts of sulphite.

The Board accepted that the x-ray processing machine had not been installed according to the manufacturer’s recommendations. As a result, there was reason to believe that a number of chemicals may have been released in the immediate vicinity of the machine in quantities in excess of what would normally occur.

The chemicals used in film processing include glutaraldehyde and hydroquinone. The MSDS information for these products state that hydroquinone is at a low hazard for inhalation but, when inhaled, it causes skin irritation and allergic skin reactions. Glutaraldehyde is described as being harmful if it is inhaled. It may cause respiratory tract irritation and severe burns and allergic skin reactions.

*Occupational Health and Safety Regulation – BC Regulation 296/97* (Regulation) establishes exposure limits for each of these substances. It identifies both hydroquinone and glutaraldehyde as “sensitizers” and “ALARA substances.” Sensitizers are defined as “substances [which] have been shown to produce an allergic type of response in some workers after an initial exposure, resulting in the development of symptoms upon subsequent exposure at much lower concentrations.”

ALARA substances are defined as “substances to which exposure of workers must be kept as low as reasonably achievable”.

Section 5.57 of the Regulation states that, where a substance which has been designated as a sensitizer is present in the workplace, the employer must, whenever practicable, replace it with a material which reduces the risk to workers. It also states that where a substance is used in the workplace which is both a sensitizer and an ALARA substance “the employer must implement an exposure control plan to maintain workers’ exposure as low as reasonably achievable below the exposure limit listed in the Table” if it is not practicable to substitute the substance with a lower risk alternative.

Section 5.51 of the Regulation states “If there is exposure to a mixture of 2 or more substances with established exposure limits, the effects of such exposure must be

considered additive...” This section goes on to provide a formula for establishing the exposure limit in this situation.

## **Evidence**

The physician’s first report to the Board is dated June 12, 1995. Dr. Lupton indicates the date of injury as June 1994 to June 12, 1995. He indicates that the worker was exposed to film processing chemicals due to improper ventilation. On examination, he reported that the worker had some flushing of forehead skin but no typical urticarial wheals (hives) and her chest was clear to auscultation.

Dr. Lupton referred the worker for a pulmonary function test which was conducted on July 10, 1995. This revealed normal lung function. On August 14, 1995 the worker underwent a methacholine challenge test which was negative.

There are a number of “symptom logs” on the Board files of the six MRI technologists. These contain entries by one or more of the technologists on specific dates and cover various periods of time; for example, one such log covers the period between January 1995 and May 1996, another the period between February 24, 1995 and April 24, 1995, and another the period between October 12, 1995 and June 1998. In addition, there are logs maintained by some of the technologists that contain their symptoms only. There are also symptom logs developed at some point after the symptoms had developed.

I have used the contemporaneous symptom logs to assist in determining when a particular technologist experienced symptoms but I do not consider these definitive statements as to which symptoms were experienced at a particular time. I expect that these entries were made in the course of busy days that included many tasks and that there would be times when symptoms were not recorded. Having said that, though, I have generally accorded more weight to these contemporaneous logs than to statements made at some later point as to what symptoms were experienced in the past. Incomplete as the documentary records may be, I consider that they are somewhat more reliable than memory.

These symptom logs indicate that the worker first recorded symptoms on April 7, 1995 of a very dry throat with the sensation of a chemical like taste and cramps and diarrhea. Another entry on April 18, 1995 refers to a sore throat, dehydration, headache, and chemical taste in the back of the throat. Two other technologists noted a sore throat on that date. On April 25, 1995 the worker noted headaches and dehydration. The worker continued to experience symptoms after that time, according to the entries in the symptom log which covers the period between October 12, 1995 and June 17, 1998. During that period, she also saw Dr. Yeung, respirologist, Dr. Morton, dermatologist, and Dr. Stark, a specialist in Allergy and Clinical Immunology.

The worker saw Dr. Yeung on May 26, 1997. At that time the worker's pulmonary function test results were within normal limits. Dr. Yeung reported that the worker's current concern was the skin rash on her forehead that now appeared on exposure to much smaller amounts of chemicals compared to before. The worker was worried that she might not be able work in any radiology department other than the employer's, where substantial accommodations had been made in order to address the exposure related problems that the MRI technologists had developed. In this regard, Dr. Yeung stated:

...Her concern is legitimate since this is a hypersensitivity phenomenon and she is reacting to minute amount [*sic*] of chemicals way below the permissible concentration. This is not unusual when someone has developed a sensitivity to a substance. At present we do not know which chemical in the workplace that she is allergic to.

The worker next saw Dr. Morton, on July 7, 1997. Dr. Morton described the worker as having had, for a number of years, a mild rosacea consisting of erythema (redness), papules and pustules of the face. He said the worker had noted that this becomes worse at work but, in addition, there was a second element of pruritis (itchiness) which involved the forehead and eyes with hives across the forehead and several episodes of respiratory tightness. Dr. Morton tested the worker's reactivity to film processing chemicals and other substances. She reacted to a fragrance mix and cinnamic aldehyde and nickel. All other chemicals were negative.

Dr. Morton commented that a number of the other technologists had reacted to fragrance mix and cinnamic aldehyde and he noted that this was quite a common reaction in the general public. He also noted that all of the technologists felt that they were more sensitive to perfume in general than they were before the work-related problems occurred.

Dr. Stark saw the worker for the first time on November 17, 1997. He stated that the worker was complaining specifically about an itchy rash on her forehead and cheeks starting in the spring of 1995. Prior to that, she had always had a clear complexion. The worker also reported red eyes with exposure to chemical fumes and chest tightness and a blotchy rash. The worker also had a history of seasonal hay fever symptoms since the spring of 1995 with complaints of sneezing, congestion, watery nasal discharge and itchy watery eyes. She had also had lower respiratory tract problems the past spring with an apparent upper respiratory tract infection, triggering wheezing and shortness of breath, suggestive of an asthmatic response.

Dr. Stark noted that, at the time of examination, the worker had mild facial erythema and mild congestion. Her skin tests showed strong reactions to alder and birch tree pollen and mild reactions to a number of other tree/weed pollens and a couple of moulds. She also had a moderately strong reaction to latex. Borderline reactions to a number of foods were noted but he did not think these were clinically relevant. Dr. Stark's impression was of a suspected latex allergy and suspected contact sensitivity to various



film processing chemicals. He noted that the worker has a history of an atopic background, particularly related to seasonal tree pollen symptoms causing rhinoconjunctivitis and possible asthmatic symptoms during the spring months.

He recommended that she observe whether any of the foods to which she had mild reactions were causing any significant problems, that measures to control dust at home might be helpful and that latex precaution should be implemented. He did not think that additional medications were necessary although an antihistamine/decongestant medication during her seasonal hay fever symptoms might be helpful. He suggested that immunotherapy might be an option for her tree pollen reactions if this became more troublesome.

Dr. Stark saw the worker again on December 16, 2003. At that time the worker continued to have problems with allergic type reactions, particularly to cleaning products and perfumes – despite trying to avoid exposure to x-ray films. Her main problem was continuing rashes. With exposure to new furniture and carpeting at work, her rashes and respiratory problems had worsened. She had also developed severe headaches and flu-like symptoms with disorientation. The rashes involved her face but had spread to her neck and upper chest with exposure to chemicals at work. Her respiratory symptoms continued to bother her in the spring with her typical hay fever symptoms but her asthma symptoms had improved since 1997.

Skin testing on that day showed a continuing strong reaction to alder/birch tree pollen; moderate reaction to grass pollen; mild reaction to dust, mite and a few weeds.

Spirometry testing was within the normal range.

Dr. Stark's impression at that time was that the worker had contact chemical sensitivities presenting with a dermatitis on her forehead and cheeks and a history of rhinoconjunctivitis symptoms and asthma. He said that her respiratory symptoms were in part related to pre-existing environmental allergies but she had developed increased sensitivity to various chemicals in the worker place.

On January 6, 2005 Dr. Stark provided a medical-legal opinion regarding the causes of the worker's allergies, based on these two examinations. He has provided a medical-legal opinion with respect to each of the technologists in the MRI unit. In his opinion of January 6, 2005, Dr. Stark states that he is a specialist in Allergy and Clinical Immunology and has also received specialist certification in Internal Medicine. In his accompanying *curriculum vitae*, he provides an extensive list of publications and further information with respect to his field of expertise.

In this opinion Dr. Stark provides the history that the worker previously experienced mild hay fever symptoms prior to her exposures to the film processing chemicals. In the spring of 1995 she developed asthmatic symptoms for the first time and also subsequently found that upper respiratory tract infections bothered her asthma. She

had also developed rashes on her forehead and cheeks. She still had problems with red eyes and ongoing asthmatic symptoms, fatigue, and headaches in addition to her respiratory symptoms. She had also had light-headedness, flushing and cold symptoms involving her upper airway and episodes of abdominal cramping and diarrhea. He noted that the worker had been seen by Dr. Yeung in May 1997 and she had felt that the worker's lung function testing and methacholine challenge test had ruled out ongoing asthma problems.

Dr. Stark's opinion was that "[the worker's] prolonged exposure to x-ray developing fumes from June of 1994 until February of 1995 was of causative significance in her development and worsening of her respiratory and skin allergy problems." He said that she had developed asthma and skin problems only after she had been exposed to the film processing chemicals. He said that she had also become more sensitive to non-specific irritants since she had this exposure to these chemicals.

He agreed with the Board medical advisor (BMA) that sulphite was likely not the only factor in exacerbating the worker's symptoms although he thought that it had played a role in combination with other chemicals. He thought that glutaraldehyde sensitivity was the more significant factor based on subsequent studies that have become available regarding x-ray technologists. He thought that exposures to this and other processing chemicals could have caused immunological sensitivity and irritant effects. He compared the relationship between the exposure to film processing chemicals and the worker's allergic reaction to the relationship between exposure to western red cedar dust and the development of western red cedar asthma as a result of a plicatic acid allergy. He said that patients who develop this type of asthma, appear to remain sensitive to the plicatic acid most of the rest of their lives and they may also have non-specific hyperreactivity of their lungs for years to come "even if they are totally removed from exposure to western red cedar saw dust." Such patients, like the MRI technologists, become more sensitive to non-significant irritants such as dust, cigarette smoke and perfume.

He noted the worker had shown immediate hypersensitivity to fragrance mix and cinnamic aldehyde chemicals based on Dr. Morton's testing and this confirmed that the worker had become sensitized to these types of chemicals.

Dr. Stark considered that the worker's exposure to sensitizing chemicals from the poorly ventilated processing machine would likely cause her to remain sensitive to these chemicals for many years to come. She had also developed cross-reacting sensitivities to other chemicals and that she now experienced non-specific irritant reactions to other substances, which would likely also be a life-long sensitivity.

In addition, the representative provided a report prepared by Dr. Yassi, a specialist in Community Medicine and Occupational Medicine, and Dr. Ouelette, a Community Health Medicine resident. The report, which is dated May 2004 was prepared at the

request of the representative and is titled *X-Ray Processing Chemical Exposure in Imaging Technologists at [name of hospital]: A brief assessment of health impact and recommendations* (May 2004 report). The report includes a brief summary of the clinical presentation of five of the six technologists who worked in the MRI unit and a summary of the case history similarities. It also contains a literature review, a section on the relationship between the clinical presentation of the technicians and the literature, and a recommendation section.

The authors describe the health effects of exposure to x-ray processing chemicals as including severe headaches, sore throat, hoarseness, nasal discharge, sore eyes, fatigue, sinus problems, catarrh, tight chest, skin rash, shortness of breath and chest pains.

The authors describe symptoms that the worker has developed since 1995. They note that the pulmonary function tests and methacholine challenge tests were normal and that allergy testing revealed sensitivity to perfumes and several metals. They indicated that the worker's physician had made a provisional diagnosis of multiple chemical sensitivities.

With regard to causation, the authors stated that it was reasonable to attribute the symptoms of the MRI technicians to x-ray processing chemicals in the face of a known exposure to abnormal levels of those chemicals due to improper ventilation. They noted that some of the MRI technologists seemed to have developed or exacerbated asthma following the exposures and this was also in accordance with the literature which recognized some cases of occupational asthma and the irritating properties of film processing chemicals.

I have not given considerable weight to this report as a medical-legal opinion. It appears to have been an attempt to combine aspects of a study with some characteristics of a medical-legal opinion. I find that the report generally does not reveal detailed attention to the specific symptoms reported, their onset, and the exposures with they were associated in each of the individual cases. It provides some interesting statements regarding the effects of exposure to film processing chemicals and multiple chemical sensitivities but the statements regarding causation are very broad and, in the absence of the detailed individual medical histories and evidence of examination findings, I do not find it useful in addressing the compensability of specific symptoms for the individual technologists.

There are also several medical opinions provided by BMAs regarding the worker's application for compensation and those of the other MRI technologists.

In the first opinion memo, dated March 22, 1995, the BMA said that it could only be said that short-term symptoms had been caused by exposure to some chemicals associated with use of the processor. It could not be expected that this exposure had caused

subsequent symptoms. For those workers with pre-existing allergies, it was accepted that these may have been temporarily aggravated by these exposures.

In the second opinion memo dated July 29, 1997 a BMA said that he had reviewed Dr. Morton's consultation report. He felt that the description of hives and the itchy forehead and eyes were likely a result of some exposure at work and he thought that consideration should be given to the provision of medical benefits beyond May 16, 1997.

In a third memo dated August 21, 1998 the BMA stated that the cause of rosacea is unknown but it is recognized that the rash becomes more obvious following exposure to any condition which causes capillary dilatation. Exposure to an irritant or sensitizer would therefore appear to cause a temporary aggravation of the rosacea. He also said that there were many causes of sore throat and phlegm buildup which include infections and contact of these areas with airborne irritants. If there was a good temporal relationship between the occurrence of the symptom and exposure to unbagged film, a causal or aggravational association would seem probable.

The BMA said the worker's history was compatible with the worker having developed chemical sensitivities as a result of the exposures in 1994/95. He did not consider that the processing chemicals had caused the rosacea but it may have caused temporary exacerbations. The same chemical may also be the cause or an aggravating factor in the recurring sore throat and phlegm buildup. The diagnoses for the worker's symptoms were likely rosacea, sinusitis, rhinitis and pharyngitis. There were likely non-occupational factors contributing to the rosacea and the worker's atopic background probably contributed to her sore throat and phlegm buildup, especially during the hay fever season.

In a final memo dated April 1, 1999 the BMA confirmed that all of the MRI technicians had probably developed a sensitivity to at least one of the chemicals used in the processing of x-ray film. He advised that sensitivities are usually permanent but they do not cause disability, unless there is re-exposure to the causative agent. He went on to say that, as a general rule, sensitivity which constitutes a permanent impairment of the immune system is likely to increase with further exposures to the causative agent. In turn, this would likely result in a more severe and more prolonged reaction, which in these cases (that of the worker and her co-workers) showed as a dermatitis or asthma. Ultimately, he said this could result in chronic asthma or dermatitis.

It was his opinion that if the worker continued to be exposed to the chemical or chemicals which caused their sensitivity they were at a significantly increased risk for a permanent disability of either their respiratory system or skin. He said that he could almost guarantee that further exposure would precipitate an asthma attack or an acute dermatitis, either of which could cause a temporary disability.

## **Oral Hearing**

At the oral hearing the worker gave evidence regarding her background as an imaging technician. She has performed work of this nature for 32 years and has been an MRI technologist since 1985. She is a supervisor and has worked approximately one-half time for a number of years prior to 1994. She also acts as a consultant for a research group along with one of the other MRI technologists.

She had frequently worked with film processing chemicals as an imaging technician and had not experienced symptoms in relation to those activities prior to 1994/95. She stated that she had mild hayfever prior to 1994/95 but she did not have rosacea. She had always had clear skin and, in addition, the type of rash that she gets is not a typical rosacea. She said that her rash was not at its worst when she saw Dr. Morton. She had developed headaches, fatigue, muscle aches, forehead itchiness, more colds than normal and generally felt unwell in the fall of 1994. These symptoms became more clearly defined in the spring of 1995 when she had actual hives on her forehead, diarrhea, chest symptoms with difficulty breathing and recurrent sores in her nose. She described the history of the steps taken at work and the ongoing symptoms that she had after the various steps were taken.

Over a period of time she found that her symptoms were triggered outside of work, as was chronicled by Dr. Stark. She continues to have flare-ups of rosacea. She also described symptoms that developed following renovations at work in 2003. She continues to have respiratory, skin and gastrointestinal symptoms to this day.

She is seeking acceptance of the following symptoms as compensable:

Itchy, red forehead

Headaches

Sore throat

Fatigue

Difficulty breathing (feeling the need to access fresh air)

Metal ( chemical) taste in mouth

Sneezing

Muscle aches

Flu – like feeling ( sore muscles, headache, upset stomach, general “unwell” feeling)

Red, itchy eyes

Upset, rumbling stomach and sudden diarrhea

Mucous membrane sores – nose & lip sores especially

[reproduced as written]

The substances which trigger these symptoms are:

X-Ray Film

Developer/ Fixer Chemistry ( even in dental offices, photo developing labs  
eg. London Drugs, Future Shop)

Perfume, colognes & scented products (including places these are sold,  
and enclosed spaces where you might be exposed to lots of scented  
products eg. Parties, meetings, airplanes)

Cleaning Products ( especially products containing bleach, ammonia,  
and/or scented products)

Paint

New furniture ( especially varnished or stained woods) – even furniture  
stores which have workshops on site where stains & varnishes are applied

New Houses ( with new paint,carpets,etc)

Hair products (scented)

Face creams (scented)

[reproduced as written]

The worker's representative states that the worker seeks acceptance of all of these symptoms and a finding that she is entitled to preventative vocational rehabilitation, should the need arise.

The representative submits that there is no evidence that the worker had rosacea prior to her exposures nor did she have rhinitis, sinusitis, or pharyngitis. She had only experienced mild ragweed allergy in 1977 and mild hay fever in 1992. That was the extent of her prior history of allergies.

The representative submits that both Dr. Stark and Dr. Yassi offer the opinion that the worker has been exposed to chemicals which could cause multiple chemical sensitivity.

The representative also refers to an "exposure log" prepared by the worker which describes exposures since 2003 and she describes the significant effects which the sensitization process has had on the worker's private life as well as her career.

The representative requests a finding that the worker has suffered permanent sequelae as a result of her exposure to film processing chemicals in 1994/95 and that all of the symptoms listed by the worker are a result of that exposure.

### **Law and Policy**

In this case, the worker's exposure and the symptoms that form the basis of the decisions under appeal occurred before June 30, 2002. As a result, the worker's entitlement to compensation is adjudicated under the provisions of the Act that preceded changes contained in the *Workers Compensation Amendment Act, 2002* (Bill 49). WCAT panels are bound by published policies of the Board pursuant to the *Workers Compensation Amendment Act (No. 2), 2002* (Bill 63).

Policy relevant to this appeal is set out in the *Rehabilitation Services and Claims Manual, Volume I* (RSCM I), which relates to the former (pre-Bill 49) provisions of the Act.

There are several policies which address entitlement to compensation in cases of skin and respiratory reactions to occupational exposures. The relevant portions of these policies are set out below:

Item #29.10 of the RSCM I addresses compensation for respiratory diseases. It provides:

Schedule B lists "Acute upper respiratory inflammation, acute pharyngitis, acute laryngitis, acute tracheitis, acute bronchitis, acute pneumonitis, or acute pulmonary edema (excluding any allergic reaction, reaction to environmental tobacco smoke, or effect of an infection)" as an occupational disease. The process or industry listed opposite to it is "Where there is exposure to a high concentration of fumes, vapours, gases, mists, or dust of substances that have irritating or inflammatory properties, and the respiratory symptoms occur within 48 hours of the exposure, or within 72 hours where there is exposure to nitrogen dioxide or phosgene".

There are many agents used in industry and commerce in the province which have irritating or inflammatory properties, and which in sufficient concentrations can produce respiratory symptoms if inhaled. Symptoms associated with the inhalation of such substances can vary from mild transient symptoms (such as a mild burning sensation affecting the eyes, nose and throat) to significant symptoms throughout the respiratory tract

(such as dyspnea and respiratory distress). Significant exposure to some substances may result in persistent respiratory symptoms.

Onset of symptoms can occur within a few minutes or several hours of the exposure, depending on the substance. For the presumption in Section 6(3) of the Act to apply, the symptoms must appear within 48 hours of the exposure, unless the exposure is to nitrogen dioxide or phosgene, in which case the onset of symptoms must occur within 72 hours.

A claim for compensation made by a worker who has developed persistent or chronic respiratory symptoms considered to be due to exposure to a substance with irritating or inflammatory properties, must be considered on its own individual merits without the benefit of a presumption in favour of work causation (unless the claim meets the requirements of one of the other items of Schedule B). In particular, claims for chronic bronchitis, emphysema, chronic obstructive pulmonary disease, obliterative bronchiolitis, reactive airways dysfunctional syndrome (RADS), chronic rhinitis, and conditions considered to be due to exposure to tobacco smoke, are determined on the merits and justice of the claim without the benefit of any presumption. The same is true of a claim made by a worker with acute respiratory symptoms where the requirements of Section 6(3) of the Act are not met (see [#26.22](#)). Where a worker who develops an acute reaction to a substance with irritating or inflammatory properties subsequently develops a persistent or chronic respiratory condition, a decision will be made based on the merits and justice of that claim on whether the chronic condition is a compensable consequence of the acute reaction.

Item #29.20 of the RSCM I addresses compensation for asthma. It provides in part:

Compensation is not payable because a worker develops an allergy or sensitivity to a substance or substances as a result of their employment. Compensation may be paid where a workplace exposure to the allergen or substance results in an asthmatic reaction.

In the case of a compensable asthma or a reaction of the respiratory tract to a substance with irritating or inflammatory properties, temporary disability benefits are payable until the temporary disability ends or until the worker's symptoms become stabilized. Where the worker's symptoms do not entirely resolve and he or she is left with a permanent impairment of the respiratory system, a disability award may be granted. However, no such award can be made when the worker's symptoms have resolved and



they are simply left with the underlying allergy or sensitivity. Not only is the worker not now suffering from the occupational disease set out in Schedule B, but they are not disabled from working. The Board cannot grant a permanent disability award to a person who has the same physical capabilities as they had previous to the occurrence of the occupational disease, but who is precluded from a limited number of occupations because of a remaining allergy or sensitivity. No permanent disability award can be made to a worker with a pre-existing condition when they have returned to their pre-exposure state.

Item #30.50 of the RSCM I addresses compensation for contact dermatitis. It provides:

Schedule B lists "Contact dermatitis" as an occupational disease. The process or industry described opposite to it is "Where there is excessive exposure to irritants, allergens or sensitizers ordinarily causative of dermatitis".

The payment of temporary disability benefits and permanent disability pensions are subject to the same general principles as are set out in #29.20 in respect of asthma or a reaction of the respiratory tract to a substance with irritating or inflammatory properties. Therefore, there is no disability for the purpose of the *Workers Compensation Act* unless the worker has an actual loss of body function or physical impairment resulting from the dermatitis which causes the worker to be disabled from earning full wages at the work at which he or she was employed.

Temporary disability benefits are payable while the disability is a temporary one, but cease when it disappears or stabilizes or becomes permanent. If the worker's symptoms do not entirely resolve and they are left with a permanent impairment, a disability award may be granted. However, neither temporary disability benefits nor a permanent disability pension is payable simply because the worker has developed a susceptibility to react to a certain substance as a result of his or her work which causes periods of temporary impairment if he or she is exposed to the particular substance, but otherwise causes no complaints. Rehabilitation assistance may be provided to assist the worker in obtaining alternative employment which does not expose him or her to the substance in question (see #86.30).

## Jurisdiction

Each of the technologists has provided a list of symptoms and a list of precipitating factors. They submit, through their representative, that all of the symptoms described should be accepted as permanent compensable sequelae of their occupational exposures. The implication is that the technologists have developed a condition which

manifests itself variously as respiratory, sinus and skin irritations, eye irritations, fatigue, headaches, gastrointestinal symptoms and other symptoms. This condition causes these symptoms to occur with exposure to numerous occupational and non-occupational situations and substances. The representative has not requested that WCAT make a finding that the technologists have developed multiple chemical sensitivity nor has the representative specifically submitted that these appeals involve adjudication of a disorder that may be described as “multiple chemical sensitivities” or, alternatively, in some of the literature, as “darkroom disease.” Yet, this view is apparent in the evidence of symptomatology, the medical evidence, and the appellate level decisions relied upon in the submission.

The representative submits that there is a recognized entity known as multiple chemical sensitivity, which is described in the May 2004 report. She also submits that there is precedent for a finding of permanent sequelae to toxic exposure to processing chemicals. In this regard, she relies on appellate decisions of workers’ compensation tribunals in other jurisdictions as well as a decision of the former Appeal Division of the Board.

The Appeal Division decision involves a radiographer who was exposed to the same types of chemicals to which the MRI technologists were likely exposed and the Appeal Division found that the worker likely had developed multiple chemical sensitivities as a result of her occupational exposure. The Appeal Division in that case, however, was dealing with an appeal of decisions made by the Board and the Review Board specifically denying acceptance of multiple chemical sensitivities. The Appeal Division clearly had the jurisdiction to address multiple chemical sensitivities.

With one exception, there is no documentation indicating that the Board was requested to adjudicate the issue of multiple chemical sensitivity nor was evidence submitted to the Board that would support such a diagnosis.

This poses issues with respect to the jurisdiction of WCAT. The decisions that form the basis of the appeals address the compensability of specific symptoms and/or conditions. These decisions date back to 1998, at which time some of the symptoms reported by the technologists had not yet developed and/or had not been reported to the Board. For the most part, those symptoms which had been reported were adjudicated on the basis that they occurred in relation to specific occupational exposures. The submission now is that a wide range of symptoms are present in both occupational and non-occupational settings due to a process of sensitization to occupational substances and cross-sensitization to various unknown and non-occupational substances. In other words, it is submitted that the technologists have developed multiple chemical sensitivities.

There are certain circumstances in which WCAT may consider a new diagnosis for a condition or symptom complex that has been adjudicated by the Board under a different diagnosis. In that situation, neither the symptoms nor the mechanism of injury have changed but new information has become available suggesting a more appropriate

diagnosis. Generally, WCAT considers that it has the jurisdiction to decide whether the condition was work-related albeit the change in diagnosis.

In this case, however, the decision letters (with one exception) address whether the workers have developed respiratory and/or skin conditions and eye irritation as a result of exposure to film processing chemicals which are recognized as causing those types of symptoms. Those decisions are based on specific histories of exposures, knowledge of the symptoms which may develop as a result of such exposures and a temporal relationship between exposure and the onset of symptoms of that nature. This is different in kind from adjudicating a multiple chemical sensitivity disorder which involves reactivity to a wide variety of unknown substances resulting in multiple organ dysfunction and which is “undiagnosable with any degree of certainty” and “the pathophysiology is unknown” as stated by the authors of the May 2004 report.

Generally, WCAT also has jurisdiction to address a diagnosis which has been made prior to the initial adjudication by the Board despite the Board not having addressed that diagnosis. In *WCAT Decision #2003-02677*, which may be viewed at the WCAT website under *Noteworthy Decisions*, the panel explained the basis on which it would consider an alternative diagnosis for the worker’s condition as follows:

...in the decision letter, the case manager dealt with only one of the diagnoses on file. The case manager did not address the matter of cervical radiculopathy secondary to degenerative disc disease. The panel considers that WCAT has jurisdiction to consider not only the condition of bursitis/tendonitis but also cervical radiculopathy, since the worker initiated a claim for a symptom complex that could have been caused by either condition or both in combination, and the medical reports clearly identified both conditions.

In the current appeal, there was no alternative diagnosis of multiple chemical sensitivity when the decisions were made regarding entitlement to compensation in 1998. In this regard, I note that the medical legal opinions of Dr. Stark speak to the conditions of the technologists in 2005 and the May 2004 report speaks to their conditions in 2004.

It may be that the technologists have developed conditions involving multiple symptoms to unknown substances as permanent sequelae of their occupational exposures in 1994/95 and afterwards. This is a question though that is adjudicated as an issue of compensable consequences.

In view of all of the above, I do not consider that I have the jurisdiction to decide whether the individual technologists have developed multiple chemical sensitivity as a result of their occupational exposures, except where that matter appears to have been considered at the time the decision was made that forms the basis of the appeal.

## **Reasons and Decisions**

The first decision letter, dated March 27, 1996, accepted the worker's claim for compensation for temporary respiratory irritation and skin irritation for which benefits would be paid until May 16, 1995, which was given as the date the "offending" film processor had been removed from the MRI Unit.

In the next decision letter dated September 11, 1998 the Board officer informed the worker that it was accepted that she had developed temporary exacerbations of her pre-existing rosacea, and temporary symptoms of sinusitis, rhinitis and pharyngitis following exposure to unbagged films. Since the worker had not sought medical treatment since November 17, 1997, there was nothing further to consider under the claim.

All of the six technologists received letters dated September 11, 1998. Some specifically referred to chemical sensitization as a result of their exposures and some did not. The reason for this differentiation is not apparent. The decision letter issued to the worker does not refer to sensitization although both Dr. Yeung and the BMA had stated that the worker had developed a chemical sensitivity prior to the date of the decision. They both identified that as the underlying basis for the respiratory and skin reactions. Accordingly, in keeping with the discussion regarding jurisdiction, I consider it appropriate to address that issue.

Based on the opinions of Dr. Stark, Dr. Yeung, and the BMA, I find that the worker has developed a sensitivity to film processing chemicals which is likely permanent.

There are no policies that deal specifically with the development of a chemical sensitivity due to occupational exposures. The policies dealing with compensation for asthma and dermatitis address situations that are most analogous to the development of a chemical sensitivity in that they deal with the existence and/or development of an underlying condition which results in either respiratory or skin reactions under certain conditions that would not elicit these reactions in individuals who do not have this underlying condition.

The policies currently in effect with respect to these conditions are currently under review and are the subject of a public consultation. The discussion papers pertaining to this review are accessible on the internet at [www.worksafebc.com](http://www.worksafebc.com). It is not known whether any policy changes will result from this review process and if there are changes, the nature of those changes. As previously noted, the policies applicable to these appeals are those in effect at the time that the workers developed symptoms due to their occupational exposures.

There is no evidence that the worker had rosacea or other skin problems prior to the exposure in 1994/95. The BMA's view was that it was unlikely this condition was caused by chemical exposure because the etiology generally is unknown. Based on the temporal evidence of onset at the time of maximal exposure and the ongoing symptoms since, it appears that the worker's rosacea was permanently aggravated by the occupational exposures if not caused by them. In view of Dr. Stark's opinion that there

was a causal relationship, I consider it likely that that was in fact the case. I find the worker's rosacea was caused by her occupational exposures.

With respect to her symptoms of rhinitis/sinusitis and pharyngitis, the evidence indicates that the worker still had the symptoms when the decision letter of September 11, 1998 was issued and they have been an ongoing problem. Accordingly, I find that these are likely chronic symptoms resulting from her permanent chemical sensitivity.

If the worker considers that her symptoms constitute a permanent functional impairment, she may request the Board to undertake a permanent functional impairment assessment.

Finally, there is the issue of entitlement to preventative vocational rehabilitation assistance. The employer has made substantial efforts to accommodate the conditions that the six MRI technologists have developed since the exposure of 1995/95. Steps have been taken to practically eliminate exposure to x-ray films by implementing digital film processing and taking various other precautionary measures to avoid any exposures to film. Despite these measures, there are instances when the worker is exposed to film in the course of her employment with this employer. Despite attempts by the employer to establish a fragrance-free workplace, there are also unavoidable exposures to perfume. By and large, however, the incidence of exposure to perfume and film processing chemicals and other chemicals to which the worker has been sensitized has been substantially reduced through the efforts of the employer.

The steps taken by the employer to accommodate this worker and her co-workers has resulted in a unique workplace in which the worker is able to function albeit with some difficulties. As I understand the position of the worker, there is a concern that she is limited in employment opportunities, present and future, because of her compensable conditions and sensitivities. In addition, earlier submissions expressed a concern that the employer might undergo organizational changes resulting in the elimination of the MRI unit.

Section 16 of the Act provides that the Board may take measures "To aid in getting injured workers back to work or to assist in lessening or removing a resulting handicap..."

Item #86.30 of the RSCM I discusses preventative vocational rehabilitation assistance. It states:

Preventative rehabilitation is intended to provide assistance to workers who can return to their old jobs, but have been medically deemed to be at undue risk of:

1. permanent disability due to vulnerability, or

2. increased permanent disability.

Cases involving occupational disease or prior claims for the same injury (mainly joints and backs) are the primary focus of preventative rehabilitation.

Once eligibility for preventative assistance has been established, the rehabilitation process set forth in #87.00 applies.

Section 16 provides the Board with discretion to provide certain types of assistance to injured workers. Since the worker has continued to work in the same occupation with the pre-injury employer, there is no basis for the Board to exercise this discretion at this point. In the future, a situation may arise where the worker is not able to continue working at her pre-injury employment and she may request the Board, at that time, to provide vocational rehabilitation assistance. It is not possible to foresee the situations in which it may be appropriate for the Board to exercise that discretion and WCAT does not have the jurisdiction to direct the Board to exercise its discretion by providing any vocational rehabilitation assistance requested by the worker in the future.

Accordingly, I agree that the worker was not entitled to preventative vocational rehabilitation in February 2000. That does not preclude the Board from exercising its discretion under section 16 of the Act should that be deemed appropriate at some point in the future.

### **Expenses**

Item #13.22 of WCAT's *Manual of Rules of Practice and Procedure* states that WCAT will generally order reimbursement of the party's expenses to attend the oral hearing under section 7(1)(a) of the *Workers Compensation Act Appeal Regulation* if the party was successful on the appeal.

The worker specifically requested expenses for three full days of wage loss with respect to the hearings. Although the hearings took place over a three-day period, her appearance was required during a very brief initial submission and an equally brief final submission and a one-hour hearing. In the circumstances, it seems appropriate her expenses be reimbursed for one and a half days of wage loss for attendances on November 14, 15, and 16, 2005.

### **Conclusion**

I vary the Board officer's decisions of March 27, 1996 and September 11, 1998. I find that the worker has developed a sensitivity to film processing chemicals which is likely permanent.

The worker's exposure to film processing chemicals caused her rosacea, rhinitis/sinusitis and pharyngitis. Her chemical sensitivity has resulted in ongoing, chronic respiratory and skin irritations.

I confirm the Board officer's decision of February 29, 2000. As of February 2000 the worker was not entitled to preventative vocational rehabilitation assistance. This does not preclude the Board from providing this assistance at some point in the future.

WCAT does not have the jurisdiction to make a decision as to whether the worker has developed multiple chemical sensitivities due to her occupational exposures.

Marguerite Mousseau  
Vice Chair

MM/gw