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QME SAMPLE REPORT **Thomas W. Wallace, M.D.** **Neurology**

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RE: WORLD COUNTRIES
EMP: COMPANY N
CLAIM NO: 000-00000
WCAB NO: FRE 000000
DOI: CT 5/28/98

Dear Attorney X:

At your request, I conducted a neurologic evaluation of Mr. WORLD COUNTRIES on 12/3/08 in my Oakland office, 180 Grand Avenue, #100.

It is my understanding that I am acting as a Qualified Medical Evaluator in this case. Thank you Attorney X for your correspondence dated 12/2/08 and 12/15/08.

This report is submitted pursuant to 8 Cal. Code Regs. Section 9795(b)&(c) as an ML104, Comprehensive Medical-Legal Evaluation Involving Extraordinary Circumstances and meets the requirement of **four complexity factors**. These factors include:

- (4) 4+ hours spent on any combination of two of the complexity factors (1)-(3), which shall count as **two complexity factors**;
- (6) addressing the issue of medical causation, which shall count as **one complexity factor**;
- (7) addressing the issue of apportionment, which shall count as **one complexity factor**;
- (8) involvement of toxic exposure, which shall count as **one complexity factor**.

Time spent in face-to-face contact with the patient was one hour and 30 minutes. Time spent reviewing records was three hours and 45 minutes. Time spent preparing the report was four hours and 30 minutes. Total time spent on this case was nine hours and 45 minutes.

Complexity is further reflected by the involvement of multiple body parts and multiple specialists; the presence of both physical and psychiatric components; widely divergent opinions; and the need to review legal documents and personnel records.

HISTORY FROM PATIENT:

Mr. WORLD COUNTRIES, now 54 years old, began working for Company K, the company name later changing to Company N and then to Company M, in 5/79. Working in various plant areas, exposed to different chemicals, he developed burning discomfort and redness in the skin of his neck and over his chest and upper extremities, spreading even to his penis.

His skin would shed and crack open, becoming so intolerable over his penis that he wanted to kill himself. He was examined by an urologist, Dr. ENGLAND, regarding this problem.

He was treated also by Dr. UNITED STATES, a dermatologist, in 1993 or 1994 with the treatment including wearing a plastic suit and using ointments. This resulted in considerable skin improvement.

He developed pain in his hip, shoulder and right wrist, and had paresthesias extending from the elbows into the ulnar aspects of his hands on both sides. Muscles all over his body lost strength and he suffered a restless feeling in his body. This restlessness included uncontrollable jerking on either side.

Before he had been very strong, he worked out regularly and was a cross country runner, having done such running up to 1993, and endeavored to encourage his daughter to be a cross country runner. His weight dropped from 210 or 220 pounds to around 130 pounds. His thinking became really screwed up with decreased memory and he found himself unable to solve math problems and think logically. This was in strong contrast to his previous capability.

Under the care of Dr. CHILE, who became his primary treating physician, a fat biopsy was obtained in 2005 and was sent to a special lab in Canada for analysis. This showed high levels of multiple toxins. There were a number of other tests, including nerve conduction studies at the Antelope Valley Neurosurgery Center by Dr. JAPAN. This was in regard to the upper extremity paresthesias.

The patient was also examined by Dr. ITALY for his skin condition, but he doubted that any of the chemicals retained in his body were having an ongoing effect on his skin. He was evaluated as well by Dr. JAMAICA, an internist.

The patient believes that through his years of working at the chemical company, he received toxic exposure to the skin and by breathing the toxic dust and vapors, and in drinking contaminated water, and that this caused his body and mind to deteriorate. His wife, Mrs. WORLD COUNTRIES, has had the same exposure, but not over such a long period, and she has these high toxic chemical concentrations in her fat analysis.

OCCUPATIONAL HISTORY:

In 5/79, his work for the chemical company began at the XYZ plant producing sodium sulfate. In 1982 he was laid off and for a few months worked for his brother in a door shop, cutting wood. He returned to XYZ in 1984 in potash production. In 1989, he was transferred to the lab as an analyst. After becoming sick, he was off work, returning in 1994 or 1995, and was sent to work in the shipping depot at the West End facility.

In his work at the different areas, he was very active physically the whole day. In sulfate production, he maintained temperature levels, shoveled, performed hold cleaning, operated flows and valves, and performed cleanup. In the laboratory, he would pick up

samples and run chemical analyses on them with the results reported to a field operator for quality control. In the shipping area, he loaded trucks and railroad cars and performed housekeeping. This was very dusty work and he was required to use a 40 pound steel bar to open railroad car bottoms. He worked on all sorts of hard and uneven surfaces.

As to prior employment, he worked in stockyards while in high school and he worked for his dad performing farm work. He was in the Navy from 1973 to 1975, where he performed laboratory work, worked in temperature control, and after that he was employed by Company B. This involved mixing, coloring, stocking, cutting and driving a forklift. This was from 1976 to 1979. He had none of his present symptoms in those jobs.

PRIOR INJURIES:

He underwent arthroscopic surgery for the right knee in 1990 of 1991, having suffered a torn cartilage as a result of his cross country running. He recovered with no ongoing problems.

CURRENT CLINICAL STATUS:

He has nearly constant pain in the left hip and right wrist, and he has just started to have pain in the left side of the chest.

His eyes are chronically irritated and he was found to have low pressure glaucoma at the V.A. Hospital. He has nearly constant nasal stuffiness with loss of ability to smell and occasionally he has slight bleeding from his nose. He feels light-headed and dizzy when getting up from a chair and when moving too fast. He manages this by stopping to hold onto something for a few seconds. He has not fallen and he has not lost consciousness or awareness.

When working at XYZ, he suffered with headaches, but currently has only infrequent aching behind his eyeballs, this occurring about once a month.

There was quite a problem with swallowing, but this has improved considerably as well. From 1998 to 2000, he would aspirate, but this stopped. He does have ongoing bad gastric reflux symptoms.

A major problem is his difficulty in thinking and in memory impairment. This seems to him to be getting worse. It has progressed over time. He quit reading because of this and can no longer look up telephone numbers in the phone book. He has lost almost all ability to understand how to use a computer, he can hardly get onto the computer. He no longer can spell or add and he has lost his mathematical ability generally. He tends to become lost when driving, feeling confused. His wife needs to help him with many of his activities.

Although he uses cannabis frequently each day, he finds no effect on his thinking. He simply feels good with it because pain and nausea are relieved.

His muscles generally are weak and he has recurrent jerking that involves both sides of his body. He has lower back, mid back and neck pain intermittently, about 26% to 50% of the time. There is intermittent but intense left shoulder pain, described as deep, dull and aching. He obtains relief from all of these pains with his frequent cannabis use.

He is continually extremely exhausted and continues to have dyspnea on exertion. He finds himself restless when sitting, but tires easily when standing. Shopping is limited by the fatigue. He usually takes three hour naps during the day, even though he sleeps all night.

There is intermittent tingling in the medial forearm areas extending into the ulnar aspect of each hand. This extends from the elbows. There are no sensory symptoms in the lower extremities.

Sexual function is considerably limited, mainly by difficulty in obtaining erections.

He has been thought to have sleep apnea related to his breathing difficulties and he has been told that he has an enlarged heart which is more likely due to his chronic pulmonary condition. His weight loss has been thought to be indicative of possible cancer and possible biopsy of his lung lesion is under consideration.

MEDICATIONS:

He takes Oxycontin, limiting this to two per day. This is for joint pain and he has taken it since 2001. He uses cannabis in vaporized form every two hours for continuing nausea the pain, and he uses it for a restless feeling at bed time. He has used this since 2003 or 2004. Prevacid currently is taken rarely.

ACTIVITIES OF DAILY LIVING:

Self-care and personal hygiene are limited by fatigue mainly. Communication is limited by a decline in thinking. Sensory function is intact, except for loss of ability to smell. Non-specialized hand activities are affected only by his generalized weakness. Travel is limited by fatigability mainly, but he does drive. Sexual function is decreased with considerable difficulty in maintaining erections. Sleep is variably limited, not severely, and there has been concern about the possibility of significant sleep apnea attacks.

As to other physical activity, the patient estimates that he can now lift only about 30 pounds, walk 50 yards, stand 60 minutes and sit for 30 minutes. He does some shopping and no housework. Because he becomes winded and his joints start to hurt and his eyes ache in the sun sometimes, he gave up running. He believes that previously he could regularly lift 90 to 100 pounds, walk all day, stand for several hours and sit as long as he wanted.

MEDICAL/SOCIAL HISTORY:

Medical Illnesses: Only in relation to the toxic exposure as above. He was found to have a testicular tumor that may be related to the toxins. Operations: Carpal tunnel release, 6/98; arthroscopic surgery, 1990 or 1991; vasectomy, 1976; and this latter surgery led to operation for a herniated testicle. Hospitalizations: For chest pain in 1/04. Medications: No others currently. Allergies: He believes he has developed multiple allergies from the toxic exposure. Birthplace: Clovis, California. Family History: Positive for diabetes and stroke. Marital Status: Married. Education: High school graduate, 1973, and later Associate's Degree in computer science and electrical. Military Service: Navy, 1973 through 1975, with highest rank E-1. He had an honorable discharge and no disability. Tobacco: None. He quit smoking in the early 1990s. Alcohol: Just when he goes out, averaging two to six beers per week. Coffee: None.

REVIEW OF SYSTEMS:

Light-headedness with standing. No cardiac symptoms. Recurrent dyspnea on exertion. Tendency to nausea and associated anorexia. Genitourinary negative. Endocrine negative. No diabetes. Neurological is as noted above with restless leg syndrome. He was found to have neuropathy in 1997 or 1998 thought due to arsenic. He has chronic lower back pain and pain in the joints as noted.

PHYSICAL EXAMINATION:

Mr. WORLD COUNTRIES is a pleasant, cooperative, right-handed man appearing the stated height of 72" with weight 150 pounds. He appears tired, but otherwise there is no evident discomfort on entering the room or while sitting. Speech and demeanor are normal.

As to mental status, formal testing was not undertaken, but the history presentation is noted to be not well-organized. He is alert and generally oriented. With mental status screening questions, he makes one mistake in reversing five numbers and another single mistake in attempt to spell the word "world" backward.

Pupils 3 mm bilaterally and react to light. Extraocular movements, visual fields to confrontation and optic discs are normal. Hearing is intact bilaterally. Pinprick and light touch sensibility intact over face. No facial, tongue or palate weakness.

In all four limbs there is no weakness found to direct muscle testing and no tremor or other involuntary movement. No muscle tone abnormality and no ataxia or decrease in rapid alternating movements. The deep tendon reflexes are all normal at 2/4 bilaterally with normal plantar responses.

He has no Tinel's signs over the ulnar or median nerves. Two-point discrimination, pinprick and light touch sensibility are normal in the upper extremities, and in the lower

extremities, pinprick, light touch and vibratory are intact. The Romberg test and the gait are normal, tandem walking included.

There are no non-physiologic findings.

CURRENT DIAGNOSTIC TESTING:

ELECTROMYOGRAPHY:

Electromyography was performed using a Cadwell 5200-A with Teflon-coated monopolar needle exploring electrodes for median and ulnar nerves in both upper extremities.:

FINDINGS:

There was electrical silence at rest in all muscles tested. There were no positive waves, fasciculations or fibrillation potentials noted. The motor units were of normal amplitude, configuration and duration. Interference patterns were full.

NERVE CONDUCTION STUDIES

Nerve conduction studies of the upper extremities were performed using a Cadwell 5200-A with surface recording electrodes.

<u>Right Measures</u>		<u>Median</u>	<u>Right elbow</u>	<u>R Ulnar (below elbow)</u>	<u>R Ulnar (across) R Mid-Palmar</u>	<u>Measure</u>	
Motor Proximal Latency	10.0	7.5	10.0			ms.	
Motor Distal latency		4.6	2.7	7.7		ms.	
Interelectrode Distance		25.0	27.0	10.0		cm.	
Motor Conduction Velocity	46.2	56.4	43.7			M/sec.	
"M" Wave (Peak to Peak)		11500	13000	12500		mV.	
"F" Wave			32.0	31.6	32.0		ms.
Sensory Proximal Latency		8.2	7.7			ms.	
Sensory Distal Latency		3.4	3.2		2.3	ms.	
Interelectrode Distance		24.0	27.0		8	cm.	
Sensory Conduc. Velocity		49.2	58.9			M/sec.	
"S" Wave (Peak to Peak)		42.5	32.5		44.5	uV.	

<u>Left Measures</u>		<u>Median</u>	<u>Left elbow</u>	<u>L Ulnar (below elbow)</u>	<u>L Ulnar (across) L Mid-Palmar</u>	<u>Measure</u>	
Motor Proximal Latency	8.7	7.7	10.0			ms.	
Motor Distal Latency		3.5	2.5	7.7		ms.	
Interelectrode Distance		24.0	24.0	10.0		cm.	
Motor Conduction Velocity		46.1	46.1	43.7		M/sec.	
"M" Wave (Peak to Peak)		22250	8375	6625		mV.	
"F" Wave				31.6			ms.
Sensory Proximal Latency		8.1	9.1			ms.	
Sensory Distal Latency		3.3	3.2		2.5	ms.	
Interelectrode Distance		24.0	27.0		8	cm.	
Sensory Conduc. Velocity		50.1	45.2			M/sec.	

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"S" Wave (Peak to Peak) 39.5 38.5 41.0 uV.

INTERPRETATION

Nerve conduction studies in both upper extremities revealed mild to borderline distal latency delays in ulnar and median nerves bilaterally, evidencing a suspicion for mild peripheral neuropathy.

MRI of the brain is reported on 1/2/09. Negative non-contrast study of the brain. There is mild mucosal thickening in maxillary, ethmoid and left frontal sinuses.

REVIEW OF FILE:

The following files were reviewed, a total of 279 pages.

1. WCAB Transcripts.
2. Court of Appeals Transcripts.
3. Deposition.
4. Medical File.
5. Article from sfgate.com.
6. Toxicology Report.

The files reviewed include and are not limited to:

1. PERU, M.D., 4/21/05, 1/19/06, 5/12/06, 11/14/07, 12/20/07. There are excellent reviews of work toxic exposure and he describes the lack of protective clothing. He believes the patient was poisoned by multiple chemicals. Arsenic levels were elevated and PCB and chlorinated pesticide blood levels were noted to be very high as well. These are neurotoxins and can cause weight loss, confusion, immune impairment and cancer. The patient has a typical skin rash and has developed skin cancers. He has also had low level exposure to organic solvents. He discusses TCCD and dioxin as a group, including PCBs. He concludes that a finding of elevated PCBs six years after he stopped working at the plant to be consistent with exposure at the XYZ Chemical Company. He explains this in detail. Dr. PERU has a protocol to reduce high PCB and chlorinated pesticide levels. He considers the patient to be totally disabled.
2. PERU, M.D., *et al*, www.sciencedirect, 1/17/07. This is a published study regarding PCBs and furans. Blood studies were analyzed in Germany by the certified ERGO Laboratory with controls from a blood clinic. They found increased levels of the dioxins OCVD and HpCDD, and also of PCP in environment surrounding a wood treatment plant.

3. CUBA, Ph.D., 6/28/08, 10/14/08. Psychology evaluation. Diagnosis is major depression of moderate intensity with cumulative trauma associated with chemical toxicity as a predominant cause. No previous mental health problems. The patient needs psychotherapy and he is temporarily totally disabled until 4/10/09. Report of 10/14/08 is regarding psychotherapy.
4. WCAB, 11/14/06, 12/4/07, 12/11/07, 4/16/08. The latter two documents are minutes of a status conference and report of a mandatory settlement conference. On 11/14/06 is the report of findings with award and his opinion. He determined that Mr. WORLD COUNTRIES was temporarily totally disabled, but with permanent and stationary level pending. He was in agreement with multiple reports of Dr. PERU and Dr. CHILE. Future medical needs should include operation for a lung mass, attention to skin lesions and regular ongoing monitoring regarding possible development of cancer and any future problems developing from dioxins, furans and PCBs. He was impressed that the defendants had never presented rebuttal evidence to Dr. PERU's very complete and exhausted history of toxic exposure. Dr. HONDURAS, a toxicologist who had evaluated the patient, challenged the reliability of the laboratory tests performed in Canada, but the Judge did not uphold this. He likewise did not support Dr. IRAN, who had evaluated the patient and opposed Dr. PERU. The Workers' Compensation Judge concluded, on the basis of the evidence, that Mr. WORLD COUNTRIES suffered injuries to his skin, lungs, neurological system and other body systems as a result of the toxic exposures which included PCBs, chlorinated pesticides, dioxin-like chemicals and arsenic.
5. California State Appeals Court, 5/10/07. COMPANY M, Inc. *et al* versus WCAB. The petition was denied. The Judge rejected COMPANY M's attack on reports prepared by Dr. CHILE and Dr. PERU, which were adopted by the WCAB. COMPANY M claimed that they were unreasonable and not supported by substantial evidence, but this Judge found no reason to disturb the WCAB award and considered that there was substantial evidence reasonably supporting the WCAB's determination. In response to COMPANY M complaining that Mr. WORLD COUNTRIES never entered into the record a list of chemicals to which he may have been exposed, the Judge noted that COMPANY M had elected to avoid the introduction of such evidence.
6. R.N., 4/4/08. Estimation of future healthcare costs. She notes that his health has deteriorated to the point of needing assistance with self-care due to pain, poor stamina, significant memory impairment and depression.
7. Deposition, 3/21/08. Case Manager.
8. San Francisco Chronicle Staff Writer, Internet Article, 7/6/08.
9. CHILE, D.O., 4/25/05, 1/12/07, 11/14/07. In 2007, he had treated the patient for six years and was seeing him on a monthly basis for chemical toxicity with onset in 1994 causing memory loss, restless legs, rashes, fatigue and chronic pain. There had

been no improvement over those six years. Dr. CHILE had obtained the fat specimen that was sent for analysis. For treatment he was sending the patient, in 2007, to a chiropractor, and for colon therapy for chemical detoxification among others. He wanted follow-up fat biopsies to monitor the treatment.

10. NORWAY, 7/15/08. Notice of alleged safety or health hazards with hazard description and location. Increased toxins were demonstrated in Mr. WORLD COUNTRIES's blood and in the fat biopsy for E-1 and E-2 pesticides, PCBs, dioxin, furan.
11. Laboratory Reports, AXYS Analytical Services, Ltd.
12. IRELAND, Ph.D., 5/10/05. E-mail to Rita WORLD COUNTRIES in which he notes that there are significant level elevations for heptachlor epoxide, chlordane, oxy, nonachlor and mirex.
13. ITALY, M.D., 11/26/08. Dermatology AME. He noted that since the patient had been away from the work place for ten years, his skin was much improved, but there were significant outbreaks occasionally. The diagnosis was atopic dermatitis with the only cancerous lesions having been actinic keratoses removed by Dr. ICELAND, overall very minimal to Dr. ITALY. There had been negative extensive patch testing. He stated that most likely the patient had suffered an irritant type dermatitis, being susceptible. He found no stigmata of arsenic poisoning or of dioxin. He felt that the patient had no significant ongoing impairment and the only permanent disability was from sun damage, a 5% whole person impairment. He summarized by stating that the atopic dermatitis probably was irritated in the work place, but should have recovered to baseline.

DIAGNOSES AND IMPAIRMENTS:

1. Encephalopathy, probably toxic.
2. Mild peripheral neuropathy, also likely toxic.
3. Multiple other toxic conditions, including rhinitis, pulmonary insufficiency, severe weight loss and fatigue state.

DISCUSSION:

Mr. WORLD COUNTRIES worked for this chemical manufacturing company in various roles, handling materials at the XYZ facility for 20 years prior to 1998, starting there in 1979. The work was in a dusty environment. He wore regular clothing and his only added protection was from leather gloves, a hard hat, safety glasses and a paper mask. He believes skin and lungs were almost continuously exposed to toxic chemicals.

The patient provided to Dr. PERU a detailed description of such toxic exposures.

In 1994, the patient began to have recurrent skin problems which eventually became very severe by the time of his resignation on 5/28/98. His dermatologist, Dr. ICELAND, removed skin cancer and other lesions over the years, with treatment mainly consisting of nitrogen, cryotherapy and laser abrasion. He was also evaluated by another dermatologist in San Francisco, Dr. UNITED STATES.

The patient was evaluated by Dr. CHILE in 2001 and he continued as the treating physician. At first Dr. CHILE was mostly concerned with the effect of arsenic exposure, especially on the skin. Dr. CHILE treated the patient for a variety of symptoms that included back pain, nausea and vomiting, difficulty sleeping, depression with anxiety, as well as the skin problem.

There was a long list of chemicals in that industrial exposure about which Dr. CHILE became concerned. He referred the patient to Dr. HONDURAS, a toxicologist. Dr. HONDURAS in his workup, provided further studies, including a CT scan of the chest which showed a 9.0 mm left lower lobe mass. He felt that malignancy needed to be ruled out. There were a number of negative gas chromatography tests for toxins, but an elevated phenol level was found.

Despite the history of exposure to multiple toxic chemicals, Dr. HONDURAS was impressed only with the skin effects. Dr. CHILE detailed results of his extensive studies in his 4/25/05 report. Included were tests such as cancer markers and studies looking for autoimmune disorders. These were normal.

There was an internal medicine evaluation by Dr. IRAN who was unimpressed with the possibility of the symptoms being a result of chemical exposure.

There were, however, some important findings to substantiate the likelihood of a problem from toxic chemicals. Mr. WORLD COUNTRIES's hair analysis was positive for arsenic. A fat biopsy specimen taken from his flank was sent for analysis to the AXYS Laboratory in British Columbia, a certified laboratory, and there were very high levels for a number of dioxins, furans, PCBs and pentachlorophenols.

Dr. CHILE became particularly impressed with the high dioxin, TCVD, found in the fat biopsy, purported to be the most studied dioxin regarding toxic effects. The patient, on his own, obtained detoxification treatments, including colonics. He received immunotherapy at the hands of Dr. ARGENTINA. He continued to see Dr. ICELAND for attention to his skin. A dentist, Dr. KENYA, sees him for treatment of what the patient describes as toxic dental injury.

The patient has been evaluated by Dr. PERU, another clinical toxicologist, who found in his examination and from his comprehensive history, that there had been damage to the brain, lungs, immune system, and that skin had developed cancer from the subject toxic exposure.

Referencing his 4/21/05 report, Dr. PERU has provided a very detailed description of the occupational exposures, lack of sufficient protective gear and other factors. It is made clear that the patient was exposed to multiple toxic chemicals on his body and through inhalation of dust and vapors for many years, and likely had ongoing chemical exposure, developing a severe skin condition, dyspnea on exertion and headaches while still working for the chemical company. Other conditions followed, including a cognitive decline that began in 1998.

Presenting for this neurology Qualified Medical Evaluation, the patient is pleasant and fully cooperative. He has obvious but mild difficulty in number and word spelling reversal and he appears fatigued. Examination of the cranial nerves is normal, as is the rest of the neurological examination, gait and stance included. Despite history of paresthesias in the upper extremities, there are no neuropathic signs evident.

Bilateral upper extremity nerve conduction study was undertaken. In this there is mild to minimal delay in distal latencies for ulnar and median nerves bilaterally. This suggests that there is an element of peripheral neuropathy, but the evidence is too limited to warrant assigning to it any definite clinical significance, particularly given the normal sensory and motor findings in the clinical examination.

CAUSATION:

The Workers' Compensation Judge concluded, on the basis of the evidence, that Mr. WORLD COUNTRIES suffered injuries to skin, lungs, neurologic system and other bodily systems as a result of the toxic exposures, which included PCBs, chlorinated pesticides, dioxin like chemicals and arsenic.

Based on the patient's history, my examination findings and on the files, there likely is disability directly attributable to these chemical exposures at the Company K, Company N and COMPANY M Chemical facilities. This is cumulative trauma extending over the years from the time of employment to his leaving that work place on 5/28/98. There is sufficient support for accepting that these chemicals are capable of damaging the nervous system¹.

As a result of such injury, as strongly evidenced by the fat analysis findings, the patient has a heavy body burden of toxic chemicals, including pesticides, chlorinated hydrocarbons, dioxins and furans. He has, most likely as a result of the chronic toxic exposure, developed chronic encephalopathy causing cognitive impairment, a severe fatigue state with general weakness and jerking.

The clinical impression of encephalopathy with the cognitive impairment needs confirmation by the scheduled neuropsychology evaluation. I have obtained a brain MRI, primarily to help in ruling out other causes for a decline in cognitive powers. This MRI is reported to be normal.

¹www.atsdr.cdc.gov/toxprofile/

The rest of the neurological examination is normal also with no cerebral signs. Likewise, there is no clinical evidence on examination for a peripheral neuromuscular disorder as a cause for the weakness and fatigability. The relatively minor nerve conduction findings do not correlate sufficiently well for this.

The patient has, in addition, suffered pulmonary, nasal, ocular and sexual impairment with severe weight loss and other conditions. Further evaluation of these is deferred to the appropriate specialist. While it seems plausible to me that they too are a result of toxic exposure and accumulated toxic body burden buildup, I need to defer to those specialists.

PERMANENT AND STATIONARY STATUS:

For the brain disorder the condition is at a permanent and stationary/maximally medically improved plateau now at the time of this examination. This is offered with a proviso to the neuropsychology findings. Earlier stabilization has not been addressed for the neurologic condition by his examiners. Ongoing progression of the encephalopathy is not anticipated, despite the presence of a heavy toxic body fat burden.

Likewise, for his sleep disturbance, based on the encephalopathy as well as joint pain and other somatic symptoms, a progressive worsening is not expected. He is permanent and stationary for this now.

OBJECTIVE FACTORS OF DISABILITY:

The objective factors of disability include:

1. Cognitive impairment per the neuropsychology evaluator.
2. Positive fat biopsy findings.
3. Positive arsenic found in a hair sample.

SUBJECTIVE FACTORS OF DISABILITY:

I characterize the subjective factors as:

1. Moderate mental symptoms to be defined by the neuropsychologist.
2. Severe constant fatigue.
3. Mild to moderate general loss of stamina.
4. Nasal, ocular, gastrointestinal and urologic symptoms to be defined by the appropriate specialists.

5. Severe weight loss.
6. Frequent light-headedness or dizziness.

WORK RESTRICTIONS:

The disability for the encephalopathy, based on my examination, history obtained from the patient and the files provided, will depend on the tendency to have severe fatigue with general lack of physical stamina and recurring myoclonic jerks and tremors, in addition to the anticipated demonstrable cognitive impairment. Other somatic factors will be at play, including dyspnea on exertion; however, from the neurologic status alone, he is limited to Semi-Sedentary Work. Again, there is a proviso to the neuropsychology conclusions.

He should not undergo further exposure to the causative toxic chemicals.

CURRENT/FUTURE MEDICAL CARE:

Much of the need for future care will be based on the non-neurologic conditions, but for the encephalopathy, he will need ongoing monitoring as long as the treating mental health specialists determine that it is needed. It is anticipated that extended psychotherapy will be necessary for associated emotional difficulty and again I defer to the recommendations of the mental health specialists.

As to the potential for delayed development of cancer as a result of exposure to arsenic, which was present in the brine in very high concentrations, and to other chemicals found in the plant analysis, extended follow-up is necessary and this likely will be addressed by other evaluators.

The patient should be encouraged to follow a home exercise program for the sake of general conditioning, a lack of physical stamina being a prominent symptom. This will need to be monitored by a primary treating physician three to four times a year for about two more years. Such treatment will be tempered by pulmonary and other limitations and treatment needs.

He should not undergo further exposure to causative toxic chemicals. As to further attempts to remove the toxic body burden, this is controversial from the neurological perspective². I cannot advise on any need for other body systems as to such treatment to date and in the future.

²Schaumburg, H., Albers, J., 2008, *Neurotoxicology. Continuum: Lifelong Learning Neurol*, Vol. 14, #5.

IMPAIRMENT RATING CRITERIA:

Refer to the above detailed history, description of activities of daily living, examination findings, discussion of diagnoses/significance, and discussion of maximal medical improvement.

IMPAIRMENT RATING AND RATIONALE:

The primary impairment from the neurologic standpoint will be based on the cognitive and any psychiatric determinations, and necessarily must be deferred to the neuropsychology evaluator.

There are no provisions apparent in the *AMA Guides, Fifth Edition* for rating a fatigue state and general lack of stamina or physical endurance, except for effects of dementia on activities of daily living as per Table 13-5, page 320. This will need input from a neuropsychologist. This patient's apathy/fatigue possibly equates with a mild dementia effect, again referencing that table.

He does have a Class II sleep/arousal difficulty by history, referencing page 317, Table 13-3, affecting activities of daily living to a mild/moderate degree, and in this case warranting a 20% whole person impairment. A formal sleep loss study was not requested and in lieu of such, I am enclosing an Epworth Sleepiness Scale questionnaire that I would appreciate your asking the patient to complete. A proviso to it will apply to this particular part of the rating.

BODY PART OR SYSTEM	CHAPTER	TABLE #	%WPI
Central and peripheral nervous system	13	13-4	20%

Calculated total whole person impairment from the neurological view point is 20% plus determination by the neuropsychology evaluator.

RECOMMENDATIONS:

Refer to the above discussion for further diagnostic or therapeutic follow-up care.

WORK ABILITY/RESTRICTIONS:

Refer to the above determinations.

APPORTIONMENT:

Apportionment is considered in accord with changes to Labor Code Section 4663 that require apportioning to causation of permanent disability, looking at all likely contributing factors and recognizing the requirements imposed by the *Escobedo vs. Marshall's* decision. Speculation, surmise and guessing are avoided.

There is no past history of such neurologic system symptomatology and no other cause for this has been found. The brain MRI failed to show other central nervous system pathology and none is suggested in the history or by the remainder of the neurological examination. A primary neurodegenerative disorder is yet to be fully excluded and the neuropsychology findings should be helpful for this.

The patient reports that his prior employment in stockyards, on his dad's farm, in the Navy and at the Blocklite company was not accompanied by any of his present complaints. There is nothing in the available files to contradict this.

Absent records to the contrary, there was no pre-existing disability. There are no previous injuries that have been shown to have produced any ongoing problem that would bear on the current disability. No asymptomatic prior conditions, underlying naturally occurring disease process, other pathology or supervening events have been found.

It is my determination, with a proviso to the neuropsychology determinations, that with reasonable medical probability, based upon substantial medical evidence, 100% of the permanent disability is caused by the subject injury.

Labor Code Section 4664, Conclusive Presumption, indicates that prior awards carry forward; however, absent records to the contrary, there are no prior awards to consider.

VOCATIONAL REHABILITATION:

Based on the patient's job description, he would meet criteria for Qualified Injured Worker status from the neurologic viewpoint. The physical demands of the job the patient held when injured exceed his ability to perform when viewed in this light. He is not able to return to all aspects of the usual and customary occupation as described to me and is a candidate for vocational rehabilitation from the neurologic viewpoint. Certainly there are other impairments to be considered in this.

ADDITIONAL:

Obtaining analysis of soil and dust samples from the former home of Mr. & Mrs. WORLD COUNTRIES so as to provide evidence for extended toxic exposure would be needed if the opinion of the Workers' Compensation Judge about causation is not likely to be accepted for any reason. Otherwise, its usefulness would be on a public health basis.

Kindly let me know if there are any specific questions that I might be able to answer or if I can be of help in any other way in this case.

I certify that I took the complete history from the patient conducted the physical examination, reviewed and summarized available records, and composed and drafted the conclusions of this report. The conclusions contained within this report are solely mine. I declare under penalty of perjury that the information contained in this report and its attachments, if any, is true and correct to the best of my knowledge and belief, except as to information that I have indicated I received from others. As to that information, I declare under penalty of perjury that the information accurately describes the information provided to me and, except as noted herein, that I believe it to be true. In accordance with Labor Code Section 5703(a) (2), there has not been a violation of Labor Code Section 139.3, and the contents of the report are true and correct to the best of my knowledge. This statement is made under penalty of perjury. Pursuant to 8 Cal. Code Regs. Sections 49.2-49.9, I have complied with the requirement for face-to-face time with the patient in this evaluation. I have discussed apportionment in the body of this report. If I have assigned disability caused by factors other than the industrial injury, that level of disability constitutes the apportionment. The ratio of non-industrial disability, if any, to all described disability represents my best medical judgment of the percentage of disability caused by the industrial injury and the percentage of disability caused by other factors, as defined in Labor Code Section 4663 and 4664.

Sincerely yours,

SAMPLE REPORT

Thomas Wallace, M.D.

Date

County