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March 15, 2009

To Whom It May Concern:

The following communication addresses health issues experienced by my patient, Mr. Doug Copp as a consequence of multiple toxic exposures at the World Trade Center.

Prior Medical Condition: “excellent health”

Prior to 9/11/01, Mr. Doug Copp’s health was excellent. Although Mr. Copp was not my patient prior to 9/11/01, I reviewed and analyzed all of his medical records in the three-year period prior to 9/11/01. These records clearly confirm that he was in excellent health prior to 9/11/09. His Kaiser doctor pronounced him in “excellent health” two months prior to 9/11/01. He was not under treatment for any medical condition, and was working at his chosen occupation: rescue. (See Appendix II, Part II, p 11 page 21 below.)

Because Mr. Copp’s prior health had been excellent, and because Mr. Copp became ill immediately after exposure to the WTC toxins, there is no reason to attribute his illness to any other cause. There is, in fact, no other possible cause to attribute it to. Additionally, Mr. Copp’s symptoms are entirely predictable based on our current molecular biological understanding of the intra- and extracellular effects of these toxins. (These issues are more thoroughly explained in the Appendices below.)

Medical testimony presented to the 9/11 Commission

In November of 2003 I appeared in person and submitted separate written testimony to the 911 Commission at a hearing conducted in Washington, D.C., chaired by Special Master Kenneth Fineberg, who questioned me regarding Mr. Copp’s medical condition I).

At that hearing, I (and another physician, Gerald Ross, M.D. who specializes in environmental medicine) explained to Mr. Fineberg’s satisfaction the causes and nature of Mr. Copp’s illness.

I also submitted a detailed written explanation to the Commission of the nature of Mr. Copp’s illnesses. Please refer to Appendix I below.

At the 911 Commission hearing and in a separate document (see Appendix I, below) I testified that Mr. Copp had been exposed to an array of toxins while

working at and under the WTC, and that this exposure was the cause of his various ailments..

Extensive medical testing confirmed the clinical observation that although Mr. Copp's general health had been significantly compromised, three systems in Mr. Copp's body had suffered the most extensive damage: the immune system, the central nervous system, and the respiratory system.

Mr. Copp's *immune system* shows major damage, as corroborated by a broad spectrum of immunological testing. The immune system damage is manifested by asthmatic bronchitis, cerebral allergic reactions, and a variety of system specific allergic hypersensitivity reactions such as skin rashes and gastroesophageal reflux. (See Appendices II and III, below). For a more complete description of Mr. Copp's immune pathology, see "Immune System Sensitization, Activation, and Hyper-reactivity" in Appendix I, page 7. There has been no significant change in immune system symptoms and treatment since my 2003 report.

Neuropsychiatric testing revealed that Mr. Copp's brain and *central nervous system* had also been extensively damaged by this exposure. His diagnosis is organic brain syndrome secondary to toxic exposure. (See Appendix II, p 11, page 21 below.) There has been no significant change in symptoms and treatment since my 2003 report. There has been no significant change in neuropsychiatric symptoms and treatment since my 2003 report.

Since the WTC exposure Mr. Copp's *respiratory system* has manifested the typical symptoms and signs of what has now come to be called "World Trade Center Cough Syndrome." (For details see Appendix II, p 11, page 21 below.) There has been no significant change in respiratory system symptoms and treatment since my 2003 report.

Current diagnoses and treatments

Mr. Copp continues to be ill and carries exactly the same list of clinical symptoms and diagnoses (see Appendix I, page 4ff.) as in November of 2003. There are modest improvements in his cognitive state and he has learned to avoid exposures to ambient chemicals (e.g., smoke, perfume, gasoline) that trigger his respiratory and other allergic attacks, but he remains a very sick and disabled individual.

Mr. Copp's current treatment program is, likewise, exactly what it was in November of 2003.

My medical opinion is that Mr. Copp's current symptoms and diagnoses are the consequence of exposure to an array of toxins while performing rescue work at the World Trade Center.

Sincerely,

Timothy J. Smith, M.D.

Appendix I

Report submitted by Timothy J. Smith, M.D. to 911 Commission in November 2003:

**Kip Purcell, Attorney-at-Law
Rodey, Dickason, Sloan, Akin, & Robb, P.A.
Counselors and Attorneys at Law
201 Third Street NW, Suite 2200
Albuquerque, New Mexico 87102**

August 10, 2003

Re: Mr. Douglas Copp

Dear Mr. Purcell:

Mr. Douglas Copp is 51-year-old patient under my care who was permanently disabled as a result of multiple injuries sustained while functioning as a rescue worker at the World Trade Center collapse on September 11, 2001.

As founder and executive director of American Rescue Team International, Doug Copp has worked at every major world disaster in the past 15 years. With experience in hundreds of building collapses (the WTC were buildings numbers 893 and 894) Mr. Copp is the most experienced rescue worker in the world.

Mr. Copp was flown by private jet to Ground Zero on September 12, 2001, where he began searching for trapped victims in the six floors below Ground Zero. Because fires were raging above, and the entire subterranean area was considered extremely unstable, other less experienced teams were not allowed there. These areas were

even more toxic than the areas above because of the lack of ventilation, molds, and toxic chemicals being flushed by water from the fire hoses into this space.

For a week Mr. Copp spent 20 hours a day working in this extremely toxic area, directing his team and searching for trapped individuals. During this time he was exposed to a toxic array of poisonous chemicals of unprecedented proportions--even by the new standards being set six floors above him.

Despite the dangerous nature of his work, Mr. Copp had always been healthy, robust, and athletic prior to 9/11/01. He was under treatment for no medical condition, and took no medications. Although he had risked his life countless times, crawling into partially collapsed buildings, he had never sustained an injury.

About Doug Copp

Prior to 9/11, Mr. Copp enjoyed worldwide fame as the world's most experienced rescue worker. In 1985, having saved the life of a 9 day old baby from a maternity ward in a collapsed hospital in Mexico City, he decided to devote his life to rescue. He points with pride to the over 125,000 lives he has saved throughout an illustrious career. Grateful diplomats around the world have awarded him dozens of medals and keys to cities. He has made over 800 TV appearances, usually as the most experienced rescue worker on over one hundred major disaster scenes. He has been featured in 8 documentaries, and has appeared on BBC several times. Also an inventor, Mr. Copp has developed several advanced technological devices designed to make saving lives easier for rescue workers, and has 32 inventions to his credit. His organization, American Rescue Team International, has members in 59 countries. Mr. Copp has been instrumental in training over ten thousand rescue workers through lectures and training seminars he gives at every disaster and training videos published in North America and Australia.

Mr. Copp has generated great admiration, respect and appreciation from many world leaders who--having been trapped in the throes of a disaster without preparedness or a workable plan--found themselves dependent upon, and extremely grateful for, Doug's expertise. Among these are President Fujimori of Peru and President Duarte of El Salvador.

Mr. Copp has been an invited lecturer at dozens of institutions of higher education, and has given hundreds of lectures. Three of these were recently televised live throughout all of South America.

The chancellor of the National University of Peru recently presented a medal to Mr. Copp honoring him as the year's most noteworthy individual. The ceremony was carried on Peruvian national television.

Medical Review

I first saw Doug Copp in my office on September 23, 2002. At that time, because of dyspnea, he was barely able to climb the steps to my second floor office. He was extremely short of breath even while sitting. He related to me, with frequent pauses to get air, the story of his involvement in the World Trade Center rescue operation. He related his fourteen-day experience, probing his way in the darkness through a toxic brew of chemicals, mold, and water in an attempt to locate and rescue survivors who might still be trapped.

Immediately following the World Trade Center collapse, Mr. Copp's most debilitating symptoms related to his back and respiratory system. He had slipped and injured his lumbar spine while four stories below the WTC, causing low back pain, groin pain, and numbness in the left leg.

On the third day of rescue, he began noticing changes in his voice and respiration, caused by the ongoing exposure to toxic fumes and molds. This had persisted and worsened in the year that had passed since the end of the rescue effort. He complained, "I get out of breath doing just about anything, even eating." He experienced a constant pain in his chest, and an ongoing feeling that with the next breath his lungs would go into spasm. He was taking Xopenex and Albuterol. Indeed he had already been hospitalized twice for acute reactive airway disease with life threatening bronchospasm, and had been put on oral prednisone to reduce the respiratory allergic hyper-reactivity.

In addition to shortness of breath and frequent asthmatic attacks, he had a variety of other complaints, all of which began during or shortly after September 11, 2001. Since 9/11 Mr. Copp had become edematous and had gained 50 pounds, presumably due to side effects of the prednisone. He had developed hypertension, and was taking Tiazac 120 mg. daily. Whereas prior to 9/11 he could "eat anything," he now had developed a sensitive stomach, and experienced heartburn and indigestion on a regular basis. He had developed a chronic allergic nasosinusitis.

In terms of neurological symptomatology, he complained that ever since 9/11 he was having episodes of disorientation, memory problems, difficulty concentrating, poor sleep, and blurred vision. A constant headache, fluctuating in intensity, made it "very difficult to do anything."

He told me that he had become very reactive to everyday odors that previously had never been a problem. Now gasoline fumes, solvents, glue, perfumes, smoke, dust, mold, and other common airborne chemicals elicit powerful respiratory attacks. "Now I look at someone with a cigarette as if they are aiming a gun at me."

In subsequent months he developed cerebral allergic reactions in which exposure to any of these allergens triggered an exacerbation of his cerebral edema (swollen

brain) with consequent heightened headache and dementia. These have become his most chronic and debilitating problems, and will be discussed below.

Symptoms and Health Problems Secondary to WTC exposure

Please note that prior to his World Trade Center exposure, Mr. Copp was perfectly healthy.

Primary health problems

1. Toxic encephalopathy with dementia
2. Cerebral allergic hypersensitivity reaction
3. Cerebral edema with optic nerve cupping
4. World Trade Center cough and syndrome (WTCS)
5. Reactive airway disease with chronic immune activation, bronchial edema, and bronchospasm
6. Hypertension

Other Symptoms, Signs, and Complaints

General

- Inability to walk farther than 30 to 40 ft without resting
- Low thyroid
- Heartburn and Gastro-Esophageal Reflux Disease
- Absence of sex drive
- Frequent urination
- Water retention and bloating
- Distended abdomen
- Weight increase
- Feels lousy...and “just plain sick”

Neurological and Neuropsychiatric

- Disorientation
- Memory problems
- Difficulty concentrating
- Difficulty sleeping
- Cerebral edema, causing
- Dementia
- Glaucoma
- Blurred vision
- Optic nerve cupping
- Constant headache
- Earaches
- Reduced hearing

Respiratory

- Constant pain in chest
- Difficulty speaking without prolonged breaks for breath
- Hyperventilation

- Constant sense of chest spasm
- Frequent chest and upper left arm pain

Immunological

- Extreme reactions to cigarette smoke, air pollution, ambient volatile chemicals
- Extreme reactions to heat and stillness of air
- Irritability
- Sinus blockage
- Dry eyes

Overview of Injuries

The complex and unique mixture of toxins presented by the WTC collapse is unprecedented in human history. The environment to which Mr. Copp was exposed was a mixture of vapor, smoke, and very fine particles that originally made up the materials of the WTC, its contents, and the aircraft that struck it. A complete listing would include tens of thousands of chemicals: cement, glass, asbestos, superheated volatilized polyvinylidene chloride (PVC), polyethylene, acrylonitrile-butadiene-styrene (ABS), reinforced thermosetting resin pipes (RTRP), vinyl coated wiring, carpet, office furniture, hydraulic oil, fuel oil, diesel fuel, jet fuel, cement and drywall dust, organic particulates from burning plastic such as polyvinyl chloride, polychlorinated biphenyls (PCBs), dioxins and other polynuclear aromatic hydrocarbons, thousands of combustion product chemicals, airplane components, burning human bodies, and vaporized toxic metals such as lead, copper, cadmium, tin, iron, steel, mercury.

Mr. Copp's WTC-induced health problems were caused by inhaled and transdermally absorbed components of these dust and smoke borne toxins. The combined effect of these toxins is impossible to assess, but it is safe to say that all organs and tissues would be adversely affected. In this patient, the immune system, respiratory system, and central nervous system were most profoundly affected. Although the CNS symptoms are most disabling, the most profound symptoms and problems disabling Mr. Copp actually stem from immune dysfunction with multisystem repercussions, so I will address that first.

Immune System Sensitization, Activation, and Hyper-reactivity

For six days, Mr. Copp waded in a toxic soup, breathed toxic air, and had toxins smeared on his body surface. It is unlikely that anyone has ever in human history been exposed to as concentrated or complex a mixture of dangerous chemicals. This mixture placed an overwhelming burden on his immune system, which generated, in response, many hundreds or perhaps thousands of types of antibody molecules (at least one for each toxic chemical). Mr. Copp now, following this overwhelming

exposure, experiences ongoing allergic hypersensitivity reactions caused by re-exposure to similar molecules in the environment.

Sensitized mast cells in Mr. Copp's brain, lungs, and elsewhere cause ongoing allergic reactions. Because his immune cells were "sensitized" by the WTC overload of toxins and fungal allergens, they are now on "hair trigger." His entire immune system now overreacts to even very small exposures to similar chemicals. Immunological testing has revealed elevated antibodies to an array of fungal microorganisms, including *Alternaria Tenuis*, *Aspergillus fumigatum*, *Candida* species, *Cladosporium herbarium*, *Epicoccum nigrum*, *Geotrichum candidum*, *Pullularia pullulans*, and *Rhodotorula glutinis*.

In effect, this patient's immune memory cells are hypervigilant and overreact. The ambient pollution to which we are all exposed has become a great danger to Mr. Copp because his damaged immune system now massively overreacts. The sustained immune reactivity in his brain and bronchioles causes ongoing symptoms. Lung symptoms are limited to recurrent asthmatic (reactive airway disease) type reactions. The consequences in the brain, however are far more severe and disabling: cerebral edema, dementia, and chronic headache. Allergic hypersensitivity reactions like these in brain and lung are also accompanied by ongoing local tissue damage, which perpetuates the process.

Although the prognosis is different from one person to the next, once an individual's immune system has been damaged this way, there is little likelihood that it will return to normal. These patients live out their lives with environmental illness, always on the verge of another acute exacerbation of their extreme allergic hypersensitivity. Before the WTC exposure, when Mr. Copp was exposed to smoke, it did not bother him. Now, because of immune sensitization, even a small amount of secondhand cigarette smoke causes a violent immune overreaction, and he experiences a classic severe asthmatic reaction. This has occurred many times and has sent him to the hospital on more than one occasion.

This patient's history and symptom picture are diagnostic of environmental illness with multiple acquired chemical sensitivities. As a result of cerebral allergic reactions, he experiences an underlying chronic cerebral edema, an inflammatory swelling of the brain caused by allergic hypersensitization, which causes constant low grade headaches, speech disorder, and dementia. He manifests grossly impaired memory and concentration. Acute exposures trigger an immediate exacerbation above his baseline symptomatology. An example of a cerebral reaction is that when Mr. Copp is exposed to the occasional transient fumes while refilling at a gas station, or a whiff of glue, or even ambient pollution, he now suffers an immediate and severe exacerbation of the chronic low grade headaches, confusion, and disorientation caused by this ongoing immune hyper-reactive state.

Ophthalmological examination of Mr. Copp by Dr. DeMonaco revealed optic nerve cupping, a retinal manifestation of the increased pressure (AKA cerebral edema) in his intracranial space.

Central Nervous System

As a result of the multiple chemical exposures at the World Trade Center, Mr. Copp suffers from a toxic encephalopathy and environmental illness. He experiences cerebral hypersensitivity reactions causing cerebral inflammation and edema. This results in compromised cognitive functioning. Neuropsychological testing performed by Tony J. Kreuch, Psy.D., ABPN, on April 23, 2003 revealed significant cerebral impairment, including memory deficit, impaired concentration, decreased powers of reasoning, and significant impairment of problem solving ability. Dr. Kreuch finds that Mr. Copp suffers from “neuropsychological dysfunction, most likely related to a toxic exposure within a previously high functioning individual. Affected areas include attention, concentration, processing speed, working memory, and acquisition, storage, and retrieval, in addition to executive conceptualization and flexibility of cognition.” Dr. Kreuch went on to recommend pharmacological management, and individual counseling with referrals to a psychiatrist, psychotherapist, and speech-language pathologist.

Mr. Copp now evidences organic brain syndrome with dementia, induced by exposure to organic solvents, heavy metals, and other chemicals. He has cerebral edema, with constant headaches, as a consequence of inflammatory changes in the brain caused by exposure to an array of toxic chemicals.

He has lost the ability to focus his thoughts, and is often unable to remember what he was doing. “I am constantly losing things, locking my keys in the car. Can’t remember things. It is a lot like Alzheimer’s, I think. I have to stop and think, “What am I doing? And a lot of the time I can’t remember what I was doing.”

Toxins, autoantibodies, and/or toxin-mediated allergic sensitization of brain tissue are all present and responsible for the brain swelling or cerebral edema. Diamox (500 mg. three times a day) has afforded significant relief from the constant headaches, earaches, eye pain, and feelings that his head was swollen. This response confirms the hypothesis that these symptoms were caused by allergy-induced cerebral edema. The dementia remains unchanged, however. He has compromised concentration, memory, and reasoning capabilities.

According to Mr. Copp: “I’ve been at more than one major disaster where the president is thinking of quitting, the generals are running around tearing their hair out, needing to do something, but not knowing what to do--and this is when I’m at my best. I am extremely calm under stress. Stress actually relaxes me, and this is because I never felt so alive as when I was solving problems. This is what I was meant to do. Now, I am unable to think clearly. I have great difficulty solving

problems, and thinking is actually painful. Now I have lost so much of my thinking and concentration and memory that there is no way I could manage a disaster scene like I used to--it would be impossible.”

Respiratory System

On September 15, 2001, having spent three days searching for people under Ground Zero, Mr. Copp first noticed, during a television interview, that his voice had changed, and that he had begun to cough. Over the next ten days he continued to experience increasingly severe respiratory symptoms, primarily cough and shortness of breath. These were accompanied by pain and tightness in the chest.

The severity of the cough, shortness of breath, and chest tightness continued to increase, and on September 27, 2001, while in Santa Fe, New Mexico, Mr. Copp experienced a severe acute attack in which he felt unable to breathe. He went to the local Emergency Room where he was treated with steroids and bronchodilators.

Since that time, Mr. Copp has continued to experience severe ongoing respiratory distress, with ongoing dyspnea, cough, and chest pain. Unable to walk even short distances without exceeding his lung’s ability to supply his tissues with sufficient oxygen, he has been rendered totally incapacitated.

Prior to seeing me, Mr. Copp’s respiratory disorder had been treated as if it were asthma and bronchitis, using conventional medications such as Advair discus and Albuterol. He had been given inhalers, prednisone, and antibiotics, but with only marginal success in controlling the symptoms. Prednisone had been effective at suppressing the abnormal immune responses, but the price in terms of weight and water gain, bone mass and muscle loss, mental symptoms, immune system suppression, and adrenal atrophy had been detrimental to his overall health and decreased the probability of complete recovery, so he successfully weaned off of steroids several months ago.

It has been well established that exposure to xenobiotic (foreign to living systems) toxins causes immune dysfunction. In Mr. Copp’s case, these foreign chemicals caused tissue damage, and immune dysfunction, as described above.

In the respiratory epithelium and elsewhere, xenobiotic exposure has altered protein molecules in his respiratory tree, causing subsequent autoimmune reactions in which the altered proteins are mistaken by his immune cells as foreign and then attacked by antibodies, natural killer cells, and macrophages. The resulting inflammatory reaction manifests in Mr. Copp as chronically inflamed respiratory tissue, shortness of breath, and chronic cough.

Exposure to xenobiotics (including the initial exposure, ongoing low level exposure, and exposure from xenobiotics later released from fatty tissue stores) also causes

immunostimulation, which results in spurious immune attacks on normal body proteins. This further inflames the respiratory cells, lowering the threshold for bronchospasm and cough. The autoimmune reactive symptoms and damage to normal protein activate complement cascades which cause more local tissue injury and further lower the threshold for bronchospasm and cough. the result is chronic asthma. This problem has been addressed by implementing a combination of symptom suppressive medications in conjunction with a broad based nutritional supplementation program designed to support and heal the respiratory and immune systems.

Hypertension Mr. Copp takes the blood pressure medication Tiazac 120 mg. daily for hypertension of unknown--but presumably WTC--origin. Toxin mediated neurological damage to the sympathetic nervous system can cause hypertension. Mr. Copp had no hypertension prior to 9/11/01.

Hypothyroidism He is in good control at 0.25 mg Synthroid daily.

Low back pain Mr. Copp was seen by Serena Hu, an orthopedist at the University of California, San Francisco who referred him to Neurosurgeon Philip R. Weinstein, M.D. also at UCSF medical Center, who referred Mr. Copp to a neurologist. He was also seen by Dr. Richard Radecki, physical medicine, but could not be fully worked up because an MRI could not be performed due to metal in his lungs.

Diagnoses:

1. World Trade Center cough and syndrome (WTCS)
2. Allergic respiratory and systemic hypersensitivity triggered by WTC smoke and dust, causing local immune cell damage with subsequent hypersensitivity to smoke, dusts, molds, heavy metals, volatile compounds and other ambient allergens previously not allergenic to this individual
3. Organic Brain Syndrome with dementia secondary to immune sensitization
4. Cerebral edema secondary to 2
5. Chronic headaches secondary to 2
6. Optic nerve supping secondary to 2
7. Glaucoma secondary to 2
8. Environmental illness with multiple acquired chemical sensitivities
9. Reactive airways dysfunction syndrome (RADS) causing bronchial inflammation, swelling, and obstruction and resulting in asthma
10. Hypersensitivity pneumonitis
11. Chronic nasosinusitis secondary to 2
12. Immunotoxicity secondary to xenobiotic exposures
13. Upper respiratory allergies, primarily allergic rhinosinusitis
14. Asbestosis secondary to 2
15. Low back pain with lumbosacral bone, nerve, and disk damage secondary to a slip and fall while working several floors under WTC
16. Left lower extremity pain, numbness and paresthesias, secondary to 15

17. Hypertension
18. Hypothyroidism

Current medications and treatments

1. Provigil 75 mg. per day, an alertness medication which partially reverses the dementia-induced lethargy and memory disorder
2. Diamox, a medication that removes excess or accumulated fluid, used to reduce cerebral edema
3. Tiazac 240 mg. a day for hypertension
4. Celluvisc eye drops as needed for chemical conjunctivitis
5. Xopenex 1.25 mg with nebulizer as needed for acute bronchoconstrictive attacks.
6. Albuterol inhaler for reactive airway disease
7. Intal inhaler for reactive airway disease
8. Advair discus as needed for reactive airway disease
9. Synthroid 25 mcg daily for hypothyroidism
10. Sporanox 100 mg. daily for multiple chronic systemic fungal infections
11. A comprehensive nutritional supplement program designed to support and enhance healing of the immune, respiratory, and central nervous systems
12. Ongoing psychiatric therapy for neuropsychiatric sequelae of WTC injuries
13. Chelation Therapy, previously performed by Robert Friedman, M.D., currently per Dr. Kumar Biswas

Required Treatments with Estimated Cost

- Comprehensive workup and ongoing treatment by William Rea, M.D., director of the Environmental Health Center, Dallas, the world's leading expert on toxic exposure and environmental medicine. Treatment program including detoxification, skin testing, intravenous therapy, antigen therapy, oxygen therapy, living at environmentally controlled units, home treatment program; 6-8 weeks of treatment. Total for initial evaluation and followup therapy three times yearly, including cost of maintaining home treatment plan between visits = 30,000/year X 25 years = \$750,000
- Estimated cost of travel to Dallas including hotels three times a year \$750 for 25 years = \$18,750#
- Bottled water \$1200/year x 25 years = \$30,000
- Additional cost for organic food \$3000/year x 25 years = \$75,000
- Home renovation for environmental illness (includes allergy free carpeting and hardwood floors, formaldehyde-free cabinetry, home air system to remove mold contamination, air filters and conditioning, one-time cost: \$85,000
- Chelation therapy and intravenous nutritional medicine per Robert Friedman, M.D. and Dr. Kumar Biswas: currently owed \$11,000 for

past treatment and estimates \$50,000 to complete all of the intravenous chelation and IV nutrient therapy injections

- Quarterly consultations by Timothy J. Smith, M.D. at \$300 x 25 years = \$30,000

Drug Medications

1. Provigil 75 mg. daily; \$2263/yr
2. Thyroid 25 mcg daily; \$276/yr
3. Tiazac 240 mg. daily; \$564/yr
4. Sporanox 200 mg. daily; \$3179/yr
5. Diamox 1 500 TR q12h; \$1764/yr
6. Xopenex \$3096/yr
7. Albuterol Inhaler \$504/yr
8. Intal Inhaler \$948/yr =
9. Celluvisc Eye Drops \$1200/yr =

Total cost per year = \$14,994

Total cost for 25 years = \$374,850

Non-prescription medications for detoxification, immune support, environmental illness: \$11,000 per year x 25 years = \$275,000

Medical and immunological testing to determine medical status, effectiveness of therapy and degree of immune dysfunction: \$2000 annually for immunological testing X 25 years = \$50,000

SPECT Scan 3000 x 3 = \$9000

Quarterly medical office visits at \$300 per visit to internist: \$1200 X 25 years = \$30,000

Quarterly medical office visits at \$300 per visit to pulmonologist: \$1200 X 25 years = \$30,000

Quarterly medical office visits to immunologist: \$1200 X 25 years = \$30,000

Neuropsychiatric therapy: \$300 per visit x average of 12 visits per year = \$3600/year X 25 years = \$90,000

Ophthalmology for Glaucoma, optic nerve cupping, cerebral edema - Quarterly medical office visits: \$1600 X 25 years = \$40,000

Grand Total for all Medical costs: \$1,967,600

Summary, Prognosis, and Conclusion

In the week of September 12 to September 18, 2001, Mr. Copp experienced an overwhelming exposure to chemicals and fungi at the site of the World Trade Center terrorist attacks. Previously healthy, Mr. Copp has now been rendered totally disabled. Because of the nature of the damage to his immune, respiratory, and central nervous systems, there is little likelihood that his condition will improve to the point where he would be able to resume work. He is permanently disabled.

This gentleman deserves optimum medical care for the injuries he sustained by placing his own life at risk while selflessly attempting to save the lives of others.

Sincerely,

Timothy J. Smith, M.D.

Appendix II

March 7, 2006

**Sheldon Karasik
Karasik and Associates
28 West 36th Street
New York, New York 10018**

Re: Doug Copp Medical History Review

Dear Mr. Karasik:

As per your request, this communication provides a summary of Mr. Doug Copp's medical histories pre-September 11, 2001 ("Part I") and post-September 11, 2001 (Part II). I have faxed you complete copies of all of the medical records I review in this communication.

I would welcome the opportunity to discuss Mr. Copp's case in general and/or these findings in particular with other medical professionals. Mr. Copp has agreed to this as well.

Part I: Review of pre-September 11, 2001 medical records

This record consists of 13 pages in all. It includes Mr. Copp's complete medical history in the two-year period prior to September 11, 2001. (I am forwarding a copy of this document with this letter).

The following is a summary of every medical visit for which Mr. Copp was examined and treated from September of 1999 to September 2001:

Undated Kaiser intake form

Lists intake "Medical Diagnoses" as ingrown toenails and eczema. This means that Mr. Copp had no history of preexisting significant illness prior to his initial intake at Kaiser.

April 15, 1999

Hayward Kaiser lab tests show a normal sedimentation rate (a measure of inflammation in the body), and a normal complete blood count. Handwritten at bottom of page is "Looks good! Best Wishes, Rick Levine, M.D."

January 7, 2000

Mr. Copp was seen in Urgent Care Clinic at Kaiser Hospital by a Dr. Cumming for treatment of an infected ingrown toenail. Dr. Cumming noted "will travel to South America soon."

April 11, 2000

Seen by Dr. Michael Tran who performed a history and thorough physical exam. Dr. Tran notes that "Patient is a 48 year old male without significant past medical history." He states that Mr. Copp "travels throughout the world."

History and physical exam by Kaiser physician Michael Tran, M.D. In the chart notes, Dr. Tran wrote "states wife doesn't want to have intercourse with him often enough." Interested in (behavioral medicine) referral." and "Desires counseling for both patient and wife regarding above."

Dr. Tran's examination of the head and CNS revealed no cognitive deficit. Neurological exam was negative.

Dr. Tran listened (auscultation) to Mr. Copp's chest and percussed it and found no abnormalities ("CT A & P" means clear to auscultation and percussion.)

The abdominal exam was normal.

No abnormalities were found on the physical exam on this date.

Lab tests were ordered (see below) and these all came back normal.

At no stage of this visit was there a suggestion by patient or physician of any immune system, respiratory system, or central nervous system problem.

April 13, 2000

Kaiser laboratory test results indicate modestly elevated cholesterol at 240, normal kidney functioning, normal glucose level, normal thyroid, normal HDL, and

normal complete blood count. Dr. Michael Tran writes “Excellent results” at bottom of page.

May 15, 2000

Message for (and signed by) Michael Tran, M.D. from the Union City Kaiser Call Center states that Mr. Copp’s “wife states that patient is arriving home from Puerto Rico this evening and needs an appointment for fever and diarrhea for four days. Patient’s wife states to leave message on home phone with appointment time for tomorrow with Dr. Tran.”

May 24, 2000

Message for (and signed by) Michael Tran, M.D. from the Union City Kaiser Call Center states that Mr. Copp “is the chief of an international rescue team, just came back from a mission to South America, developed amoebic dysentery per Venezuela medical clinic and placed on Lomotil. Continues to have diarrhea for 10 days now, although less today. Yesterday had total of 7 diarrheas....” Dr. Tran states “wife will come by to pick up lab slip.” (for stool testing)

May 26, 2000

Lab report finds Campylobacter infection on stool culture, which confirms that Mr. Copp caught dysentery in South America. All other lab tests done at that time were negative, including a complete blood count, thyroid testing, glucose, kidney, liver, hepatitis A, and stool for occult blood. Mr. Copp’s cholesterol was elevated at 240.

December 29, 2000

Mr. Copp was seen in Medicine clinic at Kaiser by Extended role RN, Schexnayder “complaining of right ear pressure and two months of sinus congestion. States feels like jaw is swollen. Denies sore throat.” Exam reveals normal ears, nose moderately swollen, no TMJ problem, throat red at sides, no exudate, non tender neck without lymph nodes, no swelling of face. Diagnosed as rhinitis with post nasal mucus. Appropriate treatment was prescribed.

Conclusions

The above summary of Mr. Copp’s pre-9/11/2001 medical history depicts a clear picture of a man who is especially fit, busily working at his chosen profession, traveling around the world, and unhampered by any disease process.

There is no suggestion, from my examination of him and his complete pre-9/11/01 medical records, that Mr. Copp was suffering from any chronic illness. There was no suggestion of lower respiratory disease, no neurological impairment, no immune system dysfunction.

The only significant illnesses in the record prior to 9/11/01 relate to gastrointestinal infections (dysentery) he contracted while working on rescue missions in foreign countries.

In 1999, 2000, and 2001 prior to 9/11/01, Mr. Copp was active and healthy, working at the job he loved to do, saving lives in rescue missions around the globe. During that time period he traveled to Taiwan (earthquake), Turkey (earthquake), El Salvador (landslide and earthquake), Peru (el Nino), Venezuela, and several other countries. It would be highly unlikely that a gentleman with severely compromised immune, respiratory and neurological functioning could have traveled, as did Mr. Copp, to 16 countries in 1999, 6 countries in 2000, and several more in 2001.

At present, Mr. Copp can't walk a city block or climb a flight of stairs without having to stop to catch his breath. Is it possible that he would have been capable of directing and coordinating the efforts of large teams of rescue workers as, for example, on January 13, 2001 when Mr. Copp traveled to assist the rescue efforts in the massive earthquake in El Salvador?

Of note here is Mr. Copp's pre-9/11/01 request for medical help because his sex drive was greater than his wife's. One would not expect this from a sick man. After 9/11/01 Mr. Copp's libido and sexual activity level plummeted as a consequence of his diseases, and have been nonexistent since he was injured at the WTC.

In his medical visits to Kaiser Hospital during the three year period of these medical records, Mr. Copp never once complained of shortness of breath, wheezing, brain fog, fatigue, pain, difficulty with concentration and memory, symptoms of hypothyroidism, hypertension, or any of the other symptoms on the long list since his WTC injuries. The illnesses he was seen and treated for included only ingrown toenail, dysentery and rhinitis.

Although he was once treated for acute rhinitis, physical examinations of Mr. Copp revealed no lower respiratory disease, and the patient never had lower respiratory complaints.

Likewise, all blood testing revealed a healthy sound biochemically normal individual without any sign of pathologic processes. Specifically, there were no test results suggesting respiratory disease, neurological disease, toxicity, or immune dysfunction. Testing for toxicity, immune system dysfunction, respiratory disease, and neuropsychological functioning were not done prior to 9/11/01 because there was no reason to do such testing. Testing done after 9/11/01 revealed massive heavy metal toxicity, extensive damage to the immune system, neurological damage with organic brain syndrome, and episodic respiratory failure.

Part II: Post-September 11, 2001 Medical History

Mr. Copp's history included heavy toxic exposure and multiple signs of immune system failure. I therefore ordered a battery of immunological tests which were done on October 23, 2002. The following is a summary of those results, with interpretive comments. A copy of this report is appended to this document.

p 1

% T Helper Cell (T4) elevated at 59.0 (25-55). this indicates a severely compromised immune system that has been damaged, sensitized, upregulated, and is now on "high alert."

T-Helper/T-Suppressor Ratio elevated at 2.7 (1-2.5) likewise indicative of a severely compromised immune system that is on "high alert." An elevation of the helper/suppressor ratio indicates immune activation and autoimmunity. Mr. Copp has many symptoms indicating he suffers from autoimmune disease.

% Immunocompetent -NKHT3+ at 1.0 (1.5-5.0) also indicates depletion of immunocompetent natural killer cells. This indicates loss of killer cell function and compromised immune system functioning. The immune system is in a weakened state and unable to mount a normal attack on invaders. An overwhelming toxic and antigenic load has damaged it.

p 2

Natural Killer Cell Activity very low at 10.50 (normal 20-50). Natural killer cells are a type of immune system cell that attack invaders. Stress and chemical exposure can cause damage to natural killer cells and/or interfere with optimum natural killer cell production. This depletion of natural killer cells indicates immunosuppression, in this case secondary to a massive toxic exposure.

% Immunocompetent -NKHT3+ at 1.0 (1.5-5.0) also indicates depletion of immunocompetent natural killer cells. This indicates loss of killer cell function and compromised immune system functioning. The immune system is in a weakened state and unable to mount a normal attack on invaders.

% T3 Positive Cells elevated at 81 (53-79) again indicating severe immune stress, toxic and/or antigenic overload, and immune dysfunction.

p 3

Autoimmune Panel When an immune system is damaged (e.g., by toxic exposure or antigenic overload) it may begin to malfunction. Since the immune system is actually a cooperative system involving many cell types with multiple tasks, a damaged immune system may malfunction in numerous ways. One of these ways is to lose its ability to discriminate between “self” and “other.” When this occurs, the injured immune system begins to make antibodies that target its own body’s cell, a tragic immune error known as autoimmunity. In Mr. Copp we see this process at work in a severely elevated **anti-nuclear antibody** (these are antibodies that are programmed to destroy the nucleus of his own cells) level at 1:320 (normal is <1:20). This is evidence of immune activation and autoimmune disease.

We see this process again in an elevated **anti-smooth muscle antibody** level and **rheumatoid factor** (antibodies that attack smooth muscle and joint tissue respectively). Anti-smooth muscle antibodies can cause hypertension; rheumatoid antibodies can cause joint pain. Mr. Copp has both high blood pressure and arthritic joint pains.

Total immune complex is elevated at 52.0. Immune complexes are antibodies attached to their target molecule to form a complex, and are evidence that the antibodies are finding their target tissues. Elevated levels, in the context of other abnormal immune markers, indicate autoimmune activation and autoimmune disease.

Complement is a group of proteins that help destroy molecular and cellular entities that have already been targeted by antibodies. Elevation of **C-3 Complement 167 (75-148)** and **C-4 Complement 36 (10-34)** indicates that the complement system has been activated, further proof of autoimmune activation and disease.

p 4

Immune Complex Assay is a measurement of three different classes of antibody that have found and locked onto their antigen, forming their respective immune complexes. IgG, IgA, and IgM are elevated. Immune complexes are antibodies attached to their target molecule to form a complex, and are evidence that the antibodies are finding their target tissues. Elevated levels, in the context of other abnormal immune markers, indicate that the immune system has been damaged, is activated, and is struggling. Elevated levels of immune complexes are typical of autoimmune disease.

p 5

Fungal Panel with elevations of Alternaria tenuis, Asper fumigatus, Candida species, Cladosporium herbarum, Epicoccum nigrum, Geotrichum candidum, Penicillium notatum, Phoma herbarium, Pullularia pullulans, and Rhodotorula glutinis indicates elevations of IgG and/or IgE antibodies to an assortment of common fungal species. When Mr. Copp worked six floors beneath the World Trade Center, the toxic soup he encountered there contained large quantities of spores of several fungal forms that thrive in this dark, damp environment. These molds are both immunosensitizing and immunosuppressive. In other words they damage the immune system while stimulating the production of large numbers of antibodies. Although they all are immunosuppressive, one of them, Candida species, is arguably the most immunosuppressive species known to medicine. The massive exposure to spores of these species sensitized his immune system such that even over a year after the exposure, antibody levels remained significantly elevated. Clinically, this group of antibody elevations indicates why Mr. Copp experiences severe respiratory attacks and cerebral allergic reactions. (A cerebral allergic reaction occurs when antibodies attacking brain structures causing inflammation that leads to confusion, cognitive deficit, inability to concentrate, and memory problems.) Because his immune system has been sensitized to these antigens, it overreacts when exposed to mold levels that would not be noticed individuals with normal immune functioning.

p 6

Gamma Glutamyl Transferase is elevated at 65.2 (0-43). This is a test for liver function, and elevated level indicates hepatotoxicity (liver damage), presumably due to extreme toxic exposure at World Trade Center site, six floors below “Ground Zero.”

p 7

Secretory IgA low at 11.0. Secretory IgA is a type of antibody secreted by mucus-secreting tissue, such as that which lines the bronchioles and is involved in asthmatic breathing. A deficiency of secretory IgA is evidence of damage to immune cells, and low levels are found in immunocompromised patients like Mr. Copp with asthma, neuropathies, endocrine (hypothyroidism), and gastrointestinal (Helicobacter pylori infection) disorders.

p 8

A Hair Analysis for toxic and essential mineral elements performed on October 21, 2002 showed toxic elevations of several metals, including antimony, barium, cadmium, lead, mercury, nickel, copper, zinc, manganese, and strontium. Although we do not have a pre-WTC analysis for comparison, this is an unusually high profile.

p 9

A later urine toxic mineral analysis done on December 31, 2002 revealed very much higher levels of lead (20 times the upper limit of normal), bismuth, cadmium, and arsenic. These levels are higher because Mr. Copp had received intravenous chelation treatments, which moved some of the toxic elements from storage depots in fat tissue into his bloodstream.

p 10

Comprehensive Detoxification Profile is a functional test which measures the liver's capacity to remove toxins. A liver that has been overloaded with toxins loses its ability to excrete toxic material. A specific toxic load is administered, and then key biochemical markers are observed. The liver removes toxic substances in two "phases." Phase I (activation) is similar to wrapping garbage prior to tossing it in the can. Phase II (conjugation, sulfation, and glucuronidation) is the actual waste removal, analogous to transporting processed garbage out of the body. Mr. Copp's results indicate that both Phase I and II are compromised. Caffeine clearance, a marker for Phase I is severely compromised. As can be seen on page 10a, sulfation, glycination, and glucuronidation are likewise severely compromised. Finally, two free radical markers are very low: reduced glutathione and superoxide dismutase. This indicates that there is toxic overload on the liver, and its ability to provide endogenously generated antioxidants with which to neutralize toxic free radicals is likewise compromised.

p 11

Neuropsychological Evaluation by Tony J. Kreuch, Psy.D., ABPN

Neuropsych Evaluation from Tony J. Kreuch, Psy.D., ABPN. This report indicates significant cerebral impairment which again dates back to toxic exposures in the

days following September 11, 2001. In my presentation to the Victim's Compensation Fund hearings, I (Timothy J. Smith, M.D.) wrote the following:

As a result of the multiple chemical exposures at the World Trade Center, Mr. Copp suffers from a toxic encephalopathy and environmental illness. He experiences cerebral hypersensitivity reactions causing cerebral inflammation and edema. This results in compromised cognitive functioning. Neuropsychological testing performed by Tony J. Kreuch, Psy.D., ABPN, on April 23, 2003 revealed significant cerebral impairment, including memory deficit, impaired concentration, decreased powers of reasoning, and significant impairment of problem solving ability. Dr. Kreuch found that Mr. Copp suffers from "neuropsychological dysfunction, most likely related to a toxic exposure within a previously high functioning individual. Affected areas include attention, concentration, processing speed, working memory, and acquisition, storage, and retrieval, in addition to executive conceptualization and flexibility of cognition." Dr. Kreuch went on to recommend pharmacological management, and individual counseling with referrals to a psychiatrist, psychotherapist, and speech-language pathologist.

"Mr. Copp now evidences symptoms of organic brain syndrome with mild dementia, induced by exposure to organic solvents, heavy metals, and other chemicals. He has cerebral edema, with constant headaches, as a consequence of inflammatory changes in the brain caused by exposure to an array of toxic chemicals.

"He has lost the ability to focus his thoughts, and is often unable to remember what he was doing. "I am constantly losing things, locking my keys in the car. Can't remember things. It is a lot like Alzheimer's, I think. I have to stop and think, "What am I doing? And a lot of the time I can't remember what I was doing."

Toxins, autoantibodies, and/or toxin-mediated allergic sensitization of brain tissue are all present and responsible for the brain swelling or cerebral edema. Diamox (500 mg. three times a day) has afforded significant relief from the constant headaches, earaches, eye pain, and feelings that his head was swollen. This response confirms the hypothesis that these symptoms were caused by allergy-induced cerebral edema. The dementia remains unchanged, however. He has compromised concentration, memory, and reasoning capabilities.

Mr. Copp is acutely aware of the neuropsychological dysfunction and organic brain syndrome symptomatology diagnosed by me and Dr. Kreuch. He understands how dramatically his daily life has been affected by the loss of critical cognitive functions (memory, concentration, thinking, problem solving). He puts it this way: "I've been at more than one major disaster where the president is thinking of quitting, the generals are running around tearing their hair out, needing to do something, but not knowing what to do--and this is when I'm at my best. I am extremely calm under stress. Stress actually relaxes me, and this is because I never felt so alive as when I was solving problems. This is what I was meant to do. Now, I am unable to think

clearly. I have great difficulty solving problems, and thinking is actually painful. Now I have lost so much of my thinking and concentration and memory that there is no way I could manage a disaster scene like I used to--it would be impossible.”

Sincerely,

Timothy J. Smith, M.D.

Appendix III

Excerpt from letter from Mr. Copp’s 911 attorney, Charles K. Purcell:

Mr. Kenneth R. Feinberg
Special Master
September 11th Victim Compensation Fund of 2001
Suite 900
1900 “K” Street NW
Washington, D.C. 20006

Re: Douglas F. Copp
VCF Claim 212-000907

Dear Mr. Feinberg:

“... As Dr. Smith’s report explains, Doug’s exposures to multiple toxins have profoundly affected his health in several interrelated ways. First, the substances that deposited themselves in Doug’s lungs and on his skin stimulated the mass production of antibodies, as a result of which Doug now experiences allergic hypersensitivity reactions whenever he comes into contact with contaminants similar to those he encountered at the World Trade Center. His immune system, as Dr. Smith puts it, is on “hair trigger.” Severe asthmatic-type reactions to small quantities of airborne substances – quantities that would be innocuous and even unnoticeable to most of us – are a constant danger. Tissue damage caused by previous attacks, and ongoing inflammation, have reduced his lung capacity to a totally disabling degree.

“Another byproduct of Doug’s hypersensitivity reactions is even more alarming than his recurrent sensation of suffocation: cerebral inflammation and edema have caused Doug to suffer chronic headaches, blurred vision, confusion, and even dementia. His compromised cognitive functioning is vividly documented in the enclosed report of Dr. Tony Kreuch, a neuropsychologist. Dr. Kreuch, after

administering an extensive battery of tests to Doug in April of this year, identified deficits in Doug's "attention, concentration, processing speed, working memory, and acquisition, storage, and retrieval, in addition to executive conceptualization and flexibility of cognition," "most likely related to a toxic exposure within a previously high functioning individual." The recent addition of Diamox to Doug's daily laundry list of medications has begun alleviating his headaches, but substantial cognitive impairment remains. He is no longer capable of the quick thinking and sustained concentration that were essential to his work as an expert in rescue and disaster management.

"Since the submission of his application for advance medical benefits late last year, Doug has battled a bewildering array of symptoms and medication side effects. It is no exaggeration to say that he has been engaged in a daily struggle for survival. Allergic hypersensitivity reactions – touched off by a whiff of gasoline at the pump, or of cleaning solution in an office building, or of cigarette smoke on the wind – lead to paroxysms of coughing, disorientation, impaired speech, and even loss of consciousness; and in an effort to avoid such episodes, Doug (who previously traveled the globe to perform physically and emotionally draining work under the most precarious conditions imaginable) has adopted a reclusive existence, retreating to the handful of environments that he stands a reasonable chance of controlling. One such environment is the northern tip of Nova Scotia, where Doug is currently staying – in exile from his wife and home – to escape the warm temperatures that heightened his respiratory distress last summer. (Even in northern Nova Scotia, however, secondhand cigarette smoke is sometimes unavoidable, and summertime temperatures occasionally rise above the 70-degree level that tends to strangle him.) Crushing and relentless headaches, incompatible with most activities of daily living, have only lately been brought under control. Immune-system breakdowns have produced chronic diarrhea. Intravenous chelation therapy, designed to flush heavy metals out of Doug's system, has precipitated frightening bouts of dementia, in addition to leaving Doug with a collection of collapsed veins. Merely swallowing and keeping track of the hundreds of prescribed pills that Doug must take each day has proved exhausting.

"As the foregoing paragraphs suggest – and as the attached reports of Dr. Smith and Dr. Michael E. Rosenbaum, and the previously submitted report of vocational rehabilitation specialist Harry A. Whiting, Jr., confirm – Doug's massive exposure to toxins at the World Trade Center has totally and permanently disabled him from the arduous work he once performed. His respiratory difficulties, of course, preclude serious physical labor of any sort. His hypersensitivity to ambient pollutants disqualifies him from most ordinary workplaces, not to mention disaster sites. But his intellectual injuries are perhaps the most significant of all. As rescue chief of the American Rescue Team, Doug prided himself on bringing order out of chaos and complexity; today, he often finds himself befuddled by the simplest of tasks. In situations of high drama and high pressure, Doug once thrived; now the smallest obstacles unnerve him. (A recent example: when Doug tried to weigh himself on a balance scale at a doctor's office, he slid the weights without producing

any movement in the balance, until someone reminded him that he needed to stand on the scale first.) Considering the totality of his physical and mental impairments, Doug's doctors and vocational consultant have concluded that he is completely disabled not only from the work he was doing at the time of the September 11 attacks, but from any other gainful employment as well. Although everyone hopes that Doug will recover at least some of his former functioning – and although his medical care is geared toward improvement rather than mere palliation – his prognosis is uncertain at best. (See, for example, Dr. Smith's report, under the heading "Immune System Sensitization, Activation, and Hyper-reactivity.") There is no reason to believe that Doug will get better in the foreseeable future..."

Charles K. Purcell