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STATE OF INDIANA  
COUNTY OF JENNINGS

IN THE JENNINGS CIRCUIT COURT  
CAUSE NO. 40C01-9811-CP-402

SCOTT FRANKS and  
KARLA FRANKS,  
Plaintiffs

vs.

CAITO FOOD SERVICES, INC.,  
Defendant

**AFFIDAVIT OF EDWARD P. BERLA'**

COMES NOW, Edward P. Berla', being first duly sworn upon his oath states the following:

This affidavit is made at the request of Roger Pardieck. I understand it will be used as part of a response to Defendant's motion to exclude my testimony. I understand the objection to my testimony centers on data derived from the Current Population Survey as used in my analysis and as reported in *The New Worklife Expectancy Tables*.

**1. Background**

On March 15, 2001, I issued a Vocational Economic Assessment of lost lifetime earnings for Mr. Scott Franks. This was updated based on new information obtained in April 2002 and testified to in my deposition of April 24, 2002. The analysis of Mr. Franks revealed a male with a high school diploma who sustained right shoulder, arm, and hand injuries in a fall in January 1997. Mr. Franks reported various limitations, such as constant pain that increases with exertion and problems with lifting over 20 pounds, fatigue, driving, and activities of daily living. In addition, he noted physical problems including problems writing and typing, grip strength, dropping items, fine manipulation with his right hand, repetitive use of his right arm, working overhead, and cold/heat intolerance. Based on a re-interview with Mr. Franks on March 6, 2003, he is still having these problems.

These difficulties indicated that Mr. Franks would have limitations in the kind and amount of work he can perform. Therefore, based upon the limitations noted by Mr. Franks and on the medical records, I opined that Mr. Franks met the definition of work disability as outlined by the U.S. Census Bureau.

**2. The New Worklife Expectancy Tables**

This challenge centers on my estimate of Mr. Franks' post-injury worklife expectancy specific to persons with a work disability. Specifically, the challenge repeatedly refers to

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the worklife expectancy data as *The New Worklife Expectancy Tables*. *The New Worklife Expectancy Tables* is a publication that meshes two key sets of government statistics together to generate worklife expectancies by age, gender, education, and level of work disability.

I did not use this publication in my analysis. However, I did use a subset of the two government data sources utilized in the publication to explore the probability that Mr. Franks would be employed in each future year of potential earnings. Explanations of this can be found in my deposition (p. 21, lines 17-24; p. 22, lines 11-19; p. 26, lines 9-15) in which I noted that my calculations were based on data from the Department of Commerce.

The method I used in my analysis is known as the Life, Participation, and Employment (LPE) model for computing worklife expectancy. This model compounds the probability that a person will be alive (L) at each future year with the probabilities he or she will be active in the labor market (P) and employed (E). The probability of life is extracted from the *United States Life Tables* developed by the National Center for Health Statistics.<sup>1</sup> The data I used to project the probability of employment were developed by the U.S. Census Bureau from its Annual Demographic Survey, as published on the Census Bureau website.<sup>2</sup> It is these employment data from the Annual Demographic Survey that are the focus of the Defense motion.

The Annual Demographic Survey is conducted in March of each year by the U.S. Census Bureau as a supplement to its monthly Current Population Survey (CPS). The CPS survey is the primary source of employment data for persons in the United States, and the source of the government's monthly unemployment rates that are widely quoted by the media.

The definition of work disability used in the Annual Demographic Survey can be found on the Census Bureau web site.<sup>3</sup> This definition was created and is controlled by the Census Bureau. As part of this definition, the government also created the sub-categories of severe and not severe disability.

### 2.1 Examples used by Defense

In an attempt to discredit the worklife tables, Defense uses an example of a "real life" possibility that they feel points to the tables' lack of validity. Unfortunately, their example does not consider important vocational factors regarding the experience of people with work disabilities.

Defense's example deals with a blind neurosurgeon, an attorney with a leg amputation, and a man with headaches and tremors. The Defense is obviously correct in stating that the

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<sup>1</sup> <http://www.cdc.gov/nchs/products/pubs/pubd/lftbls/life/1966.htm>

<sup>2</sup> <http://www.census.gov/hhes/www/disable/disabcps.html>

<sup>3</sup> <http://www.census.gov/hhes/www/disable/cps/cpsworkd.html>

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neurosurgeon will no longer be able to function in that job again. The Defense falls short, however, when they state that, because the attorney can return to work as an attorney, that he has sustained no worklife loss. Section 3 addresses the problems with Defense's criticisms by discussing the proper method for conducting a vocational economic analysis and the need to look at the specifics of a plaintiff's situation. Specifically, Section 3.2 directly addresses the issue of residual capacity for persons with a work disability and notes that, just because people can return to work does not automatically mean that they have returned to their pre-injury level in terms of their ability to work and earn money.

Defense's example also focuses on the use of statistical averages to represent specific plaintiffs. This issue is dealt with very directly in Section 4.3. In addition, the issue of disability being self-reported (the "dishonest" man with headaches and tremors) is dealt with in Section 4.4.

Thus, all of Defense's objections stemming from this example are answered in various portions of this affidavit.

### **3. The Vocational Economic Analysis**

Defense objects to various elements of my analysis of Mr. Franks' earnings loss. These focus on my consideration of Mr. Franks' reduced worklife expectancy without medical verification and on my opinion that Mr. Franks meets the government's definition of work disability even though he has returned to work. The following sections respond to these objections and clarify the reality of the work experience of people with a work disability.

#### **3.1 Role of the Vocational Expert**

Defense criticizes my analysis regarding Mr. Franks' reduced worklife expectancy post-injury because no medical evidence confirms this reduction. They appear to believe that, because I am not a medical doctor, I should not be allowed to testify regarding Mr. Franks' work disability. Testimony regarding work disability is the province of a vocational expert, not a medical doctor. Medically diagnosed physical and cognitive limitations require vocational interpretation to determine their impact in the working world. Medical doctors are not likely to have this knowledge. My knowledge, skill, experience, training, and education all combine to qualify me to make this determination.

I have a Ph.D. in Psychology and post-doctoral training in economics (see Attachment A). My training in economics has been specific to the issue of earning capacity, loss of earnings over a lifetime, worklife expectancies, and the role of wage growth, interest rates, and inflation in the economy. I have over 25 years experience within the field of disability as a psychologist, university professor, and vocational expert with the U.S. Department of Health and Human Services. I have qualified as a vocational expert and as a vocational economic analyst on numerous occasions in both federal and state courts, including, but not limited to, courts in Indiana, Kentucky, Ohio, Tennessee, Missouri, Illinois, Michigan, and West Virginia.

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With this background, I can assist the trier of fact in a review of Mr. Franks' physical impairments in conjunction with his age, education, and work experience to assess the impact of the impairments on his ability to work and earn money.

### 3.2 Residual capacity

Defense contends that Mr. Franks' work disability does not have an effect on his ability to earn money or remain employed over his lifetime since he has returned to work and is earning more than he did prior to injury. Defense's contention is contrary to published research on the effect of work disability on a person's *lifetime* capacity to work and earn money.

The presence of a disability is widely known to affect both earnings and worklife expectancy. This finding is documented in results from various surveys, including the Current Population Survey (CPS), the Survey of Income and Program Participation (both from the Census Bureau),<sup>4</sup> the National Health Interview Survey from the National Center for Health Statistics,<sup>5</sup> and the *N.O.D./Harris Survey of Americans With Disabilities*.<sup>6</sup> The disability effect is the cause of such events as the passage of the well-known Americans with Disabilities Act (ADA),<sup>7</sup> the existence of the Department of Labor's Office of Disability Employment Policy,<sup>8</sup> and the practice of rehabilitation counseling, just to name a few.

It is important to understand the impact of permanent work disability on people in the modern labor market. Employers and employees do not form lifetime relationships where the employee stays with a single employer for the duration of his or her career – whether they are disabled or not. According to the Bureau of Labor Statistics,<sup>9</sup> the average U.S. worker has more than nine employers just between the ages of 18 and 36, let alone further shifts after the age of 36.

In addition, private research (Yelin, 1996; Yelin and Trupin, 1997, see Attachment B; Gibson, 2000 and 2001, see Attachment C) has shown that employed persons with a work disability, both not severe and severe, are more likely to become unemployed than persons without a work disability. If unemployed, they are less likely to find employment. These differences become more profound with age.

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<sup>4</sup> Data from both the CPS and SIPP can be found on the Census Bureau website at <http://www.census.gov/hhes/www/disability.html>.

<sup>5</sup> One example is a study by Stapleton, et al. (1997) that accesses data from the NHIS. <http://aspe.hhs.gov/daltcp/reports/eshcclit.htm>.

<sup>6</sup> <http://www.nod.org>

<sup>7</sup> <http://www.usdoj.gov/crt/ada/adahom1.htm>.

<sup>8</sup> <http://www.dol.gov/odep/welcome.html>.

<sup>9</sup> <ftp://ftp.bls.gov/pub/news.release/nlsoy.txt>.

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Even if persons with a work disability find employment conducive to their disabilities, they face ongoing struggles to cope with their disabilities. These struggles may intensify with age, continuously making it more difficult to compete with their counterparts without disability (Gibson, 2000 and 2001, see Attachment C; also see U.S. Census Bureau website<sup>10</sup>). The impairments will place the individual at a disadvantage in the labor market compared to those without disability, and likely cause the person to have a harder time finding and/or maintaining comparable employment.

I have been asked to respond to statements on page 10 of Defendant's Brief where they state that "Berla and VEI are f [sic] the opinion that all disabled persons suffer a worklife reduction simply because of a disability regardless of the nature of the disability. This produced skewed results and opinions based on faulty information." This is not true. As described in sections 3.1, 3.3, and 4.2 of this affidavit, definitions of disability vary, and my analysis of Mr. Franks' loss considers his particular limitations and how they will affect his ability to work.

### 3.3 Application to Mr. Franks

In conducting an assessment of loss of lifetime earnings, an expert needs to consider a variety of factors, some of which are age, education, previous work experience, work-related limitations, and the lifetime effects of these impairments on ability to work and earn money. When conducting the assessment, it is essential that the expert take important vocational factors into consideration.

In assessing Mr. Franks' post-injury earning capacity, I considered the effects of his injuries and the impact that these limitations are likely to have on his capacity to work and earn money in the future. His return to work does not mean that he is as fully capable as he would have been had the injury of January 1997 not occurred. At the very least, his limitations make it reasonable to assume that he will not be able to function at an average, nondisabled level. I used my vocational expertise in determining reasonable outcomes for Mr. Franks.

In considering Mr. Franks' difficulties, I considered two possibilities. One conservatively analyzes Mr. Franks' loss by assuming no loss of annual earning capacity, only a reduction in worklife expectancy. The second analysis looks at the Census Bureau data on the difference in earnings for males with and without work disability at Mr. Franks' education level.<sup>11</sup> This difference is applied to his post-injury earnings to obtain an estimate of what his earnings could have been like had he not been injured. This analysis assumes that his future earnings experience will be like that of other men with a similar level of education and disability. These analyses take into consideration personal vocational factors that will impact his ability to work.

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<sup>10</sup> <http://www.census.gov/hhes/www/disable/disabcps.html>

<sup>11</sup> <http://www.census.gov/hhes/www/disable/disabcps.html>.

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Both analyses acknowledge Mr. Franks' limitations in his ability to perform work as he could have done absent injury and factor those limitations into the assessment of his earning capacity and worklife expectancy. As noted in Section 3.2, this is consistent with various research findings regarding the earnings and employment experiences of persons with an occupational disability.

### 4. Current Population Survey

I have been asked to respond to several points made by the Defendant regarding the data from the U.S. Census Bureau's Current Population Survey (CPS) that I used for estimating Mr. Franks' worklife expectancy. My responses will discuss each point by considering their various parts.

#### 4.1 Purpose of the CPS

Defense states the government data from the CPS were never intended to ascertain disability status, but this ignores or misunderstands the full intent of this survey and of government publications directly addressing this issue.

In March of each year beginning in 1981, the CPS has been expanded to collect more information on income and employment. This Annual Demographic Survey forms the basis for the rates of participation and employment used in the worklife expectancy tables through expanded questions that specifically address work disability. As early as 1983, the Census Bureau itself supported the validity of the CPS data for studying the effects of work disability, and published *Labor Force Status and Other Characteristics of Persons with a Work Disability: 1982* (see Attachment B). The beginning of the publication addresses the issue of measuring the experiences of persons with disability:

One of the issues that this country has tried to address through the Federal statistical system is the extent to which persons with a disability are able to participate in the labor force. Programs and policies have been established to discourage discrimination and encourage training and rehabilitation, but the success of these programs and policies cannot be measured without some type of statistical monitoring system. Statistics on persons with a disability are obtained from two sources: program statistics and household surveys. While the former source is critical for certain purposes, the basic unit in a statistical monitoring system must be household surveys. Only through household surveys is it possible to obtain estimates of the number of persons with a disability and learn how their situation changes over time.

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Recent changes to the questionnaire used in the March Income Supplement to the Current Population Survey (CPS) make it possible for the March CPS to be used as a source of information on the labor force status and other characteristics of noninstitutional persons with a work disability.

In the 1989 publication *Labor Force Status and Other Characteristics of Persons With a Work Disability: 1981 to 1988* (see Attachment B), Census expanded on the reasoning behind these questions:

According to Saad Nagi, a major figure in the development of survey data on persons with disabilities, a person has a disability if he or she has a limitation on the ability to perform one or more of the life activities expected of an individual within a social environment. The primary ways this basic concept is operationalized in the March CPS is to ask whether any household member has a health problem or disability which prevents them from working or which limits the kind or amount of work they can do.

Finally, John McNeil (2002), the former Special Assistant for Disability Statistics with the U.S. Census Bureau, expands on the origins and intent of the CPS disability questions in the attached article (see Attachment B). This article provides further verification that the use to which I apply the CPS disability statistics is both appropriate and in keeping with the underlying criteria.

Defense's claim that the CPS data are not appropriate for studying the effects of work disability is incorrect in my opinion.

### **4.2 Definition of work disability**

Part of Defense's confusion regarding the issues in this case could result from a lack of understanding regarding the Census Bureau's definition of work disability<sup>12</sup> and the appropriateness of the definition for use in cases involving lost earnings.

Before measuring the effect of disability on earnings and employment, it is necessary to define what is meant by disability. Depending on the desired focus, different groups and surveys will define disability differently. The Veterans Administration (VA) and the Social Security Administration, for instance, each have their own definitions, which vary considerably. Males considered disabled by the VA who do not otherwise have a work disability enjoy levels of employment comparable to males without a work disability (Gibson, 2001; see Attachment C), whereas individuals found to be disabled under Social Security law are unable to perform any type of substantial, gainful work activity. Other

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<sup>12</sup> <http://www.census.gov/hhes/www/disable/cps/cpsworkd.html> .

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organizations have definitions that may not consider work effects, except within the context of the overall social effects of impairment.

Another popular definition comes from the Americans with Disabilities Act (ADA), which defines disability as existing in persons with a physical or mental impairment that substantially limits one or more of the major life activities. This is the definition apparently preferred by Defense. The ADA definition, however, is not the appropriate definition of disability to use in tort cases involving lost earnings. The ADA definition is too broad in that it includes people who do *not* have limitations in the kind or amount of work they can perform, i.e., they do not have a work disability. For forensic purposes, when assessing loss of lifetime earnings, the most relevant data pertain to those persons who have a work disability, the definition used in the CPS. This is the exact issue addressed by Mr. John McNeil, formerly with the Census Bureau, in an article (McNeil, 2002, see Attachment B) and in an affidavit (Attachment D).

Work disability does not mean that someone is totally disabled. As noted by Defense, Census uses seven basic criteria when defining someone as having a work disability. Defense fails to recognize, however, that some of the seven points are used to refine the classification further by identifying individuals as having a severe or non-severe work disability. Some of Defense's complaints center on supposed problems with the definition of severe disability. There are two problems with this. First, their complaints are inaccurate (see Section 2.1), and second, their complaints regarding severe disability are irrelevant in this case, since Mr. Franks' disability is not severe.

### **4.3 Use of statistical averages**

Defense states that the worklife expectancy statistics I used are not specific to particular conditions or types of impairment. In short, they object to the fact that the statistics are derived from an average for males with a not severe work disability and an education level equivalent to Mr. Franks. They feel the group of "not severely disabled" is too broadly defined.

All statistics are averages. An average for Not Disabled does not apply, as already addressed. An average for all persons is even broader and more homogeneous than that for persons with a not severe disability. When predicting the height of a 5-year-old boy, should one use an average of all people or of 5-year-old boys? Similarly, when predicting the employment experience of a male with a non-severe work disability, should one use an average of all people or of males with a non-severe work disability?

Economists, actuaries, insurance companies, and gambling establishments use population averages when making rational bets on human outcomes. The basic belief is that in the absence of more specific and precise information, the best predictors of outcomes are statistical averages or relative frequencies. For example, economists (forensic and otherwise) commonly make inferences on expected income based upon a person's level of education. Yet, education is obviously a very broad classification. People with a high school diploma can have vastly divergent results in the labor market. Following this, it is

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not true that disability data would have to be disaggregated by type, severity, or duration of disability in order to be reliable or meaningful.

Even if segregated data existed, their use would be limited at best. Persons with the same diagnosis and the same length of time since injury can have dramatically different experiences in terms of their experience in the workplace, especially when education level is factored in. Consider an example of two men with identical hand injuries resulting in reduced grip strength and limited range of motion. This injury would have an enormous impact on a carpenter, who would likely need to leave his employment. For an English professor, however, the effect may be minimal.

Also, when looked at from a vocational perspective, many different types of conditions can result in identical work-related impairments (e.g., both a knee injury and a lung ailment can result in a restriction to sedentary work). Impairments from non-injury related causes can result in work disability of varying degrees, with minimum to maximum impact. What is relevant is the effect of the impairment, whatever the cause, on a person's capacity to work and earn money.

Statistics of all sorts must be used responsibly and applied by persons familiar with issues involved. When assessing persons with disability, for instance, the user must be familiar with the effects of impairment on ability to work and earn money as well as the experiences of persons with disability in the labor market. In assessing the impact of Mr. Frank's future capacity to work and earn money, I have considered all of the relevant vocational factors in estimating his earning capacity and worklife expectancy.

### **4.4 Self-reported data**

Defense objects to the CPS data stating that since the disabilities in the data are self-reported and without independent verification, the resulting data are unreliable. A study of this nature, however, would be so enormous as to be impossible. Acquiring independent verification from the thousands of people interviewed would be very difficult, at best. This does not negate the usefulness of the CPS data.

Defense's confusion regarding this issue is particularly obvious when they discuss alleged problems in the survey from the presence of Social Security Disability Insurance (SSDI) applicants. Defense implies that this group makes up a majority of the people in the survey and that this group is inherently dishonest and prone to exaggerating their disabilities. Because of this, Defense concludes that the majority of the CPS data are flawed. Not only does this assume the worst about people, but Defense offers no support for the suppositions.

The CPS relies upon answers from respondents to questions administered by trained Census personnel (self-reporting). As such, the seven criteria used by the Census Bureau to classify a respondent's disability status depend upon

1. the respondent's ability to recognize the disability and
2. the truthfulness of the response.

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Defense speculates that these requirements are not met in a material quantity of responses. Defense further speculates that this could impact is a majority of the data collected. The word "speculate" is used here, because Defense offers a criticism with no scientific support.

As mentioned in Section 2 of this affidavit, the Current Population Survey is the *primary* source of employment data for the United States. The entire survey is self-reported. It is relied upon by researchers, economists, demographers, and other scientists across the world for measurements of employment, earnings, education status, age, and other characteristics of the U.S. economy:

- Researchers rely upon current employment status, but nobody verifies this with the respondents' employers.
- Earnings information is relied upon, but CPAs do not verify the respondents' tax returns. The surveyors do not even glance at them.
- Education status is taken as truthful, but nobody examines the respondents' diplomas.
- Classifications by age are routinely made, but not a single birth certificate is reviewed.

Now, with respect to whether the respondent has a limitation in the kind or amount of work he or she can perform, Defense contends that the average U.S. citizen is either ignorant or a liar. The next section describes in more detail the reliance placed on the CPS by various disability researchers.

### 4.5 Use by other researchers

Defense objects to my use of the Census Bureau's CPS data, implying that the Survey of Income and Program Participation (SIPP) is the only possible survey that can be used to study the employment effects of disability. True, there are researchers who use the SIPP to study the effects of disability. The definition of disability used in the SIPP, however, is closely tied to the definition used in the Americans with Disabilities Act. As noted in Section 4.2, this is a broader definition of disability than is appropriate in a forensic setting when studying loss of lifetime earnings.

Contrary to Defense's contentions, there are numerous government and independent researchers who use CPS data for studying the effects of disability. Attachment B<sup>13</sup> contains a partial list of this research, some of which is described in the paragraphs that follow. Most of this research has been done for non-forensic purposes, lending further support to the strength of CPS data for the purpose of studying the effects of disability on a person's ability to work and earn money.

Various independent researchers use CPS data in research on the employment experiences of persons with a work disability. In a presentation before the National Association of

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<sup>13</sup> Unless otherwise noted, all material in this section can be found in Attachment B.

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Forensic Economics (NAFE) in November 2000, John McNeil, a special assistant for disability statistics for the U.S. Census Bureau, now retired, reaffirmed the application of CPS data for the study of persons with a work disability. As part of the presentation, he produced a study entitled "Employment and Earnings of Individuals 18 to 64 by Disability Status: Data from the March 2000 Current Population Survey." The study explores the participation and employment rates for persons with work disability using the same data used by me in this case. In addition, he signed an affidavit (Attachment D) stating he sees no reason why the CPS data for work disability cannot be used in the manner applied by me and by Vocational Econometrics. He also authored an article further supporting use of CPS data for studying worklife issues for people with a work disability (McNeil, 2002).

Herman Miller functioned as the chief of the Population Division of the Census Bureau. He has also signed an affidavit (Attachment E) noting that the CPS data are "the most appropriate source for studying the employment experiences of people with a work disability."

In addition, both government and non-government researchers rely on the CPS employment rates and earnings figures for non-forensic purposes. Burkhauser, Daly, and Houtenville (2000), for example, used data from the March supplement of the CPS to compare the employment experience of people with and without disability during the 1990s business cycle. This paper was published through the Rehabilitation Research and Training Center (RRTC) for Economic Research on Employment Policy for Persons with Disabilities at Cornell University. The Cornell RRTC has also published several other papers using CPS data on persons with a work disability. These include three papers by Houtenville (2000) that studied the prevalence, employment rates, and household income of people with disability, as well as a paper by Burkhauser, Houtenville, and Wittenburg (2001) that compared the employment trends of persons with work limitations using the CPS and two other government surveys.

Daly, Burkhauser, and Houtenville (2000) published a paper through the Federal Reserve Bank of San Francisco that used CPS data to study the work and income of men with disability. Acemoglu and Angrist (1998), both with the Department of Economics at MIT, published a paper through the National Bureau of Economic Research that used CPS data to study the impact of the ADA on the employment of people with disability.

Researchers at the University of California, San Francisco, also use CPS data to study persons with a disability. This work includes an article published in the U.S. Bureau of Labor Statistics' *Monthly Labor Review* (Yelin and Katz, 1994) that used both the CPS and the National Health Interview Survey to study the participation trends of people with and without disability during the period from 1970 to 1992. Yelin (1996) and Yelin and Trupin (1997) used the CPS to study the participation and employment of people with and without disability during the mid-1990s.

Government researchers have also used CPS data to study the experiences of people with and without work disability. The U.S. Census Bureau measured the participation and employment rates and average earnings of people with and without disability and published

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the results in two key documents (1983 and 1989). In 2001, the Census Bureau issued a press release that included basic information from the CPS on the prevalence, employment, earnings, and education of people with a work disability.

The research list above is not meant to be complete. It does, however, give an idea of the variety of researchers using CPS data. The use of the CPS by this sampling of government and non-government researchers corroborates the validity of the CPS for the purpose of studying the work experience of people with a work disability.

The extensive use of the CPS data for research on employment issues provides corroborative evidence of the validity of the data. Independent researchers from various institutions and with various purposes would not all use the CPS data unless the data were meaningful.

### **5. Reliability and Relevance**

I have been asked to respond to various issues regarding the reliability and relevance of the data used in my analysis.

#### **5.1 Reliability**

Reliability centers on four basic issues: testing, peer review, error rates and standards, and general acceptance. Each of these will be addressed separately.

##### **5.1.1 Testing**

Data from the Current Population Survey are produced and extensively tested by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.<sup>14</sup> The probabilities of life are drawn from the life tables from the U.S. Department of Health and Human Services, National Center for Health Statistics, which produced and extensively tests the tables.

Defense claims that the data and method used to derive the worklife expectancies used in my analysis have not been replicated by me or by any independent researcher. Section 4.4 discusses the implications of their suggestion, which seems to be that I must replicate the CPS, a survey with approximately 150,000 respondents in each of the six years I used, in order for my use of the data to be valid.

Defense is confused on the concept of testing. Not only are the data relied on by numerous government and non-forensic researchers (see Section 4.5) around the world, but, as detailed in the attached bibliography (see Attachment C), the model I use for my analysis (LPE) has been written about by many independent researchers. As mentioned in Section 3.2, the negative effect of disability has been documented in results from various surveys, including CPS, the Survey of Income and Program Participation (both from the Census

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<sup>14</sup> <http://www.bls.census.gov/cps/tp/tp63.htm>.

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Bureau), the National Health Interview Survey from the National Center for Health Statistics, and the *N.O.D./Harris Survey of Americans With Disabilities*. All of the surveys, whatever the purpose, find that disability, whatever the definition, negatively impacts an individual's ability to work and earn money. This provides another form of testing and verification.

Testing is more relevant to the "hard" sciences (e.g., engineering) than to vocational and economic testimony, since such testimony is concerned with the future experience of people, which can never be tested or known with absolute certainty.

### **5.1.2 Peer Review**

Defense notes that numerous articles have been written that favor the Tables, but dismisses them because they were written by people related in some way to Vocational Economics, Inc. In contrast, they note only three articles criticizing the Tables or the CPS.<sup>15</sup> Defense fails to mention that two noted Census Bureau officials (unrelated to Vocational Economics) have supported use of CPS data for studying the effects of disability on work (see Attachments D and E).

By discounting the favorable articles, Defense misinterprets the peer review process. The articles mentioned by Defense underwent a blind peer review process and were accepted for publication. By definition, this means that others in the profession, also unrelated to Vocational Economics, have found the articles to have scientific merit. The fact that many of these articles are authored by persons associated with Vocational Economics should not be a surprise. After all, the persons most likely to write about a science are the researchers that lead innovations in that science.

The worklife tables and the CPS data underlying them are the subject of multiple articles. The bibliography (see Attachment C) is a partial listing of these articles and includes listings of articles pertaining to the worklife tables themselves and to the methodology underlying them that I used in my analysis. Articles supporting use of CPS data are noted in Attachment B. The bibliographies show that the worklife tables have been reviewed in professional journals and that the CPS data have been used by researchers for both forensic and non-forensic purposes.

In addition, each of the three articles used by Defense to support their position has its problems and is inadequate for criticizing CPS data. Section 6 deals with these articles and why each is used inappropriately for the issues involved in this case.

### **5.1.3 Error Rates and Standards**

Defense objects to the lack of an error rate for worklife expectancies. There is no way to test how a particular plaintiff will fair in the future against a prediction. This criterion is

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<sup>15</sup> See Section 6 for a fuller discussion of these articles.

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primarily intended to apply to the “hard” sciences in conjunction with the testing performed there (e.g., reliability of a bolt securing a heavy sheet of metal).

One can, however, compute the standard error of a worklife expectancy using the formula for the standard error of a probability. Due to the large sample size of the CPS, one could show that the standard error of a worklife expectancy would not exceed 3% of the estimate. Thus, statistically measured standard errors of the worklife expectancy statistics are insignificant.

With regard to standards for controlling the technique’s operation, the LPE methodology used to develop the tables was developed by Brookshire and Cobb (1983; see Attachment C). It was further refined by Brookshire, Cobb, and Gamboa (1987) to adjust for work disability, and is one of multiple widely accepted methods to compute worklife expectancies discussed in *Life and Worklife Expectancies* (Richards & Abele, 1999).

### 5.1.4 General Acceptance

Defense claims that the data that I used in estimating Mr. Franks’ post-injury worklife expectancy do not have general acceptance in the relevant scientific community. In making this claim, they again show a misunderstanding of the issues involved in estimating loss of lifetime earnings.

Forecasting a plaintiff’s future earnings stream is not an exact science. There is no single step in the loss computation process that enjoys universal acceptance in the relevant community. As such, it is predictable that experts may disagree on the method for computing lost earnings. This is true of defining earning capacity, computing worklife expectancy, projecting earnings growth, and determining discount rates.

There is, however, wide acceptance of use of the CPS data to define work disability. In addition, a 1999 publication by Richards and Abele, *Life and Worklife Expectancies*, looks at several generally accepted ways of computing a statistical worklife, including the LPE model used in my analysis.

The methodology used to develop my estimate of Mr. Franks’ worklife expectancy was developed by Michael Brookshire and William Cobb (1983) and was further refined by Brookshire, Cobb and Gamboa (1987). In a 1991 article in the *Journal of Legal Economics*, Gary Albrecht applied this methodology to assessments of earnings for partially disabled individuals. My opinions in this case are consistent with this methodology (see Attachment C).

The worklife tables, as well as the data and methodology underlying them, have been the subject of many articles, lending credence to their overall acceptance. Section 4.5 describes in more detail the use made by various researchers of the data that I used to estimate Mr. Franks’ worklife expectancy.

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### 5.2 Relevancy

The CPS data that I used in my assessment of Mr. Franks' earnings loss are averages for the applicable disability population – those people with a work disability. For forensic purposes, when assessing loss of lifetime earnings, the most relevant and direct focus is on persons who have a work disability.

Experts, however, must not blindly apply data to a plaintiff without consideration of how it matches the plaintiff's circumstances. The expert must apply data with intellectual rigor, applying the available statistics about the work-disabled population and molding them to meet the specifics of the case. In determining my estimate of lost earnings for Mr. Franks, I have considered specifics related to Mr. Franks' work limitations and applied them to statistics for people with a work disability who are similar to Mr. Franks in terms of age, education level, and severity of disability.

### 6. Articles

Defense focuses on three articles which are critical of *The New Worklife Expectancy Tables*. These will be addressed separately below.

#### 6.1 Corcione

Defense notes an article written by Corcione in 1995 that was critical of *The New Worklife Expectancy Tables*, though they do not mention the specifics of the article. However, subsequent issues of that same journal that included two replies to Corcione's criticisms that have been published under peer-reviewed guidelines contradicting all of Corcione's objections (Gluck, 1996; Gibson, 1998; see Attachment C).

#### 6.2 Hale

The June 2001 issue of the *Monthly Labor Review* contains an article written by Thomas Hale, an economist employed by the Bureau of Labor Statistics. The article criticizes the CPS as a data source for studying the employment experience of persons with a disability as measured by the Americans with Disabilities Act (ADA). Defense takes great liberties with this article, claiming that it is one of "several articles critical of the use of VEI's Tables to estimate worklife" (p. 9). **This is a misrepresentation of the facts. Dr. Hale's article makes absolutely no reference to *The New Worklife Expectancy Tables*.**

Hale's goal as an employee of BLS is to find/develop a survey to enable measurement of the employment experiences of persons with a disability as it is defined by the ADA. As noted in section 4.2, the CPS does not use this definition, nor is this definition the best one to use when assessing lost earnings. Other key criticisms in the article deal with the validity of the first work disability question (limited in the amount or kind or amount of work a person can perform) and the presence of persons with a temporary disability.

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There is no official government position against use of the CPS to define work disability. In fact the Census Bureau regularly generates cross-tabulations of these data and publishes them on its web site. In addition, two noted former Census officials (Mr. John McNeil and Dr. Herman Miller) have authored affidavits regarding the validity of the CPS for measuring work disability, as shown in Attachments D and E.

Hale's criticisms of the CPS are not new. The CPS is not a perfect measure of the impact of disability on employment. However, it is the best tool that exists for the matter at hand. The limitations are not substantial enough to warrant discontinuing use of the CPS for estimating the worklife expectancy of persons with and without work disability. In fact Hale's reservations are contradicted by the many leading researchers who use the CPS data to study the impact of disability.<sup>16</sup>

### 6.3 Rodgers

Defense mentions the article by Rodgers, stating that it recognizes the flawed nature of the CPS and attempts to fix this by using another Census survey, the Survey of Income and Program Participation (SIPP). While the SIPP may be preferable when the purpose is to study the impact of the more-broadly defined ADA, this is certainly not true as a statement of preference for disability research in general (see Section 4.5).

A major reason for preferring the CPS over the SIPP for measuring worklife expectancy for persons with a disability is the differences in the definitions of disability used by the two surveys (see section 4.2). The definition of work disability used in the Current Population Survey was created and is controlled by the Census Bureau. It focuses exclusively on disability as it limits a person's ability to work and earn money – the key focus of this and most cases for lost earnings.

The SIPP, however, is targeted to measure disability as defined in the Americans with Disabilities Act (ADA). This act defines a disability as a limitation in any major life activity – a much broader definition than work disability. ADA disability includes activities that have nothing to do with employment (e.g., a sexual dysfunction). This is the exact issue addressed by Mr. John McNeil, formerly with the Census Bureau, in his attached affidavit (Attachment D). Mr. McNeil's exclusion of the CPS in the article cited by Rodgers was due to fact he was trying to measure disability as defined by the ADA, not work disability.

The Census Bureau website contains a page dedicated to disability data.<sup>17</sup> In it, the Bureau notes three sources for disability statistics for the United States workforce: CPS, SIPP, and the decennial census. Here, in terms of the disability questions asked, it notes that the sources range from limited (decennial census) to most expansive (SIPP). Most importantly,

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<sup>16</sup> See sections 4.5 and 5.1.3.

<sup>17</sup> <http://www.census.gov/hhes/www/disable/intro.html>.

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the site notes that the CPS focuses on work disability – the pivotal measure for disability-specific worklife expectancy computations necessary in forensic settings.

The existing evidence is quite contrary to Rodgers' stated opinions. Both government and non-government researchers rely on the CPS disability employment rates and earnings figures for non-forensic purposes. Section 4.5 describes some of this research and supports use of the CPS for studying the work experiences of people with a work disability.

FURTHER, THE AFFIANT SAYETH NAUGHT.

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Edward P. Berla', PhD  
Vocational Economic Analyst

Subscribed and sworn to before me, a notary public, in this \_\_\_\_ of March, 2003.

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Notary Public

My Commission Expires \_\_\_\_\_