

**HUMAN FACTORS/CIRCADIAN RHYTHMS QUESTIONNAIRE**

This questionnaire was designed to collect work/sleep, human factor, and demographic information from engineers that have been involved in de-certification events, as prescribed in 49 CFR Part 240. Your participation in this data gathering process is entirely voluntary. **Your name and the name of your employing railroad will be coded to protect anonymity and only group data developed during the course of this project will be reported.** Your responses (truthful and forthright answers) to the questions that follow are essential to the success of this project.

**Call Keppen Associates (Bill Keppen), toll free, at 1 866.573.9094 if you have questions or wish to schedule an interview. Leave a message with call back information if Bill is not available.**

**If you prefer, simply obtain a copy of this form from your local union representative, fill it out, and return it to Keppen Associates via fax (1.866.573.9094) or mail (60 cents postage) to the following address:**

**Keppen Associates  
1603 Honeysuckle Ridge Ct.  
Annapolis, MD 21401-6425**

### **Project background Information**

The purpose of this project is to determine if the revised Human Factor/Circadian Rhythms form and data collection protocol are effective for gathering human factor information from railroad workers who are involved in events that may be the result of human error. "Cardinal rule" violations (**signals, speed, braking, and track occupancy**) qualify as events worth investigating because they are, in most if not all cases, the result of human error and because they occur with enough frequency to permit data collection and process evaluation.

### **Participant Roles**

#### **General Committees:**

Provide point of contact information  
Circulate HF/CR questionnaires and instructions to their divisions  
Provide feedback to Keppen Associates on any questions or concerns

#### **Division union representatives:**

Provide point of contact information  
Advise and encourage engineers regarding the importance of their participation in the project  
Make forms available to engineers that wish to participate  
Contact Keppen Associates regarding issues and concerns

#### **Engineers charged with Cardinal Rule violations:**

Seek copies of HF/CR forms from local union representatives  
Call Keppen Associates for a telephone interview to fill out form, or  
Fill out HF/CR form and return to Keppen Associates by fax or U.S. Mail

**Your cooperation and participation is encouraged and greatly appreciated.**

**Human Factor Incident Questionnaire  
(49 CFR Part 240)  
Incident Information**

Date: \_\_\_\_\_ (mm/dd/yy) Time: \_\_\_\_\_

Railroad: \_\_\_\_\_

Location: City \_\_\_\_\_ State \_\_\_\_\_

RR (sub)division, terminal and/or milepost:

Name of person being interviewed (optional):

Phone number of person being interviewed (optional):

Rule violation cited for de-certification:

- Failure to comply with signals
- Failure to comply with speed restrictions
- Unsafe use of brakes or failure to perform proper brake procedures
- Occupying a main track without authority

1. Information on typical sleep and activity habits.

Preferred bedtime – Weekday \_\_\_\_\_ Weekend \_\_\_\_\_

Usual wake-up - Weekday \_\_\_\_\_ Weekend \_\_\_\_\_

Do you regularly take naps?

- Yes – Indicate usual time(s) \_\_\_\_\_
- No

Time typically reserved for family/personal activities:

\_\_\_\_\_

2. Commute time/distance from residence to home terminal (worksite).

One-way travel time \_\_\_\_\_ One-way mileage \_\_\_\_\_

3. Were you working “on-call” for this work assignment?

- Yes
- No

Normal calling interval \* \_\_\_\_\_ hrs \_\_\_\_\_ mins

Interval for this work assignment \_\_\_\_\_ hrs \_\_\_\_\_ mins

\* (For example – 1 hr, 30 mins)

4. Were you called for the job/assignment you expected to be called for? (If the answer is “No”, explain)

- Yes
- No – Explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. If you were following train line-up information, was your call for work:

- Accurate
- Early
- Late
- Not applicable

Indicate how **early** or **late** and circle which:

- 1-2 hours – early late
- 2-4 hours – early late
- 4 hours or more – # of hours \_\_\_\_\_ minutes \_\_\_\_\_  
early late

6. Which phase best describes your ability to sleep during the off-duty period preceding the incident?

- Easily
- Slight difficulty
- Moderate difficulty
- Great difficulty
- Not able to sleep

Explanation for answers other than “Easily”: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. How well rested did you feel when you woke up?

- Well rested
- Moderately well rested
- Slightly rested
- Not at all rested

8. What was the location of your last sleep event?

- At home
- At an away-from-home rest facility
- Other – Explain: \_\_\_\_\_

\_\_\_\_\_

9. Which phrase best describes how you felt during the time period immediately preceding the incident?

- Fully alert
- Moderately alert
- Somewhat drowsy
- Fighting sleep

10. Did you experience any of the following prior to the incident?

- Trouble keeping your head up
- Couldn't stop yawning
- Nodding off
- Feeling weak or dizzy
- Trouble recalling things like signals, communications, train orders, etc.

If you were experiencing any of the problems listed in questions 9 or 10, can you further explain why you may have felt this way?

---



---



---

11. Did you take any steps in response to any of the acknowledged problems, questions 9 and 10?

- Yes
- No

If the answer to # 11 is yes, describe. \_\_\_\_\_

---

12. If GCOR – Opportunity Napping rules apply, did you take a on-duty nap prior to the event?

- Yes
- No
- Not applicable

If "Yes", how long was the nap? \_\_\_\_\_ mins

What time did the nap begin? \_\_\_\_\_

13. Did any of the following affect your ability to perform your duties?

- Weather
- Equipment problems

- Difficulties with supervisors or co-workers
- Personal issues
- Other - Explain: \_\_\_\_\_

---



---

14. Have you received training on fatigue, circadian rhythms, sleep and sleep disorders?

- Yes
- No

15. **If you received training**, which term best describes how you would rate the training?

- Good
- Adequate
- Poor

16. Do you regularly have trouble going to sleep or staying asleep?

- Yes
- No

If the answer to # 16 is "Yes", provide a brief explanation of your problem.

---



---

17. Have you been screened or tested for sleep disorders?

- Yes – When? \_\_\_\_\_ (mm/yy)
- No

18. Have you been diagnosed as having a sleep disorder?

- Yes
- No

If the answer to # 18 is "Yes", please describe the treatment procedures.

---



---

19. Please provide the following information:

\_\_\_\_\_ Age \_\_\_\_\_ Height \_\_\_\_\_ Weight

\_\_\_\_\_ Neck or shirt size \_\_\_\_\_ Waist size

\_\_\_\_\_ Date of last physical exam (mm/yy)



### Work/Rest Log for Engineers Charged with 49 CFR 240 Rule Violations

The information collected on this form is for statistical purposes only; your name is not associated with the data, in any way. Start your entries with the day and time of the rule violation incident. We would like to have at least 7 days of work/rest data, the 3 days immediately preceding the incident are extremely important. Round your entries to the nearest half-hour, e.g., 0315 would be entered as 0300, while 0316 would be 0330. It is important that you entries are as accurate as possible. If you are unsure of the time period entered, place an "E" for estimate in the box adjacent to the entry.

**Rule violation cited for de-certification (place an "X" in the appropriate box):**

- |  |   |
|--|---|
| <input type="checkbox"/> Failure to comply with signals            | <input type="checkbox"/> Unsafe use of brakes or failure to perform proper brake procedures |
| <input type="checkbox"/> Failure to comply with speed restrictions | <input type="checkbox"/> Occupying a main track without authority                           |

**EXAMPLE – Worked from 0330 to 1000** (when the violation occurred) **and slept from 2200 the day before the incident until 0200** (the beginning of this sleep period would be charted on the table for the day before the incident)

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
Work																								
Sleep				E																				

**EXAMPLE (CONT.)**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
Work																								
Sleep																								

**INCIDENT DAY**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
Work																								
Sleep																								

**DAY BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
Work																								
Sleep																								

**2 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
Work																								
Sleep																								

**3 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
Work																								
Sleep																								

**4 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
Work																									
Sleep																									

**5 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
Work																									
Sleep																									

**6 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
Work																									
Sleep																									

**7 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
Work																									
Sleep																									

**8 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
Work																									
Sleep																									

**9 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
Work																									
Sleep																									

**10 DAYS BEFORE**

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	
Work																									
Sleep																									