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Reactor Statistics - Section III
April, 1961 - May 15, 1962

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June 13, 1962

REACTOR SIMULATION STUDY

The following discussion and attached summary report is sent to you to illustrate the type of information that is currently in data processing machine language and available to those who require it. During the progress meetings at which these reports were discussed, several persons indicated a desire to have a documented explanation of the report and a personal copy to scan. This is the answer to these requests.

The reports are comprised of three major sections. The first is a map indicating the number of recordings of data in the category defined by the function number code. The second is a summary of the data, in terms of hours, for each of the functions performed during an outage, except secondary function code number 21 which is the number of tubes associated with the basic function performed. The third is a summary of the secondary functions performed within a basic function class, the associated delay total, and the number of tubes involved for those functions where a delineation by tube count may be of interest.

The function code numbers relate directly to the definitions of the hours expended for charge-discharge, rupture removal, tube leak repair, tube replacement, and so forth. These definitive classes are taken from the distribution records supplied by the various reactor analysts and summarized by the Reports and Statistics group in the IPD Production Operation. The listing and record count map are an enlargement of the summary form designed in April of 1961. The codes are as follows:

| | <u>Primary</u> | <u>Secondary</u> |
|-----------|--------------------------------|--------------------|
| *** | 1. Charge discharge - normal | 1. Same as primary |
| Functions | 2. Charge discharge - special | 2. Same |
| | 3. Charge discharge - problem | 3. Same |
| | 4. Rupture Removal | 4. Same |
| | 5. Water leak repair | 5. Same |
| | 6. Tube replacement | 6. Same |
| | 7. Tube replacement - abnormal | 7. Same |
| | 8. Mechanical Maintenance | 8. Same |
| | 9. Instrument Maintenance | 9. Same |
| | 10. Electrical Maintenance | 10. Same |

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| | <u>Primary</u> | <u>Secondary</u> |
|---------------|---------------------------|--------------------------------|
| | 11. Standard Check | 11. Same as Primary |
| | 12. Production Test | 12. Same |
| | 13. Project Work | 13. Same |
| | 14. Miscellaneous - Other | 14. Same |
| *** Delays | 15. Cooling Time | 15. Same |
| | 16. Startup Time | 16. Same |
| | 17. Equipment Breakdown | 17. Same |
| | 18. Delays - Man | 18. Same |
| | 19. Turco | 19. Same |
| | 20. Miscellaneous | 20. Same |
| | 21. Probologging | **21. Number of tubes involved |
| | 22. Scrums | |

One will notice immediately that the various time elements across any given function code row (primary function) do not necessarily have equal total values. The reason here is that some tasks are distributed according to the function governing or controlling the outage during different periods of the given outage. As an example, the records indicate that tube leak work was performed while normal charge-discharge was governing or the time controlling portion of a given outage. Therefore, one will find the tube leak repair hour requirements in row 1 under secondary function number 5 indicating the leak work was performed during the period when charge-discharge was the outage controlling function. The same distribution pattern will be especially noticeable with regard to associated maintenance time requirements. To determine the amount of time associated with a specific function one should look at the diagonal element for that particular function. For example, tube leak work during tube leak controlling periods will show up on the function row number 5 under secondary function column 5, and so forth.

The number of elements involved in this analysis versus the width of the paper on which to write the information required a slight modification. Therefore, it will be noted that each row is split with regard to the secondary functional relationship. The first fourteen functions are corrective in nature and the remaining are the unavoidable delays required to perform the necessary corrective work. Therefore, each row is broken at this logical point. The corrective first, followed by the associated delays ending with the corresponding tube count.

The third portion of each reactor report is a summary of the corrective time requirements, a summary of the associated delays, followed by the tube count for the period reported.

This report summarizes all the recorded data starting April 1, 1961 to May 15, 1962. This same analysis can be run for any reactor for any incremental period considering any one or combinations of causes for an outage during the above mentioned period. For example, one can get an analysis for B reactor, for the period July 1, 1961 through December 31, 1961 covering the outages for tube leaks and ruptures.

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The last page of the report is a summation of all the hours expended during the period for each of the recovery functions. This summary presents a reasonably good picture of the distribution of the total outage time to the various activities. One can, if he desires, calculate the percentage of time attributed to charge-discharge, rupture removal, mechanical maintenance and so forth. The averages, variance and standard deviation associated with tube count, in this case, are valueless.

Appendix A is an updated analysis which parallels the report HW-57166, but covers the period April 1, 1961 to May 16, 1962.

R. C. Burke

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OPERATIONS RESEARCH & SYNTHESIS

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APRIL 1961 TO MAY 15 1962

REACTOR 1 OUTAGE FUNCTION EXPECTATION REPORT

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION 12 IN TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------------------------|----|----|---|---|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FUNCTION 1 | 30 | 0 | 0 | 2 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 20 | 8 | 18 | 0 | 0 | 0 | 31 |
| FUNCTION 2 | 8 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 5 | 7 | 0 | 0 | 25 |
| FUNCTION 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 |
| FUNCTION 4 | 6 | 0 | 0 | 5 | 0 | 2 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 4 | 0 | 0 | 6 |
| FUNCTION 5 | 21 | 1 | 1 | 0 | 14 | 13 | 1 | 30 | 7 | 0 | 0 | 0 | 0 | 0 | 32 | 33 | 6 | 28 | 0 | 0 | 29 |
| FUNCTION 6 | 3 | 0 | 0 | 0 | 0 | 10 | 0 | 11 | 12 | 0 | 1 | 1 | 0 | 1 | 12 | 12 | 4 | 11 | 1 | 0 | 13 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 0 | 2 | 0 | 0 | 1 |
| FUNCTION 8 | 13 | 0 | 0 | 0 | 2 | 0 | 0 | 44 | 11 | 1 | 0 | 1 | 2 | 0 | 30 | 32 | 8 | 18 | 0 | 0 | 0 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 0 | 0 | 0 |
| FUNCTION 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 |
| FUNCTION 11 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 10 | 1 | 0 | 0 | 3 | 4 | 1 | 2 | 0 | 0 | 0 |
| FUNCTION 12 | 8 | 6 | 0 | 0 | 1 | 2 | 0 | 2 | 1 | 0 | 1 | 5 | 0 | 0 | 6 | 6 | 2 | 5 | 0 | 0 | 6 |
| FUNCTION 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9 | 0 | 9 | 9 | 0 | 3 | 0 | 0 | 0 |
| FUNCTION 14 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 3 | 3 | 0 | 3 | 0 | 0 | 1 |
| FUNCTION 15 | 27 | 3 | 1 | 3 | 8 | 7 | 1 | 11 | 3 | 0 | 2 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 27 | 2 | 0 | 3 | 8 | 7 | 1 | 13 | 3 | 0 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|----|---|---|---|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FUNCTION 18 | 23 | 1 | 1 | 0 | 7 | 5 | 1 | 18 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 19 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 21 | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 2 | 0 | 4 | 0 | 0 | 5 | 5 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| FUNCTION 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| SECONDARY FUNCTION NUMBER | 15 | 16 | 2 | 17 | 3 | 18 | 4 | 19 | 5 | 20 | 6 | 21 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | | | |
|---------------------------|-------|------|------|------|------|------|------|------|------|------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| FUNCTION 1 | | | | | | | | | | | | | | | | | | | | | | | |
| TOT. HOURS DOWN | 273.4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 9.7 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | | |
| INCIDENTS | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | |
| AVERAGE DOWN | 46.4 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 4.8 | -0.0 | -0.0 | -0.0 | -0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | | | | |
| FUNCTION 1 | | | | | | | | | | | | | | | | | | | | | | | |
| TOT. HOURS DOWN | 17.6 | 17.9 | 7.7 | 17.2 | 17.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 | 5576.0 |
| INCIDENTS | 20 | 20 | 1.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 | 180.0 |
| AVERAGE DOWN | 0.9 | 0.9 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 | 37072.0 |
| VARIANCE | 0.3 | 0.4 | 0.7 | 0.7 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | | | | |
| FUNCTION 2 | | | | | | | | | | | | | | | | | | | | | | | |
| TOT. HOURS DOWN | 40.6 | 55.4 | 18 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 6 | 18 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 5.1 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 15.0 | 5.5 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD. DEVIATION | 3.9 | 2.3 | | | | | | | | | | | | | | | | | | | | | |
| FUNCTION 2 | | | | | | | | | | | | | | | | | | | | | | | |
| TOT. HOURS DOWN | 3.4 | 4.2 | 4.2 | 4.2 | 4.2 | 1.9 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 756.0 | 756.0 | 756.0 | 756.0 | 756.0 | 756.0 | 756.0 | 756.0 | 756.0 | 756.0 | 756.0 | |
| INCIDENTS | 11 | 17 | 3 | 3 | 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| AVERAGE DOWN | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | |
| VARIANCE | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | 7454.0 | |
| STD. DEVIATION | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | |
| FUNCTION 3 | | | | | | | | | | | | | | | | | | | | | | | |
| TOT. HOURS DOWN | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| INCIDENTS | 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| AVERAGE DOWN | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| VARIANCE | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | |
| STD. DEVIATION | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| FUNCTION 3 | | | | | | | | | | | | | | | | | | | | | | | |
| TOT. HOURS DOWN | 0.2 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| INCIDENTS | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| AVERAGE DOWN | 0.2 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |

FUNCTION 4
TCT.HOURS DOWN 7.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 7.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DOWN 1.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
VARIANCE 1.5 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
STD.DEVIATION 1.2 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 4
TCT.HOURS DOWN 13.7 12.6 4.5 4.3 4.3 4.3 4.3 4.3 4.3 4.3
INCIDENTS 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3
AVERAGE DOWN 2.3 2.1 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3
VARIANCE 1.2 1.1 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6
STD.DEVIATION 1.1 1.0 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6

FUNCTION 5
TCT.HOURS DOWN 153.1 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5
INCIDENTS 153.1 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5
AVERAGE DOWN 7.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5
VARIANCE 39.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
STD.DEVIATION 4.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 5
TCT.HOURS DOWN 67.5 62.9 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5
INCIDENTS 67.5 62.9 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5
AVERAGE DOWN 2.1 2.5 2.6 2.6 2.6 2.6 2.6 2.6 2.6 2.6
VARIANCE 1.9 3.4 7.2 7.2 7.2 7.2 7.2 7.2 7.2 7.2
STD.DEVIATION 1.4 1.9 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7

FUNCTION 6
TCT.HOURS DOWN 34.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 34.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DOWN 12.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
VARIANCE 30.4 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
STD.DEVIATION 5.5 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 6
TCT.HOURS DOWN 27.3 38.2 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7
INCIDENTS 27.3 38.2 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7
AVERAGE DOWN 2.3 3.2 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7
VARIANCE 0.9 3.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5
STD.DEVIATION 1.0 1.8 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7

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FUNCTION 13
TOT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

5.7
7.0
0.9
0.6
0.3
0.5
1.1
0.0
0.0
0.4
0.1
0.4
0.0
0.0
0.0
0.0
0.0
0.0
0.0

FUNCTION 14
TOT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

28.5
5.5
5.7
124.1
11.1
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0

FUNCTION 14
TOT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

4.6
3.3
1.3
4.4
2.1
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0

FUNCTION 15
TOT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

82.4
27
3.1
2.6
1.7
0.5
0.2
0.2
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0

FUNCTION 15
TOT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0

FUNCTION 14
TOT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

83.0
27
3.1
4.0
2.0
0.5
2
0.2
0.0
0.1
0.5
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0

INCIDENTS
 AVERAGE DOWN 0.0
 VARIANCE -0.0
 STD.DEVIATION -0.0

FUNCTION 17
 TGT.HOURS DOWN 3.9
 INCIDENTS 0.5
 AVERAGE DOWN 0.2
 VARIANCE 0.0
 STD.DEVIATION 0.1

FUNCTION 17
 TGT.HOURS DOWN 0.0
 INCIDENTS 0.0
 AVERAGE DOWN -0.0
 VARIANCE -0.0
 STD.DEVIATION -0.0

FUNCTION 18
 TGT.HOURS DOWN 31.0
 INCIDENTS 23
 AVERAGE DOWN 1.3
 VARIANCE 1.7
 STD.DEVIATION 1.3

FUNCTION 18
 TGT.HOURS DOWN 0.0
 INCIDENTS 0.0
 AVERAGE DOWN -0.0
 VARIANCE -0.0
 STD.DEVIATION -0.0

FUNCTION 19
 TGT.HOURS DOWN 0.0
 INCIDENTS 0.0
 AVERAGE DOWN -0.0
 VARIANCE -0.0
 STD.DEVIATION -0.0

FUNCTION 19
 TGT.HOURS DOWN 0.0
 INCIDENTS 0.0

16.0
 12
 1.1
 1.1
 1.1

7.4
 1.8
 4.0
 2.1

0.0
 0.0
 0.0
 0.0

36.6
 18
 2.9
 8.0
 9.1

0.0
 0.0
 0.0
 0.0

0.0
 0.0
 0.0
 0.0

0.0
 0.0

SUB TOTAL DELINEATION

FUNCTION 1
 SUM#BASIS6SEC#CONCARRIES 284.5
 NUMBER OF INCIDENTS 34
 AVERAGE HOURS REQD. 8.4
 VARIANCE 121.8
 STD. DEVIATION 11.0

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 40.4
 INCIDENTS 34
 AVERAGE 1.8
 VARIANCE 3.4
 STD. DEVIATION 1.8

TOTAL TUBES
 SUM 5578.
 CNT 34
 AVG 164.

FUNCTION 2
 SUM#BASIS6SEC#CONCARRIES 96.2
 NUMBER OF INCIDENTS 26
 AVERAGE HOURS REQD. 3.7
 VARIANCE 23.1
 STD. DEVIATION 4.6

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 14.4
 INCIDENTS 26
 AVERAGE 0.6
 VARIANCE 0.8
 STD. DEVIATION 0.9

TOTAL TUBES
 SUM 756.
 CNT 26
 AVG 29.

FUNCTION 3
 SUM#BASIS6SEC#CONCARRIES 5.8
 NUMBER OF INCIDENTS 2
 AVERAGE HOURS REQD. 2.9
 VARIANCE 22.4
 STD. DEVIATION 4.6

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 0.7
 INCIDENTS 2
 AVERAGE 0.3
 VARIANCE 0.2
 STD. DEVIATION 0.5

TOTAL TUBES
 SUM 2.
 CNT 2
 AVG 1.

FUNCTION 4
 SUM#BASIS6SEC#CONCARRIES 69.2
 NUMBER OF INCIDENTS 9
 AVERAGE HOURS REQD. 7.7
 VARIANCE 102.1
 STD. DEVIATION 10.1

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 35.1
 INCIDENTS 9
 AVERAGE 3.9
 VARIANCE 10.9
 STD. DEVIATION 3.3

TOTAL TUBES
 SUM 6.
 CNT 9
 AVG 1.

FUNCTION 5
 SUM#BASIS6SEC#CONCARRIES 501.7
 NUMBER OF INCIDENTS 34
 AVERAGE HOURS REQD. 14.8
 VARIANCE 102.1
 STD. DEVIATION 10.1

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 205.4
 INCIDENTS 34
 AVERAGE 6.0
 VARIANCE 6.0
 STD. DEVIATION 2.0

TOTAL TUBES
 SUM 71.
 CNT 34
 AVG 2.

FUNCTION 6
SUM BASIC SECONDARIES
NUMBER OF INCIDENTS
AVERAGE HOURS REQD.
VARIANCE
STD. DEVIATION

834.3
13
44.3
1774.9
108.5

ASSOCIATED DELAY TOTALS
SUM OF DELAYS
INCIDENTS
AVERAGE
VARIANCE
STD. DEVIATION

110.2
13
8.5
41.8
4.5

TOTAL TUBES
982
13
76.4

FUNCTION 7
SUM BASIC SECONDARIES
NUMBER OF INCIDENTS
AVERAGE HOURS REQD.
VARIANCE
STD. DEVIATION

43.2
5
8.6
123.1
11.1

ASSOCIATED DELAY TOTALS
SUM OF DELAYS
INCIDENTS
AVERAGE
VARIANCE
STD. DEVIATION

6.9
5
1.3
1.9
1.4

TOTAL TUBES
54
5
1.

FUNCTION 21
SUM BASIC SECONDARIES
NUMBER OF INCIDENTS
AVERAGE HOURS REQD.
VARIANCE
STD. DEVIATION

122.7
9
13.6
426.7
20.7

ASSOCIATED DELAY TOTALS
SUM OF DELAYS
INCIDENTS
AVERAGE
VARIANCE
STD. DEVIATION

16.3
9
1.8
4.0
2.0

TOTAL TUBES
870
9
97.4

APRIL 1961 TO MAY 15 1962

REACTOR 2 OUTAGE FUNCTION EXPECTATION REPORT

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21#TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------------------------|----|----|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FUNCTION 1 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 14 | 7 | 5 | 0 | 0 | 18 |
| FUNCTION 2 | 9 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 17 | 3 | 3 | 0 | 0 | 20 |
| FUNCTION 3 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| FUNCTION 4 | 9 | 0 | 0 | 9 | 0 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 0 | 1 | 0 | 0 | 6 |
| FUNCTION 5 | 12 | 0 | 0 | 0 | 3 | 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 12 | 2 | 3 | 0 | 0 | 6 |
| FUNCTION 6 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 1 | 0 | 0 | 8 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 13 | 4 | 0 | 0 | 2 | 0 | 25 | 28 | 2 | 2 | 1 | 0 | 0 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 12 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 2 | 5 | 0 | 0 | 14 | 15 | 0 | 1 | 1 | 0 | 1 |
| FUNCTION 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 14 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 15 | 20 | 5 | 1 | 4 | 1 | 5 | 0 | 7 | 0 | 0 | 2 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 21 | 6 | 1 | 4 | 1 | 5 | 0 | 9 | 0 | 0 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------------|-------|-------|------|------|------|------|---------|------|------|------|------|------|------|------|
| FUNCTION 1 | | | | | | | | | | | | | | |
| TOT-HOURS DOWN | 254.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 13.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 91.1 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 9.5 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 2 | | | | | | | | | | | | | | |
| TOT-HOURS DOWN | 12.5 | 24.0 | 8.9 | 8.5 | 0.0 | 0.0 | 5020.1 | | | | | | | |
| INCIDENTS | 1.0 | 1.7 | 1.3 | 1.7 | 0.0 | 0.0 | 279.1 | | | | | | | |
| AVERAGE DOWN | 0.22 | 1.0 | 0.5 | 0.7 | -0.0 | -0.0 | 40449.0 | | | | | | | |
| STD.DEVIATION | 0.5 | 1.0 | 0.7 | 0.6 | -0.0 | -0.0 | 322.0 | | | | | | | |
| FUNCTION 3 | | | | | | | | | | | | | | |
| TOT-HOURS DOWN | 95.3 | 116.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 10.6 | 9.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 48.9 | 30.6 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 7.0 | 5.5 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 4 | | | | | | | | | | | | | | |
| TOT-HOURS DOWN | 10.4 | 21.8 | 4.9 | 5.1 | 0.0 | 0.0 | 2543.1 | | | | | | | |
| INCIDENTS | 0.7 | 1.3 | 1.4 | 1.7 | 0.0 | 0.0 | 128.0 | | | | | | | |
| AVERAGE DOWN | 0.1 | 0.6 | 4.4 | 2.4 | -0.0 | -0.0 | 4427.0 | | | | | | | |
| STD.DEVIATION | 0.4 | 0.8 | 2.1 | 1.4 | -0.0 | -0.0 | 67.0 | | | | | | | |
| FUNCTION 5 | | | | | | | | | | | | | | |
| TOT-HOURS DOWN | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 2.3 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 2.3 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | 0.0 | -0.0 | 0.1 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | 0.0 | -0.0 | 0.4 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 6 | | | | | | | | | | | | | | |
| TOT-HOURS DOWN | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | | | | | | | |
| INCIDENTS | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | | | | | | | |
| AVERAGE DOWN | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | | |

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FUNCTION 4
 TOT.HOURS DWN 40.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 4.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 30.1 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE 5.5 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 2.3 19.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 FUNCTION 4
 TOT.HOURS DWN 11 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 1.0 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 2.3 1.9 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE 1.5 1.4 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 1.2 1.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 5
 TOT.HOURS DWN 75.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 12 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 4.2 4.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 32.8 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 5.7 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 5
 TOT.HOURS DWN 24.1 33.3 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 11 12 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 2.2 2.8 3.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD.DEVIATION 0.0 1.7 2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 6
 TOT.HOURS DWN 28.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 9.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 134.7 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE 11.1 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 3.3 11.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 4
 TOT.HOURS DWN 7.5 11.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 4 6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 1.2 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 1.5 3.9 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 1.2 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 4
 TOT.HOURS DWN 20.3 19.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 11 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 1.0 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 2.3 1.9 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 1.5 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 4
 TOT.HOURS DWN 39.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 4.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 47.3 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE 4.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 2.0 1.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 5
 TOT.HOURS DWN 93.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 12 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 7.8 4.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 30.8 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 5.5 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 6
 TOT.HOURS DWN 127.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 18.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DWN 987.1 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE 31.4 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 5.6 143.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

| | | | | | | | | | | | | |
|----------------|-------|------|------|------|-------|------|------|------|-------|------|------|------|
| AVERAGE DOWN | 31.0 | 0.0 | 0.0 | 0.0 | 113.7 | 3.0 | 2.4 | 5.0 | 15.6 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.0 | -0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 10.7 | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 0.0 | -0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 10 | | | | | | | | | | | | |
| TOT.HOURS DOWN | 2.2 | 13.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 1 | 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 2.2 | 13.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 11 | | | | | | | | | | | | |
| TOT.HOURS DOWN | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 1.7 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 1.7 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 11 | | | | | | | | | | | | |
| TOT.HOURS DOWN | 0.9 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 3 | 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 0.3 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 12 | | | | | | | | | | | | |
| TOT.HOURS DOWN | 82.9 | 12.1 | 0.0 | 0.0 | 159.6 | 0.0 | 0.0 | 2.7 | 73.8 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 10 | 5 | 0.0 | 0.0 | 12.3 | 0.0 | 0.0 | 1.3 | 14.8 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 8.3 | 2.4 | 0.0 | 0.0 | 13.2 | 0.0 | 0.0 | 1.3 | 14.8 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 110.7 | 2.4 | -0.0 | -0.0 | 159.6 | -0.0 | -0.0 | 0.2 | 156.9 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 10.5 | 1.5 | -0.0 | -0.0 | 12.5 | -0.0 | -0.0 | 0.5 | 12.5 | -0.0 | -0.0 | -0.0 |
| FUNCTION 12 | | | | | | | | | | | | |
| TOT.HOURS DOWN | 21.0 | 29.4 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 14 | 15 | 0.0 | 0.0 | 7.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 1.5 | 2.0 | 0.0 | 0.0 | 7.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 2.3 | 2.7 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 1.5 | 1.7 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION E1 | | | | | | | | | | | | |
| TOT.HOURS DOWN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.3 | 0.0 | 14.7 | 0.0 |
| INCIDENTS | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 5.5 | 0.0 |
| AVERAGE DOWN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.1 | 0.0 | 2.9 | 0.0 |
| VARIANCE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | 0.0 |
| STD.DEVIATION | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 |

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FUNCTION 13
TGT-HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

1.0 2.7 0.0 0.0 0.0 0.0
0.4 0.5 0.0 0.0 0.0 0.0
0.2 0.1 0.0 0.0 0.0 0.0
0.0 0.3 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 14
TGT-HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

3.2 3.2 0.0 0.0 0.0 0.0
1 1 0.0 0.0 0.0 0.0
0.2 0.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 14
TGT-HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

0.0 1.8 0.0 0.0 0.0 0.0
0.0 1.8 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 15
TGT-HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

79.9 3.1 0.1 0.1 0.0 0.0
20 5 0.1 0.1 0.0 0.0
4.0 0.4 0.1 0.1 0.0 0.0
5.4 0.1 0.0 0.0 0.0 0.0
2.4 0.2 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 15
TGT-HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 16
TGT-HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

123.4 9.7 0.2 0.2 0.0 0.0
121 6 0.2 0.2 0.0 0.0
6.5 1.6 0.2 0.2 0.0 0.0
3.0 0.8 0.0 0.0 0.0 0.0
5.5 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

DECLASSIFIED

INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 17
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 17
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 18
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 18
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 19
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 19
TGT. HOURS DOWN
INCIDENTS

0
0
-0
-0

3.4
1.7
0.7
0.6

0
0
-0
-0

20.5
2.4
4.4
2.5

0
0
-0
-0

0
0
-0
-0

0
0
-0
-0

0
0
-0
-0

4.4
2.2
2.2
2.7

0
0
-0
-0

0.7
0.7
0
0

0
0
-0
-0

0
0
-0
-0

0
0
-0
-0

0
0
-0
-0

15.8
2.0
3.5
1.9

0
0
-0
-0

3.9
1.3
0.8
0.9

0
0
-0
-0

17.0
17.0
0
0

0
0
-0
-0

0
0
-0
-0

2.6
2.6
0
0

0
0
-0
-0

2.5
1.2
2.2
1.5

0
0
-0
-0

0
0
-0
-0

0
0
-0
-0

DECLASSIFIED

STD.DEVIATION

-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 20
TGT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 20
TGT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 21
TGT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

63.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
7.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
15.1 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
3.9 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 21
TGT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

6.9 13.1 2.8 7.4 0.0 1885
10 10 2 7.0 0.0 209
0.7 1.4 7.0 0.0 42070
0.2 0.9 0.7 0.0 209
0.5 1.0 0.8 0.0 0.0

FUNCTION 22
TGT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 22
TGT.HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

••SUB TOTAL DELINEATION••

FUNCTION 1
 SUBBASIS&SECONDARIES
 NUMBER OF INCIDENTS 19
 AVERAGE HOURS REQD. 13.4
 VARIANCE 280.3
 STD. DEVIATION 16.7

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 53.9
 INCIDENTS 19
 AVERAGE 2.8
 VARIANCE 5.1
 STD. DEVIATION 2.3

TOTAL TUBES
 SUM 5020
 CNT 19
 AVG 264.2

FUNCTION 2
 SUBBASIS&SECONDARIES
 NUMBER OF INCIDENTS 22
 AVERAGE HOURS REQD. 9.6
 VARIANCE 133.8
 STD. DEVIATION 11.6

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 42.4
 INCIDENTS 22
 AVERAGE 1.9
 VARIANCE 2.9
 STD. DEVIATION 1.7

TOTAL TUBES
 SUM 2563
 CNT 22
 AVG 117.0

FUNCTION 3
 SUBBASIS&SECONDARIES
 NUMBER OF INCIDENTS 3
 AVERAGE HOURS REQD. 3.3
 VARIANCE 1.9
 STD. DEVIATION 1.4

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 0.3
 INCIDENTS 3
 AVERAGE 0.1
 VARIANCE 0.0
 STD. DEVIATION 0.2

TOTAL TUBES
 SUM 2
 CNT 3
 AVG 1.0

FUNCTION 4
 SUBBASIS&SECONDARIES
 NUMBER OF INCIDENTS 14
 AVERAGE HOURS REQD. 8.9
 VARIANCE 177.7
 STD. DEVIATION 13.3

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 39.9
 INCIDENTS 14
 AVERAGE 2.8
 VARIANCE 6.9
 STD. DEVIATION 2.6

TOTAL TUBES
 SUM 74
 CNT 14
 AVG 5.3

FUNCTION 5
 SUBBASIS&SECONDARIES
 NUMBER OF INCIDENTS 14
 AVERAGE HOURS REQD. 15.9

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 71.1
 INCIDENTS 14
 AVERAGE 5.1

TOTAL TUBES
 SUM 74
 CNT 14
 AVG 5.3

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FUNCTION 6
 SUMBASICSECONDRARIES 168.9
 NUMBER OF INCIDENTS 21.1
 AVERAGE HOURS REQD. 1871.0
 VARIANCE 43.3
 STD. DEVIATION

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 21.7
 INCIDENTS 8
 AVERAGE 2.7
 VARIANCE 14.5
 STD. DEVIATION 3.8

TOTAL TUBES
 SUM 143.8
 CNT 16.4

FUNCTION 7
 SUMBASICSECONDRARIES 0.0
 NUMBER OF INCIDENTS 0.0
 AVERAGE HOURS REQD. -0.0
 VARIANCE -0.0
 STD. DEVIATION

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 0.0
 INCIDENTS 0.0
 AVERAGE 0.0
 VARIANCE -0.0
 STD. DEVIATION -0.0

TOTAL TUBES
 SUM 0.0
 CNT 0.0

FUNCTION 21
 SUMBASICSECONDRARIES 119.1
 NUMBER OF INCIDENTS 10
 AVERAGE HOURS REQD. 11.9
 VARIANCE 227.3
 STD. DEVIATION 15.1

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 30.4
 INCIDENTS 10
 AVERAGE 3.0
 VARIANCE 14.0
 STD. DEVIATION 4.0

TOTAL TUBES
 SUM 1885.0
 CNT 189.0

DECLASSIFIED

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
*ALL DATA IN HOURS--EXCEPT SECONDARY FUNCTION#21(TUBE COUNT).

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------------------------|----|----|---|---|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FUNCTION 1 | 32 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 29 | 9 | 11 | 0 | 0 | 35 |
| FUNCTION 2 | 11 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 18 | 0 | 4 | 0 | 0 | 34 |
| FUNCTION 3 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 0 | 0 | 11 |
| FUNCTION 4 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 9 | 2 | 3 | 0 | 0 | 12 |
| FUNCTION 5 | 13 | 0 | 0 | 0 | 17 | 4 | 0 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 28 | 28 | 10 | 12 | 0 | 0 | 28 |
| FUNCTION 6 | 1 | 0 | 0 | 0 | 0 | 19 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 20 | 20 | 2 | 4 | 0 | 1 | 23 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 6 |
| FUNCTION 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 17 | 7 | 0 | 0 | 3 | 0 | 32 | 33 | 0 | 10 | 0 | 0 | 0 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 0 | 0 | 0 | 0 | 3 |
| FUNCTION 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 11 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 |
| FUNCTION 12 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 | 13 | 0 | 0 | 6 | 6 | 1 | 1 | 0 | 0 | 4 |
| FUNCTION 13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 14 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 5 | 8 | 10 | 0 | 4 | 0 | 0 | 0 |
| FUNCTION 15 | 31 | 7 | 0 | 3 | 13 | 13 | 5 | 13 | 5 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 35 | 7 | 0 | 3 | 13 | 13 | 5 | 13 | 6 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| SECONDARY FUNCTION NUMBER | 15 | 16 | 2 | 3 | 17 | 4 | 18 | 5 | 19 | 6 | 20 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
|------------------------------|-------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| FUNCTION 1 | | | | | | | | | | | | | | | | | | | | |
| TGT.HOURS DWN | 349.3 | 0. | 0. | 0. | 0. | 0. | 0. | 1.7 | 3.7 | 0.1 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 32 | 0. | 0. | 0. | 0. | 0. | 0. | 1.7 | 2 | 0.1 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DQWN | 10.9 | 0. | 0. | 0. | 0. | 0. | 0. | 1.7 | 1.6 | 0.1 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 68.4 | -0. | -0. | -0. | -0. | -0. | -0. | 0. | 2.4 | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD.DEVIATION | 8.3 | -0. | -0. | -0. | -0. | -0. | -0. | 0. | 1.4 | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 1 | | | | | | | | | | | | | | | | | | | | |
| TGT.HOURS DWN | 20.0 | 31.7 | 15.9 | 6.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 27 | 29 | 11 | 11 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DQWN | 0.7 | 1.1 | 1.6 | 0.6 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 0.3 | 0.5 | 1.3 | 0.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD.DEVIATION | 0.5 | 0.7 | 1.1 | 0.6 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 2 | | | | | | | | | | | | | | | | | | | | |
| TGT.HOURS DWN | 36.9 | 53.9 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 11 | 23 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DQWN | 3.4 | 2.3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 0.9 | 2.9 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD.DEVIATION | 0.9 | 1.7 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 2 | | | | | | | | | | | | | | | | | | | | |
| TGT.HOURS DWN | 5.5 | 4.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 16 | 18 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DQWN | 0.3 | 0.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 0.0 | 0.0 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD.DEVIATION | 0.0 | 0.0 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 3 | | | | | | | | | | | | | | | | | | | | |
| TGT.HOURS DWN | 8.9 | 0. | 0. | 3.0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 6 | 0. | 0. | 3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DQWN | 1.5 | 0. | 0. | 1.0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 1.2 | -0. | -0. | 0.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD.DEVIATION | 1.1 | -0. | -0. | 0.6 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 3 | | | | | | | | | | | | | | | | | | | | |
| TGT.HOURS DWN | 0.4 | 0.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 2 | 3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DQWN | 0.2 | 0.2 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

REPRODUCTION

FUNCTION 7
 TGT.HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DGMN -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 7
 TGT.HOURS DWN 0.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DGMN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 8
 TGT.HOURS DWN 32.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DGMN 13.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE 5.7 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 8
 TGT.HOURS DWN 27.4 35.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 32.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DGMN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 9
 TGT.HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DGMN -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 9
 TGT.HOURS DWN 4.5 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.1
 INCIDENTS 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DGMN 0.7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
 VARIANCE 0.3 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1
 STD.DEVIATION 0.6 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1

FUNCTION 10

AVERAGE DGMN
VARIANCE
STD.DEVIATION

0.
-0.
-0.

0.
-0.
-0.

FUNCTION 10
TOT-HOURS DGMN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

0.
0.
0.
-0.
-0.

0.
0.
0.
-0.
-0.

FUNCTION 11
TOT-HOURS DGMN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

12.6
1.6
14.4
4.0

12.6
1.6
14.4
4.0

FUNCTION 11
TOT-HOURS DGMN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

0.5
0.2
0.0
0.1

0.5
0.2
0.0
0.1

FUNCTION 12
TOT-HOURS DGMN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

6.1
2.7
7.7
2.6

6.1
2.7
7.7
2.6

FUNCTION 12
TOT-HOURS DGMN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

1.5
0.2
0.0
0.2

1.5
0.2
0.0
0.2

FUNCTION 13
TOT-HOURS DGMN
INCIDENTS
AVERAGE DGMN

2.4
0.3
0.8

2.4
0.3
0.8

FUNCTION 13
TGT. HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD. DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 14
TGT. HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD. DEVIATION

44.2 0.0 0.0 0.0 0.0 0.0
6.5 0.0 0.0 0.0 0.0 0.0
55.9 -0.0 -0.0 -0.0 -0.0 -0.0
7.3 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 14
TGT. HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD. DEVIATION

0.5 9.5 0.0 0.0 0.0 0.0
0.8 1.0 0.0 0.0 0.0 0.0
0.6 0.9 0.0 0.0 0.0 0.0
0.4 1.0 -0.0 -0.0 -0.0 -0.0
0.6 1.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 15
TGT. HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD. DEVIATION

45.9 1.6 0.0 0.0 0.0 0.0
1.5 0.0 0.0 0.0 0.0 0.0
2.1 0.0 0.0 0.0 0.0 0.0
2.1 0.0 0.0 0.0 0.0 0.0
1.1 0.0 0.0 0.0 0.0 0.0

FUNCTION 15
TGT. HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD. DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 16
TGT. HOURS DWN
INCIDENTS
AVERAGE DWN
VARIANCE
STD. DEVIATION

91.4 2.6 0.0 0.0 0.0 0.0
5.1 0.7 0.0 0.0 0.0 0.0
2.5 0.4 0.0 0.0 0.0 0.0
4.5 0.0 -0.0 -0.0 -0.0 -0.0
2.1 0.1 -0.0 -0.0 -0.0 -0.0

1.2 1.2 0.0 0.0 0.0 0.0
1.2 1.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

2.5 0.0 0.0 0.0 0.0 0.0
2.5 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

3.8 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.7 0.0 0.0 0.0 0.0 0.0
0.6 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

0.2 0.2 0.0 0.0 0.0 0.0
0.2 0.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

0.9 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

0.4 0.4 0.0 0.0 0.0 0.0
0.2 0.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.2 0.2 0.0 0.0 0.0 0.0
0.2 0.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

1.8 1.8 0.0 0.0 0.0 0.0
1.5 1.5 0.0 0.0 0.0 0.0
0.4 0.4 0.0 0.0 0.0 0.0
0.2 0.2 0.0 0.0 0.0 0.0

1.4 2.6 0.0 0.0 0.0 0.0
20.1 1.5 0.0 0.0 0.0 0.0
1.5 2.1 0.0 0.0 0.0 0.0
1.4 1.4 0.0 0.0 0.0 0.0

1.8 2.6 0.0 0.0 0.0 0.0
1.5 1.5 0.0 0.0 0.0 0.0
0.4 0.4 0.0 0.0 0.0 0.0
0.2 0.2 0.0 0.0 0.0 0.0

3.1 3.1 0.0 0.0 0.0 0.0
3.0 3.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

1.2 1.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

5.7 5.7 0.0 0.0 0.0 0.0
0.9 0.9 0.0 0.0 0.0 0.0
1.2 1.2 0.0 0.0 0.0 0.0
1.1 1.1 0.0 0.0 0.0 0.0

10.6 10.6 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

20.1 20.1 0.0 0.0 0.0 0.0
1.5 1.5 0.0 0.0 0.0 0.0
2.1 2.1 0.0 0.0 0.0 0.0
1.4 1.4 0.0 0.0 0.0 0.0

1.4 1.4 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

2.6 2.6 0.0 0.0 0.0 0.0
0.4 0.4 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.1 0.1 -0.0 -0.0 -0.0 -0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

3.1 3.1 0.0 0.0 0.0 0.0
3.0 3.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

DECLASSIFIED

SUB TOTAL DELINEATION

FUNCTION 1
 SUM BASIC SECONDARIES 351.0
 NUMBER OF INCIDENTS 35
 AVERAGE HOURS REQD. 10.1
 VARIANCE 179.2
 STD. DEVIATION 13.2

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 16.2
 INCIDENTS 35
 AVERAGE 2.4
 VARIANCE 4.4
 STD. DEVIATION 2.1

TOTAL TUBES
 SUM 407.2
 CNT 35
 AVG 13.3

FUNCTION 2
 SUM BASIC SECONDARIES 90.6
 NUMBER OF INCIDENTS 24
 AVERAGE HOURS REQD. 2.7
 VARIANCE 9.6
 STD. DEVIATION 3.1

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 14.4
 INCIDENTS 24
 AVERAGE 0.4
 VARIANCE 0.3
 STD. DEVIATION 0.5

TOTAL TUBES
 SUM 750.2
 CNT 24
 AVG 22.9

FUNCTION 3
 SUM BASIC SECONDARIES 15.3
 NUMBER OF INCIDENTS 11
 AVERAGE HOURS REQD. 1.4
 VARIANCE 4.2
 STD. DEVIATION 2.1

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 1.9
 INCIDENTS 11
 AVERAGE 0.2
 VARIANCE 0.1
 STD. DEVIATION 0.3

TOTAL TUBES
 SUM 807.2
 CNT 11
 AVG 5.9

FUNCTION 4
 SUM BASIC SECONDARIES 94.6
 NUMBER OF INCIDENTS 13
 AVERAGE HOURS REQD. 7.4
 VARIANCE 149.0
 STD. DEVIATION 12.2

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 29.4
 INCIDENTS 13
 AVERAGE 2.3
 VARIANCE 6.3
 STD. DEVIATION 2.4

TOTAL TUBES
 SUM 127.2
 CNT 13
 AVG 1.1

FUNCTION 5
 SUM BASIC SECONDARIES 446.0
 NUMBER OF INCIDENTS 29
 AVERAGE HOURS REQD. 15.4

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 109.0
 INCIDENTS 29
 AVERAGE 3.8

TOTAL TUBES
 SUM 707.2
 CNT 29
 AVG 2.4

FUNCTION 4
 SUBBASISSECONDIARIES
 NUMBER OF INCIDENTS 702.8
 AVERAGE HOURS REQD. 30.4
 VARIANCE 3876.4
 STD. DEVIATION 62.2

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 94.0
 INCIDENTS 23
 AVERAGE 4.1
 VARIANCE 50.0
 STD. DEVIATION 7.1

TOTAL TUBES
 878
 23
 58.

FUNCTION 7
 SUBBASISSECONDIARIES
 NUMBER OF INCIDENTS 26.9
 AVERAGE HOURS REQD. 2.9
 VARIANCE 12.7
 STD. DEVIATION 3.5

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 2.6
 INCIDENTS 0.3
 AVERAGE 0.1
 VARIANCE 0.1
 STD. DEVIATION 0.3

TOTAL TUBES
 14
 2.3

FUNCTION 21
 SUBBASISSECONDIARIES
 NUMBER OF INCIDENTS 89.2
 AVERAGE HOURS REQD. 5.4
 VARIANCE 47.0
 STD. DEVIATION 6.9

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 6.8
 INCIDENTS 14
 AVERAGE 0.4
 VARIANCE 0.6
 STD. DEVIATION 0.8

TOTAL TUBES
 819
 14
 51.

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21#TUBE COUNT.

INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------------------------|----|----|---|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FUNCTION 1 | 31 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 20 | 23 | 10 | 15 | 0 | 0 | 34 |
| FUNCTION 2 | 11 | 19 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 26 | 5 | 13 | 0 | 0 | 32 |
| FUNCTION 3 | 7 | 0 | 8 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 10 | 3 | 4 | 0 | 0 | 16 |
| FUNCTION 4 | 11 | 2 | 0 | 11 | 0 | 4 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 14 | 14 | 3 | 12 | 0 | 0 | 15 |
| FUNCTION 5 | 18 | 1 | 0 | 0 | 16 | 7 | 2 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 23 | 24 | 4 | 15 | 0 | 0 | 14 |
| FUNCTION 6 | 13 | 7 | 1 | 0 | 1 | 14 | 0 | 11 | 1 | 0 | 0 | 2 | 0 | 0 | 16 | 17 | 5 | 10 | 0 | 0 | 17 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 1 | 0 | 0 | 1 |
| FUNCTION 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 11 | 2 | 0 | 1 | 1 | 0 | 29 | 33 | 4 | 12 | 0 | 0 | 0 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 2 | 0 | 0 | 0 |
| FUNCTION 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 4 | 6 | 0 | 4 | 0 | 0 | 0 |
| FUNCTION 12 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 7 | 1 | 0 | 10 | 10 | 1 | 5 | 0 | 0 | 2 |
| FUNCTION 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 14 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 11 | 10 | 9 | 4 | 2 | 0 | 0 | 1 |
| FUNCTION 15 | 24 | 13 | 3 | 8 | 10 | 11 | 4 | 14 | 1 | 1 | 5 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 26 | 13 | 3 | 8 | 11 | 11 | 5 | 16 | 2 | 1 | 6 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| SECNGARY FUNCTION NUMBER | 15 | 16 | 2 | 17 | 3 | 18 | 4 | 19 | 5 | 20 | 6 | 21 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-----------------------------|-------|------|------|------|-----|-----|-----|-----|-----|------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| FUNCTION 1 | | | | | | | | | | | | | | | | | | | | |
| TCT-HOURS DWN | 214.2 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0.5 | 13.0 | 0. | 0. | 0. | 0. | 0. | 0. | 0.9 | 0. | 0.3 | 0. |
| INCIDENTS | 31 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0.5 | 2.2 | 0. | 0. | 0. | 0. | 0. | 0. | 0.9 | 0. | 0.3 | 0. |
| AVERAGE DCHN | 4.9 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0.5 | 1.8 | 0. | 0. | 0. | 0. | 0. | 0. | 0.9 | 0. | 0.3 | 0. |
| VARIANCE | 63.7 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 0. | 1.8 | -0. | -0. | -0. | -0. | -0. | -0. | 0. | -0. | 0. | -0. |
| STO.DEVIATION | 8.0 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 0. | 1.4 | -0. | -0. | -0. | -0. | -0. | -0. | 0. | -0. | 0. | -0. |
| FUNCTION 2 | | | | | | | | | | | | | | | | | | | | |
| TCT-HOURS DWN | 14.0 | 23.8 | 11.0 | 7.0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 4507. | | | | | | | | |
| INCIDENTS | 20 | 23 | 10 | 15 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 34 | | | | | | | | |
| AVERAGE DCHN | 0.7 | 1.0 | 1.1 | 0.9 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 134. | | | | | | | | |
| VARIANCE | 0.3 | 0.4 | 1.1 | 0.3 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 5915. | | | | | | | | |
| STO.DEVIATION | 0.5 | 0.6 | 1.0 | 0.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 243. | | | | | | | | |
| FUNCTION 3 | | | | | | | | | | | | | | | | | | | | |
| TCT-HOURS DWN | 80.1 | 17.1 | 0. | 11.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 17.9 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 11 | 19 | 0. | 1 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DCHN | 7.3 | 4.1 | 0. | 11.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 4.5 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 23.1 | 4.4 | -0. | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 3.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STO.DEVIATION | 4.8 | 2.1 | -0. | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 1.8 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 4 | | | | | | | | | | | | | | | | | | | | |
| TCT-HOURS DWN | 14.2 | 21.3 | 5.3 | 7.7 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1409. | | | | | | | | |
| INCIDENTS | 24 | 26 | 9 | 13 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 32 | | | | | | | | |
| AVERAGE DCHN | 0.6 | 0.8 | 1.1 | 0.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 44. | | | | | | | | |
| VARIANCE | 0.2 | 0.5 | 0.4 | 0.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 1402. | | | | | | | | |
| STO.DEVIATION | 0.5 | 0.7 | 0.4 | 0.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 37. | | | | | | | | |
| FUNCTION 5 | | | | | | | | | | | | | | | | | | | | |
| TCT-HOURS DWN | 20.5 | 0. | 0. | 26.0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1.5 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 7 | 0. | 0. | 8 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DCHN | 2.9 | 0. | 0. | 3.3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1.5 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 8.4 | -0. | -0. | 10.1 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STO.DEVIATION | 2.9 | -0. | -0. | 3.2 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 6 | | | | | | | | | | | | | | | | | | | | |
| TCT-HOURS DWN | 4.4 | 6.4 | 3.3 | 1.2 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 216. | | | | | | | | |
| INCIDENTS | 9 | 10 | 3 | 4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 16 | | | | | | | | |
| AVERAGE DCHN | 0.5 | 0.6 | 1.1 | 0.3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 14. | | | | | | | | |

DECLASSIFIED

| | | | | | | | | | | | | | |
|---------------|------|------|------|------|-------|-------|------|-------|------|------|------|------|-------|
| FUNCTION 4 | 18.0 | 1.3 | 0.0 | 39.5 | 0.0 | 15.6 | 1.7 | 40.5 | 0.0 | 0.0 | 0.0 | 0.0 | 237.8 |
| TOT.HOURS DWN | 11 | 0.6 | 0.0 | 5.0 | 0.0 | 3.9 | 7.7 | 5.1 | 0.0 | 0.0 | 0.0 | 0.0 | 237.8 |
| INCIDENTS | 3.3 | 0.2 | -0.0 | 4.0 | -0.0 | 2.3 | 0.0 | 18.4 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| AVERAGE DQWN | 1.6 | 0.3 | -0.0 | 2.0 | -0.0 | 1.3 | 0.0 | 4.3 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | | | | | | | | | | | | | |
| STD.DEVIATION | | | | | | | | | | | | | |
| FUNCTION 4 | 24.3 | 20.2 | 1.8 | 7.9 | 0.0 | 0.0 | 14.0 | 54.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS DWN | 16 | 14 | 0.0 | 12 | 0.0 | 0.0 | 15 | 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 1.5 | 1.4 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DQWN | 2.0 | 1.1 | 0.0 | 0.3 | -0.0 | -0.0 | 0.0 | 2.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 1.4 | 1.0 | 0.0 | 0.3 | -0.0 | -0.0 | 0.0 | 2.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| STD.DEVIATION | | | | | | | | | | | | | |
| FUNCTION 5 | 43.4 | 0.2 | 0.0 | 0.0 | 116.7 | 21.7 | 10.0 | 54.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS DWN | 18 | 0.2 | 0.0 | 0.0 | 16 | 3.1 | 3.0 | 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 3.5 | 0.2 | 0.0 | 0.0 | 3.5 | 4.8 | 19.2 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DQWN | 6.1 | 0.0 | -0.0 | -0.0 | 24.2 | 2.2 | 4.4 | 2.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 2.6 | 0.0 | -0.0 | -0.0 | 4.9 | 0.0 | 1.4 | 2.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| STD.DEVIATION | | | | | | | | | | | | | |
| FUNCTION 5 | 22.5 | 23.5 | 9.0 | 9.9 | 0.0 | 0.0 | 26.0 | 26.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS DWN | 23 | 24 | 0.0 | 15 | 0.0 | 0.0 | 14 | 14 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 1.0 | 1.0 | 1.0 | 0.3 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DQWN | 0.3 | 0.2 | 2.0 | 0.3 | -0.0 | -0.0 | 1.5 | 1.5 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 0.4 | 0.3 | 1.7 | 0.3 | -0.0 | -0.0 | 1.0 | 1.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| STD.DEVIATION | | | | | | | | | | | | | |
| FUNCTION 6 | 46.0 | 19.7 | 1.5 | 0.0 | 1.0 | 113.1 | 0.0 | 566.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS DWN | 13 | 7 | 1.5 | 0.0 | 1.0 | 16 | 0.0 | 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 3.5 | 2.2 | 1.5 | 0.0 | 1.0 | 7.0 | 0.0 | 51.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DQWN | 9.7 | 3.5 | 0.0 | -0.0 | 0.0 | 101.5 | -0.0 | 487.5 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 1.5 | 0.1 | 0.0 | -0.0 | 0.0 | 10.1 | -0.0 | 70.9 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| STD.DEVIATION | | | | | | | | | | | | | |
| FUNCTION 6 | 31.7 | 35.5 | 7.3 | 21.1 | 0.0 | 0.0 | 54.0 | 54.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS DWN | 16 | 17 | 5.5 | 10 | 0.0 | 0.0 | 17 | 17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 2.0 | 2.1 | 1.5 | 2.1 | 0.0 | 0.0 | 3.5 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DQWN | 3.0 | 4.1 | 1.1 | 5.8 | -0.0 | -0.0 | 34.5 | 34.5 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 1.6 | 2.0 | 1.1 | 2.4 | -0.0 | -0.0 | 6.5 | 6.5 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| STD.DEVIATION | | | | | | | | | | | | | |

FUNCTION 7
TGT-HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DWN -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 7
TGT-HOURS DWN 2.2 2.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 0.4 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
VARIANCE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 8
TGT-HOURS DWN 3.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DWN 3.6 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
VARIANCE 1.9 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
STD.DEVIATION 26.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 29 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DWN 0.9 1.4 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9
VARIANCE 0.4 4.0 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4
STD.DEVIATION 0.6 2.4 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6

FUNCTION 8
TGT-HOURS DWN 26.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 29 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DWN 0.9 1.4 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9
VARIANCE 0.4 4.0 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4
STD.DEVIATION 0.6 2.4 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6

FUNCTION 9
TGT-HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DWN -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
STD.DEVIATION 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 9
TGT-HOURS DWN 0.5 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
INCIDENTS 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
AVERAGE DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
VARIANCE 0.1 0.1 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
STD.DEVIATION 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 10

DECLASSIFIED

AVERAGE DOWN 0.0
 VARIANCE -0.0
 STD.DEVIATION -0.0

FUNCTION 10
 TGT-HOURS DOWN 0.1
 INCIDENTS 0.1
 AVERAGE DOWN 0.0
 VARIANCE -0.0
 STD.DEVIATION -0.0

FUNCTION 11
 TGT-HOURS DOWN 1.4
 INCIDENTS 2
 AVERAGE DOWN 0.7
 VARIANCE 0.3
 STD.DEVIATION 0.6

FUNCTION 11
 TGT-HOURS DOWN 1.0
 INCIDENTS 4
 AVERAGE DOWN 0.2
 VARIANCE 0.7
 STD.DEVIATION 0.9

FUNCTION 12
 TGT-HOURS DOWN 2.9
 INCIDENTS 1.4
 AVERAGE DOWN 2.2
 VARIANCE 1.5

FUNCTION 12
 TGT-HOURS DOWN 7.5
 INCIDENTS 10
 AVERAGE DOWN 0.7
 VARIANCE 1.0
 STD.DEVIATION 1.0

FUNCTION 13
 TGT-HOURS DOWN 0.0
 INCIDENTS 0.0
 AVERAGE DOWN 0.0

1.3
 -0.0
 -0.0

0.0
 -0.0
 -0.0

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FUNCTION 13
TGT. HOURS DWN
INCIDENTS
AVERAGE DQHR
VARIANCE
STD. DEVIATION

2.7 2.3 0.0 0.0 0.0 0.0
0.4 0.6 0.0 0.0 0.0 0.0
0.0 0.1 -0.0 -0.0 -0.0 -0.0
0.2 0.2 -0.0 -0.0 -0.0 -0.0

FUNCTION 14
TGT. HOURS DWN
INCIDENTS
AVERAGE DQHR
VARIANCE
STD. DEVIATION

50.4 0.0 0.0 0.0 0.0 0.0
5 0.0 0.0 0.0 0.0 0.0
10.1 0.0 0.0 0.0 0.0 0.0
140.5 -0.0 -0.0 -0.0 -0.0 -0.0
11.9 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 14
TGT. HOURS DWN
INCIDENTS
AVERAGE DQHR
VARIANCE
STD. DEVIATION

31.0 6.0 2.3 0.0 0.0 0.0
10 4 1.1 0.0 0.0 0.0
3.1 0.7 1.1 0.0 0.0 0.0
71.2 0.4 0.6 0.0 0.0 0.0
8.4 0.6 1.2 0.0 0.0 0.0

FUNCTION 15
TGT. HOURS DWN
INCIDENTS
AVERAGE DQHR
VARIANCE
STD. DEVIATION

79.7 7.0 1.4 9.2 12.6 2.2
24 13 3 10 11 6
3.3 0.5 0.5 0.9 1.1 0.4
10.0 0.2 0.1 0.3 0.9 0.2
3.2 0.4 0.4 0.5 0.9 0.2

FUNCTION 15
TGT. HOURS DWN
INCIDENTS
AVERAGE DQHR
VARIANCE
STD. DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 16
TGT. HOURS DWN
INCIDENTS
AVERAGE DQHR
VARIANCE
STD. DEVIATION

95.8 9.4 2.1 11.2 14.4 2.2
24 11 11 11 11 5
2.7 0.7 1.0 1.0 1.3 0.4
23.3 0.5 1.3 1.3 1.0 0.4
4.4 0.7 1.1 0.6 1.0 0.4

36.1
11
3.5
65.8
6.1

9.6
4.8
2.2
0.0
-0.0
-0.0

0.0
0.0
-0.0
-0.0
-0.0
-0.0

3.4 0.0 0.0 0.0 0.0
3.4 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0

2.3 0.0 0.0 0.0 0.0
1.1 0.0 0.0 0.0 0.0
0.6 0.0 0.0 0.0 0.0
0.9 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0

0.4
0.2
0.0

0.9
0.4
0.0
0.0

0.1
0.1
0.0
0.0

0.2 0.2 0.0 0.0
0.2 0.2 0.0 0.0
0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0

12.6 11 1.1 0.9 0.9
9.2 10 0.9 0.3 0.5
0.9 1.1 1.1 0.9 0.9
0.3 0.3 0.3 0.3 0.3

0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0

0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0

0.5
0.2
0.0
0.2

1.9
0.9
0.0
0.0

0.1
0.1
0.0
0.0

0.3 0.1 0.0 0.1
0.3 0.1 0.0 0.1
0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0

2.2 1.4 1.1 1.3 1.0
11.2 11 1.0 0.6 0.6
1.0 1.3 1.0 1.0 1.0
0.4 0.4 0.4 0.4 0.4

14.2 1.8 1.6 1.3 1.1
1.8 1.6 1.3 1.0 1.0
1.3 1.3 1.0 1.0 1.0
1.1 1.1 1.1 1.1 1.1

9.4 0.7 1.0 0.5 0.7
0.7 0.7 0.5 0.5 0.7
0.5 0.5 0.5 0.5 0.5
0.7 0.7 0.7 0.7 0.7

DECLASSIFIED

INCIDENTS
 AVERAGE DOWN 0.0
 VARIANCE -0.0
 STD.DEVIATION -0.0

FUNCTION 17
 TGT.HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD.DEVIATION

4.1
 2.1
 1.9
 1.5
 6.6
 4.3
 0.0
 22.4
 0.9
 3.2
 0.0
 0.0
 0.7

FUNCTION 17
 TGT.HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD.DEVIATION

0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 22.4
 0.9
 3.2
 0.0
 0.0
 0.0

FUNCTION 18
 TGT.HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD.DEVIATION

20.1
 5.2
 0.5
 3.7
 5.8
 4.7
 0.0
 22.3
 0.4
 0.0
 0.0
 0.0
 0.0

FUNCTION 18
 TGT.HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD.DEVIATION

0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 22.3
 0.4
 0.0
 0.0
 0.0
 0.0

FUNCTION 19
 TGT.HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD.DEVIATION

0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0

FUNCTION 19
 TGT.HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD.DEVIATION

0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0
 0.0

SUB TOTAL DELINEATION

| | | | |
|------------------------|-------|-------------------------|-------------|
| FUNCTION 1 | 228.9 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM#BASIS6SECCONCARIES | 34 | SUM OF DELAYS | 4567 |
| NUMBER OF INCIDENTS | 6.7 | INCIDENTS | 34 |
| AVERAGE HOURS REQD. | 105.4 | AVERAGE | 134. |
| VARIANCE | 10.3 | VARIANCE | |
| STD. DEVIATION | | STD. DEVIATION | |

| | | | |
|------------------------|-------|-------------------------|-------------|
| FUNCTION 2 | 184.7 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM#BASIS6SECCONCARIES | 32 | SUM OF DELAYS | 1409 |
| NUMBER OF INCIDENTS | 5.8 | INCIDENTS | 32 |
| AVERAGE HOURS REQD. | 50.4 | AVERAGE | 44. |
| VARIANCE | 7.1 | VARIANCE | |
| STD. DEVIATION | | STD. DEVIATION | |

| | | | |
|------------------------|------|-------------------------|-------------|
| FUNCTION 3 | 57.1 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM#BASIS6SECCONCARIES | 19 | SUM OF DELAYS | 216 |
| NUMBER OF INCIDENTS | 3.0 | INCIDENTS | 19 |
| AVERAGE HOURS REQD. | 17.0 | AVERAGE | 11. |
| VARIANCE | 4.1 | VARIANCE | |
| STD. DEVIATION | | STD. DEVIATION | |

| | | | |
|------------------------|--------|-------------------------|-------------|
| FUNCTION 4 | 360.4 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM#BASIS6SECCONCARIES | 20 | SUM OF DELAYS | 16 |
| NUMBER OF INCIDENTS | 18.0 | INCIDENTS | 20 |
| AVERAGE HOURS REQD. | 3039.3 | AVERAGE | 1. |
| VARIANCE | 55.1 | VARIANCE | |
| STD. DEVIATION | | STD. DEVIATION | |

| | | | |
|------------------------|-------|-------------------------|-------------|
| FUNCTION 5 | 167.8 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM#BASIS6SECCONCARIES | 27 | SUM OF DELAYS | 26 |
| NUMBER OF INCIDENTS | 9.9 | INCIDENTS | 27 |
| AVERAGE HOURS REQD. | 1.1 | AVERAGE | 1. |
| VARIANCE | | VARIANCE | |
| STD. DEVIATION | | STD. DEVIATION | |

FUNCTION 4
 SUBBASIS66SECONCARIES
 NUMBER OF INCIDENTS 19
 AVERAGE HOURS REQD. 39.9
 VARIANCE 6196.9
 STD. DEVIATION 78.7

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 45.4
 INCIDENTS 19
 AVERAGE 5.0
 VARIANCE 26.4
 STD. DEVIATION 5.1

TOTAL TUBES
 SUM 560
 CNT 29

FUNCTION 7
 SUBBASIS66SECONCARIES
 NUMBER OF INCIDENTS 17
 AVERAGE HOURS REQD. 54.2
 VARIANCE 7.4
 STD. DEVIATION 2.7

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 4.7
 INCIDENTS 17
 AVERAGE 0.7
 VARIANCE 0.4
 STD. DEVIATION 0.6

TOTAL TUBES
 SUM 17
 CNT 0

FUNCTION 21
 SUBBASIS66SECONCARIES
 NUMBER OF INCIDENTS 14
 AVERAGE HOURS REQD. 77.6
 VARIANCE 6.8
 STD. DEVIATION 2.6

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 23.2
 INCIDENTS 14
 AVERAGE 1.7
 VARIANCE 3.0
 STD. DEVIATION 1.7

TOTAL TUBES
 SUM 1796
 CNT 128

REACTOR 5 OUTAGE FUNCTION EXPECTATION REPORT APRIL 1961 TO MAY 15 1962

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THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
*ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21#TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------------------------|----|----|----|---|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FUNCTION 1 | 31 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 23 | 1 | 0 | 0 | 0 | 30 |
| FUNCTION 2 | 9 | 15 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 | 0 | 0 | 0 | 0 | 24 |
| FUNCTION 3 | 2 | 0 | .5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 5 |
| FUNCTION 4 | 4 | 0 | 0 | 7 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 6 | 0 | 0 | 0 | 0 | 5 |
| FUNCTION 5 | 14 | 2 | 0 | 0 | 17 | 2 | 0 | 21 | 3 | 0 | 1 | 0 | 0 | 0 | 24 | 24 | 3 | 0 | 0 | 0 | 18 |
| FUNCTION 6 | 12 | 1 | 0 | 0 | 0 | 10 | 0 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 16 | 15 | 1 | 5 | 0 | 0 | 14 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 3 |
| FUNCTION 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 10 | 0 | 0 | 0 | 2 | 0 | 34 | 35 | 1 | 4 | 0 | 0 | 0 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 1 | 0 | 0 | 0 | 0 |
| FUNCTION 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 |
| FUNCTION 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 1 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 12 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 1 |
| FUNCTION 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| FUNCTION 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 15 | 21 | 7 | 1 | 4 | 11 | 10 | 3 | 21 | 10 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 23 | 8 | 1 | 3 | 10 | 11 | 3 | 19 | 9 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| FUNCTION 18 | 5 | 0 | 0 | 0 | 4 | 2 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 21 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 10 |
| FUNCTION 22 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| SECONDARY FUNCTION NUMBER | 15 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------------|-------|------|------|------|------|------|------|---------|------|------|------|------|------|------|------|
| FUNCTION 1 | | | | | | | | | | | | | | | |
| TGT-HOURS DOWN | 238.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 51 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 7.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 48.7 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 7.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 1 | | | | | | | | | | | | | | | |
| TGT-HOURS DOWN | 13.0 | 20.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5271.0 | | | | | | | |
| INCIDENTS | 25 | 23 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30 | | | | | | | |
| AVERAGE DOWN | 0.4 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 176.0 | | | | | | | |
| VARIANCE | 0.2 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 36881.0 | | | | | | | |
| STD.DEVIATION | 0.5 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 192.0 | | | | | | | |
| FUNCTION 2 | | | | | | | | | | | | | | | |
| TGT-HOURS DOWN | 37.9 | 54.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 9 | 15 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 4.2 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 7.2 | 8.1 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 2.7 | 2.8 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 2 | | | | | | | | | | | | | | | |
| TGT-HOURS DOWN | 4.4 | 4.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 724.0 | | | | | | | |
| INCIDENTS | 17 | 17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24 | | | | | | | |
| AVERAGE DOWN | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | | | | | | | |
| VARIANCE | 0.0 | 0.1 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 554.0 | | | | | | | |
| STD.DEVIATION | 0.0 | 0.3 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 24.0 | | | | | | | |
| FUNCTION 3 | | | | | | | | | | | | | | | |
| TGT-HOURS DOWN | 2.7 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 3 | 0.0 | 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE DOWN | 1.3 | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.2 | -0.0 | 0.9 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 0.5 | -0.0 | 1.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 3 | | | | | | | | | | | | | | | |
| TGT-HOURS DOWN | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.5 | | | | | | | |
| INCIDENTS | 1 | 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2 | | | | | | | |
| AVERAGE DOWN | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.25 | | | | | | | |

FUNCTION 13
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

0.2 0.2 1.1 0.0 0.0 0.0
1 1 1 0 0 0
0.2 0.2 1.1 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 14
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

20.9 0.0 0.0 0.0 0.0 0.0
2 2 0 0 0 0
10.4 0.0 0.0 0.0 0.0 0.0
10.1 0.0 0.0 0.0 0.0 0.0
3.2 0.0 0.0 0.0 0.0 0.0

FUNCTION 14
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

0.8 0.4 0.0 0.0 0.0 0.0
E 2 0 0 0 0
0.3 0.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.2 0.1 0.0 0.0 0.0 0.0

FUNCTION 15
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

34.6 2.6 0.3 14.2 7.9 1.0
21 7 1 11 10 3
1.6 0.4 0.1 1.9 0.8 0.3
2.1 0.0 0.0 0.9 0.2 0.0
1.5 0.2 0.0 0.7 0.3 0.0

FUNCTION 15
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0
0 0 0 0 0 0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 16
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

41.0 4.3 0.3 19.1 13.4 1.4
23 8 1 11 11 1
1.8 0.5 0.1 1.9 1.2 0.5
2.4 0.2 0.0 3.0 1.0 0.2
1.4 0.4 0.0 1.7 1.0 0.0

3.2 9.4 0.0 0.0 0.0 0.0
1 1 0 0 0 0
3.2 3.2 0.0 0.0 0.0 0.0
0.0 12.2 0.0 0.0 0.0 0.0

0.3 0.0 1.3 0.2 0.1 0.0
1 0 1 1 1 0
0.3 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

0.3 0.0 1.3 0.8 0.3 0.0
1 0 1 1 1 0
0.3 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD. DEVIATION

0
 0
 0
 0

FUNCTION 17
 TGT. HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD. DEVIATION

0.4
 0.4
 0
 0
 0

FUNCTION 17
 TGT. HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD. DEVIATION

0
 0
 0
 0
 0

FUNCTION 18
 TGT. HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD. DEVIATION

13.4
 2.7
 18.4
 4.3

FUNCTION 18
 TGT. HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD. DEVIATION

0
 0
 0
 0

FUNCTION 19
 TGT. HOURS DOWN
 INCIDENTS
 AVERAGE DOWN
 VARIANCE
 STD. DEVIATION

0
 0
 0
 0

FUNCTION 19
 TGT. HOURS DOWN
 INCIDENTS

0
 0
 0
 0

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SUB TOTAL DELINEATION

| | | | | | | | | | | | | | | |
|---------------------|-------|---|------|------|--|--|--|--|--|--|--|--|--|--|
| FUNCTION 1 | | | | | | | | | | | | | | |
| SUM#BASISSEC | 239 | 1 | 42.6 | 5271 | | | | | | | | | | |
| NUMBER OF INCIDENTS | 31 | | | CNT | | | | | | | | | | |
| AVERAGE HOURS REQD. | 7.7 | | 1.4 | AVG | | | | | | | | | | |
| VARIANCE | 110.1 | | 2.3 | | | | | | | | | | | |
| STD. DEVIATION | 10.5 | | 1.5 | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---------------------|------|---|------|-----|--|--|--|--|--|--|--|--|--|--|
| FUNCTION 2 | | | | | | | | | | | | | | |
| SUM#BASISSEC | 94 | 6 | 11.2 | 724 | | | | | | | | | | |
| NUMBER OF INCIDENTS | 25 | | | CNT | | | | | | | | | | |
| AVERAGE HOURS REQD. | 3.9 | | 0.4 | AVG | | | | | | | | | | |
| VARIANCE | 21.3 | | 0.2 | | | | | | | | | | | |
| STD. DEVIATION | 4.6 | | 0.5 | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---------------------|-----|---|-----|-----|--|--|--|--|--|--|--|--|--|--|
| FUNCTION 3 | | | | | | | | | | | | | | |
| SUM#BASISSEC | 12 | 3 | 0.8 | 10 | | | | | | | | | | |
| NUMBER OF INCIDENTS | 7 | | | CNT | | | | | | | | | | |
| AVERAGE HOURS REQD. | 1.8 | | 0.1 | AVG | | | | | | | | | | |
| VARIANCE | 5.2 | | 0.1 | | | | | | | | | | | |
| STD. DEVIATION | 2.3 | | 0.2 | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---------------------|-------|---|------|-----|--|--|--|--|--|--|--|--|--|--|
| FUNCTION 4 | | | | | | | | | | | | | | |
| SUM#BASISSEC | 81 | 0 | 10.2 | 5 | | | | | | | | | | |
| NUMBER OF INCIDENTS | 8 | | | CNT | | | | | | | | | | |
| AVERAGE HOURS REQD. | 10.1 | | 1.3 | AVG | | | | | | | | | | |
| VARIANCE | 308.1 | | 1.9 | | | | | | | | | | | |
| STD. DEVIATION | 17.6 | | 1.4 | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---------------------|------|---|------|-----|--|--|--|--|--|--|--|--|--|--|
| FUNCTION 5 | | | | | | | | | | | | | | |
| SUM#BASISSEC | 357 | 1 | 86.2 | 90 | | | | | | | | | | |
| NUMBER OF INCIDENTS | 25 | | | CNT | | | | | | | | | | |
| AVERAGE HOURS REQD. | 14.3 | | 3.4 | AVG | | | | | | | | | | |
| VARIANCE | 101 | | 3.4 | | | | | | | | | | | |

FUNCTION 4
 SUM BASIC SECONDARIES 503.3
 NUMBER OF INCIDENTS 18
 AVERAGE HOURS REQ. 28.0
 VARIANCE 3131.4
 STD. DEVIATION 56.0

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 43.7
 INCIDENTS 18
 AVERAGE 2.4
 VARIANCE 7.7
 STD. DEVIATION 2.8

TOTAL TUBES
 599
 18
 33%

FUNCTION 7
 SUM BASIC SECONDARIES 22.4
 NUMBER OF INCIDENTS 5.4
 AVERAGE HOURS REQ. 57.8
 VARIANCE 7.4
 STD. DEVIATION 2.7

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 2.0
 INCIDENTS 4
 AVERAGE 0.5
 VARIANCE 0.2
 STD. DEVIATION 0.4

TOTAL TUBES
 12
 4
 33%

FUNCTION 21
 SUM BASIC SECONDARIES 79.5
 NUMBER OF INCIDENTS 11
 AVERAGE HOURS REQ. 7.2
 VARIANCE 68.5
 STD. DEVIATION 8.3

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 9.0
 INCIDENTS 11
 AVERAGE 0.8
 VARIANCE 0.5
 STD. DEVIATION 0.7

TOTAL TUBES
 755
 11
 69%

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21/TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|---------------------------|----|----|---|---|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FUNCTION 1 | 22 | 0 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 20 | 11 | 13 | 3 | 2 | 21 |
| FUNCTION 2 | 7 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 10 | 11 | 2 | 3 | 3 | 0 | 16 |
| FUNCTION 3 | 7 | 0 | 3 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 1 | 0 | 1 | 9 |
| FUNCTION 4 | 15 | 0 | 0 | 9 | 1 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 19 | 1 | 3 | 0 | 0 | 20 |
| FUNCTION 5 | 23 | 0 | 0 | 0 | 27 | 3 | 0 | 40 | 0 | 0 | 1 | 0 | 0 | 1 | 44 | 47 | 4 | 21 | 4 | 1 | 38 |
| FUNCTION 6 | 9 | 0 | 0 | 0 | 0 | 10 | 0 | 12 | 1 | 0 | 1 | 2 | 0 | 0 | 14 | 14 | 3 | 5 | 3 | 1 | 14 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 1 | 1 | 5 |
| FUNCTION 8 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 21 | 1 | 0 | 0 | 0 | 0 | 31 | 33 | 2 | 13 | 3 | 1 | 0 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 10 | 14 | 2 | 3 | 2 | 0 | 0 |
| FUNCTION 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | 0 | 0 |
| FUNCTION 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 0 | 4 | 6 | 0 | 2 | 0 | 0 | 0 |
| FUNCTION 12 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 4 | 7 | 2 | 3 | 1 | 0 | 1 |
| FUNCTION 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 8 | 0 | 4 | 6 | 1 | 1 | 2 | 1 | 0 | 0 |
| FUNCTION 14 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 4 | 16 | 3 | 3 | 0 | 1 | 0 | 0 | 0 |
| FUNCTION 15 | 30 | 4 | 1 | 3 | 18 | 6 | 2 | 13 | 9 | 0 | 1 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 28 | 4 | 1 | 5 | 16 | 6 | 3 | 13 | 10 | 0 | 3 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

DECLASSIFIED

FUNCTION 18 17 2 1 0 9 4 1 11 4 0 1 4 1 1 0 0 0 0 0 0 0 0
FUNCTION 19 3 2 0 0 3 2 1 2 1 0 0 1 1 0 0 0 0 0 0 0 0 0
FUNCTION 20 2 0 1 0 1 1 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0
FUNCTION 21 5 0 0 0 0 1 0 0 0 5 0 0 3 3 0 1 0 0 0 0 0 0
FUNCTION 22 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0

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DECLASSIFIED

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------------|-------|------|------|------|------|------|---------|------|------|------|------|------|------|------|
| FUNCTION 1 | | | | | | | | | | | | | | |
| TOT.HOURS DOWN | 259.6 | 0.0 | 5.3 | 7.6 | 4.2 | 3.3 | 1.0 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 22 | 0 | 2 | 2 | 3 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVERAGE DOWN | 11.8 | 0.0 | 1.6 | 3.6 | 3.7 | 3.3 | 1.0 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 133.7 | -0.0 | 3.4 | 21.6 | 6.8 | 0.0 | 0.0 | 1.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 11.6 | -0.0 | 2.3 | 4.7 | 3.0 | 0.0 | 0.0 | 1.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 1 | | | | | | | | | | | | | | |
| TOT.HOURS DOWN | 15.3 | 38.1 | 14.6 | 12.1 | 7.8 | 1.7 | 4165.1 | | | | | | | |
| INCIDENTS | 18 | 20 | 11 | 13 | 11 | 2 | 21 | | | | | | | |
| AVERAGE DOWN | 0.8 | 1.9 | 1.3 | 0.9 | 2.6 | 0.8 | 198.0 | | | | | | | |
| VARIANCE | 0.2 | 2.2 | 0.7 | 0.7 | 1.7 | 0.4 | 74194.0 | | | | | | | |
| STD.DEVIATION | 0.5 | 1.5 | 0.8 | 0.8 | 1.3 | 0.6 | 272.0 | | | | | | | |
| FUNCTION 2 | | | | | | | | | | | | | | |
| TOT.HOURS DOWN | 45.2 | 29.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 7 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| AVERAGE DOWN | 6.5 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 24.3 | 4.3 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 4.9 | 2.1 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 2 | | | | | | | | | | | | | | |
| TOT.HOURS DOWN | 5.3 | 8.2 | 3.4 | 5.3 | 0.6 | 0.0 | 642.0 | | | | | | | |
| INCIDENTS | 10 | 11 | 2 | 2 | 3 | 0 | 16 | | | | | | | |
| AVERAGE DOWN | 0.5 | 0.7 | 1.7 | 1.8 | 0.2 | 0.0 | 41.0 | | | | | | | |
| VARIANCE | 0.4 | 0.5 | 5.1 | 7.6 | 0.0 | -0.0 | 1639.0 | | | | | | | |
| STD.DEVIATION | 0.4 | 0.7 | 2.3 | 2.8 | 0.1 | -0.0 | 40.0 | | | | | | | |
| FUNCTION 3 | | | | | | | | | | | | | | |
| TOT.HOURS DOWN | 14.2 | 0.0 | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 22.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVERAGE DOWN | 2.3 | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 5.5 | -0.0 | 2.2 | -0.0 | -0.0 | -0.0 | -0.0 | 9.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 2.4 | -0.0 | 1.5 | -0.0 | -0.0 | -0.0 | -0.0 | 3.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| FUNCTION 3 | | | | | | | | | | | | | | |
| TOT.HOURS DOWN | 2.3 | 4.4 | 0.0 | 0.4 | 0.0 | 0.5 | 23.0 | | | | | | | |
| INCIDENTS | 4 | 5 | 0 | 1 | 0 | 1 | 3 | | | | | | | |
| AVERAGE DOWN | 0.6 | 0.9 | 0.0 | 0.4 | 0.0 | 0.5 | 3.0 | | | | | | | |
| VARIANCE | 0.6 | 0.9 | 0.0 | 0.4 | 0.0 | 0.5 | 3.0 | | | | | | | |

| | | | | | | | | | | | | | | |
|---------------|-------|-------|------|------|-------|------|------|--------|------|------|------|------|------|-----|
| FUNCTION 4 | 27.6 | 0.0 | 0.0 | 16.2 | 2.0 | 0.0 | 0.0 | 18.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 |
| TOT.HOURS OWN | 15 | 0.0 | 0.0 | 1.8 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1 |
| INCIDENTS | 1.9 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 |
| AVERAGE OWN | 4.4 | -0.0 | -0.0 | 0.8 | 0.0 | -0.0 | -0.0 | 2.4 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 2.1 | -0.0 | -0.0 | 0.0 | 0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| STD.DEVIATION | 11.5 | 31.7 | 0.5 | 6.1 | 0.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 4 | 13 | 1.9 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS OWN | 0.9 | 1.7 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 0.4 | 5.9 | 0.0 | 10.4 | 0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE OWN | 0.4 | 2.4 | 0.0 | 5.5 | 0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.4 | 2.4 | 0.0 | 5.5 | 0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD.DEVIATION | 123.2 | 0.0 | 0.0 | 0.0 | 185.0 | 0.0 | 0.0 | 262.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 |
| FUNCTION 5 | 23 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 |
| TOT.HOURS OWN | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 |
| INCIDENTS | 4.0 | -0.0 | -0.0 | -0.0 | 5.0 | 2.0 | 0.0 | 11.8 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| AVERAGE OWN | 2.5 | -0.0 | -0.0 | -0.0 | 2.4 | 1.4 | 0.0 | 3.4 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 79.4 | 125.3 | 4.5 | 29.8 | 1.4 | 0.4 | 0.4 | 73.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD.DEVIATION | 4.4 | 11.7 | 1.4 | 2.1 | 0.4 | 1 | 1 | 38.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 5 | 1.8 | 2.7 | 1.4 | 1.4 | 0.4 | 0.4 | 0.4 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS OWN | 0.9 | 3.4 | 5.2 | 2.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 0.9 | 1.8 | 2.3 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE OWN | 0.9 | 3.4 | 5.2 | 2.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 1.0 | 1.8 | 2.3 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD.DEVIATION | 63.8 | 0.0 | 0.0 | 0.0 | 0.0 | 40.9 | 10.0 | 471.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 6 | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS OWN | 7.1 | 0.0 | 0.0 | 0.0 | 0.0 | 4.1 | 0.0 | 56.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 90.9 | -0.0 | -0.0 | -0.0 | -0.0 | 46.4 | -0.0 | 7129.8 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| AVERAGE OWN | 9.5 | -0.0 | -0.0 | -0.0 | -0.0 | 6.8 | -0.0 | 84.4 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 |
| VARIANCE | 19.2 | 55.7 | 3.4 | 11.0 | 10.2 | 1.4 | 0.0 | 713.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD.DEVIATION | 14 | 14 | 3.4 | 5 | 3.4 | 1 | 0.0 | 45.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOT.HOURS OWN | 1.4 | 4.0 | 1.3 | 2.2 | 4.7 | 1.4 | 0.0 | 684.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 1.2 | 21.0 | 0.3 | 5.8 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| AVERAGE OWN | 1.1 | 4.0 | 0.3 | 2.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 1.1 | 4.0 | 0.3 | 2.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STD.DEVIATION | | | | | | | | | | | | | | |

FUNCTION 7
 TCT.HOURS DWN 0.0
 INCIDENTS 0.0
 AVERAGE DCWN -0.0
 STD.DEVIATION -0.0

FUNCTION 7
 TCT.HOURS DWN 0.9 3.3 0.0 0.3 0.2 1.1 1.1 12.5
 INCIDENTS 2 1 1 1 1 1 1 1
 AVERAGE DCWN 0.4 1.1 0.0 0.3 0.2 0.4 0.4 2.0
 VARIANCE 0.2 1.7 -0.0 0.0 0.0 0.0 0.0 0.0
 STD.DEVIATION 0.5 1.3 -0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 8
 TCT.HOURS DWN 23.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 AVERAGE DCWN 3.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 48.5 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION 7.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 8
 TCT.HOURS DWN 19.5 27.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 3 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 AVERAGE DCWN 0.5 0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.2 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD.DEVIATION 0.4 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 9
 TCT.HOURS DWN 0.0
 INCIDENTS 0
 AVERAGE DCWN -0.0
 STD.DEVIATION -0.0

FUNCTION 9
 TCT.HOURS DWN 3.1 7.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 10 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 AVERAGE DCWN 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD.DEVIATION 0.0 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 10
 TCT.HOURS DWN
 INCIDENTS
 AVERAGE DCWN
 VARIANCE
 STD.DEVIATION

FUNCTION 13
TOT-HOURS DWN
INCIDENTS
AVERAGE DCHN
VARIANCE
STD.DEVIATION

1.1 4.1 1.0 0.4 1.2 0.3 0.0
4 6 1 1 2 1 0
0.3 0.7 1.0 0.4 0.6 0.3 0.0
0.0 0.7 0.0 0.0 0.2 0.0 -0.0
0.2 0.8 0.0 0.0 0.4 0.0 -0.0

FUNCTION 14
TOT-HOURS DWN
INCIDENTS
AVERAGE DCHN
VARIANCE
STD.DEVIATION

16.8 0.0 0.5 0.0 0.0 0.0 0.0
4 0 1 0 0 0 0
4.2 0.0 0.5 0.0 0.0 0.0 0.0
17.2 0.0 0.0 0.0 0.0 0.0 0.0
4.1 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 14
TOT-HOURS DWN
INCIDENTS
AVERAGE DCHN
VARIANCE
STD.DEVIATION

3.5 4.4 0.0 0.2 0.0 0.0 0.0
3 3 0 1 0 0 0
1.2 1.5 0.0 0.2 0.0 0.0 0.0
0.6 1.8 0.0 0.0 0.0 0.0 0.0
0.9 1.3 0.0 0.0 0.0 0.0 0.0

FUNCTION 15
TOT-HOURS DWN
INCIDENTS
AVERAGE DCHN
VARIANCE
STD.DEVIATION

75.6 1.0 0.4 1.9 23.4 4.8 0.9
30 4 1 3 18 6 2
2.5 0.2 0.4 0.6 1.1 1.1 0.4
2.3 0.0 0.0 0.2 0.7 0.4 0.4
1.5 0.2 0.0 0.4 0.8 0.4 0.4

FUNCTION 15
TOT-HOURS DWN
INCIDENTS
AVERAGE DCHN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0 0.0
0 0 0 0 0 0 0
0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 16
TOT-HOURS DWN
INCIDENTS
AVERAGE DCHN
VARIANCE
STD.DEVIATION

121.7 1.9 1.2 17.3 46.0 21.7 3.3
28 4 1 5 18 6 5
4.0 0.5 1.2 3.5 6.6 3.6 1.1
20.0 0.0 0.0 17.8 2.9 4.2 1.7
4.5 0.2 0.0 4.2 1.7 2.0 1.3

DECLASSIFIED

INCIDENTS
 AVERAGE DOWN 0.0
 VARIANCE DOWN -0.0
 STD. DEVIATION DOWN -0.0

FUNCTION 17
 TOT. HOURS DOWN 12.9
 INCIDENTS DOWN 0.1
 AVERAGE DOWN 0.1
 VARIANCE DOWN 0.1
 STD. DEVIATION DOWN 0.8

FUNCTION 17
 TOT. HOURS DOWN 0.0
 INCIDENTS DOWN 0.0
 AVERAGE DOWN 0.0
 VARIANCE DOWN 0.0
 STD. DEVIATION DOWN 0.0

FUNCTION 18
 TOT. HOURS DOWN 21.0
 INCIDENTS DOWN 1.7
 AVERAGE DOWN 1.3
 VARIANCE DOWN 2.3
 STD. DEVIATION DOWN 1.5

FUNCTION 18
 TOT. HOURS DOWN 0.0
 INCIDENTS DOWN 0.0
 AVERAGE DOWN 0.0
 VARIANCE DOWN 0.0
 STD. DEVIATION DOWN 0.0

FUNCTION 19
 TOT. HOURS DOWN 4.4
 INCIDENTS DOWN 1.3
 AVERAGE DOWN 0.4
 VARIANCE DOWN 0.4
 STD. DEVIATION DOWN 0.4

FUNCTION 19
 TOT. HOURS DOWN 0.0
 INCIDENTS DOWN 0.0
 AVERAGE DOWN 0.0
 VARIANCE DOWN 0.0
 STD. DEVIATION DOWN 0.0

SUB TOTAL DELINEATION

FUNCTION 1
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 287.2
 AVERAGE HOURS REQD. 12.5
 VARIANCE 223.3
 STD. DEVIATION 16.0

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 49.6
 INCIDENTS 23
 AVERAGE 2.9
 VARIANCE 13.3
 STD. DEVIATION 3.6

TOTAL TUBES
 SUM 4165
 CNT 23
 AVG 181.

FUNCTION 2
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 78.2
 AVERAGE HOURS REQD. 4.4
 VARIANCE 39.2
 STD. DEVIATION 4.3

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 22.8
 INCIDENTS 17
 AVERAGE 1.3
 VARIANCE 7.2
 STD. DEVIATION 2.7

TOTAL TUBES
 SUM 6227
 CNT 17
 AVG 39.

FUNCTION 3
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 45.2
 AVERAGE HOURS REQD. 4.5
 VARIANCE 44.2
 STD. DEVIATION 6.8

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 7.4
 INCIDENTS 10
 AVERAGE 0.8
 VARIANCE 0.9
 STD. DEVIATION 1.0

TOTAL TUBES
 SUM 2310
 CNT 10
 AVG 23.

FUNCTION 4
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 66.4
 AVERAGE HOURS REQD. 3.0
 VARIANCE 19.2
 STD. DEVIATION 3.9

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 49.8
 INCIDENTS 23
 AVERAGE 2.1
 VARIANCE 9.1
 STD. DEVIATION 3.0

TOTAL TUBES
 SUM 2022
 CNT 23
 AVG 1.

FUNCTION 5
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 581.4
 AVERAGE HOURS REQD. 12.4
 VARIANCE 182.7
 STD. DEVIATION 13.5

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 243.2
 INCIDENTS 47
 AVERAGE 5.2
 VARIANCE 11.2
 STD. DEVIATION 3.4

TOTAL TUBES
 SUM 7347
 CNT 47
 AVG 2.

100-1000

| | | | | | | | | | |
|-----------------------|--------|-------------------------|-------|-----|------|-------------|--|--|--|
| FUNCTION 4 | | | | | | | | | |
| SUM BASIC SECONDARIES | 792.3 | ASSOCIATED DELAY TOTALS | 101.1 | SUM | 713. | TOTAL TUBES | | | |
| NUMBER OF INCIDENTS | 18 | SUM OF DELAYS | 18 | CNT | 18 | | | | |
| AVERAGE HOURS REQD. | 44.0 | INCIDENTS | 5.6 | AVG | 40. | | | | |
| VARIANCE | 8763.9 | AVERAGE | 40.8 | | | | | | |
| STD. DEVIATION | 93.6 | VARIANCE | 6.4 | | | | | | |
| | | STD. DEVIATION | | | | | | | |

| | | | | | | | | | |
|-----------------------|------|-------------------------|-----|-----|-----|-------------|--|--|--|
| FUNCTION 7 | | | | | | | | | |
| SUM BASIC SECONDARIES | 28.2 | ASSOCIATED DELAY TOTALS | 5.8 | SUM | 12. | TOTAL TUBES | | | |
| NUMBER OF INCIDENTS | 5 | SUM OF DELAYS | 5 | CNT | 5 | | | | |
| AVERAGE HOURS REQD. | 5.6 | INCIDENTS | 1.2 | AVG | 2. | | | | |
| VARIANCE | 94.6 | AVERAGE | 3.6 | | | | | | |
| STD. DEVIATION | 9.7 | VARIANCE | 1.9 | | | | | | |
| | | STD. DEVIATION | | | | | | | |

| | | | | | | | | | |
|-----------------------|------|-------------------------|-----|-----|------|-------------|--|--|--|
| FUNCTION 21 | | | | | | | | | |
| SUM BASIC SECONDARIES | 33.8 | ASSOCIATED DELAY TOTALS | 2.9 | SUM | 609. | TOTAL TUBES | | | |
| NUMBER OF INCIDENTS | 6 | SUM OF DELAYS | 6 | CNT | 6 | | | | |
| AVERAGE HOURS REQD. | 5.6 | INCIDENTS | 0.5 | AVG | 102. | | | | |
| VARIANCE | 74.9 | AVERAGE | 0.5 | | | | | | |
| STD. DEVIATION | 8.6 | VARIANCE | 0.7 | | | | | | |
| | | STD. DEVIATION | | | | | | | |

REACTOR 7 OUTAGE FUNCTION EXPECTATION REPORT APRIL 1961 TO MAY 15 1962

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THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
*ALL DATA IN HOURS--EXCEPT SECONDARY FUNCTION DURATION

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------------------------|----|----|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| FUNCTION 1 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 21 | 23 | 11 | 5 | 1 | 0 | 24 |
| FUNCTION 2 | 9 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 19 | 0 | 1 | 0 | 0 | 24 |
| FUNCTION 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| FUNCTION 4 | 3 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 4 |
| FUNCTION 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 6 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 4 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 10 | 3 | 0 | 0 | 4 | 0 | 14 | 16 | 2 | 3 | 0 | 0 | 0 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| FUNCTION 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 12 | 11 | 15 | 0 | 3 | 0 | 1 | 0 | 13 | 2 | 0 | 7 | 14 | 2 | 0 | 20 | 22 | 1 | 1 | 0 | 0 | 2 |
| FUNCTION 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 14 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 5 | 2 | 4 | 6 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 15 | 19 | 10 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 0 | 1 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 20 | 10 | 0 | 2 | 0 | 2 | 0 | 4 | 0 | 0 | 1 | 11 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| SECONDARY FUNCTION NUMBER | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------------|-------|------|------|------|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|
| FUNCTION 1 | | | | | | | | | | | | | | | |
| TGT. HOURS DOWN | 407.4 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2.9 |
| INCIDENTS | 24 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1.4 |
| AVERAGE DOWN | 15.7 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0.8 |
| VARIANCE | 68.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 0.9 |
| STD. DEVIATION | 9.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 0.9 |
| FUNCTION 1 | | | | | | | | | | | | | | | |
| TGT. HOURS DOWN | 29.2 | 33.5 | 11.7 | 17.4 | 2.4 | 0. | 110.4 | | | | | | | | |
| INCIDENTS | 21 | 23 | 11 | 5 | 1 | 0 | 24 | | | | | | | | |
| AVERAGE DOWN | 1.4 | 1.5 | 1.2 | 3.5 | 2.4 | 0. | 4.1 | | | | | | | | |
| VARIANCE | 0.4 | 0.9 | 0.8 | 15.0 | 0. | 0. | 110.3 | | | | | | | | |
| STD. DEVIATION | 0.6 | 1.0 | 0.9 | 3.9 | 0. | 0. | 10.3 | | | | | | | | |
| FUNCTION 2 | | | | | | | | | | | | | | | |
| TGT. HOURS DOWN | 65.4 | 92.8 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 9 | 15 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DOWN | 7.3 | 6.2 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 20.0 | 5.5 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD. DEVIATION | 4.5 | 2.4 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 2 | | | | | | | | | | | | | | | |
| TGT. HOURS DOWN | 11.5 | 9.8 | 0. | 0.2 | 0. | 0. | 2037. | | | | | | | | |
| INCIDENTS | 20 | 14 | 0 | 1 | 0 | 0 | 24 | | | | | | | | |
| AVERAGE DOWN | 0.6 | 0.7 | 0. | 0.2 | 0. | 0. | 122. | | | | | | | | |
| VARIANCE | 0.1 | 0.1 | -0. | -0. | -0. | -0. | 836. | | | | | | | | |
| STD. DEVIATION | 0.3 | 0.3 | -0. | -0. | -0. | -0. | 91. | | | | | | | | |
| FUNCTION 3 | | | | | | | | | | | | | | | |
| TGT. HOURS DOWN | 2.0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE DOWN | 0.7 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 0.1 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD. DEVIATION | 0.3 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| FUNCTION 3 | | | | | | | | | | | | | | | |
| TGT. HOURS DOWN | 0. | 0. | 0. | 0. | 0. | 0. | 14. | | | | | | | | |
| INCIDENTS | 0. | 0. | 0. | 0. | 0. | 0. | 3 | | | | | | | | |
| AVERAGE DOWN | 0. | 0. | 0. | 0. | 0. | 0. | 0. | | | | | | | | |
| VARIANCE | 0. | 0. | -0. | -0. | -0. | -0. | 0. | | | | | | | | |
| STD. DEVIATION | 0. | 0. | -0. | -0. | -0. | -0. | 0. | | | | | | | | |

FUNCTION 4
 TGT. HOURS DOWN 3.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 1.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DOWN 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.02 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD. DEVIATION 0.14 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 4
 TGT. HOURS DOWN 1.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DOWN 0.13 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.01 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD. DEVIATION 0.10 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 5
 TGT. HOURS DOWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DOWN 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD. DEVIATION 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 5
 TGT. HOURS DOWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DOWN 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD. DEVIATION 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 6
 TGT. HOURS DOWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DOWN 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD. DEVIATION 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 6
 TGT. HOURS DOWN 3.4 1.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.8 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DOWN 0.55 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 VARIANCE 0.5 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 STD. DEVIATION 0.7 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

14.9 2.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 14.9 1.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 1.6 1.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 1.5 1.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

4.4 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 1.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

29.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 7.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 23.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 4.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

11.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 3.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

SUB TOTAL DELINEATION

FUNCTION 1
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 24
 AVERAGE HOURS REQD. 15.8
 VARIANCE 349.2
 STD. DEVIATION 18.7

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 96.2
 INCIDENTS 26
 AVERAGE 3.7
 VARIANCE 12.2
 STD. DEVIATION 3.5

TOTAL TUBES
 SUM 11054
 CNT 26
 AVG 425

FUNCTION 2
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 24
 AVERAGE HOURS REQD. 6.6
 VARIANCE 54.0
 STD. DEVIATION 7.5

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 21.5
 INCIDENTS 24
 AVERAGE 0.9
 VARIANCE 0.4
 STD. DEVIATION 0.6

TOTAL TUBES
 SUM 2937
 CNT 24
 AVG 122

FUNCTION 3
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 0.7
 AVERAGE HOURS REQD. 0.8
 VARIANCE 0.9
 STD. DEVIATION 0.9

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 0.3
 INCIDENTS 0
 AVERAGE 0
 VARIANCE 0
 STD. DEVIATION 0

TOTAL TUBES
 SUM 14
 CNT 3
 AVG 5

FUNCTION 4
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 4.3
 AVERAGE HOURS REQD. 154.2
 VARIANCE 12.4
 STD. DEVIATION 12.4

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 1.8
 INCIDENTS 4
 AVERAGE 0.4
 VARIANCE 0.3
 STD. DEVIATION 0.5

TOTAL TUBES
 SUM 4
 CNT 4
 AVG 1

FUNCTION 5
 SUBBASIS/SECONDARIES
 NUMBER OF INCIDENTS 1.0
 AVERAGE HOURS REQD. 1.0

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 0
 INCIDENTS 1
 AVERAGE 0
 VARIANCE 0
 STD. DEVIATION 0

TOTAL TUBES
 SUM 0
 CNT 1
 AVG 0

FUNCTION 4
 SUBBASISSECONDIARIES
 NUMBER OF INCIDENTS 32.4
 AVERAGE HOURS REQD. 4.5
 VARIANCE 75.4
 STD. DEVIATION 8.7

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 5.1
 INCIDENTS 5
 AVERAGE 1.0
 VARIANCE 0.8
 STD. DEVIATION 0.9

TOTAL TUBES
 11
 2

FUNCTION 7
 SUBBASISSECONDIARIES
 NUMBER OF INCIDENTS 0
 AVERAGE HOURS REQD. 0
 VARIANCE -0
 STD. DEVIATION -0

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 0
 INCIDENTS 0
 AVERAGE 0
 VARIANCE -0
 STD. DEVIATION -0

TOTAL TUBES
 0
 0

FUNCTION 21
 SUBBASISSECONDIARIES
 NUMBER OF INCIDENTS 59.0
 AVERAGE HOURS REQD. 1.7
 VARIANCE 18.9
 STD. DEVIATION 4.3

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 17.3
 INCIDENTS 16
 AVERAGE 1.1
 VARIANCE 8.0
 STD. DEVIATION 2.8

TOTAL TUBES
 576
 14
 39

REACTOR 8 OUTAGE FUNCTION EXPECTATION REPORT APRIL 1961 TO MAY 15 1962

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THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
*ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21#TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | |
|------------------------------|----|----|---|---|---|---|---|----|---|----|----|----|----|----|----|----|----|----|----|----|----|---|
| FUNCTION 1 | 21 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 21 | 2 | 1 | 0 | 21 | |
| FUNCTION 2 | 10 | 12 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 19 | 3 | 1 | 1 | 0 | 22 | |
| FUNCTION 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| FUNCTION 4 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 0 | 0 | 1 | |
| FUNCTION 5 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | |
| FUNCTION 6 | 3 | 1 | 0 | 0 | 0 | 4 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 0 | 1 | 0 | 8 | |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| FUNCTION 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 7 | 1 | 0 | 0 | 2 | 0 | 16 | 19 | 3 | 3 | 1 | 0 | 1 | |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 1 | 0 | 1 | |
| FUNCTION 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | |
| FUNCTION 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | |
| FUNCTION 12 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 7 | 7 | 0 | 12 | 13 | 0 | 0 | 1 | 0 | 0 | |
| FUNCTION 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | |
| FUNCTION 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 6 | 6 | 6 | 1 | 0 | 0 | 0 | 0 | |
| FUNCTION 15 | 21 | 7 | 0 | 1 | 0 | 4 | 0 | 4 | 1 | 0 | 4 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| FUNCTION 16 | 21 | 7 | 0 | 1 | 0 | 4 | 0 | 4 | 1 | 0 | 4 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

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| SECONDARY FUNCTION NUMBER | 15 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------------|-------|------|------|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|
| FUNCTION 1 | | | | | | | | | | | | | | | |
| TOT-HOURS OCMN | 366.4 | 0. | 0. | 0. | 0. | 0. | 1.2 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 17.4 | 0. | 0. | 0. | 0. | 0. | 1.2 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE OCMN | 121.7 | -0. | -0. | -0. | -0. | -0. | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| VARIANCE | 11.0 | -0. | -0. | -0. | -0. | -0. | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD.DEVIATION | | | | | | | | | | | | | | | |
| FUNCTION 2 | | | | | | | | | | | | | | | |
| TOT-HOURS OCMN | 31.4 | 30.0 | 14.1 | 1.9 | 2.4 | 0. | 0. | 1164.7 | | | | | | | |
| INCIDENTS | 1.4 | 1.4 | 1.3 | 0.9 | 2.4 | 0. | 0. | 54. | | | | | | | |
| AVERAGE OCMN | 0.8 | 1.0 | 1.3 | 0.0 | 0. | -0. | -0. | 127974. | | | | | | | |
| VARIANCE | 0.9 | 1.0 | 1.1 | 0.1 | 0. | -0. | -0. | 358. | | | | | | | |
| STD.DEVIATION | | | | | | | | | | | | | | | |
| FUNCTION 3 | | | | | | | | | | | | | | | |
| TOT-HOURS OCMN | 69.4 | 69.0 | 0. | 0. | 0. | 0. | 0.7 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 10 | 12 | 0. | 0. | 0. | 0. | 2 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE OCMN | 6.9 | 5.7 | 0. | 0. | 0. | 0.3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 19.7 | 13.1 | -0. | -0. | -0. | 0.0 | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. |
| STD.DEVIATION | 4.4 | 3.6 | | | | 0.1 | | | | | | | | | |
| FUNCTION 4 | | | | | | | | | | | | | | | |
| TOT-HOURS OCMN | 11.3 | 10.9 | 1.9 | 4.4 | 0.8 | 0. | 0. | 2740. | | | | | | | |
| INCIDENTS | 81 | 19 | 3 | 1 | 1 | 0. | 0. | 125. | | | | | | | |
| AVERAGE OCMN | 0.4 | 0.6 | 0.3 | 4.4 | 0.8 | 0. | 0. | 7497. | | | | | | | |
| VARIANCE | 0.1 | 0.2 | 0.2 | 0. | 0. | -0. | -0. | 87. | | | | | | | |
| STD.DEVIATION | 0.3 | 0.4 | 0.4 | 0. | 0. | | | | | | | | | | |
| FUNCTION 5 | | | | | | | | | | | | | | | |
| TOT-HOURS OCMN | 1.8 | 0. | 2.3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0.7 | 0. | 0. | 0. |
| INCIDENTS | 2 | 0. | 1 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1 | 0. | 0. | 0. |
| AVERAGE OCMN | 0.9 | 0. | 2.3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0.7 | 0. | 0. | 0. |
| VARIANCE | 0.7 | -0. | 0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | -0. | 0. | -0. | -0. | -0. |
| STD.DEVIATION | 0.8 | -0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| FUNCTION 6 | | | | | | | | | | | | | | | |
| TOT-HOURS OCMN | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| INCIDENTS | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| AVERAGE OCMN | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| VARIANCE | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| STD.DEVIATION | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

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21.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 10.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 19.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 12.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

11.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 15.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

INCIDENTS
 AVERAGE OCHN
 VARIANCE
 STD.DEVIATION

1.4
 1.3
 0.3
 0.7

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

10.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 10.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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FUNCTION 6
 TOT.HOURS OCHN
 INCIDENTS
 AVERAGE OCHN
 VARIANCE
 STD.DEVIATION

3.5
 0.7
 0.7
 1.4

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

27.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 5.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 4.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 2.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 6
 TOT.HOURS OCHN
 INCIDENTS
 AVERAGE OCHN
 VARIANCE
 STD.DEVIATION

3.5
 0.7
 0.7
 1.4

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

7.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 9.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 4.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 2.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

DECLASSIFIED

FUNCTION 7
 TOT.HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DCHW -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION

FUNCTION 7
 TOT.HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DCHW -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION

FUNCTION 8
 TOT.HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DCHW -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION

FUNCTION 8
 TOT.HOURS DWN 20.8 16.3 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1 16.1
 INCIDENTS 18 19 19 19 19 19 19 19 19 19 19 19
 AVERAGE DCHW 1.2 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9
 VARIANCE 0.9 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5
 STD.DEVIATION 0.9 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7

FUNCTION 9
 TOT.HOURS DWN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 INCIDENTS 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 AVERAGE DCHW -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 VARIANCE -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
 STD.DEVIATION

FUNCTION 9
 TOT.HOURS DWN 1.8 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5
 INCIDENTS 4 4 4 4 4 4 4 4 4 4 4 4
 AVERAGE DCHW 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3
 VARIANCE 0.2 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1
 STD.DEVIATION 0.5 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3

FUNCTION 13
TGT-HOURS DWN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

0.4 0.3 0.0 0.0 0.0 0.0
0.2 0.1 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.1 0.0 0.0 0.0 0.0

FUNCTION 14
TGT-HOURS DWN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

3.9 0.0 0.0 0.0 0.0 0.0
3.9 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 14
TGT-HOURS DWN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

11.2 10.3 0.1 0.0 0.0 0.0
1.4 0.0 0.0 0.0 0.0 0.0
1.9 1.7 0.1 0.0 0.0 0.0
2.2 3.0 0.0 0.0 0.0 0.0
1.5 1.7 0.0 0.0 0.0 0.0

FUNCTION 15
TGT-HOURS DWN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

62.4 3.9 0.0 0.0 0.0 0.0
21 7 0.0 0.0 0.0 0.0
3.0 0.6 0.0 0.0 0.0 0.0
2.1 0.0 0.0 0.0 0.0 0.0
1.5 0.2 0.0 0.0 0.0 0.0

FUNCTION 15
TGT-HOURS DWN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0
-0.0 0.0 0.0 0.0 0.0 0.0
-0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 16
TGT-HOURS DWN
INCIDENTS
AVERAGE DGMN
VARIANCE
STD.DEVIATION

54.9 4.3 0.0 0.0 0.0 0.0
21 7 0.0 0.0 0.0 0.0
2.6 0.6 0.0 0.0 0.0 0.0
2.1 0.2 0.0 0.0 0.0 0.0
1.4 0.4 0.0 0.0 0.0 0.0

15.0 22.3 47.1
15.0 2.8 5.9
0.0 6.2 84.2
0.0 3.9 9.2

1.7 0.0 7.0
0.6 0.0 3.5
0.1 0.0 0.5
0.1 0.0 0.7

1.4 0.0 7.2
0.3 0.0 3.6
0.5 0.0 1.6
0.1 0.0 1.3

DECLASSIFIED

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INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 17
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 17
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 18
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 18
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 19
TGT. HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD. DEVIATION

FUNCTION 19
TGT. HOURS DOWN
INCIDENTS

0
0.0
-0.0
-0.0

11.7
1.4
1.2
1.1

0.0
0.0
-0.0
-0.0

12.4
3.1
1.1
2.1

0.0
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DECLASSIFIED

SUB TOTAL DELINEATION

| | | |
|-----------------------|-------------------------|-------------|
| FUNCTION 1 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM BASIC SECONDARIES | SUM OF DELAYS | SUM |
| NUMBER OF INCIDENTS | INCIDENTS | CNT |
| AVERAGE HOURS REQD. | AVERAGE | AVG |
| VARIANCE | VARIANCE | |
| STD. DEVIATION | STD. DEVIATION | |

367.6 62.4 1187.7
 21 21 21
 11.3 3.0 56.1
 44.5 7.7
 21.1 2.6

| | | |
|-----------------------|-------------------------|-------------|
| FUNCTION 2 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM BASIC SECONDARIES | SUM OF DELAYS | SUM |
| NUMBER OF INCIDENTS | INCIDENTS | CNT |
| AVERAGE HOURS REQD. | AVERAGE | AVG |
| VARIANCE | VARIANCE | |
| STD. DEVIATION | STD. DEVIATION | |

139.1 28.9 2760.2
 22 22 22
 6.3 1.3 125.5
 57.7 2.0
 7.6 1.4

| | | |
|-----------------------|-------------------------|-------------|
| FUNCTION 3 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM BASIC SECONDARIES | SUM OF DELAYS | SUM |
| NUMBER OF INCIDENTS | INCIDENTS | CNT |
| AVERAGE HOURS REQD. | AVERAGE | AVG |
| VARIANCE | VARIANCE | |
| STD. DEVIATION | STD. DEVIATION | |

4.8 0.3 7.0
 3 3 3
 1.6 0.1 2.3
 4.3 0.1
 2.1 0.1

| | | |
|-----------------------|-------------------------|-------------|
| FUNCTION 4 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM BASIC SECONDARIES | SUM OF DELAYS | SUM |
| NUMBER OF INCIDENTS | INCIDENTS | CNT |
| AVERAGE HOURS REQD. | AVERAGE | AVG |
| VARIANCE | VARIANCE | |
| STD. DEVIATION | STD. DEVIATION | |

24.9 17.7 1.7
 4 4 4
 6.2 4.4 0.4
 131.5 24.0
 11.3 4.9

| | | |
|-----------------------|-------------------------|-------------|
| FUNCTION 5 | ASSOCIATED DELAY TOTALS | TOTAL TUBES |
| SUM BASIC SECONDARIES | SUM OF DELAYS | SUM |
| NUMBER OF INCIDENTS | INCIDENTS | CNT |
| AVERAGE HOURS REQD. | AVERAGE | AVG |
| VARIANCE | VARIANCE | |
| STD. DEVIATION | STD. DEVIATION | |

41.9 9.2 0.2
 2 2 2
 20.9 4.6 0.6

FUNCTION 6
SUMBASIS6SECNCARIES
NUMBER OF INCIDENTS
AVERAGE HOURS REQ.
VARIANCE
STD. DEVIATION

44.8
9
7.2
107.5
10.4

ASSOCIATED DELAY TOTALS
SUM OF DELAYS
INCIDENTS
AVERAGE
STD. DEVIATION

8.2
9
0.9
1.2
1.7

TOTAL TUBES
73
8

FUNCTION 7
SUMBASIS7SECNCARIES
NUMBER OF INCIDENTS
AVERAGE HOURS REQ.
VARIANCE
STD. DEVIATION

1.8
1
1.8
0
0

ASSOCIATED DELAY TOTALS
SUM OF DELAYS
INCIDENTS
AVERAGE
STD. DEVIATION

0
1
0
0
0

TOTAL TUBES
1
1

FUNCTION 21
SUMBASIS21SECNCARIES
NUMBER OF INCIDENTS
AVERAGE HOURS REQ.
VARIANCE
STD. DEVIATION

39.4
7
5.6
46.4
6.6

ASSOCIATED DELAY TOTALS
SUM OF DELAYS
INCIDENTS
AVERAGE
STD. DEVIATION

7.9
7
1.1
1.4
1.2

TOTAL TUBES
385
55

APRIL 1961 TO MAY 15 1962

DEPARTMENT OUTAGE FUNCTION EXPECTATION REPORT

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
*ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21 TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------------------------|-----|-----|----|----|----|----|----|-----|-----|----|----|----|----|-----|-----|-----|----|----|----|----|-----|
| FUNCTION 1 | 212 | 0 | 2 | 4 | 16 | 12 | 2 | 2 | 0 | 0 | 1 | 0 | 1 | 5 | 162 | 173 | 69 | 77 | 5 | 2 | 214 |
| FUNCTION 2 | 74 | 125 | 0 | 1 | 1 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 139 | 138 | 18 | 34 | 4 | 0 | 0 | 197 |
| FUNCTION 3 | 30 | 0 | 23 | 0 | 2 | 0 | 14 | 0 | 0 | 1 | 0 | 1 | 0 | 19 | 22 | 4 | 7 | 0 | 0 | 1 | 50 |
| FUNCTION 4 | 56 | 3 | 0 | 51 | 1 | 9 | 3 | 38 | 2 | 0 | 0 | 0 | 0 | 2 | 64 | 70 | 9 | 24 | 0 | 0 | 69 |
| FUNCTION 5 | 101 | 4 | 1 | 0 | 98 | 30 | 3 | 126 | 12 | 0 | 2 | 0 | 0 | 1 | 164 | 170 | 32 | 87 | 4 | 1 | 133 |
| FUNCTION 6 | 45 | 9 | 2 | 0 | 1 | 15 | 0 | 63 | 24 | 0 | 2 | 5 | 0 | 1 | 93 | 93 | 15 | 38 | 5 | 2 | 105 |
| FUNCTION 7 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 11 | 1 | 0 | 0 | 0 | 0 | 1 | 21 | 21 | 0 | 4 | 1 | 1 | 17 |
| FUNCTION 8 | 40 | 0 | 0 | 0 | 2 | 0 | 0 | 302 | 100 | 19 | 0 | 2 | 16 | 0 | 213 | 229 | 22 | 65 | 5 | 1 | 1 |
| FUNCTION 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 124 | 0 | 0 | 0 | 0 | 0 | 36 | 45 | 3 | 4 | 3 | 0 | 4 |
| FUNCTION 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 28 | 1 | 1 | 0 | 0 | 5 | 9 | 7 | 1 | 1 | 0 | 0 |
| FUNCTION 11 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 1 | 68 | 2 | 0 | 0 | 33 | 40 | 2 | 8 | 0 | 0 | 0 |
| FUNCTION 12 | 44 | 29 | 0 | 4 | 1 | 4 | 1 | 34 | 4 | 0 | 27 | 58 | 3 | 0 | 78 | 82 | 7 | 16 | 3 | 0 | 17 |
| FUNCTION 13 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 14 | 26 | 0 | 31 | 35 | 1 | 5 | 2 | 1 | 0 |
| FUNCTION 14 | 26 | 2 | 1 | 0 | 1 | 0 | 0 | 10 | 4 | 1 | 1 | 6 | 38 | 59 | 37 | 40 | 5 | 10 | 0 | 0 | 2 |
| FUNCTION 15 | 193 | 56 | 7 | 29 | 61 | 58 | 17 | 87 | 29 | 2 | 17 | 28 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNCTION 16 | 201 | 57 | 6 | 31 | 61 | 59 | 17 | 93 | 31 | 3 | 20 | 34 | 13 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| SECONDARY FUNCTION NUMBER | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------------|--------|-------|------|------|------|------|---------|------|------|------|------|-----|------|------|------|
| FUNCTION 1 | | | | | | | | | | | | | | | |
| TOT.HOURS OWN | 2383.2 | 0.0 | 5.3 | 8.6 | 18.1 | 23.2 | 1.1 | 1.1 | 4.2 | 0.0 | 0.0 | 0.9 | 0.0 | 0.3 | 4.1 |
| INCIDENTS | 212 | 0.0 | 2.4 | 2.1 | 1.1 | 1.2 | 0.5 | 0.5 | 2.1 | 0.0 | 0.0 | 0.9 | 0.0 | 0.3 | 1.5 |
| AVERAGE DOWN | 11.1 | 0.0 | 3.4 | 10.6 | 1.4 | 1.5 | 0.5 | 0.5 | 2.1 | 0.0 | 0.0 | 0.9 | 0.0 | 0.3 | 0.8 |
| VARIANCE | 87.5 | -0.0 | 2.3 | 3.3 | 1.2 | 1.2 | 0.4 | 0.4 | 1.0 | -0.0 | -0.0 | 0.0 | -0.0 | 0.0 | 0.4 |
| STD.DEVIATION | 9.4 | -0.0 | 1.5 | 1.8 | 1.1 | 1.1 | 0.6 | 0.6 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| FUNCTION 1 | | | | | | | | | | | | | | | |
| TOT.HOURS OWN | 153.2 | 210.5 | 66.3 | 61.4 | 13.0 | 1.7 | 42149.0 | | | | | | | | |
| INCIDENTS | 162 | 173 | 49 | 77 | 2.4 | 2 | 214 | | | | | | | | |
| AVERAGE DOWN | 0.9 | 1.3 | 1.3 | 1.1 | 0.4 | 0.8 | 244.0 | | | | | | | | |
| VARIANCE | 0.5 | 1.0 | 1.2 | 1.7 | 0.4 | 0.4 | 78376.0 | | | | | | | | |
| STD.DEVIATION | 0.7 | 1.0 | 1.1 | 1.3 | 0.9 | 0.6 | 280.0 | | | | | | | | |
| FUNCTION 2 | | | | | | | | | | | | | | | |
| TOT.HOURS OWN | 471.0 | 548.4 | 0.0 | 11.6 | 4.0 | 19.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 74 | 125 | 0.0 | 1 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| AVERAGE DOWN | 6.4 | 4.4 | 0.0 | 11.6 | 4.0 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 22.1 | 11.0 | -0.0 | 0.0 | 0.0 | 6.4 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 |
| STD.DEVIATION | 4.7 | 3.5 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 2 | | | | | | | | | | | | | | | |
| TOT.HOURS OWN | 66.4 | 69.4 | 19.6 | 27.3 | 1.4 | 0.0 | 12563.0 | | | | | | | | |
| INCIDENTS | 135 | 136 | 18 | 45 | 1.4 | 0 | 197 | | | | | | | | |
| AVERAGE DOWN | 0.5 | 0.6 | 1.1 | 9.0 | 0.0 | 0.0 | 44.0 | | | | | | | | |
| VARIANCE | 0.1 | 0.3 | 1.3 | 1.5 | 0.3 | -0.0 | 4606.0 | | | | | | | | |
| STD.DEVIATION | 0.4 | 0.4 | 1.1 | 1.2 | 0.3 | 0.0 | 69.0 | | | | | | | | |
| FUNCTION 3 | | | | | | | | | | | | | | | |
| TOT.HOURS OWN | 51.8 | 0.0 | 52.6 | 0.0 | 0.0 | 3.8 | 0.0 | 0.0 | 36.3 | 0.0 | 0.0 | 0.7 | 0.0 | 0.2 | 0.0 |
| INCIDENTS | 30 | 0 | 23 | 0 | 0 | 2 | 0 | 0 | 14 | 0 | 0 | 1 | 0 | 1 | 0 |
| AVERAGE DOWN | 1.8 | 0.0 | 2.3 | 0.0 | 0.0 | 1.9 | 0.0 | 0.0 | 2.6 | 0.0 | 0.0 | 0.7 | 0.0 | 0.2 | 0.0 |
| VARIANCE | 4.0 | 0.0 | 4.9 | -0.0 | -0.0 | 0.3 | -0.0 | -0.0 | 5.7 | -0.0 | -0.0 | 0.0 | -0.0 | 0.0 | -0.0 |
| STD.DEVIATION | 2.0 | 0.0 | 2.2 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 3 | | | | | | | | | | | | | | | |
| TOT.HOURS OWN | 7.6 | 12.3 | 3.4 | 2.4 | 0.0 | 0.5 | 334.0 | | | | | | | | |
| INCIDENTS | 19 | 22 | 4 | 7 | 0 | 1 | 50 | | | | | | | | |
| AVERAGE DOWN | 0.4 | 0.6 | 0.8 | 0.4 | 0.0 | 0.5 | 7.0 | | | | | | | | |

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FUNCTION 4
 TCT.HOURS DWN 114.6 1.5 0.0 226.8 2.0 32.9 25.1 204.9 0.9 0.0 0.0 0.0 240.0
 INCIDENTS 54 3 1 51 1 7 5 38 1 0 0 0 0
 AVERAGE DQWN 2.0 0.2 0.0 4.4 2.0 3.7 6.4 5.4 0.4 0.0 0.0 0.0 120.0
 VARIANCE 7.6 0.2 -0.0 29.4 0.0 1.7 38.8 43.3 0.1 -0.0 -0.0 -0.0 2733.7
 STD.DEVIATION 2.7 0.4 -0.0 5.4 0.0 1.3 6.2 6.6 0.1 -0.0 -0.0 -0.0 166.6

FUNCTION 4
 TCT.HOURS DWN 85.0 107.3 6.0 37.8 0.0 0.0 71.0
 INCIDENTS 44 70 9 24 0 0 69
 AVERAGE DQWN 1.3 1.5 0.9 1.4 0.0 0.0 1.0
 VARIANCE 1.5 2.6 1.0 5.0 -0.0 -0.0 0.0
 STD.DEVIATION 1.2 1.6 1.0 2.2 -0.0 -0.0 0.0

FUNCTION 5
 TCT.HOURS DWN 585.9 6.0 0.0 0.0 894.5 114.7 14.0 785.4 7.0 0.0 1.9 0.0 1.1
 INCIDENTS 101 2.1 0.1 0.0 98 38 50 128 12 0 2 0 1
 AVERAGE DQWN 5.8 2.1 0.0 0.0 9.1 3.8 2.7 6.1 0.4 0.0 0.9 0.0 1.1
 VARIANCE 21.0 4.9 0.0 -0.0 38.1 4.5 9.9 15.9 0.2 -0.0 -0.0 -0.0 0.0
 STD.DEVIATION 4.6 2.1 0.0 -0.0 6.2 2.1 3.2 3.9 0.1 -0.0 -0.0 -0.0 0.0

FUNCTION 5
 TCT.HOURS DWN 265.4 359.7 97.6 104.7 1.6 0.4 337.0
 INCIDENTS 164 170 87 87 4 1 1
 AVERAGE DQWN 1.6 2.1 1.2 1.2 0.4 0.4 1.5
 VARIANCE 1.1 2.6 3.2 1.8 0.0 0.0 17.0
 STD.DEVIATION 1.0 1.6 1.8 1.3 0.0 0.0 4.1

FUNCTION 6
 TCT.HOURS DWN 281.9 16.8 1.8 0.0 1.1 749.3 0.0 2655.0 88.9 0.0 4.0 33.4 6.3
 INCIDENTS 45 3 2 0 1 75 0 63 24 0 2 5 1
 AVERAGE DQWN 6.3 1.9 0.9 0.0 1.1 10.3 0.0 42.1 3.7 0.0 2.0 6.7 6.3
 VARIANCE 62.4 3.2 0.7 -0.0 0.0 144.1 -0.0 492.1 17.4 -0.0 2.9 16.7 0.0
 STD.DEVIATION 7.9 1.8 0.8 -0.0 0.0 12.0 -0.0 22.2 4.2 0.0 1.7 4.1 0.0

FUNCTION 6
 TCT.HOURS DWN 126.7 202.2 26.2 91.5 24.2 6.6 395.0
 INCIDENTS 93 93 15 38 5 2 105
 AVERAGE DQWN 1.4 2.2 1.9 2.4 4.8 3.3 38.0
 VARIANCE 1.5 6.2 10.2 7.4 21.9 7.2 628.0
 STD.DEVIATION 1.2 2.5 3.2 2.7 4.7 2.7 25.0

| | | | | | | | | | | | | |
|-----------------|-------|------|------|------|------|-------|------|------|-------|-------|-------|------|
| AVERAGE DOWN | 31.0 | 0.0 | 0.0 | 0.0 | 0.0 | 113.7 | 3.0 | 1.6 | 5.0 | 15.6 | 0.0 | 0.0 |
| VARIANCE | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | -0.0 | -0.0 |
| STD. DEVIATION | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | -0.0 | -0.0 |
| FUNCTION 10 | | | | | | | | | | | | |
| TOT. HOURS DOWN | 2.7 | 18.6 | 7.2 | 0.5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 3 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVERAGE DOWN | 0.5 | 2.1 | 1.0 | 0.5 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.0 | 10.0 | 0.0 | 0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD. DEVIATION | 0.0 | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 11 | | | | | | | | | | | | |
| TOT. HOURS DOWN | 34.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 0.0 | 1.4 | 158.6 | 14.0 | 0.0 | 0.0 |
| INCIDENTS | 25 | 0 | 0 | 0 | 0 | 13 | 0 | 1 | 68 | 2 | 0 | 0 |
| AVERAGE DOWN | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 4.1 | 0.0 | 1.4 | 2.3 | 7.0 | 0.0 | 0.0 |
| VARIANCE | 4.6 | -0.0 | -0.0 | -0.0 | -0.0 | 22.2 | -0.0 | 0.0 | 2.8 | 32.0 | -0.0 | -0.0 |
| STD. DEVIATION | 2.2 | -0.0 | -0.0 | -0.0 | -0.0 | 4.7 | 0.0 | 0.0 | 1.7 | 5.7 | 0.0 | 0.0 |
| FUNCTION 11 | | | | | | | | | | | | |
| TOT. HOURS DOWN | 11.0 | 17.5 | 1.0 | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 33 | 40 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVERAGE DOWN | 0.3 | 0.4 | 0.5 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 0.1 | 0.2 | 0.3 | 0.3 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD. DEVIATION | 0.3 | 0.4 | 0.5 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 12 | | | | | | | | | | | | |
| TOT. HOURS DOWN | 191.3 | 87.8 | 0.0 | 12.4 | 9.3 | 212.1 | 4.6 | 0.0 | 105.1 | 260.9 | 7.6 | 0.0 |
| INCIDENTS | 46 | 29 | 0 | 4 | 3 | 36 | 4 | 0 | 27 | 59 | 3 | 0 |
| AVERAGE DOWN | 4.2 | 3.0 | 0.0 | 3.1 | 9.3 | 5.9 | 1.2 | 0.0 | 3.9 | 4.8 | 2.3 | 0.0 |
| VARIANCE | 32.3 | 8.7 | -0.0 | 8.9 | 0.0 | 243.0 | 0.0 | -0.0 | 15.9 | 33.9 | 13.0 | -0.0 |
| STD. DEVIATION | 5.7 | 2.9 | 0.0 | 3.0 | 0.0 | 15.6 | 0.0 | 0.0 | 4.0 | 5.8 | 3.6 | 0.0 |
| FUNCTION 12 | | | | | | | | | | | | |
| TOT. HOURS DOWN | 67.4 | 73.6 | 9.7 | 27.4 | 8.4 | 173.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCIDENTS | 18 | 21 | 1 | 16 | 3 | 17 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVERAGE DOWN | 0.9 | 0.9 | 1.4 | 1.7 | 2.8 | 10.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VARIANCE | 1.0 | 1.1 | 1.4 | 16.9 | 19.0 | 299.2 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 | -0.0 |
| STD. DEVIATION | 1.0 | 1.0 | 1.2 | 4.1 | 4.4 | 17.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FUNCTION 13 | | | | | | | | | | | | |
| TOT. HOURS DOWN | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 79.9 | 0.0 | 0.0 | 40.6 | 83.8 | 105.6 | 0.0 |
| INCIDENTS | 4 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 14 | 26 | 0 |
| AVERAGE DOWN | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 11.4 | 0.0 | 0.0 | 5.8 | 6.0 | 4.1 | 0.0 |
| VARIANCE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.8 | 0.0 | 0.0 | 5.8 | 6.0 | 17.3 | 0.0 |
| STD. DEVIATION | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.6 | 0.0 | 0.0 | 2.4 | 2.4 | 4.2 | 0.0 |

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INCIDENTS
AVERAGE DOWN 0.0
VARIANCE -0.0
STD.DEVIATION -0.0

FUNCTION 17
TGT.HOURS DOWN
INCIDENTS

57.1 7.6 1.9 4.1 14.4 9.2 0.0 85.9 15.4 30.8 0.6 1.0/ 1.0 0.8
42 10 1.9 5.1 12 11 0.0 47 16 24 1 1.0 2 0.2
1.4 0.8 1.4 1.2 1.2 0.8 0.0 1.8 1.0 0.6 1.0 0.4 0.4
1.3 1.5 0.0 1.5 1.7 0.4 -0.0 4.4 1.5 0.9 0.0 0.0 0.2
1.2 1.2 0.0 1.2 1.5 0.8 -0.0 2.1 1.2 1.0 0.0 0.1 0.4

FUNCTION 17
TGT.HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD.DEVIATION

0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 18
TGT.HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD.DEVIATION

175.8 7.0 1.0 6.9 31.5 24.4 1.0 11.6 6.5 4.7 3.2 3.3 3.3 0.2
101 1.1 4.4 1.0 1.0 2.1 0.0 5.1 0.0 1.4 0.8 4.4 4.4 1
1.7 0.5 0.2 1.0 1.0 1.0 0.0 5.1 0.0 1.4 0.8 2.1 2.1 0.2
5.0 0.3 0.0 1.4 1.1 1.0 0.0 4.8 0.0 0.3 0.0 1.6 1.6 0.0
2.2 0.6 0.2 1.5 1.1 1.4 0.0 2.2 0.0 0.0 0.0 0.4 0.4 0.0

FUNCTION 18
TGT.HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0
-0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0

FUNCTION 19
TGT.HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD.DEVIATION

4.4 0.3 0.0 0.0 2.5 17.1 0.2 18.0 0.5 0.7 0.0 0.4 0.4 0.0
1.5 0.1 0.0 0.0 0.6 5.7 0.2 4.0 0.5 0.9 0.0 0.4 0.4 0.0
0.4 0.0 0.0 0.0 0.2 34.4 0.0 90.8 0.0 0.0 0.0 0.0 0.0 0.0
0.6 0.1 0.0 0.0 0.4 6.0 0.0 9.5 0.0 0.0 0.0 0.0 0.0 0.0

FUNCTION 19
TGT.HOURS DOWN
INCIDENTS
AVERAGE DOWN
VARIANCE
STD.DEVIATION

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

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FUNCTION 6
 NUMBER OF SECONDARIES 3658.5
 NUMBER OF INCIDENTS 113
 AVERAGE HOURS REQD. 34.1
 VARIANCE 4950.7
 STD. DEVIATION 70.4

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 479.4
 INCIDENTS 113
 AVERAGE 4.2
 VARIANCE 31.5
 STD. DEVIATION 5.6

TOTAL TUBES
 3959
 113
 35.

FUNCTION 7
 NUMBER OF SECONDARIES 197.7
 NUMBER OF INCIDENTS 31
 AVERAGE HOURS REQD. 5.1
 VARIANCE 49.4
 STD. DEVIATION 7.0

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 22.3
 INCIDENTS 31
 AVERAGE 0.7
 VARIANCE 1.0
 STD. DEVIATION 1.0

TOTAL TUBES
 45
 31
 1.

FUNCTION 21
 NUMBER OF SECONDARIES 433.6
 NUMBER OF INCIDENTS 89
 AVERAGE HOURS REQD. 7.1
 VARIANCE 100.1
 STD. DEVIATION 10.0

ASSOCIATED DELAY TOTALS
 SUM OF DELAYS 113.6
 INCIDENTS 89
 AVERAGE 1.3
 VARIANCE 4.7
 STD. DEVIATION 2.2

TOTAL TUBES
 7695
 89
 84.

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REACTOR 1 OUTAGE FUNCTION EXPECTATION REPORT

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION=21=TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|----|----|---|---|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 43 | 19 | 3 | 6 | 18 | 21 | 3 | 46 | 32 | 4 | 14 | 9 | 14 | 10 | 47 | 47 | 27 | 43 | 1 | 0 | 43 |

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| SECONDARY NUMBER | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|-------|-------|------|-------|-------|-------|--------|--------|-------|------|------|------|------|------|----|----|
| FUNCTION TOTAL | 646.9 | 59.1 | 4.5 | 15.3 | 147.6 | 189.1 | 17.7 | 1328.3 | 132.0 | 11.1 | 47.2 | 55.1 | 60.0 | 18.7 | | |
| TOT. HOURS DWN | 43 | 19 | 3 | 6 | 18 | 21 | 3 | 46 | 32 | 4 | 14 | 14 | 14 | 10 | | |
| INCIDENTS | 15.0 | 3.1 | 1.5 | 2.5 | 8.2 | 9.0 | 5.9 | 28.9 | 4.1 | 2.8 | 3.4 | 6.1 | 4.3 | 1.9 | | |
| AVERAGE DWN | 284.1 | 6.1 | 1.9 | 4.9 | 37.1 | 67.0 | 21.6 | 2477.3 | 20.0 | 3.9 | 9.8 | 96.9 | 8.0 | 4.6 | | |
| VARIANCE | 16.9 | 2.5 | 1.4 | 2.2 | 6.1 | 8.8 | 4.7 | 49.8 | 4.5 | 2.0 | 3.8 | 9.8 | 2.8 | 2.1 | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 187.4 | 224.8 | 49.1 | 117.9 | 12.6 | 0. | 6285. | | | | | | | | | |
| TOT. HOURS DWN | 47 | 47 | 27 | 43 | 1 | 0 | 43 | | | | | | | | | |
| INCIDENTS | 4.0 | 4.8 | 1.8 | 2.7 | 12.6 | 0. | 193. | | | | | | | | | |
| AVERAGE DWN | 2.1 | 6.0 | 2.8 | 8.7 | 0. | -0. | 10189. | | | | | | | | | |
| VARIANCE | 1.5 | 2.5 | 1.7 | 2.9 | 0. | -0. | 318. | | | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | |

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REACTOR 2 OUTAGE FUNCTION EXPECTATION REPORT

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THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21*TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|----|----|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 30 | 13 | 1 | 9 | 4 | 9 | 0 | 41 | 10 | 6 | 16 | 9 | 15 | 8 | 35 | 35 | 11 | 12 | 2 | 0 | 31 |

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| SECONDARY FUNCTION NUMBER | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---------------------------|-------|-------|-----|------|------|------|-----|--------|------|------|------|-------|------|------|----|
| FUNCTION TOTAL | 671.9 | 131.7 | 0.5 | 36.8 | 43.1 | 46.4 | 0. | 922.5 | 55.9 | 16.2 | 67.1 | 110.9 | 20.0 | 15.2 | |
| TOT.HOURS DMN | 30 | 13 | 1 | 9 | 4 | 9 | 0 | 41 | 18 | 6 | 16 | 8 | 15 | 1.9 | |
| INCIDENTS | 22.4 | 10.1 | 0.5 | 4.1 | 10.8 | 5.2 | 0. | 22.5 | 3.1 | 2.7 | 4.2 | 12.3 | 1.3 | 1.9 | |
| AVERAGE DOWN | 487.9 | 41.5 | 0. | 17.1 | 45.8 | 7.5 | -0. | 1141.9 | 9.7 | 12.1 | 16.9 | 110.2 | 2.5 | 15.4 | |
| VARIANCE | 22.1 | 6.4 | 0. | 4.1 | 6.8 | 2.7 | -0. | 33.8 | 3.1 | 3.5 | 4.1 | 10.5 | 1.6 | 3.9 | |
| STD.DEVIATION | | | | | | | | | | | | | | | |

| | | | | | | | |
|----------------|-------|-------|------|------|------|-----|---------|
| FUNCTION TOTAL | 134.7 | 217.8 | 26.4 | 34.1 | 24.9 | 0. | 9587. |
| TOT.HOURS DMN | 35 | 35 | 11 | 12 | 2 | 0 | 31 |
| INCIDENTS | 3.8 | 6.2 | 2.4 | 2.8 | 12.4 | 0. | 309. |
| AVERAGE DOWN | 0.9 | 19.2 | 6.1 | 5.6 | 41.4 | -0. | 142267. |
| VARIANCE | 1.0 | 4.4 | 2.5 | 2.4 | 6.4 | -0. | 377. |
| STD.DEVIATION | | | | | | | |

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REACTOR 3 OUTAGE FUNCTION EXPECTATION REPORT

THIS IS AN EXEMPLARY REPORT ILLUSTRATING AVERAGE TIME REQUIREMENTS AND EXPECTED VARIANCES FOR THE BASIC TASKS REQUIRED TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.

**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION=21*TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|----|----|---|---|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 46 | 23 | 3 | 7 | 17 | 24 | 9 | 47 | 40 | 11 | 17 | 14 | 9 | 7 | 46 | 50 | 20 | 28 | 0 | 1 | 46 |

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| SECONDARY NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|-------|-------|------|-------|-------|-------|--------|--------|-------|------|------|------|-----|------|
| FUNCTION TOTAL | 682.6 | 53.9 | 3.0 | 46.0 | 265.4 | 422.3 | 26.6 | 703.6 | 177.2 | 16.7 | 46.7 | 31.0 | 5.3 | 15.9 |
| TOT.HOURS DWN | 46 | 23 | 3 | 7 | 17 | 24 | 9 | 47 | 40 | 11 | 17 | 14 | 9 | 7 |
| INCIDENTS | 14.8 | 2.3 | 1.0 | 6.6 | 15.6 | 17.6 | 3.0 | 15.0 | 4.4 | 1.5 | 2.7 | 2.2 | 0.6 | 2.3 |
| AVERAGE DWN | 293.3 | 2.9 | 0.4 | 108.2 | 76.0 | 188.7 | 4.0 | 1126.8 | 49.9 | 2.0 | 3.6 | 3.6 | 0.6 | 11.2 |
| VARIANCE | 17.1 | 1.7 | 0.6 | 10.4 | 8.7 | 13.7 | 2.0 | 33.6 | 7.1 | 1.4 | 1.9 | 1.9 | 0.8 | 3.3 |
| STD.DEVIATION | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 134.9 | 199.9 | 48.2 | 59.2 | 0. | 5.2 | 7474. | | | | | | | |
| TOT.HOURS DWN | 46 | 50 | 20 | 28 | 0 | 1 | 46 | | | | | | | |
| INCIDENTS | 2.9 | 4.0 | 2.4 | 2.1 | 0. | 5.2 | 162. | | | | | | | |
| AVERAGE DWN | 0.9 | 3.2 | 8.7 | 7.5 | -0. | 0. | 44636. | | | | | | | |
| VARIANCE | 1.0 | 1.8 | 2.9 | 2.7 | -0. | 0. | 211. | | | | | | | |
| STD.DEVIATION | | | | | | | | | | | | | | |

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APRIL 1961 TO MAY 15 1962

REACTOR 4 OUTAGE FUNCTION EXPECTATION REPORT

THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION=21 TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|----|----|---|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 40 | 21 | 9 | 12 | 15 | 22 | 7 | 43 | 31 | 3 | 16 | 14 | 8 | 12 | 40 | 41 | 29 | 41 | 0 | 0 | 41 |

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| SECONDARY FUNCTION NUMBER | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
|------------------------------|-------|-------|------|------|-------|-------|---------|--------|------|------|------|------|------|--------|---|----|----|----|----|----|--|
| FUNCTION TOTAL | 541.2 | 96.5 | 30.5 | 51.6 | 103.2 | 190.7 | 29.8 | 994.7 | 75.6 | 11.1 | 62.0 | 73.3 | 10.3 | 275.9 | | | | | | | |
| TOT. HOURS DMN | 40 | 21 | 9 | 12 | 15 | 22 | 7 | 43 | 31 | 3 | 16 | 14 | 8 | 12 | | | | | | | |
| INCIDENTS | 13.5 | 4.6 | 3.4 | 4.3 | 6.9 | 6.7 | 4.3 | 23.1 | 2.4 | 3.7 | 5.1 | 5.2 | 1.3 | 23.0 | | | | | | | |
| AVERAGE DOWN | 392.2 | 9.6 | 9.4 | 21.5 | 21.2 | 101.1 | 6.7 | 2233.9 | 6.2 | 11.6 | 31.2 | 20.2 | 2.5 | 4635.9 | | | | | | | |
| VARIANCE | 19.8 | 3.1 | 3.1 | 4.6 | 4.6 | 10.1 | 2.6 | 47.3 | 2.5 | 3.4 | 5.6 | 4.5 | 1.6 | 68.1 | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 196.2 | 207.3 | 53.3 | 90.2 | 0.0 | 0.0 | 6672. | | | | | | | | | | | | | | |
| TOT. HOURS DMN | 40 | 41 | 29 | 41 | 0 | 0 | 41 | | | | | | | | | | | | | | |
| INCIDENTS | 4.9 | 5.1 | 1.8 | 2.2 | 0 | 0 | 212. | | | | | | | | | | | | | | |
| AVERAGE DOWN | 19.4 | 12.7 | 3.6 | 10.2 | -0. | -0. | 145685. | | | | | | | | | | | | | | |
| VARIANCE | 4.4 | 3.6 | 1.9 | 3.2 | -0. | -0. | 382. | | | | | | | | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | | |

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REACTOR 5 OUTAGE FUNCTION EXPECTATION REPORT

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THIS IS AN EXEMPLARY REPORT ILLUSTRATING AVERAGE TIME REQUIREMENTS AND EXPECTED VARIANCES FOR THE BASIC TASKS REQUIRED TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.

**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION=21-TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|----|----|---|---|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 34 | 18 | 5 | 7 | 17 | 16 | 4 | 44 | 33 | 5 | 16 | 4 | 6 | 1 | 39 | 38 | 11 | 17 | 0 | 0 | 36 |

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| SECONDARY NUMBER | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|-------|-------|------|------|-------|-------|--------|--------|-------|-----|------|------|------|-----|----|
| FUNCTION TOTAL | 505.1 | 63.0 | 7.3 | 47.6 | 148.4 | 179.0 | 23.5 | 945.3 | 151.8 | 8.7 | 46.5 | 14.4 | 14.6 | 3.2 | |
| TOT. HOURS DWN | 34 | 18 | 5 | 7 | 17 | 16 | 4 | 44 | 33 | 5 | 16 | 4 | 6 | 1 | |
| INCIDENTS | 14.9 | 3.5 | 1.5 | 6.8 | 8.7 | 11.2 | 5.9 | 21.5 | 4.6 | 1.7 | 2.9 | 3.6 | 2.5 | 3.2 | |
| AVERAGE DWN | 391.0 | 7.1 | 0.9 | 35.8 | 31.1 | 197.8 | 19.0 | 1130.2 | 24.6 | 0.7 | 3.5 | 24.4 | 5.9 | 0. | |
| VARIANCE | 19.8 | 2.7 | 1.0 | 6.0 | 5.6 | 14.1 | 4.4 | 33.6 | 5.0 | 0.9 | 1.9 | 4.9 | 2.4 | 0. | |
| STD. DEVIATION | | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 108.5 | 148.9 | 14.6 | 38.1 | 0. | 0. | 7883. | | | | | | | | |
| TOT. HOURS DWN | 39 | 38 | 11 | 17 | 0 | 0 | 36 | | | | | | | | |
| INCIDENTS | 2.8 | 3.9 | 1.3 | 2.2 | 0. | 0. | 197. | | | | | | | | |
| AVERAGE DWN | 1.2 | 4.4 | 1.1 | 6.3 | -0. | -0. | 70739. | | | | | | | | |
| VARIANCE | 1.1 | 2.1 | 1.0 | 2.5 | -0. | -0. | 266. | | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | |

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THIS IS AN EXEMPLARY REPORT ILLUSTRATING AVERAGE TIME REQUIREMENTS AND EXPECTED VARIANCES FOR THE BASIC TASKS REQUIRED TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION#21=TUBE COUNT.

REACTOR 6 OUTAGE FUNCTION EXPECTATION REPORT

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|----|----|---|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 47 | 11 | 6 | 10 | 27 | 13 | 5 | 60 | 47 | 9 | 12 | 7 | 12 | 18 | 51 | 54 | 15 | 27 | 4 | 2 | 56 |

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| SECONDARY NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|-------|-------|------|------|-------|------|--------|--------|------|-----|------|------|------|------|
| FUNCTION TOTAL | 598.9 | 30.2 | 12.6 | 23.8 | 194.9 | 58.9 | 8.0 | 1212.3 | 87.1 | 8.4 | 33.7 | 49.8 | 33.6 | 13.8 |
| TOT.HOURS DWN | 47 | 11 | 6 | 10 | 27 | 13 | 5 | 60 | 47 | 9 | 12 | 7 | 12 | 18 |
| INCIDENTS | 12.7 | 2.7 | 2.1 | 2.4 | 7.2 | 4.5 | 1.6 | 20.2 | 1.9 | 0.9 | 2.8 | 7.1 | 2.8 | 0.8 |
| AVERAGE DWN | 245.9 | 4.7 | 2.4 | 7.1 | 7.2 | 42.0 | 2.0 | 2024.8 | 3.5 | 0.7 | 10.3 | 22.5 | 34.6 | 0.7 |
| VARIANCE | 15.7 | 2.2 | 1.6 | 2.7 | 2.7 | 6.5 | 1.4 | 45.0 | 1.9 | 0.9 | 3.2 | 4.7 | 5.9 | 0.8 |
| STD.DEVIATION | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 161.4 | 316.5 | 28.7 | 72.0 | 25.5 | 5.9 | 6134. | | | | | | | |
| TOT.HOURS DWN | 51 | 54 | 15 | 27 | 4 | 2 | 56 | | | | | | | |
| INCIDENTS | 3.2 | 5.9 | 1.9 | 2.7 | 6.4 | 2.9 | 110. | | | | | | | |
| AVERAGE DWN | 1.0 | 16.8 | 3.4 | 4.7 | 23.6 | 13.0 | 63208. | | | | | | | |
| VARIANCE | 1.0 | 4.1 | 1.8 | 2.2 | 4.9 | 3.6 | 251. | | | | | | | |
| STD.DEVIATION | | | | | | | | | | | | | | |

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REACTOR 7 OUTAGE FUNCTION EXPECTATION REPORT

THIS IS AN EXEMPLARY REPORT ILLUSTRATING AVERAGE TIME REQUIREMENTS AND EXPECTED VARIANCES FOR THE BASIC TASKS REQUIRED TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.
**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION=21 TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|----|----|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 27 | 18 | 1 | 4 | 0 | 9 | 1 | 28 | 23 | 9 | 15 | 14 | 11 | 4 | 25 | 27 | 12 | 10 | 1 | 0 | 29 |

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| SECONDARY NUMBER | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|-------|-------|------|------|-----|------|---------|-------|------|------|-------|------|------|-----|---|----|----|----|----|----|
| FUNCTION TOTAL | 526.2 | 155.2 | 0.3 | 16.6 | 0. | 21.9 | 14.9 | 304.3 | 34.6 | 26.9 | 112.2 | 52.6 | 15.9 | 5.5 | | | | | | |
| TOT. HOURS DWN | 27 | 18 | 1 | 4 | 0 | 9 | 1 | 28 | 23 | 19 | 14 | 11 | 4 | | | | | | | |
| INCIDENTS | 19.5 | 8.6 | 0.3 | 4.1 | 0. | 2.4 | 14.9 | 10.9 | 1.5 | 3.0 | 7.5 | 3.8 | 1.4 | | | | | | | |
| AVERAGE DWN | 232.3 | 28.0 | 0. | 5.8 | -0. | 2.0 | 0. | 103.5 | 1.1 | 12.7 | 46.2 | 11.2 | 3.4 | | | | | | | |
| VARIANCE | 15.2 | 5.3 | 0. | 2.4 | -0. | 1.4 | 0. | 10.2 | 1.1 | 3.6 | 6.6 | 3.4 | 0.8 | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 89.6 | 90.5 | 18.7 | 38.0 | 2.4 | 0. | 14053. | | | | | | | | | | | | | |
| TOT. HOURS DWN | 25 | 27 | 12 | 10 | 1 | 0 | 29 | | | | | | | | | | | | | |
| INCIDENTS | 3.6 | 3.4 | 1.6 | 3.8 | 2.4 | 0. | 485. | | | | | | | | | | | | | |
| AVERAGE DWN | 1.1 | 2.6 | 1.8 | 15.4 | 0. | -0. | 189312. | | | | | | | | | | | | | |
| VARIANCE | 1.0 | 1.6 | 1.3 | 3.9 | 0. | -0. | 435. | | | | | | | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | |

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REACTOR 8 OUTAGE FUNCTION EXPECTATION REPORT

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THIS IS AN EXEMPLARY REPORT ILLUSTRATING
AVERAGE TIME REQUIREMENTS AND EXPECTED
VARIANCES FOR THE BASIC TASKS REQUIRED
TO RE-ESTABLISH ON-LINE PRODUCTION STATUS.

**ALL DATA IN HOURS-EXCEPT SECONDARY FUNCTION=21=TUBE COUNT.

** INCIDENT EXPERIENCE BY CAUSE FUNCTION **

| | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|----|----|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SECONDARY FUNCTION NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| FUNCTION TOTAL | 24 | 12 | 1 | 2 | 2 | 8 | 0 | 26 | 17 | 1 | 16 | 10 | 10 | 6 | 26 | 27 | 16 | 5 | 1 | 0 | 24 |

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| SECONDARY NUMBER | 15 | 1 | 16 | 2 | 17 | 3 | 18 | 4 | 19 | 5 | 20 | 6 | 21 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|-------|------|------|-------|------|------|---------|-------|------|-----|------|------|------|------|---|---|----|----|----|----|----|
| FUNCTION TOTAL | 466.1 | 79.7 | 2.3 | 21.9 | 31.2 | 29.4 | 0. | 245.6 | 40.9 | 3.0 | 50.2 | 64.6 | 26.8 | 47.1 | | | | | | | |
| TOT. HOURS DWN | 24 | 12 | 1 | 2 | 2 | 8 | 0 | 26 | 17 | 1 | 16 | 10 | 10 | 8 | | | | | | | |
| INCIDENTS | 19.4 | 6.6 | 2.3 | 10.9 | 15.6 | 3.7 | 0. | 9.4 | 2.4 | 3.0 | 3.1 | 6.5 | 2.7 | 5.9 | | | | | | | |
| AVERAGE DWN | 250.9 | 20.1 | 0. | 149.6 | 5.8 | 10.0 | -0. | 44.4 | 5.0 | 0. | 7.1 | 34.5 | 5.0 | 84.2 | | | | | | | |
| VARIANCE | 15.8 | 4.5 | 0. | 12.2 | 2.4 | 3.2 | -0. | 6.7 | 2.2 | 0. | 2.7 | 5.9 | 2.2 | 9.2 | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 101.0 | 90.4 | 23.3 | 19.4 | 7.2 | 0. | 14566. | | | | | | | | | | | | | | |
| TOT. HOURS DWN | 26 | 27 | 16 | 5 | 1 | 0 | 24 | | | | | | | | | | | | | | |
| INCIDENTS | 3.9 | 3.3 | 1.5 | 3.9 | 7.2 | 0. | 607. | | | | | | | | | | | | | | |
| AVERAGE DWN | 0.7 | 1.6 | 1.7 | 10.0 | 0. | -0. | 204645. | | | | | | | | | | | | | | |
| VARIANCE | 0.8 | 1.3 | 1.3 | 3.2 | 0. | -0. | 452. | | | | | | | | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | | | | | | | |

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USE FUNCTION **

14 15 16 17 18 19 20 21

68 309 319 141 183 9 3 306

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| SECONDARY NUMBER | 15 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------|--------|--------|-------|-------|-------|--------|---------|--------|-------|-------|-------|-------|-------|-------|----|
| FUNCTION TOTAL | 4638.9 | 669.3 | 61.0 | 259.6 | 933.8 | 1137.7 | 120.5 | 6656.6 | 755.1 | 102.1 | 485.6 | 451.7 | 186.7 | 395.3 | |
| TOT. HOURS DWN | 291 | 135 | 29 | 57 | 100 | 122 | 29 | 335 | 241 | 48 | 122 | 81 | 85 | 68 | |
| INCIDENTS | 15.9 | 5.0 | 2.1 | 4.6 | 9.3 | 9.3 | 4.2 | 19.9 | 3.1 | 2.1 | 4.0 | 5.6 | 2.2 | 5.8 | |
| AVERAGE DWN | 321.8 | 19.9 | 4.4 | 30.6 | 40.1 | 117.6 | 12.9 | 1453.9 | 17.9 | 5.6 | 17.3 | 41.1 | 9.1 | 839.8 | |
| VARIANCE | 17.9 | 4.5 | 2.1 | 5.5 | 6.3 | 10.9 | 3.6 | 38.1 | 4.2 | 2.4 | 4.2 | 6.4 | 3.0 | 29.0 | |
| STD. DEVIATION | | | | | | | | | | | | | | | |
| FUNCTION TOTAL | 1113.7 | 1496.1 | 262.3 | 468.9 | 72.6 | 11.1 | 75854. | | | | | | | | |
| TOT. HOURS DWN | 309 | 319 | 141 | 183 | 9 | 3 | 306 | | | | | | | | |
| INCIDENTS | 3.6 | 4.7 | 1.9 | 2.6 | 8.1 | 3.7 | 248. | | | | | | | | |
| AVERAGE DWN | 3.9 | 9.6 | 3.7 | 8.1 | 26.9 | 8.2 | 127331. | | | | | | | | |
| VARIANCE | 2.0 | 3.1 | 1.9 | 2.8 | 5.2 | 2.9 | 357. | | | | | | | | |
| STD. DEVIATION | | | | | | | | | | | | | | | |

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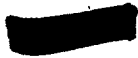
APPENDIX

| | REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| CAUSE 1 | 0. | 448.5 | 308.3 | 173.2 | 43.1 | 0. | 431.8 | 643.1 |
| CAUSE 2 | 516.4 | 978.0 | 584.2 | 742.7 | 373.3 | 642.8 | 334.0 | 243.3 |
| CAUSE 3 | 805.1 | 192.1 | 538.8 | 794.8 | 699.4 | 1148.4 | 0. | 0. |
| CAUSE 4 | 1681.8 | 526.7 | 1172.7 | 831.3 | 829.6 | 917.8 | 0. | 33.4 |
| CAUSE 5 | 4.1 | 10.2 | 50.6 | 173.8 | 133.3 | 127.7 | 663.6 | 334.1 |
| CAUSE 6 | 31.1 | 72.4 | 146.4 | 35.3 | 1.8 | 4.7 | 0. | 38.0 |
| CAUSE 7 | 0. | 56.0 | 5.4 | 0. | 134.6 | 116.5 | 2.1 | 0. |
| CAUSE 8 | 0. | 3.6 | 0. | 0. | 6.3 | 0. | 0. | 0. |
| CAUSE 9 | 72.6 | 0.5 | 121.5 | 274.1 | 41.8 | 0. | 0.6 | 92.7 |
| CAUSE 10 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1.1 |
| CAUSE 11 | 0.1 | 0. | 0. | 0. | 0. | 0. | 117.5 | 0. |
| CAUSE 12 | 0. | 200.6 | 0. | 0. | 0. | 0. | 0. | 0. |
| CAUSE 13 | 102.8 | 43.4 | 0. | 0. | 0. | 0. | 0. | 0. |
| CAUSE 14 | 52.9 | 0. | 0.5 | 89.2 | 188.9 | 0.5 | 0. | 0. |
| CAUSE 15 | 37.7 | 0. | 0. | 0. | 27.1 | 0. | 0. | 0. |
| CAUSE 16 | 7.5 | 11.1 | 0. | 3.1 | 0. | 2.5 | 0. | 0. |

TOTAL HOURS DOWN

- Cause 1 = Scheduled Charge-Discharge
- 2 = Rupture
- 3 = Tube Replacement
- 4 = Water Leaks
- 5 = Control Trips (Panellit, Beckman, etc.)
- 6 = Front Face Leaks
- 7 = Rear Face Leaks
- 8 = Production Test
- 9 = Electrical Poser Failure
- 10 = Oriface Failure
- 11 = Control Rod Failure
- 12 = Scheduled Overbore
- 13 = Water Supply Failure
- 14 = Ball Drop - Loss of Reactivity
- 15 = Plugged Rear Nozzles
- 16 = Faulty Thermocouples

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TOTAL DOWN INCIDENTS

| | REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| CAUSE 1 | 0 | 4 | 3 | 1 | 2 | 0 | 6 | 9 |
| CAUSE 2 | 9 | 14 | 13 | 18 | 9 | 21 | 8 | 6 |
| CAUSE 3 | 2 | 1 | 2 | 2 | 4 | 6 | 0 | 0 |
| CAUSE 4 | 29 | 11 | 22 | 14 | 15 | 25 | 0 | 1 |
| CAUSE 5 | 4 | 16 | 10 | 12 | 5 | 24 | 21 | 19 |
| CAUSE 6 | 1 | 2 | 4 | 1 | 1 | 3 | 0 | 1 |
| CAUSE 7 | 0 | 3 | 2 | 0 | 4 | 4 | 2 | 0 |
| CAUSE 8 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| CAUSE 9 | 2 | 1 | 5 | 2 | 1 | 0 | 1 | 1 |
| CAUSE10. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| CAUSE11 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| CAUSE12 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| CAUSE13 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 |
| CAUSE14 | 2 | 0 | 1 | 2 | 2 | 2 | 0 | 0 |
| CAUSE15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CAUSE16 | 2 | 2 | 0 | 2 | 0 | 2 | 0 | 0 |

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**DOWN INCIDENT AVERAGE AND STANDARD DEVIATION*
REACTORS

| | REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|------------|------------|-------------|-------------|-------------|-------------|-----------|-----------|
| CAUSE 1 | 0. 0. | 112.1 38.3 | 102.8 18.4 | 86.6 68.5 | 43.1 0. | 0. 0. | 72.0 9.7 | 71.5 9.6 |
| CAUSE 2 | 57.4 28.4 | 69.9 73.0 | 44.9 21.2 | 41.3 5.1 | 41.5 21.7 | 30.6 13.8 | 41.8 35.6 | 40.6 27.4 |
| CAUSE 3 | 402.5 27.6 | 192.1 0. | 269.4 168.8 | 397.4 75.6 | 174.8 142.4 | 191.4 148.6 | 0. 0. | 0. 0. |
| CAUSE 4 | 58.0 36.5 | 47.9 30.3 | 53.3 16.2 | 59.4 24.9 | 55.3 17.0 | 36.7 25.4 | 0. 0. | 33.4 0. |
| CAUSE 5 | 1.0 1.2 | 0.6 0.5 | 5.1 12.6 | 14.5 20.9 | 26.7 26.5 | 5.3 10.5 | 31.6 25.9 | 17.6 16.6 |
| CAUSE 6 | 31.1 0. | 36.2 0.5 | 36.6 29.3 | 35.3 0. | 1.8 0. | 1.6 0.6 | 0. 0. | 38.0 0. |
| CAUSE 7 | 0. 0. | 18.7 30.7 | 2.7 3.1 | 0. 0. | 33.6 37.3 | 29.1 57.7 | 1.1 0.1 | 0. 0. |
| CAUSE 8 | 0. 0. | 3.6 0. | 0. 0. | 0. 0. | 6.3 0. | 0. 0. | 0. 0. | 0. 0. |
| CAUSE 9 | 36.3 8.5 | 0.5 0. | 24.3 22.4 | 137.0 142.5 | 41.8 0. | 0. 0. | 0.6 0. | 92.7 0. |
| CAUSE 10 | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 1.1 0. |
| CAUSE 11 | 0.1 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 58.7 3.2 | 0. 0. |
| CAUSE 12 | 0. 0. | 100.3 84.1 | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. |
| CAUSE 13 | 51.4 70.4 | 43.4 0. | 0. 0. | 0. 0. | 63.0 25.4 | 0. 0. | 0. 0. | 0. 0. |
| CAUSE 14 | 26.5 36.1 | 0. 0. | 0.5 0. | 44.6 23.9 | 13.5 5.5 | 0.2 0.0 | 0. 0. | 0. 0. |
| CAUSE 15 | 18.8 25.9 | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. | 0. 0. |
| CAUSE 16 | 3.8 3.1 | 5.6 7.6 | 0. 0. | 1.5 1.6 | 0. 0. | 1.3 0.6 | 0. 0. | 0. 0. |

DECLASSIFIED

DOWN INCIDENT SUMMARY- TOTAL HOURS, PERCENTAGE OF TOTAL DEPARTMENT HOURS AND TIME OPERATING EFFICIENCY
 REACTOR1 REACTOR2 REACTOR3 REACTOR4 REACTOR5 REACTOR6 REACTOR7 REACTOR8

| | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| TOTAL | 3312.2 | 2543.2 | 2928.4 | 3117.4 | 2479.1 | 2961.0 | 1549.8 | 1385.7 |
| PERCENT | 16.335 | 12.542 | 14.442 | 15.374 | 12.226 | 14.603 | 7.643 | 6.834 |
| EFFENCY | 0.664 | 0.742 | 0.703 | 0.684 | 0.749 | 0.700 | 0.843 | 0.860 |

DECLASSIFIED

STANDARD DEVIATION

| | |
|----------|-------|
| CAUSE 1 | 28.2 |
| CAUSE 2 | 34.7 |
| CAUSE 3 | 146.4 |
| CAUSE 4 | 27.5 |
| CAUSE 5 | 19.9 |
| CAUSE 6 | 22.1 |
| CAUSE 7 | 36.3 |
| CAUSE 8 | 1.9 |
| CAUSE 9 | 63.1 |
| CAUSE 10 | 0. |
| CAUSE 11 | 33.9 |
| CAUSE 12 | 84.1 |
| CAUSE 13 | 36.3 |
| CAUSE 14 | 23.5 |
| CAUSE 15 | 25.9 |
| CAUSE 16 | 3.7 |

AVERAGE

| | |
|----------|-------|
| CAUSE 1 | 81.9 |
| CAUSE 2 | 45.0 |
| CAUSE 3 | 245.8 |
| CAUSE 4 | 51.2 |
| CAUSE 5 | 13.5 |
| CAUSE 6 | 25.4 |
| CAUSE 7 | 21.0 |
| CAUSE 8 | 4.9 |
| CAUSE 9 | 46.4 |
| CAUSE 10 | 1.1 |
| CAUSE 11 | 39.2 |
| CAUSE 12 | 100.3 |
| CAUSE 13 | 55.8 |
| CAUSE 14 | 18.9 |
| CAUSE 15 | 18.8 |
| CAUSE 16 | 5.0 |

DEPARTMENT SUMMARY

TIMES DOWN

| | |
|----------|-------|
| CAUSE 1 | 25.0 |
| CAUSE 2 | 98.0 |
| CAUSE 3 | 17.0 |
| CAUSE 4 | 117.0 |
| CAUSE 5 | 111.0 |
| CAUSE 6 | 13.0 |
| CAUSE 7 | 15.0 |
| CAUSE 8 | 2.0 |
| CAUSE 9 | 13.0 |
| CAUSE 10 | 1.0 |
| CAUSE 11 | 3.0 |
| CAUSE 12 | 2.0 |
| CAUSE 13 | 6.0 |
| CAUSE 14 | 9.0 |
| CAUSE 15 | 2.0 |
| CAUSE 16 | 8.0 |

TOTAL HOURS

| | |
|----------|--------|
| CAUSE 1 | 2048.0 |
| CAUSE 2 | 4414.8 |
| CAUSE 3 | 4178.7 |
| CAUSE 4 | 5993.4 |
| CAUSE 5 | 1497.4 |
| CAUSE 6 | 329.8 |
| CAUSE 7 | 314.6 |
| CAUSE 8 | 9.8 |
| CAUSE 9 | 603.7 |
| CAUSE 10 | 1.1 |
| CAUSE 11 | 117.6 |
| CAUSE 12 | 200.6 |
| CAUSE 13 | 335.1 |
| CAUSE 14 | 170.2 |
| CAUSE 15 | 37.7 |
| CAUSE 16 | 24.3 |

CAUSE 1
 CAUSE 2
 CAUSE 3
 CAUSE 4
 CAUSE 5
 CAUSE 6
 CAUSE 7
 CAUSE 8
 CAUSE 9
 CAUSE 10
 CAUSE 11
 CAUSE 12
 CAUSE 13
 CAUSE 14
 CAUSE 15
 CAUSE 16

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

| REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 1040.3 | 749.9 | 486.6 | 977.6 | 857.7 | 747.8 | 1055.8 | 747.8 |
| 1147.4 | 6621.5 | | 1069.4 | 1591.4 | 760.5 | 826.8 | 1591.4 |
| 2299.6 | | | 1552.7 | 473.2 | 412.3 | 642.9 | 473.2 |
| | | | | 917.2 | | | 917.2 |

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

| REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 334.6 | 170.0 | 444.1 | 502.2 | 189.2 | 418.9 | 1.8 | 2864.7 |
| 138.2 | 834.2 | 2898.2 | 1965.71 | 136.1 | 2.4 | 186.8 | 594.2 |
| 3.3 | 34.7 | 36.2 | 395.5 | 1528.8 | 1274.2 | 538.6 | 2881.2 |
| 1067.0 | 2970.2 | 253.5 | 142.1 | 207.0 | 1165.6 | 395.0 | 16.1 |
| 4788.8 | 251.7 | 545.9 | 203.7 | 62.9 | 519.5 | 5722.4 | 1138.6 |
| 1136.8 | 1007.9 | 1085.8 | 41.3 | 2.0 | 26.6 | 1439.6 | |
| 193.3 | 360.6 | 978.1 | 93.7 | 900.2 | 74.9 | 96.4 | |
| 1491.5 | 224.7 | 494.8 | 74.2 | 12.7 | 660.8 | | |
| | 375.9 | 395.8 | 28.1 | | 1625.4 | | |
| | 1415.7 | 1309.1 | 38.0 | | 198.3 | | |
| | 212.1 | 6.6 | 1120.8 | | 129.8 | | |
| | 402.9 | 105.0 | 270.4 | | 45.6 | | |
| | 27.9 | | 1720.8 | | 127.2 | | |
| | | | 916.8 | | 12.2 | | |
| | | | 105.4 | | 183.4 | | |
| | | | 88.2 | | 79.0 | | |
| | | | 116.9 | | 64.1 | | |
| | | | | | 1083.4 | | |
| | | | | | 337.1 | | |
| | | | | | 901.9 | | |

REACTOR1 1794.7 REACTOR2 REACTOR3 1515.0 REACTOR4 1445.1 REACTOR5 1934.1 REACTOR6 1050.3 REACTOR7 REACTOR8

CAUSE 3 3004.4 1419.6 1117.1 1675.2 1112.3

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

| REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 81.4 | 2.7 | 1402.1 | 61.3 | 6.6 | 2.9 | | |
| 1472.5 | 666.8 | 506.1 | 425.81 | 2107.1 | 538.4 | | |
| 430.9 | 69.0 | 335.7 | 103.0 | 16.2 | 453.2 | | |
| 49.7 | 99.5 | 326.7 | 522.0 | 105.8 | 192.0 | | |
| 111.1 | 184.4 | 174.3 | 162.5 | 577.0 | 580.9 | | |
| 229.2 | 3507.2 | 776.9 | 529.8 | 399.6 | 203.4 | | |
| 255.5 | 1255.8 | 31.2 | 69.1 | 278.4 | 584.7 | | |
| 89.1 | 76.1 | 81.8 | 3096.1 | 1461.8 | 356.5 | | |
| 12.0 | 1360.7 | 519.0 | 281.9 | 6.7 | 314.1 | | |
| 99.5 | 300.8 | 195.8 | 1082.6 | 105.0 | 182.5 | | |
| 109.2 | | 132.5 | 458.2 | 352.5 | 92.5 | | |
| 124.4 | | 139.8 | 506.7 | 326.2 | 73.4 | | |
| 156.2 | | 43.1 | 1035.5 | 139.8 | 92.3 | | |
| 2.3 | | 385.6 | | 959.0 | 448.3 | | |
| 148.4 | | 266.2 | | | 160.7 | | |
| 49.4 | | 119.0 | | | 70.7 | | |
| 121.0 | | 76.2 | | | 140.6 | | |
| 75.6 | | 145.6 | | | 113.6 | | |
| 62.5 | | 197.4 | | | 304.5 | | |
| 347.6 | | 270.0 | | | 136.8 | | |
| 137.6 | | 1989.8 | | | 1457.5 | | |
| 903.5 | | | | | 69.2 | | |
| 36.2 | | | | | 781.4 | | |
| 152.3 | | | | | 365.5 | | |
| 365.8 | | | | | | | |
| 150.1 | | | | | | | |
| 249.0 | | | | | | | |
| 161.1 | | | | | | | |

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

| REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 631.1 | 1203.3 | 1393.1 | 2782.2 | 73.3 | 305.1 | 353.6 | 15.6 |
| 1645.3 | 3.3 | 2963.8 | 293.5 | 4878.6 | 308.2 | 323.1 | 574.4 |
| 2217.9 | 2368.3 | 529.6 | 622.6 | 210.8 | 205.6 | 628.3 | 322.8 |
| | 968.9 | 786.1 | 286.9 | 1453.6 | 357.5 | 1252.5 | 712.5 |
| | 36.1 | 358.8 | 326.6 | | 1094.9 | 148.0 | 41.6 |
| | 136.6 | 1045.7 | 117.7 | | 1.1 | 585.2 | 2462.0 |
| | 1183.7 | 0.1 | 69.6 | | 1044.4 | 308.2 | 1008.4 |
| | 63.1 | 492.5 | 925.7 | | 0.3 | 130.9 | 714.7 |
| | 1050.3 | 66.3 | 1139.2 | | 1.4 | 558.4 | 51.5 |
| | 987.1 | | 1881.9 | | 0.6 | 226.4 | 330.9 |
| | 411.6 | | 332.0 | | 1407.1 | 792.9 | 0.2 |
| | 840.6 | | | | 11.7 | 208.3 | 1.1 |
| | 1.3 | | | | 3.3 | 357.8 | 0.7 |
| | 0.5 | | | | 15.5 | 646.0 | 70.2 |
| | 0.4 | | | | 5.3 | 483.7 | 457.1 |
| | | | | | 65.6 | 4.1 | 179.2 |
| | | | | | 110.9 | 1586.2 | 447.9 |
| | | | | | 0.9 | 1.4 | 928.0 |
| | | | | | 1063.7 | 19.1 | |
| | | | | | 742.6 | 317.3 | |
| | | | | | 702.6 | | |
| | | | | | 0.6 | | |
| | | | | | 975.2 | | |

REACTOR1 REACTOR2 REACTOR3 REACTOR4 REACTOR5 REACTOR6 REACTOR7 REACTOR8

6044.2 1214.6 3074.2 1649.0

657.6 660.1

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

CAUSE 6

REACTOR1 REACTOR2 REACTOR3 REACTOR4 REACTOR5 REACTOR6 REACTOR7 REACTOR8

4389.9 3551.9 529.7 704.3 1079.1

4147.9 753.4 1000.8

6536.2 2965.5

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

CAUSE 7

REACTOR1 REACTOR2 REACTOR3 REACTOR4 REACTOR5 REACTOR6 REACTOR7 REACTOR8

CAUSE 8

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

DECLASSIFIED

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

| REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 5588.9 | | 1373.5 | 6220.0 | | | | |
| | | 17.8 | | | | | |
| | | 3146.1 | | | | | |
| | | 1833.2 | | | | | |

REACTOR1 REACTOR2 REACTOR3 REACTOR4 REACTOR5 REACTOR6 REACTOR7 REACTOR8

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE
CAUSE10

****INTERVAL BETWEEN LIKE OUTAGES BY CAUSE****

REACTOR1 REACTOR2 REACTOR3 REACTOR4 REACTORS REACTOR6 REACTOR7 REACTOR8

540.7

****INTERVAL BETWEEN LIKE OUTAGES BY CAUSE****
CAUSE12

REACTOR8

REACTOR7

REACTOR6

REACTOR5

REACTOR4

REACTOR3

REACTOR2
3112.7

REACTOR1

REACTOR1 272.6
REACTOR2
REACTOR3 REACTOR4 REACTOR5 REACTOR6 REACTOR7 REACTOR8
INTERVAL BETWEEN LIKE OUTAGES BY CAUSE
CAUSE13
517.8
28.6

DECLASSIFIED



INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
| 312.5 | | | 115.3 | 10.1 | 1.1 | | |
| CAUSE14 | | | | | | | |





REACTOR1
 5512.3
 REACTOR2
 REACTOR3
 REACTOR4
 REACTOR5
 REACTOR6
 REACTOR7
 REACTOR8
 INTERVAL BETWEEN LIKE OUTAGES BY CAUSE
 CAUSE15



DECLASSIFIED

INTERVAL BETWEEN LIKE OUTAGES BY CAUSE

| REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 3936.5 | 3340.8 | | 8137.4 | | 0.7 | | |
| | | | CAUSE16 | | | | |

SUMMARY OF INTERVALS--AVERAGES AND STANDARD DEVIATIONS

| | REACTOR1 | REACTOR2 | REACTOR3 | REACTOR4 | REACTOR5 | REACTOR6 | REACTOR7 | REACTOR8 | | | | | |
|---------|----------|----------|----------|----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|
| CAUSE 1 | 0. | 1495.8 | 698.2 | 3685.7 | 4151.8 | 486.6 | 0. | 0. | 1037.4 | 312.7 | 837.3 | 374.6 | |
| CAUSE 2 | 1144.2 | 637.6 | 810.2 | 712.8 | 804.9 | 460.2 | 608.0 | 0. | 499.7 | 1197.3 | 2052.4 | 1499.0 | 1315.6 |
| CAUSE 3 | 1794.7 | 0. | 0. | 1515.0 | 0. | 1445.1 | 0. | 0. | 760.1 | 0. | 0. | 0. | 0. |
| CAUSE 4 | 220.8 | 302.5 | 1088.3 | 386.4 | 480.9 | 641.1 | 806.9 | 0. | 1559.3 | 0. | 0. | 0. | 0. |
| CAUSE 5 | 1498.1 | 803.6 | 617.0 | 689.9 | 848.5 | 909.2 | 798.0 | 850.0 | 321.5 | 446.6 | 404.7 | 462.2 | 599.4 |
| CAUSE 6 | 0. | 0. | 6044.2 | 0. | 1979.3 | 972.8 | 0. | 0. | 366.3 | 1.7 | 0. | 0. | 0. |
| CAUSE 7 | 0. | 4268.9 | 171.1 | 3551.9 | 0. | 0. | 0. | 2606.5 | 658.9 | 1228.9 | 1079.1 | 0. | 0. |
| CAUSE 8 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1556.9 | 0. | 0. | 0. | 0. |
| CAUSE 9 | 5588.9 | 0. | 0. | 1592.6 | 1290.9 | 6220.0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| CAUSE10 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| CAUSE11 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 540.7 | 0. | 0. | 0. |
| CAUSE12 | 0. | 3112.7 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| CAUSE13 | 272.6 | 0. | 0. | 0. | 0. | 0. | 0. | 273.2 | 345.9 | 0. | 0. | 0. | 0. |
| CAUSE14 | 312.5 | 0. | 0. | 0. | 0. | 115.3 | 0. | 10.1 | 1.1 | 0. | 0. | 0. | 0. |
| CAUSE15 | 5512.3 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| CAUSE16 | 3936.5 | 0. | 3340.8 | 0. | 0. | 8137.4 | 0. | 0. | 0.7 | 0. | 0. | 0. | 0. |