

## **CHAPTER V**

### **CONCLUSION**

The contents of this part are the conclusion of the problem and the suggestion for the next research.

#### **5.1 Conclusion**

The conclusions of the final report entitled “Project Evaluation Using Earned Value Analysis and Lean Project Management to Minimize Waste” are:

1. The evaluation step uses earned value analysis is divided into 4 categories; cost variance, schedule variance, cost performance index, and schedule performance index. The cost variance and cost performance index for 15 months had good result for month 5,6,8,9,and 10. For those months, contractor had saved money. Cost reduction at those periods were; Rp3.113.217.385, Rp5.451.189.989, Rp7.105.055.894, Rp13.168.671.339, and Rp10.845.021.592. The good performance for schedule variance and schedule performance index was in 1<sup>st</sup> month. In the first month, the performance of contractor was better than planning but the 2<sup>nd</sup> month until 15<sup>th</sup> month, the performances were poor.
2. According to the schedule performance index and schedule variance at the end of the project schedule, it is concluded that much inefficiencies at the project activity. Most inefficiency activities or called wastes are caused by three highest wastes, are waiting, rework, and movement. The waste that has been identified is 40 failure modes which are based on waiting, rework, and movement. Then, the highest risk priority number of the failure have been identified are wait for material on delivery processed by supplier, damage material during delivery process, wait for the workers, the performance of worker is slow, wait for repairing of machine and tool, the quality of tools were poor, additional project activity which is not described in contract agreement, design changes from owner and

supervision, bad weather, poor arrangement of working space, and location cannot be used directly.

## 5.2 Suggestion

The suggestions of the final report entitled “Project Evaluation Using Earned Value Analysis and Lean Project Management to Minimize Waste” are:

1. Project evaluation can be focused on all of Civil Construction to discover each performance of project activity progress in Indarung VI Project, PT Semen Padang.
2. The focused of waste is not only at 8 wastes, but the additional wastes that potentially arise on the case.
3. The variance of lean project management tools is to create a lean concept of project management.
4. The recommendation of FMEA can be implemented on the Civil Construction 1 Project to minimize the risk priority number on the next project activity in civil construction project.

