

ABSTRACT

PT XYZ is an integrated company as a provider of building materials in the form of cement, ready-to-use concrete and aggregate products that is working with the Polyface Nambo community which is engaged in post-harvest technology that will build infrastructure or workstations for processing citronella plants into natural dyes and oleoresin oils using a distillation process that aims to build the economy of the community around the site. The project will be the object of this scientific research, this project will be built by PT XYZ located in Bogor, West Java. This project focuses on the development of saung infrastructure (workstations) which consists of several job descriptions including preparatory work, main saung work, extraction hut work, waste processing saung work, worker hut work, processing saung work. This project in its implementation is inseparable from risks, one of which is the delay in implementing the project, so that the project that was supposed to be in the ninth week has reached 65.50% but the actual in the ninth week is still around 42%. This happens because there are various kinds of problems in the field, namely the timing and list of work activities are not clear, lack of accuracy in the implementation of work, limited number of workers, and there are workers who do two or more tasks at once (multitasking).

The tightening of re-baseline schedules and resource leveling in workstation construction projects aims to determine critical path activities in project scheduling, and resource leveling design will be carried out on resource leveling to make worker activities unencumbered with piled-up activities and to improve the stability of project scheduling.

The re-baseline and resource leveling design of the workstation hut construction project is carried out using the evm method to see the details and status of delays in a project. The Calculation of Earn Value Management (EVM) results in planning in week 6 and week 9 of the CPI value of less than 1 and SPI of less than 1 which can be interpreted as costs incurred greater than the budget with a schedule that is slower than planning. After that, the design of the Critical path method produced critical points including B1-B2-B7-C1-D1-D2-E1-E2-F1-F2-F3. The re-baseline schedule design is carried out on the main saung work activities until the processing hut runs for 62 working days. This project starts

from June 28, 2022 and is planned to be completed on September 7, 2022. The resource leveling design obtained activities that experienced overallocated worker resources, namely C3, C4, C5, and C6 activities with a total float value of 14 working days. After that, the activity is carried out a shift in working time as far as the total float obtained to avoid the activity from happening overallocated, and the selected activity is the C6 activity. This activity after the resource leveling date was carried out, which became August 25, 2022. However, the activity does not affect the completion time of the project because the activity does not affect the activity afterwards.

Keywords: Re-baseline, Resource leveling, EVM, CPM, Manual Book