

ABSTRACT

PT XYZ is a company engaged in manufacturing and producing cement products. Currently, PT XYZ is carrying out a project in the form of an additional filter bag on bin#3. Bag Filters are places for air residue contained in the fine coal bin that will come into the environment. The Bag Filter installed at this time is not capable of meeting the suction needs of bin #3. Based on field observations, the bag filter bin#3 project experienced delays in the fabrication stage. The root cause analysis in the project found several dominant problems which were divided into four aspects, namely human, material, machine, and method aspects.

In planning the project schedule, a method is needed that can determine project delays and determine the critical point of a project. The methods used in this study are Earned Value Analysis (EVA) and the critical path method (CPM).

The Earn Value Analysis that has been carried out shows that the project experienced delays starting from the 20th day of analysis of variance and 39th day based on schedule analysis of performance index and cost performance index. The project fabrication stage is required to be completed within 134 days, the estimate due to delays shows that the fabrication activity will be carried out within 143 days with the costs that need to be incurred assuming that after rescheduling, the vendor can carry out activities according to the specified schedule is Rp. 209,570 .593.26. Path analysis that needs to be done to find out critical activities before rescheduling. In the existing condition, the fabrication stage will be completed on February 18, 2022 and the delay is 9 days. After the schedule is carried out, the fabrication stage will be completed on February 04, 2022. The renewal schedule can only be carried out at the fabrication stage because the installation stage cannot be changed the date and duration because it is adjusted to the schedule for the main cement combustion engine to stop.

Keywords — [bag filter, critical path method, Earned Value Analysis]