Compressed Natural Gas (CNG) is an alternative fuel besides gasoline and diesel. Many companies are involved in the processing of natural gas, one them is PT. CNG Plant Cepu that supply fuels demand of several industries, by means of road transportation using Gas Transportation Modules (GTM). The potential hazards that may occurred in CNG Plant are fire and explosion, usually due to error of flexible hose installation. This condition will lead to gas leakage, then the pressure at the operation of CNG Plant excessed and resulting in explosion. By looking at the potential hazards that may happened, the OHS SOP need to be evaluated as on the OHS management system. Therefore, the focus of this final project is to evaluate the SOP of the plant by complying the standards or requirements of SMK3 / OHSAS 18001:1999. To evaluate the SOP, the study begin by identification of business process management of OHS using IDEF0, which will generate the required SOP HSE management. From those results, the proposed SOP is made and compared it against the SOP Plant, after that the success indicators from the perspective of the Balance Scorecard will be found. The evaluation result of the SOP is that SOP of the plant does not comply with ISO 10013:2001, the majority of OHS SOP of the plant does not meet the requirements of the HSE management and some SOP of the plant could not be categorized to be SOP. To identify the performance of the purposed SOP, the success
indicator is determined using the BSC perspective. The results of this evaluation will be used as the development of SOP in PT CNG Plant Cepu. So the workers can easily understand and perform the work in accordance with the existing procedures and the rate of work accident can be reduced directly.

**Keywords**: SOP Evaluation, IDEF0, success indicator, Balance Scorecard