

Occupational safety and health act engineering essay

[Engineering](#)



**ASSIGN
BUSTER**

1. 0introductionFor this construction project, a contractor has complete four block of student hostel for a Nursing college in nilai about 8 month ago. Student has been stay at this hostel block. The hostel area is surrounded by hill. Heavy downpour cause mudflow due to weakened soil structure. Those will cost the structure unbalance due to this project; School didn't take any visible action after some of students complain to the management. However, following heavy rain recently, the slope volume of soil covered and damaged 20 motorcycles parked below the hill. The hostel building wre not affected, student trying to retrieve their vehicles from the parking lots were advised to leave because this is for their safety purpose. In the other hand school still summoned contractor immediately another properties to prevent damage. 2.

0Background of projectA contractor has been completed construct the building for a nursing college for the student at around the hill. Type of project: private projectLocation of this project: Nilai Negeri Sembilan, MalaysiaCompleted of time for this project before 8 month4. 0Safety responsibility4. 1DEFINITIONS1. Employer means immediate employer or the principal employer or both.(Section 3, Occupational Safety and Health Act 1994)2. Developer means any person, body of persons, company, firm or society who or which engages in or carries on or undertakes the business of developing or providing monies for development or purchasing or partly developing and providing monies for purchasing buildings. (Section 3, Street, Drainage, And Building Act 1974 (Act 133)3. Contractor means a person who has entered into a contract for the purpose of carrying out any building operations or work of engineering construction and includes a main contractor or subcontractor. (Regulation 2, Building Operations And Works Of

Engineering Construction) (Safety) Regulations, 4. Main contractor means a person who has entered into a contract with an owner or lessee of a property or his agent for the purpose of carrying out any building operations or work of engineering construction. (Regulation Building Operations and Works of Engineering Construction (Safety) Regulations, 1986); 5. Safety and Health Officer means a person who registered under provision of regulation 6(1), Occupational Safety and Health (Safety and Health Officer) Regulations 1997; 6. Designated Person means a competent person appointed by an employer to carry out any supervision or inspection or to perform any tasks or duty prescribed by Building Operations And Works Of Engineering Construction (Safety) Regulations, 1986; 7. Contractor Safety Supervisor means a contractor's safety supervisor appointed under regulations 26, Building Operations And Works Of Engineering Construction (Safety) Regulations, 1986; 8. Site Safety Supervisor means a site safety supervisor appointed under regulations 25, Building Operations And Works Of Engineering Construction (Safety) Regulations, 1986; 9. Professional Engineer means a " registered Professional Engineer" as defined by section 2 of the Registration of Engineers Act 2002 (Amendment). Property damages: after the rain, the soil has completely cover all the motorcycles some their property has been cover with soil but some are not. The 1A423000 construction work of occupational health and safety and environmental management The 1A423010 safety in construction management 1A423011 master building construction safety management Construction enterprises must adhere to the policy of " safety first, prevention first" safe production, improve production safety organization and management system, inspection

and evaluation system, security measures planned to strengthen the safety management of construction, the implementation of comprehensive management., Building construction safety management procedures¹ to determine the safety management objectives;(2) the preparation of a safety action plan; 3. The implementation of safety measures plan; 4. Plans to implement safety measures to verify the results; 5. Evaluation of safety management performance and continuous improvement., Safety measures plan¹ Project Overview;(2) management objectives; Organization and the duties and powers;(4) rules and regulations; Risk analysis and control measures; 6 special safety construction programs; Emergency preparedness and response; 8. Resource allocation and cost investment plan; 9 education and training; 10 inspection and evaluation, verification and continuous improvement. Should be prepared separately special safety engineering construction programFor larger segment reached a certain size, the risk of sub-project should be prepared separately special safety construction program. 1 The following works should be prepared separately and safety special construction program:(1) The excavation depth of more than 5m (5m) pit, slot supporting and precipitation engineering; or pit, although not more than 5m, but the geologicalComplex conditions and the surrounding environment, the groundwater level above the bottom of the pit foundation pit supporting and precipitation engineering.(2) The excavation depth of more than 5m (5m) pit, groove earth excavation works.(3) all kinds of tools template projects, including sliding, climbing formwork, formwork; horizontal concrete structures template support system and the special structure of the template works.(4) on-site temporary power engineering.(5) on-site foreign

protection projects; underground power supply, gas supply, ventilation, pipelines and adjacent buildings protection works.(6) Scaffolding Engineering: floor-to-ceiling height of more than 24m steel scaffolding; attached lifting scaffold (including the overall ladders and slide elevator); cantilevered scaffold; door of scaffolding; hanging scaffolding; hanging scaffolding; unloading platform.(7) special equipment such as tower cranes, construction elevator demolition works.(8) lifting works.(9) the use of artificial, mechanical removal or blasting demolition project.(10) greater risk of project: building curtain wall installation and construction; prestressed structure tensioning construction; installation and construction of large-scale equipment; grid membrane structure construction; slope construction more than 6m; adoption of new technologies, new processes, new materials, construction projects that may affect quality and safety, risk engineering. Safety special construction program must be designed, calculated, detail, text description. 3 safety special construction program prepared in construction enterprises professional engineering and technical personnel should be audited by the construction enterprise technology sector professional engineering and technical personnel and supervision units professional supervision engineers, passing the examination by the person in charge of the construction enterprise technology, supervision unit chief supervision engineer for approval after execution. 1A423012 master building works Hazard Source Identification Hazard that can result in personal injury or disease, property damage, the work environmental damage or these situations portfolio origin or status factors. Risk factors and risk factors belong to the same source of danger. The dangerous source of the

mechanism in the development of security incidents, the hazard is generally divided into two categories, the first-class sources of danger and second sources of danger., Hazard identification Hazard identification is to identify from the organization's activities may result in personal injury or illness, property damage, environmental damage danger or risk factors, may lead to accidents and determine categories and lead to the direct cause of the accident. Hazard identification method, commonly used methods of site survey, task analysis, safety checklist method, hazard and operability study method, event tree analysis and fault tree analysis method. Second, casualties Casualties refers to workers in the labor process personal injury, acute poisoning. Workers in the job labor, or labor, though not in the post, but due to unsafe equipment and facilities, poor working conditions and operating environment, mismanagement, as well as business leaders assigned to enterprises engaged in the activities of the enterprise, the occurrence of personal injury of (ie minor injuries, serious injury, death) and acute poisoning. The current casualties statistics other than workers, should also include businesses employ migrant workers, temporary. March 1, 1991 the State Council released " enterprise workers casualty reports and the required workers in the labor process personal injury, acute poisoning casualties divided into minor injuries, serious injury, death, major fatal accidents. 3 major accident reporting and investigation procedures of the Ministry of Construction " project provides that" the casualties occurred in the construction process is divided into a major accident, four levels of the two major accidents, three major incidents, four major accidents. 4, according to the survey of all casualties casualty rate in the building industry

is second only to the mining industry. Falling from height, against objects, mechanical injury, electric shock, collapse, for the construction industry the most frequently occurring five accidents in recent years has accounted for 80% and 90% of the total number of accidents, should focus on guard against them., A major cause of security incidents Unsafe behavior: including a physical defect, error behavior, disciplinary violation. Material insecurity: major defects including equipment, devices, workplaces defects in material and environmental sources of danger.(3) the adverse environmental factors: site layout disorderly, poor sight, vertical and horizontal canals, traffic congestion, materials, tools and instruments huddle misplacing, mechanical protective devices, electrical appliances without leakage protection, dust, noise harsh labor physical, psychological unbearable, is bound to induce security incidents. should often carry out a preventive safety inspections, in order to detect and eliminate hidden hazards, to ensure that the construction of normal production. Regular safety inspections of the construction site.: 1) on-site time (part-time) safety management personnel and security personnel on duty daily to carry out safety inspections, inspections. 2) on-site project manager, responsible engineers and related professional and technical management personnel in the inspection of the production work of the security checks. 3) the operating team in front of the class, class, class after security checks.(3) Seasonal security checks. Seasonal safety checks to safety in production caused by climate characteristics (such as: the summer season, the rainy season, typhoon season, winter, etc.) may adversely affect or harm caused by the organization's security check.(4) holiday safety check. Holidays, especially significant or traditional extended Christmas the EI (such

as: " 51", " 11", New Year's Day, Chinese New Year, etc.) before and after and during the holiday season, to prevent on-site management and operations personnel to2 " to see." View construction site safety management information and inspections are carried out on the construction site. Example: view the project leader, full-time safety management personnel, special operations personnel certificates; site safety signs; labor protection articles; site security situation; site safety facilities and machinery and equipment safety device configuration, etc. . 3 " amount." Mainly refers to the use of measurement tools on the construction site of a number of facilities, installations measured real amount. 4 " measured". Mainly refers to the use of special instruments, meters and other monitoring device specific object key features technical parameters of the test. Such as: an earth-leakage protection tester leakage current leakage protection, residual operating time test; using ground resistance meter test on-site grounding resistance of grounding device; using megger test of the motor insulation resistance; using theodolite tower crane, topical elevator installation the verticality testing. 5 running test. " Mainly refers to the actual operation of machinery and equipment by persons with, construction design, segments (sub-) engineering safety technical tests, safety checks, safety education classes before the security activities, special operations held certificate for employment, work-related accidents and safety signs 10. Among them: the responsibility systemleakage, electric shock, cut off the power to stop. Remove theform a lowercontrol generally recharge wells, tracking grouting method. For settlement, compaction grouting can not control the building, if the foundation is reinforced concrete, you can consider using the static

anchor pile pressure method for processing. 8. The protection emergency measures for the pipeline around the pit generally include additional recharge wells, set up to fight the closed pile or pipeline overhead., Playing pile construction safety control points (Shen)Playing (Shen) pile before the preparation of the special construction program, to conduct a comprehensive inspection of the original buildings of the adjacent underground pipelines and other influential buildings or underground pipeline should take effective the reinforcement measures or quarantine measures, in order to ensure the construction safety. Sixth, hand-dug pile construction safety control points1 program organize the construction of hand-dug pile construction should be prepared before the special construction program, strictly in accordance with program requirements. 2. Pile hole must be set the emergency soft ladder for people to go down, used electric hoists, hoists should be safe and reliable, and with automatic clamping insurance device. Daily prior to the start of construction on the composition and content of toxic and harmful gases mine detection and reliable security measures should be taken to. Pile hole excavation depth of more than 10m should be configured specifically to underground ventilation equipment. Orifice must be set around the safety railing. Excavated earth and stone should be transported from the orifice, or place around the orifice within 1m. Motor vehicles are permitted to be away from the orifice. Dug pile hole electricity Gate is strictly prohibited. Holes on the cable must be elevated above 2. 0m, non-mopping the floor and buried compacted soil, hole cable must have anti-wear, moisture-proof, anti-breaking measures. Safety miner's lamp or 12V safe voltage lighting should be used. 1A423032 grasp scaffolding erection to prevent security

risks Scaffolding erection work prone to falling from height, the types of security incidents against objects and the collapse of the frame body. An, scaffolding erection of the main forms of job security risks Illegal workers. Job site does not have a security alert. 3 frame body structure has not been rigorously designed. 4 rack on the basis of false or carrying capacity is not enough. 5 the size of the structure of the frame body is too large. 6 frame body with the wall pieces set is too small, even the wall above the free height is too large. 7. Did not seek the set scissors with the other overall Rachel rod. 8 frame body perpendicular to the pole, the level of the horizontal bar is not enough. Node structure and connection of the frame body installation does not meet the requirements. 10 cantilevered scaffolding pick the supporting member, hold tension member and pick the branch structure of production or installation does not meet the design requirements. 11. Adhesive lifting scaffolding scaffolding and enhance the overall enhance the Construction and Equipment does not meet the design requirements. 12. Arbitrary mix steel fasteners of different sizes and materials. Second, the general scaffolding job security control points(I) Scaffolding special construction plan preparation Before the erection of the scaffolding should be determined according to the characteristics of the engineering and construction process requirements erection (including demolition) construction program.(2) construction program content should include: basic handling, erection requirements, the spacing of the rod and the wall pieces set position, connection method, remove the operating procedures to ensure the safety of technical measures, and draw a large drawing of the construction details and node. Erection of scaffolding height

of more than specification, the corresponding calculation.(B) Scaffolding foundation and foundation construction¹. The scaffolding foundation and foundation construction, must be based on scaffolding erection height, erection of site soil conditions and the relevant provisions in the existing national foundations and foundation engineering construction and acceptance of norms. When scaffolding based equipment foundation trench excavation, or in scaffolding during use should not have to take measures to reinforce.(C) scaffold master node set of the rod memberA scaffolding at the master node must be set to a horizontal bar, snap and do not remove the right angle fasteners. 2 master node at the center of the two right-angled fastener distance should not be more than 150mm. Double scaffolding, one end against the wallOverhang length should not exceed 0. 4 times the rod length, and should not be greater than 500mm.(4) Scaffolding sweeping rod setScaffolding must be set vertical and horizontal sweep the floor level. Longitudinal sweeping rod Double Coupler fixed at not more than 200mm from the base of epithelial at the pole. 3 horizontal sweeping rod should right-angle the fastener fixed in close vertical sweeping lever on the bottom of the pole. When the pole base is not the same height, the height of the longitudinal sweeping rod extended to the lower two-span fixed pole height difference should not be greater than 1 m. On the slope above the pole axis to the slope distance of not less than 500mm.(5) Scaffolding scissors setHeight in 24m single, double scaffolding, must work together at both ends of the outside facade set scissors and by continuous set bottom to top, should not be greater than the spacing between the middle of the Road scissors 15m.(2) the height of more than 24m double scaffolding on the

entire length and height of the outer facade continuous set scissors.

Scissors, the lateral bracing erection with the pole, vertical and horizontal rod synchronization erection, the underlying oblique lower end of the rod must be supported on the pad or pad.(6) scaffold Rachel point settings Height of 24m single, double scaffolding should adopt the rigidity of the wall pieces and building a reliable connection, we can use a stretch and top brace used in conjunction with wall connection, prohibited the use of only a stretch of flexible with the wall pieces. Double scaffolding height of more than 24m must be rigid with the wall pieces and building a reliable connection with the wall pieces must be constructed to withstand tension and pressure. 3. 50m (including 50m) double scaffolding with the wall pieces in accordance with Step 3 Cross arranged scaffolding with the wall pieces should be more than 50m 2 Step 3 Cross arranged.(G) general safety technical measures scaffolding erection work Shelf operating personnel must wear a helmet, wearing a seatbelt, wear non-slip shoes, and a firm in prison. In case of more than six and six high winds and fog, rain, snow weather, you should stop scaffolding erection work.(8) General scaffolding dismantling operations and safety technical measures 1 demolition work should be from top to bottom with the erection of the opposite procedure layer by layer, non-simultaneous operation of up and down. Each floor demolition of the wall pieces must be on all removable rods have been removed, non release of the wall pieces, and then remove the upper bar. Who have release the connection rod must be promptly removed, down to prevent workers mistakenly Rotary mistakenly rely on. 4 Segmented removable frame body height difference should not be greater than 2 steps, such as the height difference of more

than 2 steps should be added to the wall pieces reinforcement. Removed rods, fasteners and scaffold boards should be lifted to the ground, and dropped prohibited from shelves. In case of more than six and six high winds and fog, rain, snow weather, should stop the scaffolding and demolition work.(9) Scaffolding inspection and acceptance

proceduresConclusionScaffolding inspection and acceptance by the project manager organization, project construction, technology, security, operations team leader and other relevant personnel to participate in relevant technical documents in accordance with the technical specifications, construction plan, technical tests, the scaffolding segment acceptance, confirmation be put into use to meet the requirements.