

APPENDICES

| ITEM | YES | NO | N/A | UnK | COMMENT |
|---|-----|----|-----|-----|---|
| 1.1 | | | | | |
| PROJECT BACKGROUND (Snr. Project Manager) | | | | | |
| Respondent and position | | | | | Name: Tan Siew Pen as Senior Project Manager from GKT-JV |
| Name of the project | √ | | | | Re-aligned of Federal Route 55 KKB – Fraser Hill. |
| Address of the project | | √ | | | None at site, about 5 km from KKB town towards to Fraser Hill |
| Project proponent | √ | | | | Syarikat Pengeluar Air Sungai Selangor Sdn Bhd (SPLASH) |
| Contractor/turnkey contractor | √ | | | | Gamuda-KDEB-TSWA Joint Venture |
| Telephone No: | √ | | | | 03-60642233 |
| Fax No: | √ | | | | 03-60641669 |
| Who is the environmental manager? | √ | | | | Teddy Eduardo |
| 1.2 | | | | | |
| OPERATION DETAILS | | | | | |
| What are the major activities being carried out at this project site? | √ | | | | Construction of 7.8 km stretch of re-aligned FR55 at the hilly terrain that involved some major activities such as site clearing, earthworks activities, construction of bridge (eg. Luit and Sg. Selangor), Granite rock quarrying, concrete batching plant and other related supportive activities as rock blasting, machinery workshop, soil nailing, piling, drainage system and etc. |
| How many staffs/parties/contractors are involved in this project? | √ | | | | There are three major sub-contractor involved, there are Gamuda Engineering |

| | | | | | | | | | |
|-------|---|--|---|--|---|--|---|--|---|
| | | | | | | | | | (main contractor), Dunia Epik (Quarry contractor) and Magah Sewa (Machinery supplier). |
| | How many Malaysian staffs involved | | √ | | | | | | Approximately 100 – 120 people |
| | How many foreigners such as Indonesian involved in this project? (Included your sub-contractor) | | √ | | | | | | Approximately about 500 people |
| | Where the entire workers stay? | | √ | | | | | | Center Labour Quarter (CLQ) |
| | What is the works schedule? | | √ | | | | | | 18 months contract basis, from April 2000 to Sep 2001. Detail schedule attached. |
| 1.3 | SITE HISTORY | | | | | | | | |
| | What is the previously landuse in this area? | | √ | | | | | | Secondary logged forest. |
| 2.0 | ENVIRONMENTAL MANAGEMENT | | | | | | | | |
| | Who is the top management and what is the operation organization chart? | | √ | | | | | | Top management is Mr. Chan Kun Yee. Organization chart as Project Director-Senior Project Manager – Project Manager – Construction manager /Environmental Manager – Section Heads – Engineers – supervisor – workers. |
| 2.1 | ENVIRONMENTAL POLICY | | | | | | | | |
| | Is there a functioning EMS? | | | | √ | | | | |
| | Is there a Department Environmental Policy? | | | | √ | | | | |
| | If yes, Does the Project Director sign the Environmental Policy? | | | | | | √ | | |
| | Is the Environmental Policy on prominent display at all the department of the project? | | | | | | √ | | |
| 2.2 | PLANNING | | | | | | | | |
| 2.2.1 | Environmental Aspects | | | | | | | | |

| | | | | |
|-----|--|---|----|--|
| A1 | <p>(A) River Water Quality management</p> <p>Identification of sources /related activities of road construction will caused siltation to the nearby river or tributary</p> | ✓ | | <p>Site clearing, cutting and filling slope, spoil tip, removal of overburden at Quarry site, and earth borrow area, bridge construction</p> |
| A2 | What are the control measures? | ✓ | | <p>Construction of silt trap at the strategic location. Tufting or hydrosceding on the completed slope and cover with plastic sheets as temporary measure.</p> |
| A3 | How many silt traps were constructed? | ✓ | 24 | |
| A4 | Who design the silt trap? | ✓ | | <p>SMHB consultant, a general design for the entire silt trap.</p> |
| A5 | Is there any approval of the design from authority? | ✓ | | <p>JPS – Jabatan Pengaliran and Saliran</p> |
| A6 | Any site selection for the silt trap location? | ✓ | | <p>Based on lower topography, site supervisor.</p> |
| A7 | Any re-design of the silt trap by SMHB? If failure | ✓ | | <p>Maintenance will carry out or upgrade the silt trap to multiple cells.</p> |
| A8 | Other than silt trap, any other measures being implemented? Such as silt fence | ✓ | | |
| A9 | Is there any monitoring program for the silt trap effluent? If yes, who? | ✓ | | <p>EMC – Dr Tan Teong Hing and Site Environmentalist.</p> |
| A10 | Where to dispose the excess soil/spoil tip? Is there any designated spoil tip area? | ✓ | | <p>Nearby area and most economically area.</p> |
| A11 | Any standard method (documented) to handle the spoil tip, included design? | ✓ | | |
| A12 | How many types of turfing works have been implemented at the site? Specific? | ✓ | | <p>4 types – hydrosceding, spot turfing. Close turfing and vetiver planting.</p> |
| A13 | Is there any standard criterion for turfing? | ✓ | | |
| A14 | Is there any monitoring program for the growth of turfed area? | ✓ | | |
| | (B) Hazardous Materials Management | | | |

| | | | | | | |
|----|---|---|---|--|---|---|
| B1 | List of any hazardous materials and chemicals handled/stored within the project area | √ | | | | Diesel and explosive and cement |
| B2 | Indicate activities where hazardous materials are used? Describe the nature and quantity of hazardous materials involved? | | | | | Explosive at Quarry site with quantity not more than 200 kg per day. Diesel – project site, with quantity about 250,000 liters per month |
| B3 | Is there an inventory for all supplies and materials? | | | | | Yes for explosive, no for diesel |
| B4 | How to store and handling the hazardous material? | √ | | | | Diesel will store inside a skid tank Storage of explosive at the site (quarry) is prohibited, use in daily basis. |
| B5 | Is there any procedure of guidelines for materials management leading to overall environmental performance improvement? (i.e. Specific storage, labeling and handling procedures) | | √ | | | |
| B6 | Provide details of any licenses, permits or applications on files pertinent to hazardous materials storage and handling. | √ | | | √ | Yes for explosive (as attached) Non applicable for diesel |
| B7 | Is there any diagrams/layout showing the storage area for this hazardous waste? | | √ | | | |
| B8 | Is there any scheduled inspection of the storage and handling facilities? | | √ | | | |
| B9 | Is there any alarm trigger system for the skid tank if spillage occurred? | | √ | | | |
| | (C) Waste Management | | | | | |
| C1 | Itinerary of general wastes produced with quantity: Provide details of internal classification of waste generated a) Dangerous waste b) Chemical waste | | | | | |

| | | | | | |
|----|--|-------------------------------------|-------------------------------------|---|--|
| | <p>e) Biological waste d) Domestic waste</p> <p>e) Office waste f) Hazardous waste</p> <p>g) Radioactive waste h) Others waste (specify)</p> | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> | <p>Kitchen waste from canteen and center labour quarter (CLQ) Used paper from office Scheduled waste as Used oil/spent oil from Megah sewa workshop Biomass waste from site clearing activities</p> |
| C2 | <p>Is there any specific waste type generated: volume. Analysis, disposal routes Solvents waste? PCBs waste? Paints waste? Asbestos waste? CFC waste? Halons waste?</p> | | | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> | |
| C3 | <p>Are there any licenses, permits or applications on file in relation to generation, storage, handling, disposal or transportation of this waste? Are there required standard documentations?</p> | <p>✓</p> | | | <p>Only scheduled waste such as spent oil, other wastes not applicable. as attached</p> |
| C4 | <p>Are there any on-site treatment facilities?</p> | | | <p>✓</p> | |
| C5 | <p>Any waste segregated and recycled?</p> | | | <p>✓</p> | |
| C6 | <p>Are there any waste storage facilities?</p> | <p>✓</p> | | | <p>Scheduled waste before collection and biomass before burning. Others will dispose off</p> |
| C7 | <p>Provide details of any on site waste disposal systems (i.e. type of waste disposal system and capacity, type and quantity of waste disposal) Does it need a license? Is it monitored?</p> | <p>✓</p> <p>✓</p> | | <p>✓</p> | <p>Only biomass waste. Disposal facility is Air curtain Incinerator to burn biomass to ash, capacity 16 tons per hour DOE approval</p> |

| | | | | | |
|----|--|---|---|---|---|
| C8 | Is there any off-site treatment facility? Is it licensed? | ✓ | ✓ | ✓ | Designed Landfill |
| C9 | Is there any transportation of waste required, internal or external? | ✓ | | | Internal to transport biomass waste to ACI External to transport scheduled waste and solids waste to disposal site and landfill respectively. |
| D1 | (D) Wastewater management Any discharge point of wastewater? | | ✓ | | Only sewage from toilet (office, CLQ and canteen) and cement washing discharge |
| D2 | Discharge license required? | | | ✓ | |
| D3 | Is there any monitoring program for its effluent discharge point? | | | ✓ | |
| D4 | Details of existing wastewater treatment facility? | ✓ | | | Common standards septic tank design |
| D5 | Is there any maintenance schedule? | | ✓ | | |
| E1 | (E) Air quality management Identification of sources /related activities of road construction will caused air pollution | ✓ | | | Gas emission from all the machinery and vehicles, dust pollution of vehicle movement, drilling rig at Quarry site, rock crusher machine, cement silo and earthworks activity. |
| E2 | Are there any diagrams of premise emission location? | | | ✓ | |
| E3 | Are there any violation notices regarding air emissions issued since the project commenced? | | ✓ | | |
| E4 | Is there any permits required to air emission? | | | ✓ | |
| E5 | What are the control measures in place? | ✓ | | | <ul style="list-style-type: none"> • Spaying water on the dusty haul road • Maintain public road with motor-pusher |

| | | | | | | |
|----|--|--|---|--|--|---|
| | | | | | | <ul style="list-style-type: none"> • Dust vacuum system for drilling rig at quarry • Maintenance of filter bag for cement silo • Regular maintenance of vehicles and machinery |
| E6 | Is there any vehicle-washing bay provided? | | √ | | | |
| E7 | Do you provide any apparatus for the worker involved? Such as mask, mouth cap | | √ | | | |
| E8 | Have there been any air-monitoring programs at the project site? If so, provided details. | | √ | | | Twice a month, monitor air particles and PM10 |
| F1 | (F) Noise and vibration quality management | | | | | |
| F2 | Identify all operations or activities that may substantially elevate noise beyond normal premise background level? | | √ | | | <ul style="list-style-type: none"> • Drilling rig at quarry • Blasting activity at quarry • Heavy machinery and lorry hantu and trucks. |
| F3 | Do you provide any apparatus for the worker involved? | | √ | | | |
| F4 | Are there any mitigation measures in placed to reduce the noise pollution? | | √ | | | <ul style="list-style-type: none"> • Control blasting – delay system |
| F5 | Have there been any noise monitoring programs undertaken at the project site? If so, provided details? | | √ | | | Twice a month, 24hours monitoring |
| F6 | Is there any vibration monitoring conducted within the project site? What is the frequency and specific location? | | √ | | | Frequency –when necessary or required Locations –road construction and quarry |
| F7 | Are there any mitigation measures in placed to reduce the noise pollution? | | √ | | | <ul style="list-style-type: none"> • Control blasting – delay system |

| | | | | | | | |
|----|--|--|--|--|-------------|--|---|
| F8 | Have there been any formal complaints received on noise and vibration generated within the area? If so, provide details | | | | √ | | |
| | | | | | | | |
| | (G) Transportation and machinery management | | | | | | |
| G1 | Is there any inventory of transportation and machinery devices operated in the project site? | | | | √ | | |
| G2 | Are there any maintenance programs in place for all the transportations and machinery? | | | | √ | | |
| G3 | Is there any formal policy or guideline on spillage prevention and disposal of fleet maintenance waste? (i.e. engine oil, refrigerant, tyre etc.) | | | | √ | | |
| G4 | Is there any oil trap constructed within the workshop? | | | | √ | | |
| G5 | Is there a program in place to monitor air and noise emissions and to effect appropriate arrangement for corrective maintenance as required? | | | | √ | | |
| G6 | Is there any training provided to drivers/operators on increasing the fleet's environmental performance? (i.e. turn off idle engines, minimize number of trips, reducing consumption of fuels) | | | | √ | | |
| | | | | | | | |
| | (H) Emergency Response Procedures | | | | | | |
| H1 | Are there any emergency response plan/procedures and contingency plans on: a) Accident b) Fire c) Oil spillage d) Dangerous materials spillage | | | | √ √ √ | | √ |

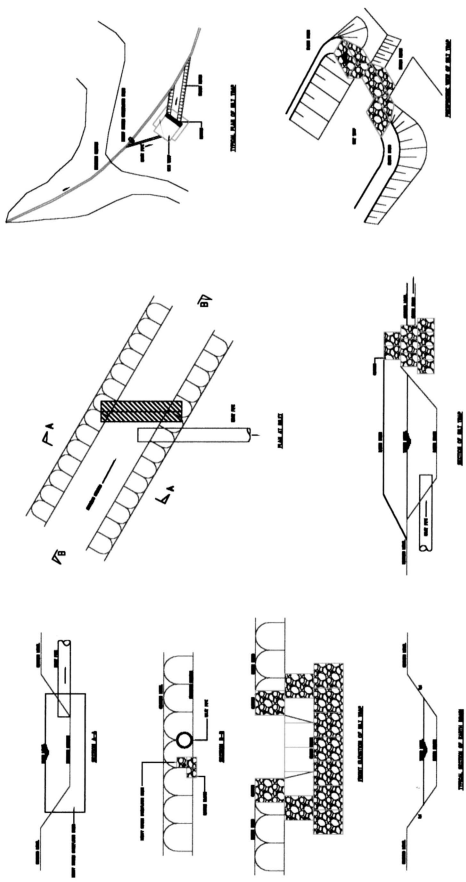
| | | | | | | |
|----|--|---|---|--|--|---|
| H2 | Is there any equipment located in areas where emergencies have potential to occur? | √ | | | | Only fire extinguisher on the strategic location within the office. |
| H3 | Are there any training provided in emergency response procedures? Any grill conducted? | | √ | | | |
| I1 | (I) Staff Awareness and Training Staff Awareness | | | | | |
| I2 | Are there any regular general meetings on the improvement of the working environment? | √ | | | | Safety meeting, which conducted in monthly basis. |
| I3 | Has there been wide participation in specific environmental management issues in the office (e.g. campaigns on reduction of paper and energy usage)? If so, provide details. | | √ | | | |
| I4 | Training | | | | | |
| I5 | Describe briefly the nature and topics of project environmental training offered in the past year. | √ | | | | <ul style="list-style-type: none"> • Induction training course for safety (CIBD) • General Environmental Awareness course |
| I6 | Is the training program offered to all the relevant personnel? | | √ | | | |
| I6 | Have there been regular reviews to ensure the effectiveness of the training program? | | √ | | | |
| I7 | Have the participants been involved in the training review process? | | √ | | | |
| I9 | Is there any skill training provided | | √ | | | |
| | (J) Monitoring and audit | | | | | |

| | | | | | | |
|----|--|---|---|--|---|---|
| J1 | Is there any monitoring programs being carried out? | √ | | | | EMC conducted monitoring in fortnightly basis that included air, water, noise and vibration and silt trap |
| J2 | Is there any compliance audit or system audit provided? | | √ | | | |
| | (K) Community relations | | | | | |
| K1 | Is there any center or build for the project proponent for environmental information? | √ | | | | SPLASH info-center located at KKB town. |
| K2 | Describe any formal program to ensure staff members responsible for publicity of environmental information have the relevant experience and adequate training? | | √ | | | |
| K3 | Are there any formal procedures to review adequacy of publicity materials? | | √ | | | |
| K4 | Is there any program to ensure that information contained in the publicity materials are correct and up to date? | | | | √ | |
| K5 | Is there any formal public complaint reports/record? | | √ | | | |
| K6 | Is there any staff-training program on public enquiry and complaint response? | | √ | | | |
| | | | | | | |
| | | | | | | |

Checklist of observation on the slope and activities related along Re-aligned Road of FR55 (November 2000)

| No | Slope Identification | Occurring Chainage | Number of Benches | | Comments |
|----|----------------------|--------------------|-------------------|---------|---|
| | | | Design | Current | |
| 1 | C/R-150 | 100 -200 | 3 | 2 | <input type="checkbox"/> Cutting/Filling and compaction in progress <input type="checkbox"/> Other activities _____ <input type="checkbox"/> Environmental Impacts: _____ <input type="checkbox"/> Completed bench (es) hydroseeded /not hydroseeded <input type="checkbox"/> Silt trap provided _____ <input type="checkbox"/> Proper interceptor drain provided <input type="checkbox"/> Inaccessible <input type="checkbox"/> No activities |
| 2 | F/L -400 | 200-550 | 3 | 1 | <input type="checkbox"/> Cutting/Filling and compaction in progress <input type="checkbox"/> Other activities _____ <input type="checkbox"/> Environmental Impacts: _____ <input type="checkbox"/> Completed bench (es) hydroseeded /not hydroseeded <input type="checkbox"/> Silt trap provided _____ <input type="checkbox"/> Proper interceptor drain provided <input type="checkbox"/> Inaccessible <input type="checkbox"/> No activities |
| 3 | C/R -550 | 520 -570 | 4 | 2 | <input type="checkbox"/> Cutting/Filling and compaction in progress <input type="checkbox"/> Other activities _____ <input type="checkbox"/> Environmental Impacts: _____ <input type="checkbox"/> Completed bench (es) hydroseeded /not hydroseeded <input type="checkbox"/> Silt trap provided _____ <input type="checkbox"/> Proper interceptor drain provided <input type="checkbox"/> Inaccessible <input type="checkbox"/> No activities |
| 4 | F/L -700 | 550 -900 | 5 | 2 | <input type="checkbox"/> Cutting/Filling and compaction in progress <input type="checkbox"/> Other activities _____ <input type="checkbox"/> Environmental Impacts: _____ <input type="checkbox"/> Completed bench (es) hydroseeded /not hydroseeded <input type="checkbox"/> Silt trap provided _____ <input type="checkbox"/> Proper interceptor drain provided <input type="checkbox"/> Inaccessible <input type="checkbox"/> No activities |
| 5 | C/R -1000 | 900 -1100 | 10 | 5 | <input type="checkbox"/> Cutting/Filling and compaction in progress <input type="checkbox"/> Other activities _____ <input type="checkbox"/> Environmental Impacts: _____ <input type="checkbox"/> Completed bench (es) hydroseeded /not hydroseeded <input type="checkbox"/> Silt trap provided _____ <input type="checkbox"/> Proper interceptor drain provided <input type="checkbox"/> Inaccessible <input type="checkbox"/> No activities |

APPENDIX 3



The general design of silt trap for the Re-aligned road of FR55 project which has been approved by Jabatan Pengaliran dan Saliran (JPS)

Re-aligned Road of Federal Route Project (KKB - Fraser Hill)

| | | |
|---|-----------------------------------|-------------------------------|
| Ref: SLP-CHK | SLOPE MONITORING CHECKLIST | Page No: |
| Location: | Date of Inspection: | |
| | Checklist No: | |
| Visual Inspection | Yes | No |
| Slope Protection :- | Action required | |
| Hydroseeding/turfing | <input type="checkbox"/> | <input type="checkbox"/> |
| Grass growth | <input type="checkbox"/> | <input type="checkbox"/> |
| Soil slope Stability :- | | |
| Excavation (sheet, rail, gully) | <input type="checkbox"/> | <input type="checkbox"/> |
| Slope failure / Landslide | <input type="checkbox"/> | <input type="checkbox"/> |
| Permanent / Temporary drain to channel the surface water at | <input type="checkbox"/> | <input type="checkbox"/> |
| Berm / Bench | <input type="checkbox"/> | <input type="checkbox"/> |
| Slope (Interceptor) | <input type="checkbox"/> | <input type="checkbox"/> |
| Toe / Base of slope | <input type="checkbox"/> | <input type="checkbox"/> |
| Exposed cut or filled soils has been rolled and compacted | <input type="checkbox"/> | <input type="checkbox"/> |
| Full slope cut to gradient not exceeding 45 degree | <input type="checkbox"/> | <input type="checkbox"/> |
| Retaining structured or other slope stability measures for slope steeper than 45 degree | <input type="checkbox"/> | <input type="checkbox"/> |
| Other :- | | |
| Soil nailing | <input type="checkbox"/> | <input type="checkbox"/> |
| Soil tip | <input type="checkbox"/> | <input type="checkbox"/> |
| Location | <input type="checkbox"/> | <input type="checkbox"/> |
| Compaction | <input type="checkbox"/> | <input type="checkbox"/> |
| Hydroseeding | <input type="checkbox"/> | <input type="checkbox"/> |
| Remarks & Suggestions : | | |
| | | |
| | | |
| Prepared by: | Verified by: | |
| (Signature) | (Signature) | |
| | Name: | |
| No: 1 | Issue No: 2 | Effective Date: 01 March 2001 |

Re-aligned Road of Federal Route Road 55 (KKB - Fraser Hill)

| Plot SLP-INV | SLOPE INVENTORY LIST | | | | | Updated date: |
|----------------|----------------------|------------|--------------|-------------------------------|------|---------------|
| Schedlist No | Location | Checked by | Date | Action taken by | Date | Remarks |
| <i>1</i> | <i>Bad</i> | | | | | |
| <i>2</i> | <i>Moderate</i> | | | | | |
| <i>3</i> | <i>Acceptable</i> | | | | | |
| <i>4</i> | <i>Good</i> | | | | | |
| checked by: | | | Verified by: | | | |
| (Signature) | | | (Signature) | | | |
| | | | Name: | | | |
| Revision No: 1 | Issue No: 2 | | | Effective Date: 01 March 2001 | | |

Re-aligned Road of FR 55 Project

Watering Schedule for Turfed Areas

| Doc Ref: VG-WTR | Dry Season | Location Reference | Turfing date | Type of turfing | Watering Schedule | | | | | | | | | | | | | | | | | |
|-----------------|------------|--------------------|--------------|-----------------|-------------------|-----|-----|--------|-----|-----|--------|-----|-----|--------|-----|-----|--------|-----|-----|--------|-----|-----|
| | | | | | Jan-01 | | | Feb-01 | | | Mar-01 | | | Jul-01 | | | Aug-01 | | | Sep-01 | | |
| | | | | | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd |
| 1 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | | | | | | | | | |

Prepared by: _____ Verified by: _____

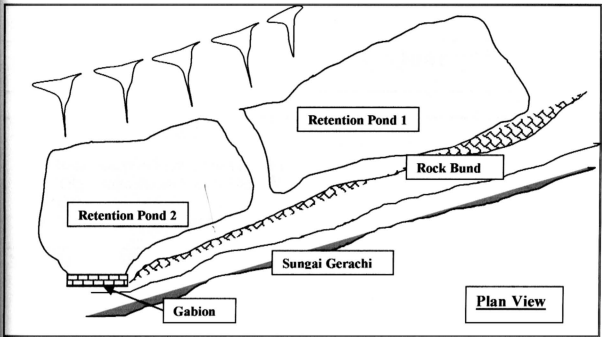
Signature _____ Signature _____

Name: _____ Name: _____

Re-aligned Road of Federal Route Project (KKB - Fraser Hill)

| | | |
|---|---------------------------------------|-------------------------------|
| Ref: ST-CHK | SILT TRAP MONITORING CHECKLIST | Page No: |
| Trap Ref: | Date of Inspection: | |
| | Checklist No: | |
| By Visual Inspection | Yes | No |
| | Action required | |
| <u>Silt trap condition</u> | | |
| <u>Filter condition</u> | | |
| Silt trap gabion structure laying with geotextile | | |
| Geotextile layer damaged or needs to replace | | |
| Geotextile layer clogged and maintenance required | | |
| <u>Gabion structure</u> | | |
| Gabion structure damaged/collapsed | | |
| Seepage problem or leakage without passing through filter medium | | |
| Rectification on gabion structure required | | |
| <u>Retention pond</u> | | |
| Silted up / 75% / 50% / 25% full with silt | | |
| Desilting required | | |
| Proper disposed of desilted materials | | |
| Lim of the retention pond is stable | | |
| Proper interceptor drain constructed | | |
| Maintenance of interceptor drain is required | | |
| <u>Others :-</u> | | |
| Silt trap abandoned and dismantled | | |
| Other major silt contribution to the silt trap needs to be recorded if required | | |
| _____ | | |
| _____ | | |
| Comments & Suggestions : | | |
| | | |
| | | |
| Prepared by: | Verified by: | |
| (Signature) | (Signature) | |
| | Name: | |
| Form No: 1 | Issue No: 2 | Effective Date: 01 March 2001 |

**Re-aligned Road of FR55 Project
SILT TRAP ACTION PLAN**



| | |
|--|--|
| SILT TRAP NO.: T1 | LOCATION: Quarry 1 |
| DATE INSPECTED: 28/12/2000 | REMARKS: i). Contribution to river - .Near to Sungai Gerachi ii). Source of silt – Exposed Spoil Tip & Rock Production Area |

Design Requirement

| | |
|----------------------------------|----------------|
| Catchment Area (ha.) | <u>40 ha</u> |
| Minimum Storage Requirement (m3) | <u>5050 m3</u> |
| Minimum Weir Length (m) | <u>6.56 m</u> |

**Re-aligned Road of FR55 Project
SILT TRAP ACTION PLAN**

Cont.

SILT TRAP NO.: T1

LOCATION: Quarry 1

PROBLEM IDENTIFIED :

- 1) Retention ponds get silted very fast.
- 2) TSS results shown high (>100mg/l) due to outlet seepage – silt direct discharge to river.
- 3) Some exposed spoil tips at the catchment area to be tidied up.

SITE CONSTRAINTS :

- 1) Retention ponds cannot be widening due to limited space (surround by steep valley).

ACTION / IMPROVEMENTS REQUIRED :

- 1) Repair of discharge outlet required.
- 2) Construction of multiple tier retention ponds required.
- 3) Rock bund along river bank need to be raised.
- 4) Spoil tip to be treated as indicated in the slope monitoring plan.

ACTION TAKEN TODATE (03/01/01):

- 1) Discharge outlet repaired. Under monitoring.
- 2) Multiple tier pond completed by constructing rock bund.
- 3) Rock bund along riverbank raised.

ANTICIPATED COMPLETION DATE :

- 1) Exposed slope beside T1 to hydroseed by 12/1/01.
- 2) Spoil tip at T1 upstream to be touched up by 23/1/01.

Prepared by:

Verified by:

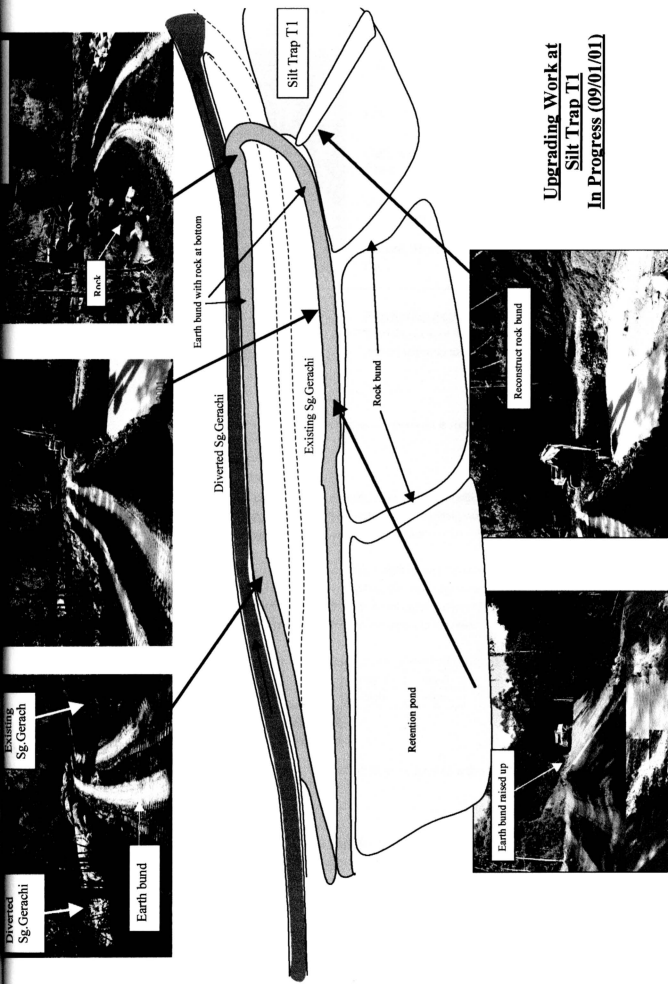
(Signature)

(Signature)

Name:

Name:

**Upgrading Work at
Silt Trap T1
In Progress (09/01/01)**



Sungai Selangor Phase 3 Project (Dam & Road) Silt Trap



| | |
|--|---------------------------|
| Silt Trap | T1 |
| Location | Quarry 1 |
| Calculated Catchment Area | 40 ha |
| Design Storage Requirement (m ³) | 5050 m³ |
| Actual Storage Capacity (m ³) | 6900 m³ |

Source of Silt

- 1 Spoil tip at Quarry 1
(dumping of overburden in progress)

Preventive Action Taken

- > Trimming of spoil tip in progress
- > Bottom trimmed slope hydroseeded

Silt Trap Maintenance Procedure

- 1 Maintenance (eg. desilting) to be carried out as per schedule or whenever is required (eg. when discharge TSS exceeds 100 mg/L)
- 2 Excavator is used for desilting works.
- 3 As this silt trap consists of 6 retention ponds forming a multiple tier silt trap, desilting works will be concentrated at the 2 initial ponds which will be desilted first. The stired water during desilting works will still manage to settle within other intermediate and final ponds before discharges into the river.
- 4 Desilting for final pond will be carried out when it is silted. The height of rock bund will be increased to prevent overflow into the river during the desilting processes. In addition, the discharge overflow pipe from 3rd & final pond will be blocked during desilting of this pond. As such, there is no inflow or outflow of water in this pond. Therefore, the muddy water generated during desilting activity will not discharge into the river.
- 5 The rate of desilting can be determined from the previous discharge monitoring records for normal & rainy seasons.

e.g.

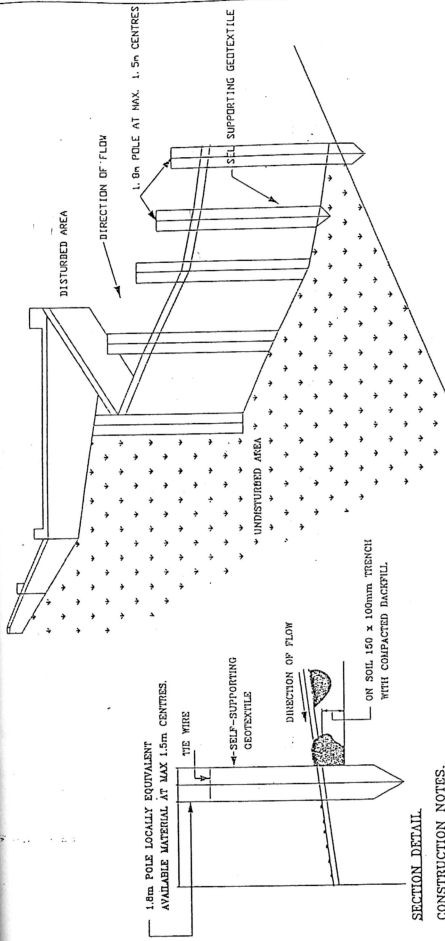
| | day 1 | day 2 | day 3 | day 4 | day 5 |
|-----|-------|-------|-------|-------|-------|
| TSS | low | low | low | high | high |

desilt
on day 3

- 6 The desilted material will be transported out to a designated silt disposal area within the project boundary.

Silt Trap Discharge Monitoring Results

- 1 Silt trap discharge TSS recorded range from 17 - 79 mg/L for the period of 1/1/01 - 17/2/01, except for 4/1, 9/1, 13/1 & 5/2 where the TSS exceeded 100 mg/L.



SECTION DETAIL.

CONSTRUCTION NOTES.

1. CONSTRUCTION SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. DRIVE 1.8 METRE LONG POLE INTO GROUND, 1.6 METRES APART.
3. DIG 1.150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE POSTS WITH WIRE TIES OR AS RECOMMENDED
6. JOINT SECTION OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.

| | | | | | | | |
|---------|-------|-------|-------------------|--|--|---|------------|
| No. 104 | KUALA | KUALA | MEL 11 1981 11 | UNIT REKRENTUK JALAN REKRENTUK JALAN REKRENTUK JALAN | MAP 14, MAMPA PERUMPAH PERUMPAH PERUMPAH PERUMPAH | JABATAN REHABITASI BAWA MALAYSIA KAWANJUAN JALAN | SILT FENCE |
|---------|-------|-------|-------------------|--|--|---|------------|

Re-aligned Road of FR 55

River Water Quality Monitoring and Assessment

Date:

| River/Tributary | Station | Station | Activities | Discharge Points | Potential pollutants | Possibility source | Level | Action required |
|----------------------------|--------------|-------------|---|--|--|-------------------------|-------|-----------------|
| Sg. Selangor (Upstream) | DW1 mg/L | DW1 mg/L | None | None | None | Upstream out of our ROW | | |
| Sg. Chiling | DW2 mg/L | DW2 mg/L | None | None | None | Upstream out of our ROW | | |
| Sg. (Kg. Peretak) /Menyeng | DW3a mg/L | DW3 mg/L | *Earthwork activity at Ch6725 and Ch6900 | T25 T32 | silt oil/diesel | | | |
| Sg. Luit | DW4a mg/L | DW4 mg/L | *Site clearing at Kg. Peretak *Earthworks activity at Ch 3900 Ch6100 and Ch6300 *Piling activity for Sg Luit bridge construction | T35 T36 T13 T17 T19 | silt cement slurry oil/diesel | | | |
| Sg. Ganggor | DW5a mg/L | DW5 mg/L | Earthworks activity at Ch4600 & Ch4900 culvert construction | T33 T34 | silt oil/diesel | | | |
| Sg. Gerachi | DW7a mg/L | DW7 mg/L | * quarry ock blasting * removal of overburden | T1 T2 | silt oil/spent oil | | | |
| Sg. Selangor | DW6 mg/L | DW8 mg/L | *Earthwork activity at Ch3600 - Ch4100 *Rock blasting at Ch 3600 *Concrete batching concrete *Mégah Sewa workshop | T14 effluent from batching plant | silt oil/spent oil cement slurry | | | |
| Sg. Selangor | DW8 mg/L | DW9 mg/L | *Piling activities *CLQ area *Earth works activity at Ch0 -Ch900 | T11 effluent from CLQ T16 T9 | organic compound silt | | | |

Prepared by:

Verified by:

Signature

Signature

Name:

Name:

Revision No: 1

Issue No: 2

Effective date: 01 March 2001

Re-aligned Road of Federal Route Project (KKB - Fraser Hill)

| | | |
|--|---------------------------------------|-------------------------------|
| Ref: SKID-CHK | SKID TANK MONITORING CHECKLIST | Page No: |
| Skid tank Ref: | Date of Inspection: | |
| Skid tank Location: | Checklist No: | |
| By Visual Inspection | Yes | No |
| | | Action required |
| Skid tank condition | | |
| Secondary containment with 110% capacity of skid tank storage capacity | | |
| Fuel nozzle put inside the containment | | |
| Water stagnant inside the containment | | |
| Leakage of diesel from the containment/valve/hole | | |
| Diesel spillage on the ground (soil contamination) | | |
| Alarm system functioning well | | |
| Proper no smoking signboard/fire extinguiser provided | | |
| For Waste Oil Storage/Diesel (drum) :- | | |
| Stored inside the secondary concrete containment | | |
| Waste oil storage under shed | | |
| Waste oil labelling provided | | |
| Leakage of oil from the containment/valve/hole | | |
| Oil spillage on the ground | | |
| Others :- | | |
| House keeping is satisfactory | | |
| Open burning | | |
| _____ | | |
| _____ | | |
| Comments & Suggestions : | | |
| | | |
| | | |
| Checked by: | Verified by: | |
| (Signature) | (Signature) | |
| | Name: | |
| Revision No: 1 | Issue No: 2 | Effective Date: 01 March 2001 |

SECOND SCHEDULE
(Regulation 3)
NOTIFICATION OF SCHEDULED WASTE
(Two copies to be completed)

For Office Use
File reference no.:

1. IDENTIFICATION

Waste Generator Code:

State Code:

(i) Name and Address of Premises: MEGAH SEWA CON BHD
1121 SUKAT TITS PEJABAT POS BESAR
SHAH ALAM 47026 SHAH ALAM SELANGOR DE
Tel. no.: 5222213 Fax no.: Telex:

(ii) Owner of Premises:
Designation:

2. PRODUCTION DATA

(i) List of raw materials/chemicals and quantities used per month*

| Raw Materials/Chemicals | Quantity in Metric Tonnes |
|-------------------------|---------------------------|
| <u>USED OIL</u> | <u>1600 PER MONTH</u> |
| | |
| | |

(ii) List of items and quantities produced per month*

| Production Items | Quantity |
|------------------|----------|
| | |
| | |

3. WASTE DATA


(i) Scheduled waste generated per month*

| Waste Category | Name of Waste | Waste Compound | Quantity (Metric Tonnes) |
|----------------|-----------------|------------------|--------------------------|
| <u>S.O.I</u> | <u>USED OIL</u> | <u>SKID TANK</u> | <u>1600 OIL</u> |
| | | | |
| | | | |

(ii) Other wastes generated per month**

| Name of Waste | Liquid/Solid/Sludge | Quantity (Metric Tonnes) |
|---------------|---------------------|--------------------------|
| | | |
| | | |

I certify that the information provided is true and correct to the best of my knowledge.


Signature of Reporting Officer

Name: Yong Lee Kee
Designation: Plant Supervisor
Date: 8/2/2001
IC No.: 512011

FIFTH SCHEDULE
(Regulation 9)
INVENTORY OF SCHEDULED WASTE
26 JANU - 26 Feb 01

| Date | Waste Category Code | Name of Waste | Quantity Generated in Metric Tonnes | Method* | Waste Handling | |
|----------|---------------------|---------------|-------------------------------------|--------------------|---------------------------|---------------|
| | | | | | Quantity in Metric Tonnes | Place** |
| 28/01/01 | S 012 | Engine oil 40 | 36 | Stone (Solid Tank) | 36 | 2873 workshop |
| 29/01/01 | S 012 | Hyd 68 | 100 | Stone (Solid Tank) | 100 | " |
| 31/01/01 | S 012 | Engine oil 40 | 50 | Stone (Solid Tank) | 50 | " |
| 03/02/01 | S 012 | Engine oil 40 | 36 | Stone (Solid Tank) | 36 | " |
| 05/02/01 | S 012 | Engine oil 46 | 36 | Stone (Solid Tank) | 36 | " |
| 08/02/01 | S 012 | Hyd 68 | 200 | Stone (Solid Tank) | 200 | " |

Note:

- * Store, Process, recover, incinerate, exchange, or other methods (state)
- ** Give name and address of the facility

ENVIRONMENTAL QUALITY (SCHEDULED WASTES) REGULATIONS 1989

SIXTH SCHEDULE

(Regulation 10)

CONSIGNMENT NOTE FOR SCHEDULED WASTES

I WASTE GENERATOR

Waste Generator Code: / State Code:

Name of Waste Generator: Mega Seng Sdn Bhd

Address: 3533, Kuala Lumpur

Name of Responsible Person: Yeong Lek Hwa

Tel. No.: 03-6145188 Fax. No.: 03-6145176 Telex No.:

Name of Waste: Used oil Waste Category Code:

Waste Component: Used oil

Waste Origin: Used oil Waste Origin Code:

Type of Waste: Solid Sludge Liquid Others (specify)

Waste Packaging: Container Canister 55 gal. Drum

Quantity: and if possible

Metric tonne m³

Cost of Treatment and Disposal: \$ /Metric tonne

Name and Address of Final Destination:

Delivery Date: 29/8/00 Signature of Responsible Person: [Signature]

II CONTRACTOR

Contractor Code: / State Code:

Name of Contractor: Hui Aik Trading

Address: 18, Jln 213, Selangor Utama, 68100 St. Gobi, Selangor

Name of Responsible Person: Ng Chun Kee

Tel. No.: 03-61382630 Fax. No.: Telex No.:

Vehicle Registration No.: BGG 219 Name of Driver: Ng Chun Kee

Temporary Storage: No Yes, Address: 18, Jln 213, Selangor Utama, 68100 St. Gobi, Selangor

Date Received: 29/8/2000 Signature of Driver: [Signature]

III STORAGE/TREATMENT/RECOVERY/DISPOSAL FACILITY OPERATOR

Facility Code: / State Code:

Name of Facility: Pemilagaan Sdn Hup Soon

Address of Facility: Batu 18 1/2, Jalan Barga, 45000 Kajang

Name of Responsible Person: Lee How Jeong

Tel. No.: 03-3470 Fax. No.: Telex No.:

Type of Operation:

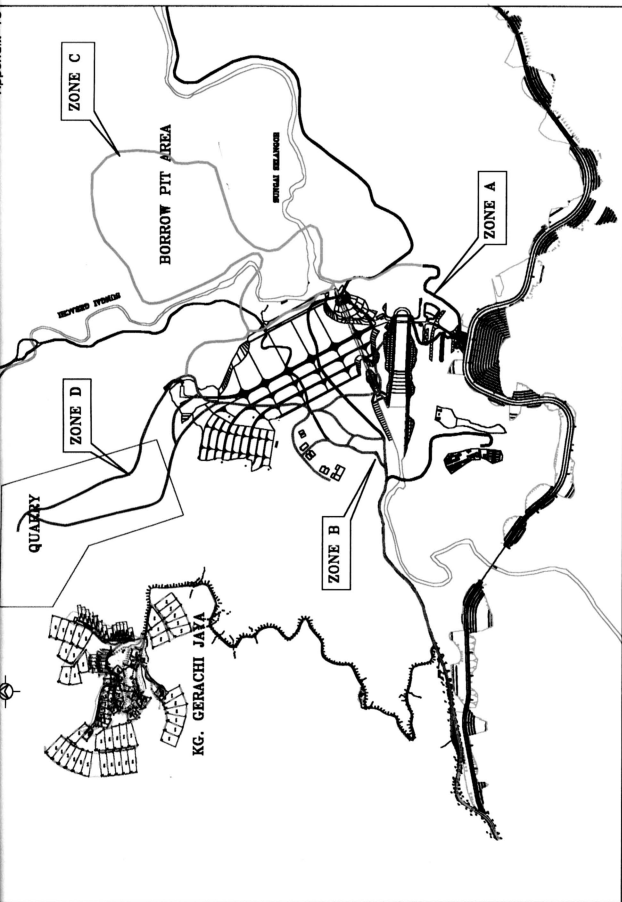
storage regrouping recovery landfill secure landfill

incinerator physical/chemical treatment others (specify)

Quantity of Waste Received: and if possible

Metric tonne m³

Date Received: 29/8/2000 Signature: [Signature]



Appendix 13: The zoning system for controlling dust pollution within the project site

SPLASH**Re-aligned Road of Federal Route 55 (KKB – Fraser Hill) Project****ENVIRONMENTAL POLICY**

We, as SPLASH, are committed to complying with the applicable environmental legislation and other relevant requirements, guidelines and policies. We shall continually to improve our environmental performance in order to achieve long term environmental by sustainable development and be environmental competitive.”

We will demonstrate this commitment by: -

1. Ensuring our activities are safe for our teammates, associates, delegates and others who come in contact with our work;
2. Complying with or exceeding legal requirements;
3. Assigning specific environmental responsibilities throughout our organization and recognizing that all teammates are responsible for ensuring high standards of environmental care;
4. Identifying and managing the environmental impacts associated with the construction activities. Short and long term improvement targets will be set for these impacts;
5. Minimizing any significant adverse environmental impacts of current or new developments through the use of an integrated environmental management procedures and planning;
6. Integrating environmental consideration into decision making at all levels and ensuring that the environmental issues are given equal weight with safety, commercial and other factors in business decisions;
7. Preventing pollution, reducing of waste and consumption of resources (materials and fuel), and committing to recovery and recycling, as opposed to disposal, where feasible;
8. Providing sufficient training to the teammates in order to achieve high quality standards of environmental performance;
9. Encouraging on the use of EMS by all the contractors;
10. Communicating openly with all interested parties on environmental issues, and
11. Reviewing the environmental policy and objective periodically. Updating and making the policy available to all the teammates and the general public as required.

Chief Executive Officer

| | | |
|----------------|-------------|-------------------------------|
| Revision No: 1 | Issue No: 2 | Effective Date: 01 March 2001 |
|----------------|-------------|-------------------------------|

SPLASH
Re-aligned Road of Federal Route 55 (KKB – Fraser Hill) Project

ENVIRONMENTAL ASPECTS

Doc. Ref: AS-POO-SOC

Appendix 5.2b – Ranking of Probability of Occurrence and Severity of Consequences

| | | Ranking | Definition | Project site |
|--|----------------|----------------|--|----------------------------|
| Probability Of Occurrence | Very Low (VL) | 1 | At least once a year | Once /year or never happen |
| | Low (L) | 2 | More than once a year | Once /month |
| | High (H) | 3 | At least once for six months | Once /week |
| | Very High (VH) | 4 | More that once for six month | More than one /week |
| Severity Of Consequences | Very Low (VL) | 1 | <ul style="list-style-type: none"> • Controlled within specific working area. • No loss in business revenue. • No effect to any property | |
| | Low (L) | 2 | <ul style="list-style-type: none"> • Controlled within the working compound. • Minor loss in business. | |
| | Moderate (M) | 3 | <ul style="list-style-type: none"> • Effects immediate vicinity of the working area. • Potential for serving of warning by DOE/Local Authority. Moderate loss in business. | |
| | High (H) | 4 | <ul style="list-style-type: none"> • Potential for stop work order by DOE /Local Authority. • Major loss in business revenue • Difficult to control environmental impacts | |

| | | |
|----------------|-------------|-------------------------------|
| Revision No: 1 | Issue No: 2 | Effective Date: 01 March 2001 |
|----------------|-------------|-------------------------------|

Source: Modified from Krishnan, 2000

SPLASH
Re-aligned Road of Federal Route 55 (KKB – Fraser Hill) Project

ENVIRONMENTAL ASPECTS

Doc. Ref: AS-DEFINATION

Appendix 5.2a – Definition of Normal, Abnormal and Emergency Operating Condition

| Type of Operation | Definition |
|-------------------|---|
| Normal | Day-to-day routine operation that is totally within the controllable limits. |
| Abnormal | Occurrence due to an upset or deviation from the set standards of normal operation. Condition may last for a very short period only and corrective action can be taken to rectify and return the condition to normal. No risk of injuries to people but may incur minor environmental and property damage |
| Emergency | Sudden and unexpected occurrences, which are beyond control and may require immediate, stop the activities. High risk of injury to people and damage to property and the wider environment. |

Revision No: 1

Issue No: 2

Effective Date: 01 March 2001

Source: Modified from Krishnan, 2000

SPLASH
Re-aligned Road of Federal Route 55 (KKB – Fraser Hill) Project

ENVIRONMENTAL ASPECTS

Doc. Ref: AS-RM

Appendix 5.2c – Ranking Matrix

| <i>Probability of Occurrence</i> | | Severity of Consequences | | | |
|----------------------------------|----------|---------------------------------|-------------|------------|-----------------|
| | | Very High | High | Low | Very Low |
| | | 4 | 3 | 2 | 1 |
| <i>Very High</i> | 4 | A | A | B | B |
| <i>High</i> | 3 | A | B | B | C |
| <i>Low</i> | 2 | B | B | C | C |
| <i>Very Low</i> | 1 | B | C | C | C |

Legend:

- A = Very Significant Shall be included in register of environmental aspects
 Shall be included in objective and targets
 Shall have work instructions to ensure good practices
- B = Significant Shall be included in register of environmental aspects
 Shall have work instruction to ensure good practices
- C = Not Significant No action required in the interim period until further review is conducted

Revision No: 1

Issue No: 2

Effective Date: 01 March 2001

Source: Modified from Krishnan, 2000

1: System Audit Schedule

| | | | | | | | |
|---------------------|--------------|--------------|------------|------------------|------------------------------|---------------|--|
| Document /Dept: | | | | | | | |
| Document Ref: | | | | | | | |
| Revision No: | Date Issued: | Page | of | | | | |
| Compiled by: | Signed: | Date: | | | | | |
| Authorized by: | Signed: | Date: | | | | | |
| Audit Schedule for: | | Period from: | | | | | |
| | | To: | | | | | |
| Audit No. | Audit of | Auditor | Audit Date | Audit Report No: | Corrective Action Report No: | Re-audit Date | |
| | | | | | | | |

2: Environmental Management Systems Audit Checklist

| Audit No: | | Date: | | Area: | |
|-----------------------|-------------------------------------|------------------------|----------|--------------------|-------------------|
| Auditor: | | Audit Liaison Contact: | | | |
| Audit of: | | | | | |
| Standards/References: | | | | | |
| Requirement | Method of Demonstrating Requirement | Y/N | Evidence | Documents Examined | Contents Verified |
| | | | | | |

3: Sample Audit Checklist Assessing the Environmental Policy

| ISO 14001 Policy Requirement | Method of Demonstrating Requirement | Requirement Demonstrated? | Evidence |
|--|---|---------------------------|----------|
| <p>Relevant to organization's activities, products and services and its environmental impacts</p> <p>Include a commitment to meet all relevant regulatory or legislative requirements</p> <p>Communicated, implemented and maintained at all levels in the organization</p> <p>Indicated how the environmental objectives will be made publicly available</p> <p>Provides for setting and publication of environmental objectives</p> <p>Supported by top management</p> | <p>Identifying and managing the environmental impacts associated with our construction activities. Short term and long term improvement targets will be set for this impacts</p> <p>Complying with or exceeding legal requirements</p> <p>Provision sufficient training to the teammates in order to achieving high quality standards of environmental performance</p> <p>Reviewing the environmental policy and objective periodically. Communicating openly with all interested parties on environmental issues</p> <p>Updating and making the policy available to all the teammates and the general public as required</p> <p>Policy signed and dated by Chief Executive Officer</p> | | |

INTERNAL SYSTEM AUDITING DOCUMENTATION AND RECORDS
RE-ALIGNED ROAD OF FR55 PROJECT

4: Internal Audit Report

| | | |
|---------------------------------------|--------------------|-------------|
| Audit Date | Auditor: | |
| Audit Liaison Contact: | Audit No: | |
| Area Under Audit: | | |
| Audit of: | | |
| Audit Findings | | |
| Recommendations for Corrective Action | Responsible Person | Target Date |
| | | |
| Recommendations for Preventive Action | Responsible Person | Target Date |
| | | |
| Corrective Action Report Issued to: | | |
| Recommended Re-audit Date: | | |
| Auditor's Signature | Date | |

INTERNAL SYSTEM AUDITING DOCUMENTATION AND RECORDS
RE-ALIGNED ROAD OF FR55 PROJECT

5: Corrective Action Report

| | |
|---|-------------------------|
| Corrective Action Report No: | |
| Response to Audit Report No: | |
| Responsible Person: | |
| Area: | Agreed Completion Date: |
| Cause of Non-compliance | |
| Response Plan | |
| Preventive Measures Taken to Avoid a Recurrence | |
| Controls Applied to Ensure the Effectiveness of the Preventive Measures | |
| Procedures Modified? If yes, Reference | |
| Action Completed: | Signed: |