



Environmental & Social Monitoring Report (April to June 2013)

Project Number: 44914

PAK: Patrind Hydropower Project

Prepared by Star Hydro Power Limited

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Asian Development Bank



STAR HYDROPOWER LIMITED

147 MW PATRIND HYDRO POWER PROJECT

ENVIRONMENTAL & SOCIAL MONITORING REPORT

(APRIL-JUNE 2013)



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A COMPANY OF KOREA WATER RESOURCES CORPORATION

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Acronyms

ADB	Asian Development Bank
AJK-EPA	Azad Jammu & Kashmir Environmental Protection Agency
KPK	Khyber Pakhtunkhwa
CDP	Community Development Plan
EH&S	Environmental Health & Safety
EPCC	Engineering Procurement Contracts Contractor
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
GRC	Grievance Redress Committee
IEE	Initial Environmental Examination
IDB	Islamic Development Bank
IFC	International Finance Corporation
ILO	International Labour Organization
KEXIM	Export Import Bank of Korea
NEQS	National Environmental Quality Standards
NTP	Notice To Proceed
PAPs	Project Affected Persons
PS	Performance Standard
RAP	Resettlement Action Plan
SHPL	Star Hydropower Limited

1. Introduction

i. Background

The Patrind Hydropower Project is run of river project located on the boundary of Khyber-Pakhtunkhwa and Azad Jammu & Kashmir. The purpose of the Project is to provide zero-emissions renewable electricity to the grid and also provide local and global environmental benefits as well as strong local socioeconomic benefits. The project has the total capacity of 147 MW. The project is being financed by multilaterals like IFC, ADB, IDB and KEXIM.

ii. Objectives:

The purpose of this Quarterly Environmental & Social Performance Report is to describe EPC contractor's compliance with the environmental and social performance requirements of IFC/ADB (including implementation of the Environmental Management Plan) and to assess any corrective actions implemented/proposed. This includes:

- A description of all significant health, safety, environmental and social activities and events that occurred during the reporting period.
- Provision of additional information about activities (i.e., status of permits or other approvals, ongoing public consultation etc.).
- Quantitative performance monitoring data summaries in comparison to appropriate ADB and IFC policies, guidelines and national requirements.
- An explanation of any cases of non-compliance with lender's guidelines or applicable regulatory limits that have occurred, identifying the cause and the corresponding corrective measures planned or underway to prevent future occurrences.
- Resettlement Action Plan activities and progress on the implementation of project within the Sustainable Development Strategy Framework

A. Project Name and Summary Information

i. Project/Business Name

Patrind Hydropower Project

ii. Status of Construction

The Notice to Proceed (NTP) for main works was issued by the Company to EPC Contractor on December 26, 2012. However the preliminary works under Preliminary Contract were initiated in October 2010 and were dovetailed in to the main contract. As of June 2013 the physical progress achieved is 22.04% which is in accordance with the construction plans.

i. Location of project

Village Patrind, District Muzaffarabad, Azad Jammu and Kashmir

ii. Nature

Run of river Hydropower Project.

iii. Scale/size

147 MW

iv. Date of construction/operation commencement

Preliminary works commencement: September 2011

Main works start after issuance of NTP: December 2012

v. Name, designation and signature of person responsible for preparing/reviewing the report

Prepared By: _____ Designation: Manager HSE	Reviewed By: _____ Designation: Deputy Chief Executive Officer
Approved By: _____ Designation: Chief Executive Officer	

B. Relevant Environmental Permits or Compliance Certificates

a) Summary of permit conditions and media covered:

As per NOC Issued by AJK-EPA, SHPL/EPC is bound to:

Condition	Status of compliance
<ul style="list-style-type: none"> Ensure compliance to NEQS and undertake mitigation measures suggested in the EIA report & EMP. Constitute Environmental/Post EIA Monitoring Committee and submit monitoring reports on quarterly basis and provide the copy of this approval and EIA report to the contractor for information and compliance activities. 	Environmental Monitoring Unit has been established and mobilized on site after the issuance of Notice to Proceed to the EPC Contractor. Quarterly E&S monitoring report has been submitted to EPA AJ&K
<ul style="list-style-type: none"> Compensate PAPs for loss of agricultural land, crops, property, and usage right etc. in accordance with the rates that agreed upon and adopt appropriate mechanism for RAP grievance redress. Employ local peoples for all unskilled jobs and implement CDP sooner than later. Ensure all public utilities such as water supply pipes, power phone line be not disturbed by the execution of the project. 	Owners are compensated for the loss of agricultural land, trees and property as per the market rates/replacement cost. For unskilled jobs local are being employed and for skilled jobs they are being hired on priority basis as per the requirement and the qualification. Care is being taken not to disturb any of the public utilities.
<ul style="list-style-type: none"> Ensure occupational and community health and safety by back by a comprehensive emergency response plan. Adopt controlled techniques in accordance with Pakistan explosive act and also make sure the safety & security of wild animals and their habitats at the project site and in its environs with the prior consultation and adhering to the guidelines of forestry and wild life departments strictly. 	Being complied in letter and spirit.
<ul style="list-style-type: none"> For compliance of regulation 13, 14, 17 & 18 of IEE/EIA regulations 2000 which enunciate the conditions for approval. Confirmation of compliance, entry, inspection and monitoring of the proposed project. The site to install the asphalt plant and other machinery would be selected in consultation with the agency (AJK-EPA). The findings of quality analysis on regular basis should positively be shared. Also, the spoil should be dumped at pre identified location. 	Being complied in letter and spirit. Selection of batching plant and dumping locations have been finalized in consultation with EPA-AJ&K.

- Communicate any change in the approved project to AJK-EPA and that would be commenced after obtaining the approval. The approval shall stand null and void if the conditions mentioned herein before are not fully complied with. It does not absolve the proponent of the duty to obtain any other approval or clearance that maybe required and can be withdrawn at any time with any prior notice if deem necessary in the public interest.

Shall be done if required.

Most of the conditions are common in both approvals with exception of following issued by EPA KPK:

Condition	Status of compliance
<ul style="list-style-type: none"> • Water in the pond created by construction of Patrind weir should be maintained at EI765m.amsl.Safety zone/adequate engineering measures should be provided to overcome fears of the residents regarding effects of pond to their houses. The level difference of 2 meter from765m.amsl to 767m will act safety zone so the owner of the land and housing structures falling within the zone should be compensated as per laid down procedure of compensation of the government. 	<p>The Company has fulfilled the condition in letter and spirit as the operation level of the Project is at 765 masl. The Company acquired the land at the level of 767 masl as per the condition of the EPA. The additional 2 meters shall act as safety zone and the owners were compensated as per the procedure.</p>
<ul style="list-style-type: none"> • The project management should contribute towards the repair of the road to be used during construction and operation activities of the project. The trees supposed to be submerged should be counted in the presence of all stake holders i.e. owners land collectors /patwari representing revenue department representative of EPA and forest/agriculture department. After the determination of exact number type and ownership of the trees be finalized and paid as per laid down procedure of the government 	<p>The owners have been compensated for the trees supposed to be acquired due to the land acquisition. The trees were counted in the presence of all stake holders i.e. owners land collectors /patwari representing revenue department representative of EPA and forest/agriculture department.</p> <p>The roads near the project area are being maintained by the EPC contractor.</p>
<ul style="list-style-type: none"> • Minimum flow of 2 cumecs in the downstream of 	<p>Shall be applicable during the operation phase</p>

weir in Kunhar River should be kept and provision for 10% extra of this amount of water for emergency in downstream should also be kept in plan. No extension would be permitted in the future in existing hydropower project without prior approval of the EPA /government of Khyber Pakhtunkhwa	of the Project.
<ul style="list-style-type: none"> Separate NOC is required for batching/crushing plant. 	NOC has been obtained from EPA KP for installation of batching plant near the weir site.

b) Relevant Government Agencies

As the project is located on the boundary of Khyber Pakhtunkhwa and Azad Jammu & Kashmir, Star Hydro Power Limited (the “Company”) had to seek approval of Environmental Impact Assessment (EIA) from following two Environmental Protection Agencies (EPAs).

- i. EPA Azad Jammu and Kashmir
- ii. EPA Khyber Pakhtunkhwa

c) Issuance dates and duration of validity

NOC Issuing Authority	Issuance Date	Duration of Validity
EPA-AJK	10-08-2010	3 years
EPA-KPK	14-04-2011	Project construction phase

d) Renewal Requirements:

Renewal is subject to compliance with aforementioned conditions.

C. Incidents of Violations or Non-Compliance

To maintain the project construction activities in compliance with recommended policies & procedures, Environmental & Social monitoring of the entire Project has been a constant activity as numerous site visits have been undertaken by SHPL, OE and EPCC’s HSE staff.

Non conformities are being recorded and reported on daily, weekly and monthly basis.



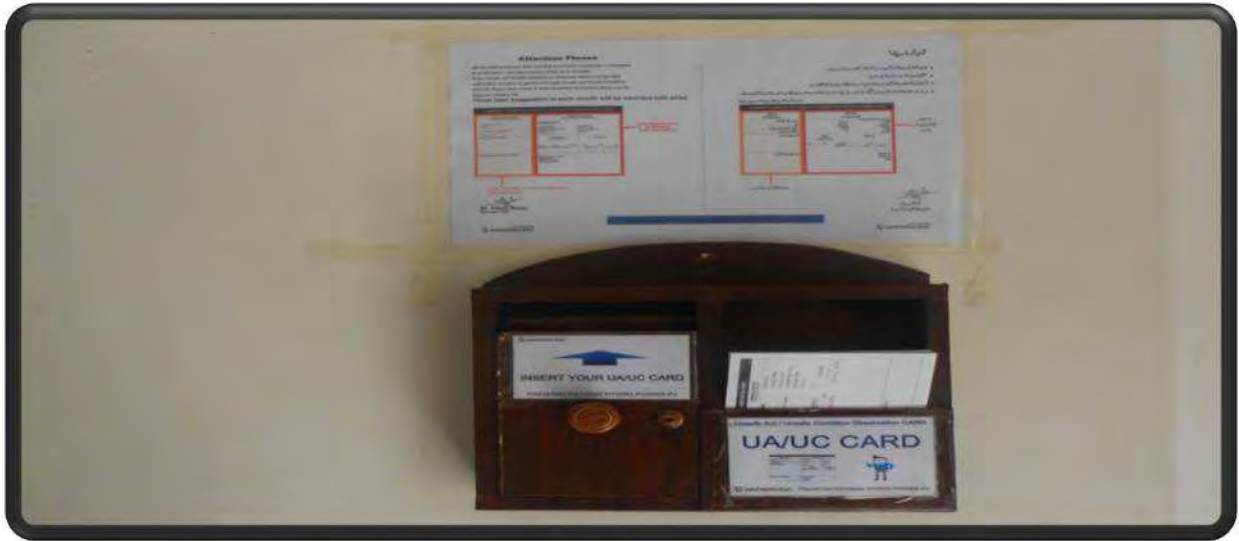
(HSE reports and their record has appropriately been maintained)

Non conformity issues raised by the OE have partially been addressed (**Annexure: C-1**)

Following non compliances were observed and EPCC/Sub-contractors has subsequently been instructed to undertake appropriate corrective actions as per recommendations:

Sr.	Recorded Date/Location	Nature Of Non Compliance	Corrective Actions	Non Compliance with	Media or Community Reaction
1.	25 June 2013/ Powerhouse Site	Sub-Contractor vehicle carrying fuel moved on unstable section of road leading to surge shaft slopes. Whereas, vehicle movement in said area was prohibited.	Verbal warning was given to the vehicle driver and was also communicated to all the employees in the daily tool box meeting not to use the surge shaft access road until it is rehabilitated.	Site Safety Plan	None
2.	12 June 2013/ Powerhouse Site	Contaminated water from the adit tunnel was over flowing in sedimentation tanks towards the river. Also ventilator performance has been observed beyond the required standards.	NCR Patrind HSE-002 dated June 13, 2013 issued to Sub Contractor. Immediate partial compliance has been made.	EMP & EPC Contract	None
3.	19 June 2013/ Powerhouse Site	A dump truck helper was found working on site without induction training.	Warning letter was issued and was sent out from the site area. Dump truck was also not allowed to work without helper. Warning letter was also sent to the Site Manager Kyungdong (Sub Contractor)	Project HSE Procedures	None
4.	12 June 2013/ Powerhouse Site	Wheel loader with high volume of exhaust gases affecting the atmosphere	Site supervisor were informed for the maintenance of wheel	EMP/IFC PS-3	None

Sr.	Recorded Date/Location	Nature Of Non Compliance	Corrective Actions	Non Compliance with	Media or Community Reaction
		inside the tunnel.	loader. Warning letter and subsequently an NCR was also issued for the maintenance of wheel loader and the filter of wheel loader was changed.		
5.	11 June 2013/ Weir Site	Helper was operating dump truck without authorization.	Warning letter was issued to both helper and site supervisor.		-Do-
6.	07 June 2013/ Weir Site.	Two workers were crossing river at a time through cable trolley in unsafe manner.	Only one person is allowed to use cable trolley at a time. Letter was sent to the Sungbo (Sub-contractor) management vide No. Patrind-HSE-052 dated 08/06/13.	HSE Procedures	-Do-
7.	01 June 2013/ Powerhouse Site	Despite Provision of body harness and relevant training, worker was found at height without using body harness.	A warning letter was issued to the worker for his unsafe act. Letter was also forwarded to the Manager QA/QC.	HSE Procedures	-Do-
8.	14 May 2013/ Powerhouse Site	It was observed that the washroom near the adit tunnel do not have septic tank and soakage pit according to the environmental requirements.	Site Manager was informed regarding the issue and remedial corrective actions recommended. A letter was also sent to the PM Kyung Dong. Furthermore, an NCR has also been issued.	EMP/IFC PS-3/ E&HS Standards	-Do-
9.	21 April 2013 Weir Site	Charging car helper was found connecting a high voltage cable in the electric panel	He was instructed verbally that he is not authorized personnel to touch with the high voltage cables. Warning letter was also issued to him.	HSE Procedures	-Do-



To sensitize all staff/workers, UA/UC Observation Card System has been introduced by the EPCC. At both the sites boxes holding UA/UC cards have been placed to get information and feedback regarding HSE. Best observer is being awarded with a prize to encourage and promote safety culture at project sites.

During quarter following observations were made which were subsequently addressed by EPC's HSE Department (C-2).

UA/ UC OBSERVATION CARDS

Sr.	Date/Time & Location	Observation	Corrective Action	Action Party	Close Out Date
1.	14/05/2013 15:00 Access Bridge/ Power House	Two Kyung Dong's excavator operators were observed walking on side barrier/ parapet wall of Access Bridge freely, right at the mid length. They were stopped to do so but not followed instructions.	Warning letters to be issued to the company who is their employer	HSE Dept.	20/05/2013
2.	28/05/2013 08:40 Weir Access Road	Two Kyung Dong workers crossed the river through cable trolley at a time. Whereas only one person is allowed to cross at a time.	Only one person should be allowed to sit on cable trolley. HSE staff to issue warning letter to Kyung Dong about the situation.	HSE Dept.	05/06/2013
3.	23/05/2013 13:30 Powerhouse Site	There was no safety person present in night time.	EPC HSE department needs strengthening of the HSE staff. New staff has been hired as per the recommendation.	HSE Dept.	27/05/2013
4.	05/05/2013 10:45 HRT	There should be an authorized person at the HRT entrance who should record the name and detail of each and every person entering into the HRT. It would be helpful in case of emergency and would help to avoid any terrorist act.	One man should be placed to record the data of the people entering inside the tunnel only permitted people should be allowed to enter inside the tunnel	Kyung Dong	14/05/2013
5.	03/05/2013 13:00 Surge Access Road	Geo-membrane (Blue Sheet) has been placed the slopes are to protect the seepage. The same is now out of place or de-shaped. In rains the rock surface can slide further.	Sheet needs a repair/replacement	Kyung Dong	13/05/2013
6.	08/06/2013	The sign board fixed at Adit Tunnel	New cards must be placed. If	Kyung Dong	10 June, 2013

Sr.	Date/Time & Location	Observation	Corrective Action	Action Party	Close Out Date
		face "Status of Tunnel Visitors" to check out accurate numbers of internal workers/ visitors in an emergency is empty. No worker/ visitor name plate at show in this sign board	cards need repairmen they must be repaired. Colors must be placed to get rid of any accident.		
7.	12/06/2013	It is repeatedly observed that site supervision/ Site Engineers do not follow the rules and regulations regarding safety at site.	All the workers on site (EPCC and its sub-contractors) have to follow rules and regulations without discrimination of seniority. EPC HSE staff should take actions against violators.	HSE (Weir Site Staff)	19 June, 2013

Number of warning letters and few NCRs were issued by the OE for incident of violations and non-compliances observed on site which are given in the following table. Sample warning letter/ NCR is attached as Annexure- C-3:

Warning Letters

Sr.	Issued to	Job Title	Date	Warning Reason	Location	Issued by
1.	Atif Mughal	Dump Truck Helper	19/06/2013	1. PPE Violation 2. Unsafe Behaviour 3. Operating without Authorization 4. Refusal to Show ID Card	Power House Site	Addil Yusaf
2.	Naiz Ali	Truck Helper	11/06/2013	1. PPE(Shoes) Violation 2. Refusal to Show ID Card	Weir Site	Javed
3.	Naseeb Khan	Truck Helper	11/06/2013	1. PPE(Shoes) Violation 2. Refusal to Show ID Card	Weir Site	Javed
4.	M. Fareed	Mason	06/06/2013	1. Fall Protection Violation 2. Unsafe Behaviour	Weir Site	Javed
5.	Wakeel Shah	Labour	01/06/2013	1. Others	Power House Site	Addil Yusaf
6.	Atta Ur Rehman	Loader Helper	03/06/2013	1. PPE Violation	Weir Site	Javed
7.	Abdul Sattaar	TM Driver	01/06/2013	1. All Protection Violation	Power House Site	Addil Yusaf
8.	Naiz Ali	Truck Helper	29/05/2013	1. PPE violation 2. Refusal to show id card 3. Working at site without safety induction training	Weir Site	Javed
9.	Zafar Iqbal Khan	Dumper Operator	23/05/2013	1. Using faulty tools/ Equipments	Weir Site	Javed

Sr.	Issued to	Job Title	Date	Warning Reason	Location	Issued by
10.	Muhammad Rasool	Mixer Helper	22/05/2013	1. PPE violation	Weir Site	Javed
11.	Muhammad Khursheed	Labor	14/05/2013	1. PPE violation	Weir Site	Javed
12.	Shafqat Hussain	Excavator Operator	10/05/2013	1. PPE Violation 2. Operating without authorization	Weir Site	Javed
13.	Azam Khan	Excavator Operator	28/04/2013	3. PPE Violation 4. Unsafe acts of working	Weir Site	Javed
14.	Naseeb Khan	Dumper Helper	27/04/2013	1. PPE violation 2. Refusal to show id card 3. Working at site without safety induction training	Weir Site	Javed
15.	Muhammad Shakeel	Jumbo Operator	21/04/2013	1. PPE violation 2. Refusal to show id card 3. unsafe acts of working	Weir Site	Javed
16.	Saeed Ahmed	Charging Car Helper	21/04/2013	1. Using unsafe/ faulty tools and equipment 2. Operating without authorization	Weir Site	Javed
17.	Nazim Hussain	Cargo Crane Operator	10/04/2013	1. Unsafe Behaviour	Weir Site	Javed
18.	Azair Abbasi	Excavator Operator	04/05/2013	1. PPE Violation 2. Unsafe Behaviour 3. Misuse of PPEs, misbehavior and refused to signature.	Weir Site	Javed

Sr.	Issued to	Job Title	Date	Warning Reason	Location	Issued by
19.	Abdul Sattar	TM Driver	01/06/2013	1. All Protection violation	Power House Site	Addil Yusaf
20.	Maroof Khan	Labor	21/05/2013	1. Operating without authorization 2. Refusal to show id card	Power House Site	Addil Yusaf
21.	Iqbal Ahmed Gillani	Dump Truck Driver	31/05/2013	1. All protection violation	Power House Site	Addil Yusaf
22.	Sajjad Shah	Labor	28/06/2013	1. Refusal to show id card	Power House Site	Addil Yusaf
23.	Peer Afzal	Wheel Loader Operator	18/05/2013	1. Operating without authorization	Power House Site	Addil Yusaf
24.	Adnan Najeeb Ullah	Lathe Machine Helper	15/05/2013	1. PPE Violation	Power House Site	Addil Yusaf
25.	Mr. Shin	Tunnel Foreman	03/04/2013	1. PPE violation 2. Unsafe behavior 3. Failure to supervise 4. Operating without authorization	Weir Site	Yasir Ghauri

D. Incidents of Environmental and Safety Accidents

a) Environmental Accidents and Mitigation

During the quarter, no incident such as extra ordinary emission or oil spill had been reported. Fuel storage areas have been maintained appropriately and relocated to mitigate risks of contamination.

- ✓ A fuel pump (diesel) is installed at Weir Site batching plant area.
- ✓ Fuel storage at Powerhouse Site has been relocated with concrete pad near batching plant. Also, manual handling is replaced by automatic pump.
- ✓ Fuel storage at surge shaft has been replaced by direct fueling through mobile fuel tank.
- ✓ Polythene sheets have also been used to avoid soil contamination.



Fuel pump Installed (Weir Site)



Concrete pad prepared for fuel storage



Vehicle oil change concrete pad facility



Vehicle service station under construction

b) Health and Safety Accidents and Mitigation

To manage and mitigate health and safety incidents following RPN (Risk Priority Number) calculator is being introduced to assess the severity and likelihood of risk of accidents/incidents.

Risk Priority Number (Calculator)						
		Likelihood/ Probability				
Likelihood/ Probability		Very Low 1	Low 2	Medium 3	High 4	Very High 5
Severity	Severity					
	Very Low 1	1	2	3	4	5
	Low 2	2	4	6	8	10
	Medium 3	3	6	9	12	15
	High 4	4	8	12	16	20
	Very High 5	5	10	15	20	25
Tolerable 1-5		Low Risk 6-10		Medium Risk 11-15		High Risk 16-25

Incidents recording extend to all workers/staff working for sub-contractors and on rented vehicles/machinery. EPCC/sub-contractors is bound to report all incident/accidents related to work at the Project site. The summary of accidents/incidents during the reporting period is as follow:

Incident	Frequency	Description	Media or Community Reaction
Fatality	None	N/A	N/A
First Aid Case	1	On April 18, 2013, Mr. Saleem Sungbo's (Sub Contractor's worker) was engaged in preparing concrete bags. He moved to take shawl while crossing barrication in an unsafe manner. He was struck with the rope and fell down. He got an injury on his left leg and was sent to medical room for initial treatment and subsequently was sent to Kunhar Christian Hospital for further checkup. No fracture or major injury was found in X-Ray report	None
Occupational Injury	None	No LTI (lost Time injury/Incident)	None
Near Miss	4	1. On 7 th April 2013, at adit Tunnel portal, Kyung Dong's (Sub Contractor's worker) welder Abdul Ghaffar was cutting steel pipe when gas pipe got fire due to leakage. Fire extinguisher was used to overcome fire otherwise an incident could have been occurred if fire reached to gas cylinder. However, fire was controlled and welder was given warning for using gas pipe which was not recommended during color coding.	None
		2. On May 05, 2013, due to heavy wind at 15:05, roof of prefabricated site office of Daewoo E&C was partially detached. All staff inside and outside the office luckily remained safe. It was suggested to construction team that all the prefabricated roofs should be inspected and the detached portion should be fixed appropriately while using additional nuts & bolts to strengthen the roof.	None

Incident	Frequency	Description	Media or Community Reaction
		3. On May 23, 2013, backfilling work at coffer dam was in progress, a dump truck was unloading the material and slipped from the edge of the cofferdam where few seconds ago labour moved away hence survived without any injury and no damage resulted to vehicle. Dumper was moved from site and driver was instructed not to move on unstable area. Also mechanical /fitness test of vehicle was recommended.	None
		4. On 13 th June 2013 at 16:30, a Corrugated Galvanized Iron (CGI) sheet fixed with the fence along power house site was dislocated due to heavy wind. Few seconds earlier, a labour moved on same section of the road. Luckily he remained safe and escaped from a possible accident.	None
Environmental incident/ Property damage	01	Due to river flood at weir site on 26 th May 2013, Generators, water pumps and other construction materials washed away. Access roads to bridge and adit tunnel were also washed away and also resulted a considerable quantity of soil erosion. Detailed incident /property damage report have already separately been submitted.	Incident was reported in local newspaper "Shamal" on 27 th May 2013 (D-1)
Medical Checkup (These cases are seasonal diseases like nausea, flue and cough, headache etc.)	437	April: 138 (Powerhouse Site & Weir Site) May: 168 (Powerhouse Site & Weir Site) June: 131(Powerhouse Site & Weir Site) 437 staff and workers visited medical facilities during the quarter. Majority of all visitors had routine check up with very few exceptions of minor injuries and rest was of minor in nature like Gastro enteritis, flue and headache etc. (D-2). Tetanus injections are available and may be provided on site as and when needed. During training sessions on health management awareness regarding use/requirement of tetanus has been given.	None

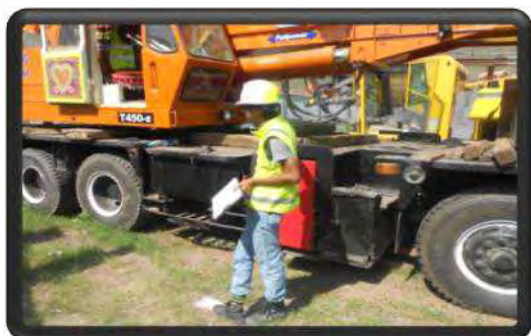
Approximately 400,000 Safe Man Hours have been completed till 30th June 2013 without any Loss Time Injury (LTI) / fatality.

Compliance is being monitored to follow all the instructions by OE, SHPL and the Project Lenders. In compliance with EPC's HSE plans/procedures and policies, various corrective actions have been undertaken during quarter and subsequently been reported in weekly monthly and quarterly reports.

Color Coding/Inspection:

To mitigate safety incidents, machinery, equipment and electrical appliances are being inspected to ensure fitness through color coding system. Sample checklists are attached as **(D-3)**.

EPC's internal HSE inspection has remained an ongoing activity. For continuous strict monitoring, Owner Engineer's Environmental Management Unit (EMU) is placed permanently on site. Periodic visits have been carried out by SHPL, Lenders and their advisors.



EQUIPMENT INSPECTION CERTIFICATE		It's Possible DAEWOO E&C	
	CERTIFICATE ISSUE NUMBER	PPHPPJ-HSE-14	
	EQUIPMENT NAME	WHEEL EXCAVATOR	
	EQUIPMENT NUMBER	MCM, APF-200/ 41	
	CERTIFICATE ISSUE DATE	15/06/2013	
	CERTIFICATE EXPIRED DATE	15/08/2013	
	COMPANY	Kyungdong	
	ISSUED BY	HSE Daewoo E&C	
BARKAT HUSSAIN	CHECKED BY	ADDIL YUSAF	
Pakistan Patrind Hydropower Project.			



U- Bolt was broken



Repairing

Inspections Conducted During Reporting Period:

Sr	Inspection	Date	Inspected by	Location
April-2013				
1.	Fire Extinguisher	11/04/2013	M. Javed	Weir Site
2.	Excavator	13/04/2013	Addil Yusaf	Powerhouse Site
3.	Dump Truck/JKT-251	13/04/2013	Addil Yusaf	Powerhouse Site
4.	Dump Truck/IKB-831	12/04/2013	Addil Yusaf	Powerhouse Site
5.	Dump Truck/TKB-448	12/04/2013	Addil Yusaf	Powerhouse Site
6.	Batching Plant	11/04/2013	M. Javed	Weir Site
7.	Batching Plant	18/04/2013	M. Javed	Weir Site
8.	Fire Extinguisher	15/04/2013	Addil Yusaf	Camp Office
9.	Kitchen Hygiene	16/04/2013	Addil Yusaf	Camp Office
May-2013				
10.	Batching Plant	30/05/2013	M. Javed	Weir Site
11.	W. Loader-03	20/05/2013	M. Javed	Weir Site
12.	W. Loader-02	20/05/2013	M. Javed	Weir Site
13.	Excavator-03	20/05/2013	M. Javed	Weir Site
14.	Charging Car-005	20/05/2013	M. Javed	Weir Site
15.	Jumbo Drill-352	20/05/2013	M. Javed	Weir Site
16.	Fire Extinguisher Camp Office	18/05/2013	Addil Yusaf	Camp Office
17.	D/Truck-362	18/05/2013	M. Javed	Weir Site

Sr	Inspection	Date	Inspected by	Location
18.	Kitchen Staff Hygienic Inspection	19/05/2013	Addil Yusaf	Camp Office
19.	Excavator-02	19/05/2013	M. Javed	Weir Site
20.	Water Tanker-01(Sungbo)	19/05/2013	M. Javed	Weir Site
21.	Concrete Pump	19/05/2013	M. Javed	Weir Site
22.	C-2094 T/Mixer	17/05/2013	M. Javed	Weir Site
23.	Excavator-200	18/05/2013	M. Javed	Weir Site
24.	Diesel tanker-01	19/05/2013	M. Javed	Weir Site
25.	T-Mixer-529	15/05/2013	M. Javed	Weir Site
26.	Dump Truck-251	14/05/2013	M. Javed	Weir Site
27.	Dump Truck	13/05/2013	M. Javed	Weir Site
28.	Dump Truck-04	12/05/2013	M. Javed	Weir Site
29.	Dump Truck-03	12/05/2013	M. Javed	Weir Site
30.	Cargo Crane-01	15/05/2013	M. Javed	Weir Site
31.	T/ Mixer-3238	15/05/2013	M. Javed	Weir Site
32.	W/ Loader	15/05/2013	M. Javed	Weir Site
33.	Batching Plant	14/05/2013	M. Javed	Weir Site
34.	Fire Extinguisher (Pak Mess & HSE)	12/05/2013	M. Javed	Weir Site
35.	Fire Extinguisher (Batching Plant)	11/05/2013	M. Javed	Weir Site
36.	Fire Extinguisher (HSE Office)	10/05/2013	M. Javed	Weir Site
37.	Fire Extinguisher(Store Generator Room)	10/05/2013	M. Javed	Weir Site
38.	Fire Extinguisher (Near Office)	10/05/2013	M. Javed	Weir Site

Sr	Inspection	Date	Inspected by	Location
39.	Fire Extinguisher (C/ Office)	10/05/2013	M. Javed	Weir Site
June-2013				
40.	Wheel Loader	3June-13	Addil Yusaf	Powerhouse Site
41.	Mobile Crane	6June-13	Addil Yusaf	Powerhouse Site
42.	Batching Plant	10June-13	Addil Yusaf	Powerhouse Site
43.	Fire Extinguishers	10June-13	Addil Yusaf	Powerhouse Site
44.	Transit Mixer	15June-13	Addil Yusaf	Powerhouse Site
45.	Dump Truck	15June-13	Addil Yusaf	Powerhouse Site
46.	Wheel Loader	17June-13	Addil Yusaf	Powerhouse Site
47.	Dump Truck	17June-13	Addil Yusaf	Powerhouse Site
48.	Transit Mixer	17June-13	Addil Yusaf	Powerhouse Site
49.	Wheel Excavator	19June-13	Addil Yusaf	Powerhouse Site
50.	Wheel Loader	19June-13	Addil Yusaf	Powerhouse Site
51.	Cable Trolley	2June-13	M. Javed	Weir Site
52.	Pakistani Mess	2June-13	M. Javed	Weir Site
53.	Dump Truck 251	3June-13	M. Javed	Weir Site
54.	Wheel Loader	3June-13	M. Javed	Weir Site
55.	Mobile Crane	6June-13	M. Javed	Weir Site
56.	Scaffolding Staircase	8June-13	M. Javed	Weir Site
57.	Batching Plant	10June-13	M. Javed	Weir Site
58.	Fire Extinguishers	10June-13	M. Javed	Weir Site

Sr	Inspection	Date	Inspected by	Location
59.	Fire Extinguishers	12June-13	M. Javed	Weir Site
60.	Crawler Drill 585	14June-13	M. Javed	Weir Site
61.	Transit Mixer	15June-13	M. Javed	Weir Site
62.	Dump Truck	15June-13	M. Javed	Weir Site
63.	Cable Trolley	15June-13	M. Javed	Weir Site
64.	Dump Truck	15June-13	M. Javed	Weir Site
65.	Scaffolding Cr.	17June-13	M. Javed	Weir Site
66.	Cable Trolley	17June-13	M. Javed	Weir Site
67.	Wheel Loader	17June-13	M. Javed	Weir Site
68.	Dump Truck	17June-13	M. Javed	Weir Site
69.	Transit Mixer	17June-13	M. Javed	Weir Site
70.	Wheel Excavator	19June-13	M. Javed	Weir Site
71.	Wheel Loader	19June-13	M. Javed	Weir Site
72.	Dump Truck # 052	22June-13	M. Javed	Weir Site
73.	Batching Plant	27June-13	M. Javed	Weir Site

E. Labor Relations and Conditions

(i) Nature of labor dispute or grievance

During the reporting quarter no incident of labor dispute or grievance was observed, recorded and reported.

(ii) Legal requirements, Permit conditions and renewal requirements

After labour strike involving 50 workers raising issues on paid holidays, 20% increase in salary and permanent employment status with company which was reported in previous quarter. Daily wage was enhanced by sub-contractor Kyung Dong Company from Rs.465/= to Rs.537/ (Local market rate is approx.Rs.400/= per day).

The EPCC and its sub-contractors are paying according to the labor law. Daily additional 2 hours are being paid as normal hourly rate. But monthly 32 hours are fully paid without work. EPCC and its sub-contractors are also paying (normal hourly rate x 2) for work on holidays. Rest of the requirements related to labor's contracts, permits and other conditions remained constant and no change was observed.

(iii) Authorities in charge of investigation/recording

In case of any labour incident, Site Construction Manager and HSE staff are responsible to record, investigate and address it appropriately.

To address any dispute or work related complaint received from staff /workers. An internal Grievance Redressal Committee (GRC) has also been established with following composition:

- i. Planning Manager (Korean)
- ii. Admin Manager (Local)
- iii. HSE Manager (Local)

Committee is mandated to investigate the matter in an unbiased manner and resolve it amicably so that the concerned party or individual may be satisfied and a friendly / peaceful environment is reinstated at project site.

(iv) Media or community reactions (if any)

No reaction was observed from media or the community.

(v) Corrective actions, deadlines, identification of responsible parties.

EMU, SHPL and EPCC's HSE department continuously indicates corrective actions for further compliance by construction team.

(vi) Labor relations and living conditions for construction labor force

75 staff/workers have been accommodated in the base camp at powerhouse site. As majority of workers are local residents so they do not need accommodation. 115 workers have been accommodated in temporary rented buildings at weir site. This arrangement shall continue till the completion of the labour camp (expected in the next quarter) after which these workers shall be shifted to the camp. The living conditions are up to merit with all necessities.

All staff/workers before induction have been educated to respect local norms and not to involve in any conflict with locals. Furthermore, to manage these accommodations community liaison officer / coordinator have been employed from local area.

Standards for labor health and safety are consistent with IFC's Environmental, Health and Safety General Guidelines. It is executed according to Provision 6.7 Health and Safety of EPC Construction Contract.

The EPC contractor:

- Made all reasonable precautions to maintain the health and safety of the Personnel. First aid facilities are available at all times at the sites and at any accommodation.
- HSE Department is responsible for maintaining safety and protection against accidents.
- Maintained records and make reports concerning health, safety and welfare of labour staff.

**(vii) Compliance status based on applicable national and international laws/
regulation on labor including ILO core labor standards**

As per following conditions of contract agreement between the Company and EPC contractor those have been made in light of National and International laws and standards, implementation during the quarter has been observed accordingly:



**Site office with prayer room facility for labour
(Power House)**



Newly constructed washrooms for site labor/staff



Weir Site camp for staff/workers is almost completed and will be functional in July 2013.

CONTRACTUAL TERMS/ CONDITIONS

STATUS OF COMPLIANCE DURING QUARTER

ENGAGEMENT OF STAFF AND LABOUR

Except as otherwise stated in the Project Requirements, the Contractor shall make arrangements for the engagement of all staff and labour, local (People living in project vicinity) or otherwise, and for their payment, housing, feeding and transport.

EPC contractor has made all necessary arrangements for the engagement of all staff and labour and for their payment, housing, feeding and transport. However, the local staff/workers do not need housing in the project base camp.

The Contractor and its subcontractor(s) shall prefer, to the extent practicable and reasonable, to hire unskilled staff and labour, and skilled staff and labour with appropriate qualifications and experience, who are residents of AJ&K or KP especially who are the affected of the Project.

147 unskilled jobs have been provided to nearby communities (Alda, Thori, Patrind, Tarchela, Sarati, and other adjacent localities). Also preference has been given to local people for skilled positions.

The Contractor shall, and shall ensure that its subcontractors shall, fulfil and observe the Environmental and Social Requirements in relation to the engagement of staff and labour.

EPC Contractor has established a proper mechanism of daily and weekly reporting and consistent monitoring of HSE and related social issues. On the basis of recommendations, corrective measures are being taken accordingly.

RATES OF WAGES AND CONDITIONS OF LABOUR

The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out or as prescribed under the Laws of the Country. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.

The pay rates of wages are comparatively better than the local prevailing rates Temporary skilled workers = Rs. 700-800 .Temporary unskilled workers= Rs. 500-550
Whereas in local market it ranges from 600-700 and 400-450 respectively.
Minimum salary as per local labour law was 7000 per month till 30th June 2013 which has been increased up to 9000/- per month. While in the project the minimum salary for the permanent worker is 13000/-.

PERSONS IN THE SERVICE OF OTHERS

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Employer's Personnel.

Full compliance of the condition was observed during entire quarter.

LABOUR LAWS/STANDARDS

(a) The Contractor shall comply with all the relevant labour Laws applicable to then Contractor's Personnel, including Laws relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

All regulations have been in implementation. Local labour laws were devised in light of International Human Rights & Core Labour Standards; therefore, compliance with local standards is same with international laws /standards. Furthermore, Pakistan has ratified ILO's conventions on core labour standards.

(b) The Contractor shall require its employees to obey all

Site HSE status has been improved due to regular

applicable Laws, including those concerning safety at work.	instructions and corrective measures.
(c) Abolition of child labor	To ensure the abolition of child labour the Computerized National Identity Card (CNIC) has been made mandatory for induction which is only provided by the GOP after the age of 18.
(d) Elimination of all forms of forced or compulsory labor	Strict monitoring is being conducted by SHPL, OE and EPCC's HSE staff to check that no forced labour has been undertaken at any site in any form. Furthermore, Compliant boxes are also placed on each site.
(e) Elimination of discrimination in respect of employment and occupation	No discrimination exists as all persons have been provided equal opportunities irrespective of colour, race, origin and nationality. Only difference is the nature of job and relevant skills. However, no female is working at site as a worker due to local customs/norms and nature of the job.
(f) Freedom of association and the effective recognition of the right to collective bargaining	No ban is imposed on workers with regard to freedom of association which is evident from the labour strikes for collective interests. However, formal labour union or association has yet not been established yet.

WORKING HOURS

No work shall be carried out on the Site on locally recognised days of rest, or outside normal working hours, unless: <ul style="list-style-type: none"> (a) Otherwise stated in the Contract, (b) the Employer gives consent, which shall not be unreasonably withheld, or (c) The work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Employer. 	Work has been carried out on weekends but only with the consent of concerned staff/labor.
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FACILITIES FOR STAFF AND LABOUR

(a) Except as otherwise stated in the Project Requirements, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in Project Requirements.	Recommended facilities have been provided.
(b) The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.	Nobody has been permitted during reporting period.

(viii) Medical facilities provided to Staff and Labor during Quarter:

During the reporting period, number of staff and workers visited medical facilities (Weir and Powerhouse Site) where they were treated accordingly. EPCC management has directed to conduct the medical examination of all new hired staff and workers. a MOU has also been signed with Muzaffarabad General Hospital for special medical services on certain terms and conditions (**Annex-E**).



Qualified male nurse and a lady doctor have been placed at upper and Powerhouse Sites.



Two ambulances available on both sites, First Aid Kits also available at all Construction Sites

(ix) Implementation of local labor standard

- GoP Labor Policy 2010 implemented.
- Standards for labor health and safety are executed according to EPC Construction Contract.
- EPC has made all necessary arrangements for payment, housing & feeding.
- The living conditions are up to merit with all necessities.
- Standards consistent with IFC's EHS General Guidelines.
- Prefer to hire unskilled /skilled staff and labor from AJ&K or KP.

(x) Local Employment Status:

As per the EPC Contract, EPCC is bound to employ unskilled from local areas/ adjacent villages and for skilled jobs preference has to be given locals. Similarly, the supply of material and hiring of houses and vehicles has been one of the expectations from local community. Aforementioned commitments and expectations have been fulfilled.

Employment opportunities have been disclosed to the local communities through different sources and preference has been given to the locals but subject to availability of skilled and unskilled human resources.

• Summary of local employment is as shown below.

Head		Total	AJ&K						KPK					Punjab
			Thori	Allrha	Patrind	Tarchila	Others	Sub-Total	Sarati	Boi	Dalola	Others	Sub-Total	
Daewoo	Total	141	2	-	6	-	71	79	1	2	10	16	29	33
	Manager	5	-	-	-	-	2	2	-	-	-	-	-	3
	Staff	31	-	-	1	-	12	13	-	1	2	5	8	10
	Labour	105	2	-	5	-	57	64	1	1	8	11	21	20
Kyungdong	Total	107	3	9	5	-	63	80	-	-	8	16	24	3
	Manager	2	-	-	-	-	-	-	-	-	-	-	-	2
	Staff	15	-	2	-	-	9	11	-	-	-	3	3	1
	Labour	90	3	7	5	-	54	69	-	-	8	13	21	-
Sungbo	Total	86	-	-	24	3	15	42	-	2	10	14	26	18
	Manager	1	-	-	-	-	-	-	-	-	-	1	1	-
	Staff	10	-	-	1	-	1	2	-	-	1	4	5	3
	Labour	75	-	-	23	3	14	40	-	2	9	9	20	15
Total	Total	334	5	9	35	3	149	201	1	4	28	46	79	54
		100.0%	1.5%	2.7%	10.5%	0.9%	44.6%	60.2%	0.3%	1.2%	8.4%	13.8%	23.7%	16.2%

i. Project procedures for: (a) hiring; and (b) acquisition of goods and services:

Hiring and procurement policy and procedures have been devised but have yet not been approved. Therefore, hiring and procurement of goods and services by EPC contractor is being carried out under Quality Assurance and Quality Control plan till the hiring & procurement policy is approved.

F. Environmental and Social Capacity

i. Staff capacities in environmental and social management (as relevant)

To enhance staff's capacity on imperative aspects of environmental and social management, trainings programs and number of tool box meetings were conducted during the quarter.

ii. Degree of awareness of: (i) Environmental Management; (ii) Health and Safety

An orientation to environmental management, health and safety during construction work is part of induction form of all the staff hired. Furthermore, it has been observed that daily HSE monitoring, toolbox meeting programs and other related activities have raised the awareness level among all staff and workers.

HSE Weekly Meetings:

During quarter as per EPC's monthly HSE Plan weekly internal meetings and meetings with site construction teams have been regularly conducted on both sites (F-1).

Some unsafe acts/ unsafe conditions were reported at project site and the issue was highlighted in the meetings. The responsible/concerned staff was advised to conduct the tool box talks on regular basis especially on Unsafe Acts/ Unsafe Conditions as 90% of accidents are the results of unsafe acts and unsafe conditions. These topics have been discussed at site through tool box talks to create awareness and understandings to the site related hazards.

Issues related to housekeeping at site and labor camp also discussed, some littering was observed in the workshop area which has been rectified till the reporting of final report.



HSE Weekly Meetings (Internal & with construction team)

Environmental laws and regulations

EIA study of the project was completed in light of following laws and regulations.

EMP is in implementation under the same laws and regulations:

- ✓ Pakistan Environmental Protection Act 1997
- ✓ National Environmental Quality Standards (NEQS)
- ✓ AJK Environmental Protection Act 2000
- ✓ Land Acquisition Act 1894
- ✓ Draft National Resettlement Policy 2002
- ✓ NWFP Forest Ordinance 2002
- ✓ Sarhad National Conservation Strategy 1992
- ✓ ADB Safeguard Policy Statement 2009
- ✓ IFC Handbook (Resettlement Action Plan)

iii. Training /Campaign/Awareness Raising Programs Carried Out During Quarter:

It has been observed that frequency of training sessions have been increased during this quarter to enhance staff's capacity on imperative aspects of HSE as various sessions were conducted on following topics at both sites (Weir & Power house Site):

Sr.	Training Name	Type	Location	Trainer	Date
June-2013					
1.	Safe Methods for Blasting	Internal	HSE Training Hall Powerhouse Site	Mr. Aftab Alam	21/06/2013
2.	Sub. Con Korean Manager Training	Internal	HSE Training Hall Powerhouse Site	Mr. Chung Myung Hun	14/06/2013
3.	Work at height and Fall Protection Training	Internal	HSE Training Hall Weir Site	Yasir Ghauri	24/06/2013
4.	First Aid Training	External	HSE Training Hall Weir Site	Red Crescent Society	06/06/2013
5.	Cable Trolley	Internal	HSE Training Hall Weir Site	Yasir Ghauri	28/06/2013
6.	Behavior Safety	Internal	HSE Training Hall Weir Site	Yasir Ghauri	30/06/2013
7.	Safety Campaign	Internal	In front of HSE Training Hall Powerhouse Site	Mr. Aftab + Mr. Chung Myung Hun	04/06/2013
8.	Safety Campaign	Internal	In front of HSE Training Hall Weir Site	Mr. Yasir Ghauri + Javed	04/06/2013
May-2013					
1.	Koreans Manager & Supervisors Training	Internal	HSE Training Hall Powerhouse Site	Mr. Chung Myung Hun	23/05/2013
2.	Induction for Supervisor	Internal	HSE Training Hall Powerhouse Site	Mr. Chung Myung Hun	06/05/2013
3.	PPE Awareness Training	Internal	HSE Training Hall Weir Site	Mr. Javed	30/05/2013
4.	Driving Safety Training	Internal	HSE Training Hall Powerhouse Site	Ansar Abbas	16/05/2013
5.	First Aid	External	HSE Training Hall Powerhouse Site	Akhtar Ayub, Red Crescent Society	09/05/2013
6.	Safety Campaign (Driving Safety)	Internal	In front of HSE Training Hall Weir Site	Mr. Yasir Ghauri + Javed	07/05/2013

Sr.	Training Name	Type	Location	Trainer	Date
7.	Safety Campaign (Driving Safety)	Internal	In front of HSE Training Hall Powerhouse Site	Mr. Aftab + Mr. Chung Myung Hun	07/05/2013
(April 2013)					
1.	Safety Campaign (Hand & Power Tool Safety)	Internal	In front of HSE Training Hall Weir Site	Mr. Yasir Ghauri + Javed	04/04/2013
2.	Safety Campaign (Hand & Power Tool Safety)	Internal	In front of HSE Training Hall Powerhouse Site	Mr. Aftab + Mr. Chung Myung Hun	04/04/2013



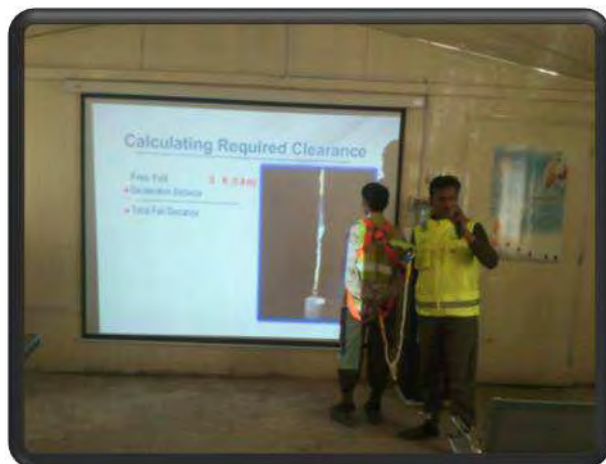
Training for Heavy Equipment Operators



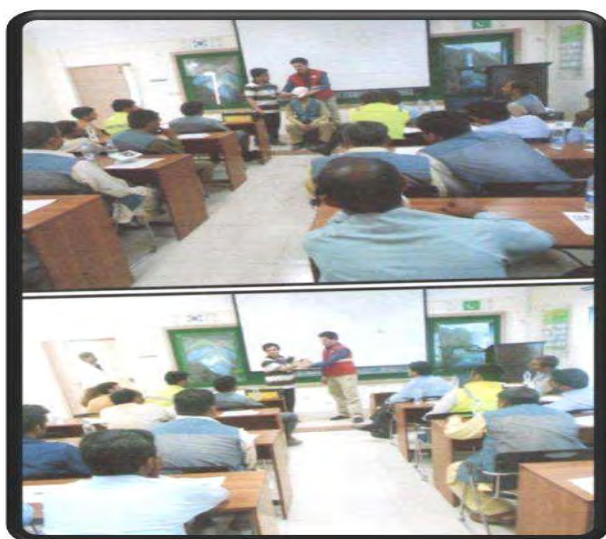
Training on Safe Use of Cable Trolley



Education on Safe Behavior



Training on Fall Protection



(First Aid training session (Weir Site & Powerhouse Site))



Training for Korean Supervisors



Training for Blasting Crew

Sample attendance sheets and training manual is annexed as F-2

Induction Training:

As part of EMP all staff and workers before starting their respective jobs have been given induction training as per “Induction Performa” recommended in EMP document. Detail is being reported in weekly and monthly reports.

INDUCTION TRAININGS

Sr.	Month	Total Inductions		Total No. of Employees Inducted	
		Weir site	Powerhouse site	Weir site	Powerhouse site
1.	April	8	14	31	26
2.	May	18	35	45	66
3.	June	19	27	39	51
Total		45	76	115	143

Tool Box Meetings (Daily on both Sites):

This is a consistent activity undertaken by the EPC before the start of every construction shift and is part of 3.5 Safety Campaign. Activity reports are being received from construction teams including sub-contractors. It has been the part of every working day on both sites till date.

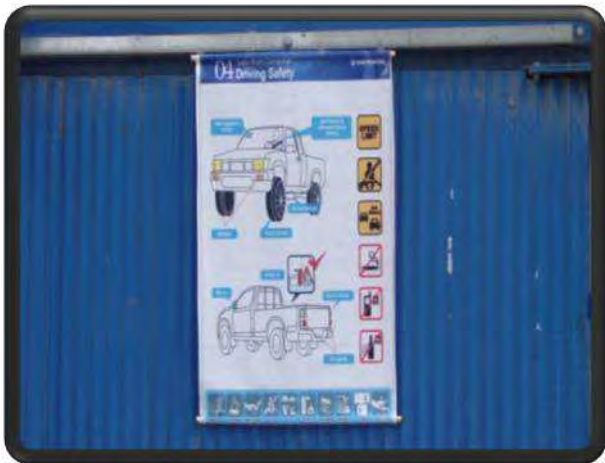
Tool Box Talks/Daily Safety Manager:

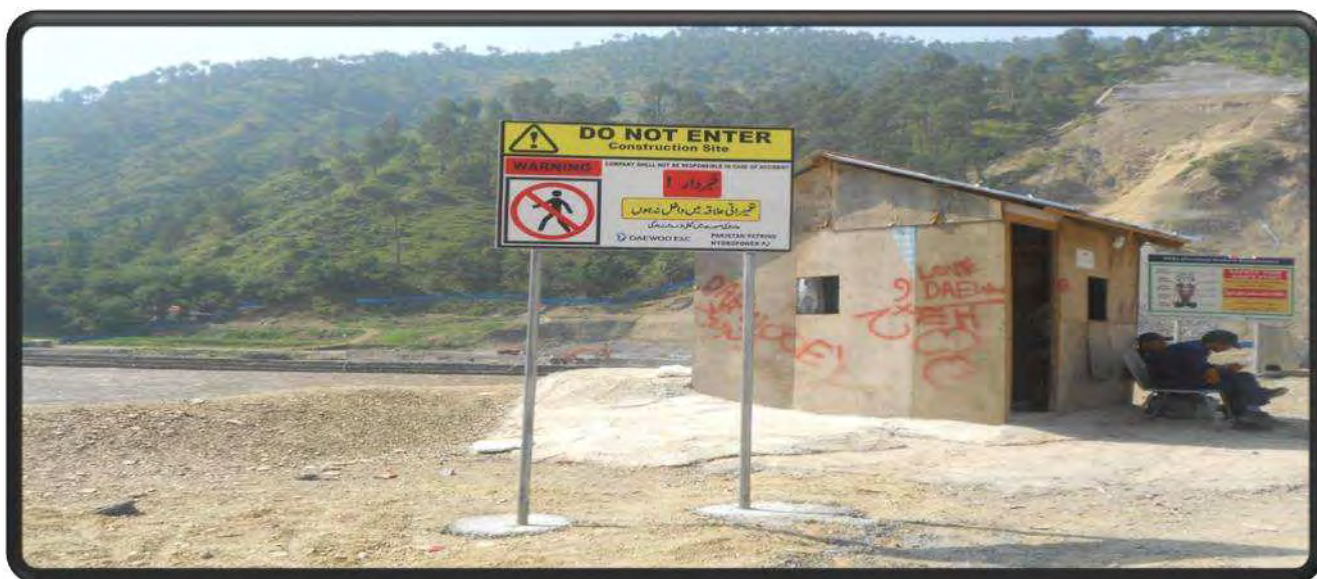
From December 2012 a series of daily “Tool Box Talk” regarding HSE has been started focusing on different HSE topics. Each Staff person has also been assigned job of daily Safety Manager to visit site and report safety status (F-3).

Awareness Raising Material/Safety sign/Campaign:

To increase the awareness amongst the workers and community, sign boards have been placed on appropriate locations; furthermore dissemination of brochures carrying

information regarding environmental and social aspect such as preventing project employees from hunting and fishing sensitizing them for disposal of excavated material and waste on approved site. Sign boards have been placed with regard to the community safety and security. Special campaigns were launched to aware the community from blasting hazards and mitigation measures which increased the level of staff/worker understanding. Safety campaign as part of monthly HSE Plan has been conducted during the reporting period.





Monthly Safety Award:

To promote safety culture on sites, EPCC has introduced a safety award during last quarter which continued during the reporting period also (**Sample Certificate annexed as F-4**)

Sr.	Names	Company	Topics	Work Site
June 04-2013				
1.	Sin Sang Min	Kyung Dong	Best Manager	Weir Site
2.	Attique	Daewoo E&C	Best Manager	Weir Site
3.	Cheon Jin Seon	Kyung Dong	Best Manager	Power House Site
4.	Najam Pervaiz	Daewoo E&C	Best Driver	Power House Site
5.	Muskeen	Kyung Dong	Best Labor	Power House Site
6.	Ibrar Hussain	Kyung Dong	Best Labor	Weir Site
7.	M. Waseem Abbasi	Sungbo C&E	Best Driver	Weir Site
May 07-2013				
1.	Lee Kang Jae	Kyung Dong	Best Manager	Weir Site
2.	Shin Sang Ku	Kyung Dong	Best Manager	Power House Site

Sr.	Names	Company	Topics	Work Site
3.	Nabeel	Kyung Dong	Best Labor	Power House Site
4.	Khawaja Abdul Waheed	Kyung Dong	Best Labor	Power House Site
5.	Jameel Nazir	Kyung Dong	Best Labor	Weir Site
6.	Malik Kashif	Daewoo E&C	Best Labor	Weir Site
April 04-2013				
1.	Ohgen lee	Sungbo C&E	Best Manager	Weir Site
2.	Mushtaq Ahmed	Daewoo E&C	Best Engineer	Weir Site
3.	Hakim Din	Kyung Dong	Best Foreman	Weir Site



Monthly Safety Campaign

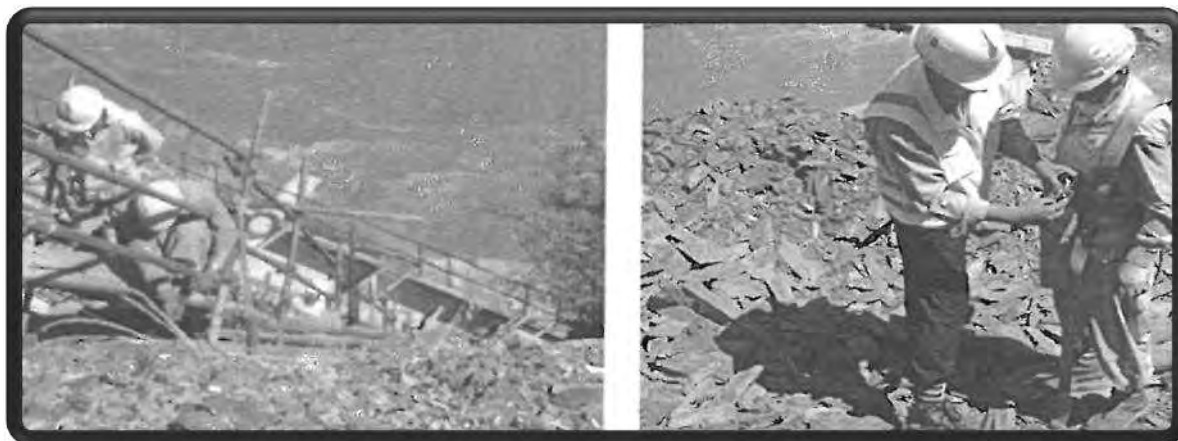
Monthly Safety Award

Daily Education/Training on site:

During frequent site visits, on spot education/training is an ongoing activity that certainly enhance and promote safety culture on sites. Moreover, during inspection of equipment and color coding activities workers and relevant staff has also been educated appropriately.



New HSE Training hall established at Weir Site



Onsite Training



Tool Box Meetings and Safety Induction Training

iv. Needs assessment of environmental and social management capacity (as relevant)

Continuous capacity building initiatives including more specific trainings on environment and social management are required for staff and labor. HSE department of EPC contractor has remained engaged in delivering orientation sessions, awareness raising and capacity building sessions on environment and social management and also identified training needs of the staff and labor during the quarter. As a result of training needs assessment and to enhance the capacities of the staff and labor before start of each month trainings and other capacity building activities are being incorporated in Monthly HSE Plan.

G. Stakeholder Consultation/CSR Activities

ii. Details of consultations, if any, with local communities, nongovernmental organizations, civil society groups, and other stakeholders, including affected people

- Formal and informal meetings and discussions with communities and other stakeholders is a consistent activity which is undertaken to improve the project's implementation. Coordination meetings were conducted during the quarter with the government departments. Meetings and discussions were held with local community of adjacent villages and government departments (Environment Protection Agency, district administration and development authority. Issues with regard to employment, hiring of services, social uplift plan and site security have generally been discussed with aforementioned stakeholders. These issues have been resolved through local employment. Hiring of services including supply of construction material and local manpower, initiating some interventions under social uplift plan such as rehabilitation of access roads and provision of water supply etc.
- Members of Local Action Committee have been visiting project office and were dealt by project management amicably and adequately with regard to their concerns and demands. Their concerns and demands about employment, social uplift plan, hiring of houses and services such as heavy equipment, supply of construction material and subletting of construction works are being fulfilled as per project requirement and availability.
- To strengthen and facilitate relation with locals, Mr. Fayyaz Qureshi a representative of local community at weir site has been appointed as a coordinator. Few more inductions in staff and labour have been made from the adjacent villages.
- AJK-EPA has been consulted regarding treatment of the water that is being used for non-potable purposes.

- A consistent liaison has been made with Development Authority Muzaffarabad (DAM) for initiation of improvement work on Supreme Court-Thori Road.
- District Administration, Police Department, Electricity Department, Hydro Electric Board and Private Power Cell are other key departments those have also been in close contact to address and facilitate the project implementation issues such as land demarcation, security issues and to fulfill regulatory requirements as and when needed.
- During the quarter, Prime Minister AJK, Ministers, Chief Secretary, Secretaries and other stakeholders have visited the project site. Briefings were given by the project management regarding progress.



**Site visit by Prime Minister GoAJK
(30/5/13)**



**Site visit by Minister Works GoAJK
(19/5/13)**

- Although, Community Complaint BOX (CCB) is placed on both the sites, but mostly direct mode of communication has been preferred by the local residents instead of using CCB i.e. through cell phone and direct access to office. Complaints are mostly related to employment, initiation of social uplift plan and more compensation for land acquisition.

Nature of Complaint	Action Taken by EPCC
Complaint received from Mr. Abdul Qayyum R/O Alrha village through cell phone about the expected damage to the house due to blasting activities.	<p>House of Mr. Abdul Qayyum was examined by the EPC team and minor cracks in the washroom wall were found. Material for extra protection including labour charges was provided by sub-contractor Kyung Dong before start of new blasting on same site to avoid complaints in the future.</p> <p>The complainant's house falls within 500 meter radius of the project, therefore with an intention to strengthen the structure, construction material was provided to the house owner. The house was one of the houses surveyed within the radius of 500 meter. No impacts after test blast were observed as it was controlled and as per SOPs.</p> <p>Further instruction and mitigation measures were suggested followed by close supervision. Community representatives were consulted before the activity. Before each blasting residents were informed verbally and through a leaflet (English & Urdu) disclosing blasting plan, impacts, preventive measures etc.</p>
Employment	Skilled /unskilled persons from local community have been employed by PEC during reporting period.

- “Survey of Potential Damage of Blasting Activities to Houses/Structures” at power house site completed in the month of April 2013. However, blasting activities started in June 2013. At upper site (weir site), 27 houses in Patrind village, 7 houses in Tracheela village and 8 houses in Sarati village were surveyed. At power house site 66 houses were surveyed partially located in 500 meter and out of radius. All the pre-blasting damages were recorded during the survey. Controlled blasting is being undertaken and after test blasts houses were revisited to assess the any potential damage but no impacts were found.
- Before blasting SOPs including HSE plan were adopted, as every household was informed (**Annex.G-1**)



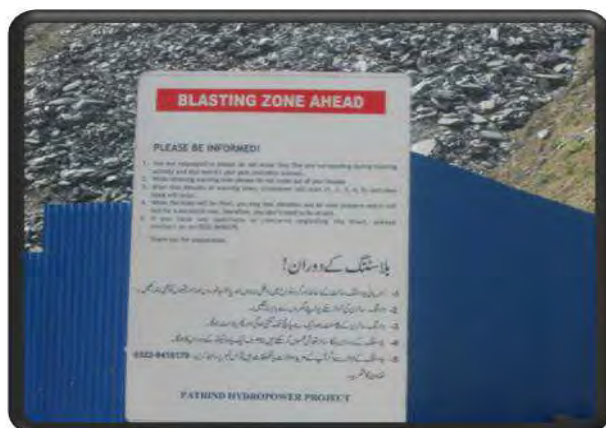
Pre blasting Training session for Blasting Crew



Pre blasting consultation with local community



Dissemination of blasting notice to each household



Sign board for community information installed at each entrance

iii. Details of community programs involving government agencies and civil society/NGOs in implementation

Both SHPL & EPC contractor have established liaison with civil society in the project vicinity. Meetings and consultations are made with all relevant stakeholders. Officials and competent authorities from government departments and external monitoring teams have been visiting project site and they were briefed and oriented with progress made and relevant issues and remedial measures have also been discussed. The issues discussed during the meetings mainly covers employment, activities under social uplift plan, hiring of local services and other HSE measures i.e. traffic management, waste management and excavated martial management.

The list of the social society organizations is given as under;

Organization Name	Location
1- Sahara Welfare Organization	Dalola (Weir Site-District Abbottabad KPK)
2- Rural Development foundation	Sarati (Weir Site-District Abbottabad KPK)
3- Tanzeem Ul Awan	Daedal Mera (Weir Site-District Abbottabad KPK)
4- Kunhar Welfare Organization	Patrind (Weir Site-District Abbottabad KPK)
5- Press for peace	Muzaffarabad (Powerhouse Site District Muzaffarabad AJK)
6- Local Action Committee	Thuri/Lower Chatter Muzaffarabad (Powerhouse Site District Muzaffarabad AJK)
7- Pakistan Red Crescent Society	Muzaffarabad (Powerhouse Site District Muzaffarabad AJK)

iv. Activities under social uplift

ACTIVITIES UNDER SOCIAL UPLIFT PLAN	STATUS
<ul style="list-style-type: none"> Provision of water supply to Patrind village 	<p>Natural spring water supply completed for Patrind village in order to ensure access to safe drinking water.</p> <p>One of the house hold who relocated within Alda village made demand of water supply to his newly build house(s). The Company and EPC will discuss with the affected household(s) their water supply reconnection</p>
<ul style="list-style-type: none"> Road pavement & Social Uplift 	<p>In compliance with construction contract clause 4.20(b) (xii) regarding Social Uplift Program, road pavement adjacent to Sarati village mosque. The road will be beneficial for local community to improve quality of life.</p>
<ul style="list-style-type: none"> Improvement on existing road paving 	<p>Damaged road to Thori park is under remedy. Regarding improvement of existing road from Supreme Court to Thori park, matter already had discussed with MDA for its implementation, but its plan has been suspending due to sewage pipe-line construction, therefore, it seems to be proceeded after completion of pipe-line construction.</p>
<ul style="list-style-type: none"> Development Scheme for Medical Treatment, 	<p>Medical facility established at power house site which is available to local community as well.</p>
<ul style="list-style-type: none"> Water supply for Sarati village 	<p>Water supply of Sarati village using the well of the construction camp is near completion.</p>
<ul style="list-style-type: none"> Water supply for Park area 	<p>Water supply of Park area using the well at the disposal access road had been developed, but this is not potable water.</p>
<ul style="list-style-type: none"> Fencing work 	<p>Fencing work at weir site amounting approximately 6 million rupees was sub-contracted to a local contractor from Patrind village which was completed during the reporting period. Entire</p>

activity executed by local community from adjacent villages of Patrind and Tarcheela



Road pavement work in Sarati village

H. Issues, Status of Implementation of Mitigating Measures in the Environmental and Social Management Plan and Compliance with Environmental Qualities and Environmental and Social Requirements

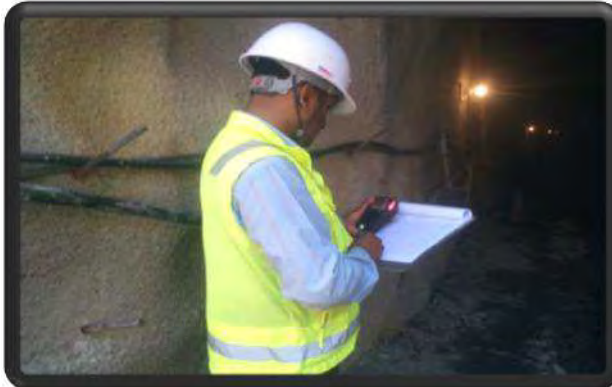
An EMP document was prepared along the guidelines established by the ADB/WB and adjoining institutions especially IFC guidelines on EHS and Performance Standards. Environmental management plan aims at providing safeguards for and enhancement of social, environmental and economic quality parameters which would be subject to project impacts whereas monitoring involves measurement and recording of such parameters to identify adverse trends for timely mitigation. These parameters have been enumerated in Environmental & Social Management Plan. Frequency for the assessment of various parameters has also been included in the plan. To manage the environmental issue appropriately, following three sub plans have been developed and are being implemented by EPC contractor in accordance with EMP.

EMP(sub plans)	Status of compliance during Quarter
a. Plan for Disposal of Excavated Material	<ul style="list-style-type: none"> i. Dumping on approved sites has been observed. ii. Disposal of excavated material quantified
b. Plan for Wastes Management	<ul style="list-style-type: none"> i. Waste and scrap materials from construction activities stored in a scrap yard and stock yard. ii. Best housekeeping practices with few exceptions. iii. Hired buildings for staff and labour having sanitary system. Camp at Powerhouse Site with sanitary system as per required standard iv. With minor exception no oil and lubricant contamination occurred.
c. Plan for Traffic Management	<ul style="list-style-type: none"> i. Speed limit controlled ii. Safety precautions placed to protect workers and the general public. iii. Vehicles equipped with directional control signage. iv. Vehicles inspected prior to use. v. workers aware of mobile equipment operating in the area

Efforts have been made to execute the project in compliance with national and international environmental and social standards. Compliance monitoring of environmental quality has been a constant activity during quarter:

Environmental component	Standards (NEQS)	Compliance/Mitigation measure
i. Air Quality	EPA ambient air quality (EPAs standards for each Parameter)	<p>NEQS:</p> <ol style="list-style-type: none"> 1. To detect confined space gaseous concentration, gas detector has been used from last month of previous quarter. However, it has been the partial compliance as detection for carbon dioxide, Nitric oxide, and Nitrogen oxide and dust particles has yet not been carried out. Two subsequent NCRs, one from OE to EPCC and 2nd from EPCC to its sub-contractor have been issued for immediate compliance. Procurement of requisite equipment is under process and soon will be made available. 2. Quality of air in project vicinity has yet not been analyzed, quotations have been received from well-known companies for environmental monitoring (Annex-H-1), however, following measures have been taken to mitigate air pollution: <ol style="list-style-type: none"> i. To ensure dust suppression due to transportation activity, unpaved roads are being sprinkled with water at least twice a day. ii. The EPC is taking all necessary measures to limit pollution from dust and any wind-blown materials during construction. iii. Use of ventilator during work in HRT has been recommended essential. Respiratory protective masks have been issued to tunnel workers.
ii. Water quality	WHO Guidelines (EPAs standards for each Parameter)	NEQS: Tests for drinking water quality have already been conducted during 3 rd quarter2012; however, to assess the impacts on rivers, quality monitoring shall be carried out through any recognized company.
iii. Noise levels	EPA ambient noise	Noise:

/Vibration	standards. Typically 8-12mm/s day time and 4mm/s night time is standard limit worldwide.	<ul style="list-style-type: none"> i. Noise prone activities are avoided during night time. With few exceptions no blasting occurs during quiet hours. Intensity of noise and has been monitored to compare it with established standards. ii. Provision of necessary safety and personal protective equipment such as ear plugs etc are ensured during high noise activities like tunnel blasting. iii. Excavators and all heavy machines are lubricated in a routine matter to minimize the noise and to increase the life of equipment <p>Vibration:</p> <ul style="list-style-type: none"> i. EPC is more concerned regarding factors of human comfort and structural damage and always try to comply with allowable vibration standards. As blasting potential impacts survey has been carried out to maintain control blasting on both sites. Blasting checklist is used by HSE staff.
iv. Soil quality	EPA quality standard (Different standards for each Parameter)	<ul style="list-style-type: none"> i. Tests to be conducted through private lab/company. ii. No environmental incident except small soil contamination has been observed at fuel storage area, lubricant change facility and non-paved area has been rectified by collecting and properly disposing off the contaminated top soil in the excavated material disposal area. As many new vehicles and machinery is arriving on sites therefore to mitigate localized soil contamination proper workshop area with concrete pad is being established.
v. Flora	Visual observations by relevant Forest professional during EIA study.	To rehabilitate, tree plantation shall be carried out as per EMP recommendations.
vi. Fauna	Observation by relevant wildlife & Fisheries professional during EIA study.	<p>No endanger species found during EIA study and construction phase.</p> <p>No considerable disturbance to aquatic life.</p>



Tunnel air quality monitoring by EPCC & OE staff (**Annex-H-2**)

Gas Concentration					
Date: 24 April 2013		O2	LEL	H2S	CO
Station	Time	%VOL	%LEL	PPM	PPM
P-1	8:20	20.9	0	0	0
P-2	8:22	20.9	0	0	0
P-3	8:25	20.9	0	0	0

Gas Concentration in Tunnel

In compliance with EMP, monitoring of different components by an authorized company is required on biannual basis. For this purpose well-known companies like SUPARCO and SGS have been contacted to carry out the said activities. During Month of July/August 2013 sampling and analysis (Air, water, soil and emissions) shall be undertaken to fulfill the requirements stipulated.

vii. **Waste generation and management**

a) **Generation:**

The solid waste produced for the months of, April, May and June 2013 has randomly quantified. Different types of waste produced at sites are as follow;

- i. Engine/ Generator Oil- (27 liter is used for 200 hours for 2 Generators installed at both sites)
- ii. Cement/ Slag Bags - (Mostly cement bulker has been used, however bags used have been taken by local labour)

Food Waste

Description	Tetra packs (Kg)	Plastic Bags (Kg)	Paper (kg)	Metal (Kg)	Vegetable + Food (Kg)
Local mess both sites	4.00	2.00	3.50	3.00	25.00
Korean mess both sites	4.00	2.00	3.50	3.00	20.00
Offices both sites	3.00	2.00	10.00	3.00	7.00
Sub Total	11.00	6.00	17.00	9	52.00
Total	95 Kg				

iv. **Mineral water bottles both sites: 5-10 Kg daily**

Use of 19 liter re-useable mineral water bottle has been increased as water approximately 1000 bottles are being purchased monthly. Also, water dispensers and water coolers have been placed on main locations. Use of ½ liter bottle is reduced and has been limited to travelling duration.

b) **Management**

The waste produced is properly managed at sites by the EPC Contractor. Each site is provided with dustbins for collection of waste material. The collected waste is properly disposed off in trenches made in excavated material disposal areas.



Filled waste trench-being covered with spoil layer



Segregation of waste



Access to Excavated Material Disposal site



House Keeping practices

viii. Occupational health and safety

Personal Protective Equipment (PPEs) is used as barriers between a person and a hazard. Their main purpose is to prevent injuries by protecting people from unnecessary exposure to hazards on the job.



1. In accordance with the safety standards all workers working at site are provided with the Personal Protective equipment comprising of hard hats, safety shoes, jacket, and sand dust masks depending upon the job specification to prevent injuries.
2. Safety sign boards have been installed at different locations. Special safety measures are being adopted for tunnel workers.
3. Like past quarter, numerous tool box meetings have been held on issues related with occupational health and hygiene.
4. As per usual morning physical exercise has also been undertaken regularly at both sites.

At Powerhouse Site camp office a gym has been established for employee's fitness.



5. The EPC Emergency Response Plan for any unforeseen incident exists. Emergency contacts and response procedures placed at each site also in Urdu translation.

ix. Community Safety Health and Security

1. During quarter more warning sign boards have been placed on both sites indicating construction hazards to protect community and their livestock. Project area is now more secured in appropriate manner by fencing at Weir Site and partially at Powerhouse Site.
2. Pre blasting survey of adjacent village Alda has been carried out to assess possible structural damages and to maintain controlled blasting.
3. Medical facilities available at project sites may also be used for nearby community
4. A strong liaison is established with concerned Government Departments for arranging site security arrangements.
5. A retired senior police officer has been hired on full time basis as Director Security to manage and improve site security system. His placement will be an effective source of coordination with governmental and other security organizations.
6. Fencing work along Patrind and Tarcheela villages at weir site was completed in the month of April 2013. Necessary road safety & community awareness sign boards were installed to mitigate possible hazards. The EPCC's staff conducted Site health, safety and security monitoring on daily basis.



7. Blasting activities have been managed appropriate and in a safe and secure manner keeping in view the community concerns and standard procedures.
8. Village services affected by construction sites or activities are protected, or temporarily or permanently relocated, to ensure that they continue to function in a similar manner

As per directions of OE (CRE) following corrective measures were undertaken near Weir Site adit tunnel to ensure the safety of workers/local community.

- ✓ Fixed ladders with handrails were installed at indicated site.
- ✓ Steep slope were marked and a narrow path around the cable trolley was appropriately barricaded.
- ✓ Lights were installed to facilitate nightshift personnel.
- ✓ Safety sign boards were installed for workers and community awareness.
- ✓ Staff/workers were given awareness by HSE Department to adopt safe routes only.



x. CO2 emissions by the Project:

Following are some of the sources those may have CO2 emission .During reporting period appropriate mitigation measure have been adopted:

SOURCES OF CO2 EMISSION	MITIGATING/ PREVENTIVE ACTIONS
Use of excavation machinery	i. Sub-contractors have been instructed strictly to operate machinery in adequate condition hence mitigating the potential source of emission of CO2 in the atmosphere. Regular tuning/servicing of the machinery, again mitigating the potential source of CO2 evolution.
Tree removal	i. Removal of trees on construction sites will certainly increase the concentration of CO2 in the Project Site atmosphere. Therefore, as corrective approach, Tree Plantation shall be carried out as retrofitting measure as stipulated in the EMP when it will be practically possible.
Waste Disposal	i. Improper waste management could be resulted to evolve and accumulate CO2 in the atmosphere. To avoid open dumping of waste, temporary trenches have been used. Filled trenches had been covered with spoil layers and new trench are established for the purpose.
Use of Construction machinery comprising of concrete mix, Dumpers, Excavators, Crane etc	i. NCRs have been issued by OE and EPCC to mitigate the potential source of emission of CO2 in the atmosphere. Remedial actions are being undertaken through servicing the equipments and mechanical fitness. ii. NOC have been obtained for batching plants installed on recommended sites having minimum impacts.

xi. Environmental and Social Management Plan, including IFC E&S Action Plan

Following detailed plans developed by EPCC have been in implementation to fulfill the environmental and social compliance requirements of the project:

- a. Plan for Disposal of Excavated Material
- b. Plan for Waste Management
- c. Plan for Traffic Management
- d. Social uplift plan

These plans (a, b & c) as part of project EMP document are under implementation, however, major interventions under Social Uplift Plan will be implemented after construction phase.

I. Resettlement Plan Implementation**i. Scope of Land Acquisition and Resettlement Impacts****Land Acquisition**

Permanent Land Acquisition	790.10 Kanal
Temporary Land Acquisition	82.55 Kanal
Total	872.60 Kanal

SUMMARY OF THE LAND TO BE ACQUIRED ON AJK AND KPK

PERMANENT LAND						
Sr.	Project Component	Affected Land (Kanal)				
		State owned Land/ Riverbed	Farmland	Wasteland	House land	Total
1	Reservoir Impounding	87.3	282.05	231.9	9.1	610.35
2	Weir Structures	0	1.5	48.7	0	50.2
3	Powerhouse	13.6	30.1	32.85	5.25	81.8
4	Surge Tank	-	-	47.75	-	47.75
Total Permanent Land Acquisition (Kanal)		100.9	313.65	361.2	14.35	790.1
TEMPORARY LAND						
1	Colony of Expatriate construction staff, Switchyard, labour camp, access road, bridge, batching plant at Powerhouse Site	54.75	0	27.8	0	82.55
Total Temporary Land Acquisition (Kanal)		54.75	0	27.8	0	82.55
Total Land Acquisition (Kanal)		155.65	313.65	389	14.35	872.65

ii. Status of Land Acquisition, Progress on Compensation Payments and Assistance**Delivery**

Land acquisition on both sides of the project is in process. The Company has deposited 100% assessed cost into Government Treasury for acquisition of the land that subsequently had been paid to APs. However, there are delays in payment of compensation due to (i) unavailability of the entitled land owners who are working or based in other cities or (ii) an existing shareholding dispute among the families. Status of the land acquisition is as follows;

Summary of Permanent Land Acquisition Progress and compensation payments

Sr. #	Location	Area (Kanal)	Award/Agreement	Status of Payments to Affectees/Government	Status of Possession	Number of Affected Persons	Persons received payment
AJ&K							
1	Powerhouse (Alda Village)	81.8	Award has been issued on November 15, 2011 in favour of the Company.	73.02%	100.00%	196	*310
2	Weir + Head pond (Patrind Village)	341.1	Award has been issued on February 21, 2012 in favour of the Company.	79.17%	100% land for permanent structures and more than 95% of the head pond	611	323
3	Head pond (Shoran Village)	130.75	Award has been issued on November 4, 2011 in favour of the Company.	96.38%	100.00%		192
4	Forest Land for Surge Tank (Alda Village)	47.75	Lease Agreement has been signed on April 13, 2012	Lease Rents being paid	100.00%	The land belongs to forest department.	Govt. Land
Total (AJ&K)		601.4					
KPK							
5	Head pond + Weir (Sarati Village)	188.7	Award has been issued on April 4, 2012 in favour of the Company.	85.00%	70.00%	196	Detail yet to receive
Total (KPK)		188.7					

***The number of persons receiving the payment is higher than the number of affected persons is due to the repetition of the owners names in the payment vouchers.**

Note: The number of persons received the payment has not been updated as the payment vouchers have not been sent to the Company by the revenue department. The numbers shall be updated once the information is received.

iii. Resettlement and Reconstruction

Updates on housing relocation and reconstruction

Construction of 8 houses is almost complete by PAPs in adjacent villages and others have acquired land in urban areas to construct houses. Newly constructed houses are far better than the acquired properties. Living standards have also been improved due to handsome compensation and economic activities in the project vicinity. This has been witnessed during the visits by the Company, and the lenders. PAPs who lost their houses had utilized their compensation amount in reconstruction of houses; some have made investments in alternative lands in urban areas and businesses. However, no further detailed information could be gathered on the utilization of the compensation amount as the locals are reluctant to share the exact information.

iv. Resettlement Related Consultation and Disclosure Activities and Grievance

Procedures

In order to ensure that grievances and complaints are addressed in a timely and satisfactory manner and that all possible avenues are available to project affected persons (PAPs) to resolve their grievances, a Grievance Redress Committee has been proposed with following composition:

- | | | |
|----|-----------------------------------|------------------|
| 1. | District Revenue Officer | Chairman |
| 2. | Union Council Nazim | Principal Member |
| 3. | SHPL Representative | As Member |
| 4. | Affected Community Representative | As Member |

GRC would be a forum for raising objections and holding discussions to resolve conflicts. Moreover, consultation with the local community and concerned public representatives and officials of the relevant line departments is an ongoing process. Relevant information to the stakeholders has been provided in a timely manner and in a form and language that are understandable and accessible to them. A grievance mechanism is available to allow an AP appealing any disagreeable decision, practice or activity arising from land or other assets compensation. The community/ APs complaints

are being addressed very diligently and carefully at all levels, i.e. district and at project level.

Although GRC has not been established in proposed format, complaints received by project management are being addressed at all levels (project & local administration level) depending on nature of complaints. Issues related with land acquisition and compensation requires involvement of district revenue officer who is part of proposed GRC while other matters related with employment are being managed through community liaison officers/coordinators and project management.

ANNEXURES

Annex C-1

HSE ISSUES RAISED BY OE

HSE ISSUES RAISED BY PES

Sr.	Issue raised by PES	Action Taken by EPCC
PENDING REPORTS AND WRITTEN DOCUMENTATION		
1	The Health and Safety Management Plan must be submitted. It was due 30 days after Notice to Proceed.	HSE Plan has already been revised and submitted to O.E.
2	The Emergency Response Plan must be submitted, along with details of early warning of flood system.	Emergency Response Plan prepared and submitted to OE.
3	The final Fatal Incident Investigation Report must be submitted, incorporating amendments recommended during the EPCC internal HSE audit in March 2013.	Initial Fatality Investigation Report was submitted to Client and final report is attached with Quarterly Report which was submitted on 22, 2013 to OE and SPC. Now requisite document has separately been submitted.
4	All HSE sections of Method Statements should be tailored to the specific work activities to be carried out. Including only generic checklists and site safety is inadequate.	HSE Sections of Method statements have been revised as per OE's directions.
5	All machine operation manuals from the manufacturers should be made available to the OE, including the cleaning and maintenance procedures.	Batching plant manual provided by manufacturer has already been submitted to OE.
6	All EPCC supplied manuals, method statements, induction trainings and safety trainings need to be made available, including the trainings provided to specific work designations.	HSE program derived from company manual has been submitted. All the training record is maintained.
7	All literature provided to Personnel should be translated into Urdu. EPCC must ensure that all Personnel have the necessary level of reading comprehension required to understand the materials provided. Where reading comprehension is insufficient, verbal instruction and practical demonstration is mandatory	For workers, labor rights, HSE policies, emergency procedures, induction trainings and awareness raising materials have already been provided in Urdu and English. For Korean staff/workers, interpreters have been hired.

8	All signboards, flyers, posters etc should be in Urdu, Korean and English, in that priority.	Mode of communication through sign boards/posters as per International Standards is pictorial, however, as needed English and Urdu translation has also been made.
LABOUR		
1	All Personnel employed on the Project should be registered and have provided copies of their Identity Cards. Frequent spot-checks on individuals present on the Sites should be carried out.	The record is being maintained. Workers IDs are also being checked randomly.
2	No underage workers should be employed. EPCC is fully aware of children as young as 16 working full shifts on a daily basis in hazardous conditions.	No underage is allowed to work on site. In exceptional case, subcontractor has been warned strictly. According to Employment Child Act 1991, 16 years old is not considered a child.
3	All labour strike resolutions should be notified to the OE with full details of the original demands and the finalized agreements as accepted by all involved parties to check the suitability with the conditions of contract and adverse effect on pace of progress.	In case of labor strike, all contractual requirements have been considered accordingly.
COMMUNITY		
1	EPCC should disclose all previous discussions and negotiations with the communities affected by the Project.	The detail of Community complaints and consultations have been elaborated in E&SM Quarterly Report
2	All efforts should be made to inform community members of upcoming Project work likely to affect local settlements, and advice and guidance given for their safety. Children should also be taught Site safety, and discouraged from using Project areas as recreational grounds. Where school children routinely use the Access Road, an awareness campaign should be held on school grounds targeting all students.	Pre blasting survey is part of community safety practices. Engagement of children from community for training purpose is beyond the scope of EPCC. It may result in further conflicts.

3	Public Access Roads should be managed in a way that minimizes the close proximity of Site traffic and pedestrians. It should be encouraged that livestock should not be left unattended or allowed to graze on the Project areas.	District Administration has repeatedly been requested to assist in managing these issues.
4	The Social Uplift Plan should be implemented in a timely way, starting with the maintenance of the Powerhouse Site Access Road through Lower Chatter.	Damaged portion of the access road have been rehabilitated. But construction activity were delayed due to litigation on the part of local community
SITE FACILITIES		
1	Washroom facilities should be available in all areas of the Project Sites and Yards. They should be maintained to a high standard of hygiene and kept permanently open.	In surge shaft area, wash rooms facilities have been completed and it has been ensured that the facilities are available to site staff/workers for 24 hours.
2	Once washrooms are available, open defecation must be discontinued.	The site staff and workers have been instructed to use wash room and avoid open defecation.
3	Washing facilities should be available in different areas of the Sites where possible, to encourage hand washing and in case of contact with chemicals or other toxins or allergens.	Sufficient water for this purpose is available on all sites
4	EPCC should disclose to OE plans for water treatment and septic tank arrangements.	EMP shall be followed in this regard
5	Drinking water should be made readily available to all Personnel.	Drinking water is available to all workers and staff
6	If possible, designated eating places, rest places, prayer rooms and changing rooms should be allocated.	Facilities are partially available. The remaining has been planned.
7	Smoking areas must be designated and all remaining areas be smoke-free zones. Smoking in the HRT and Adit Tunnels must not be allowed. Stubs must be disposed of properly in fireproof bins.	As per HSE policy, Smoking at construction sites is not allowed. Smoking areas have been designated at all camp site and accommodations and shall also be allocated on all working site

SITE SAFETY AND MEDICAL FACILITIES		
1	All slopes have to be stabilized. Work being undertaken next to high risk areas should only be carried out once adequate slope stability has been ascertained.	Relevant to construction deptt. However, work shall not be allowed in high risk areas.
2	Fallen or felled trees must be removed from site immediately.	Removal of fallen trees shall be made as per given directions.
3	Fire extinguishers should be located, mounted and signed appropriately and checked regularly to ensure they are in working order. Where provided, sand buckets should be kept filled and free of rubbish.	Inspection is being made by HSE deptt.
4	First Aid kits should be available across all areas of site, should be accessible at all times, and should be well sign posted. Eye wash stations must be provided.	First Aid kits have been provided at all construction sites
5	Medical Facilities should include ambulance, driver and qualified doctor or nurse on each site. Cover should include both day and night shifts. Medical staff should not be expected to work overtime.	Medical facilities are available on both sites.
6	Medical Rooms must be equipped with sink and running water. Equipment must be kept clean and orderly. Expired or leaking medicines must be disposed of. All medical waste must be labeled and disposed of separately.	First Aid trained personnel are available in case of any Emergency during night shifts and complete arrangements have been made available during day time.
7	The ambulance on the Powerhouse Site should be located on the Site itself for rapid response, rather than at the EPCC offices.	Ambulance is placed at Access Bridge near power house as and when needed.
8	Ambulance and doctor mobile numbers must be available in all areas of the Project Sites.	Already available on site
9	Landlines must be installed. The intercoms currently in use are not in working order and do not allow for communication out of site. There must be working phones available within the HRT – near the rock face and at appropriate intermediate locations. The Explosive Stores must also have a landline available	Installation of landline is under process and intercoms are being replaced.

	both inside and outside the fenced compound.	
SITE SECURITY		
1	Site security is poor. No security staff is present on the Powerhouse Site during the nightshift, other than at the Explosive Store.	Wherever security is required has been placed. Also considerable number of police staff has been deputed on site.
2	All security staff should be provided with PPE's (shoes and helmet) if they are expected to patrol Site areas.	Security services have been hired from private company who is responsible to provide them uniform and equipments.
3	All vehicles entering and leaving Site should be noted. Entrance barriers should be installed and used.	Please refer to No. 3 of Community section.
4	Security Personnel should be trained to deal with community members, and be able to request individuals to leave the Site areas if they are unauthorized or contravening site regulations.	Training session will also be held in this regard
5	Fencing of the Site areas is inadequate. Livestock can easily enter, and community members routinely use restricted Access Roads as short cuts.	There is resistance from local community regarding fencing, therefore Local administration may be requested to solve this issue.
6	The Powerhouse Workshops and Batching Yard needs to be fully fenced for security and for protection of local labour collecting river sediments in the vicinity.	Same as 5
7	All existing fences must be maintained. Damaged Corrugated Iron sheets need to be replaced. Loose and hanging sheets are a hazard in windy conditions.	Construction deptt has been asked to repair damaged fencing.
PERSONAL PROTECTIVE EQUIPMENT (PPE's)		
1	All Personnel on Site should be provided all necessary PPE's. Ear Muffs and Safety Glasses are essential for certain work, and must be made available by EPCC. All Personnel working within confined areas such as the HRT must wear protective ear muffs if noise-generating activities are being	Ear plugs have already been provided.

	carried out.	
2	Masks (chemical and dust respirators) are essential in the HRT at all times.	Already given.
3	Dust masks must be provided to Personnel working with or in the vicinity of the Drilling Machines.	Have been provided as per demand by concerned site staff.
4	All Drivers and machine helpers must wear PPE's when on Project Site. Even if not expected to leave vehicle, PPE's are essential in case of emergency when the vehicle has to be abandoned.	All drivers/operators and helpers have been given induction training and PPEs to use as and when required.
5	Spot checks should be carried out to ensure compliance with safety regulations. Where PPE's are provided but are not be worn, disciplinary measures should be used.	Verbal and written warnings are being issued.
6	Issued PPE's should be regularly checked for wear, and should be replaced when necessary.	Checking is routine activity and for replacement sub contractors have been instructed.
7	Accountability for issued PPE's should be enforced. Daily Wage Labourers must return their equipment when their employment on Site is discontinued.	Already, same procedure is adopted.

ACCESS ROADS AND ROUTES

1	Dust levels are high on Access Roads in hot or windy weather. Vehicle speeds should be restricted and water sprinkling should be carried out hourly.	Water sprinkler is hired for sprinkling twice a day and in dry weather more times.
2	All primary Access Roads through the Site must be accessible for machinery and vehicles, including emergency vehicles. Turning, passing and parking areas should be available and signposted. Blind corners should have convex mirrors for oncoming vehicles.	Roads are accessible through all sites. Recommended signboards shall be installed on sites.
3	Pack animals such as horses, mules or donkeys must not be used for the transporting of materials in areas where the Access Road has been inadequately maintained. Similarly, Subcontractor staff should not be required to carry heavy equipment or material up slopes or along inadequate paths.	There are no clear directions in EMP/ADB guidelines, not to use pack animals as alternate means of transportation. As consulted with social and environmental experts, the interim use of pack

		animals may have economic benefits for marginalized professions. Keeping in view, the steepness of slope, pack animals were used to avoid any manual handling of heavy equipment by workers of subcontractor. However it has been ensured that pack animals have not been over loaded/abused.
4	All Access Roads must be suitably signposted, tagged and with appropriate lighting during the night.	A lay out plan for traffic sign boards and lighting is being developed.
5	Drainage on the Access Roads is essential to prevent erosion and seepage.	At surge tank access road drain is almost completed. On other roads as per requirement these may be developed.
6	All Access paths and other routes must have steps, rails or fixed ladders where necessary.	These facilities have been developed on sites where required

VEHICLES AND MACHINERY

1	All vehicles must be regularly maintained and checked for emissions. Broken windows, side-mirrors etc should be replaced immediately.	Periodic inspection is being carried out.
2	All vehicle and machine drivers must hold relevant and valid licenses.	Drivers and operators are not allowed without valid license.
3	All vehicles and machinery must be parked and maintained on a concrete base. Oil changes and engine grease are a frequent source of localized contamination.	As new machines and equipments have reached on site before making them operational an appropriate workshop has been developed.

OTHER ENVIRONMENTAL CONCERNS

1	Ad hoc dumping of excavated materials in undesignated places must be discontinued.	No more Ad hoc dumping of excavated material is allowed on unapproved sites
2	Waste collection is disorganized and without	Major quantity of waste

	segregation of types of waste.	comprises of mineral water bottles that is being handed over to scavengers.. rest of the waste is disposed off into trenches.
3	Waste disposal is mainly through dumping or burning. Air pollution is severe and a lot of waste ends up (both intentionally and unintentionally) in the river.	No dumping into river is allowed. Waste is being managed as mentioned above.
4	Aggregate stores need to be designed and maintained to prevent cross-contamination and spread.	Materials stored on separate yards
5	Waste concrete (ie from slump tests) should be disposed of in designated areas.	For Concrete waste, excavated material disposal sites have been allocated.
6	Vehicle and Batching Plant wash water should be drained into sedimentation tanks. Surfaces currently contaminated with Polypropylene fibres should be cleaned.	With construction team design for sedimentation tanks has been discussed and soon will be implemented
7	All fuels and chemicals must be stored on a concrete base allowing easy cleaning of leaks and spills. Porous grounds magnify the risks of soil and water contamination.	Concrete pads are being developed for fuel storage area. Polythene sheets are also used for the purpose.
8	All surface run-off water originating from the Project must be frequently checked for contamination from fuels, chemicals or cement and Polypropylene Fibres.	Different labs have been contacted for environmental monitoring including water quality.

AIR QUALITY AND BLASTING

1	Air quality must be checked in the HRT during all phases of work and in numerous locations. Ongoing activities, ventilator and location within the tunnel must be documented and taken into account.	HRT gases concentration is regularly being monitored jointly by OE and EPCC's HSE staff.
2	The Air quality testing devices must be available at all times in the immediate vicinity of the HRT and Adit Tunnels.	Gases concentration is being checked during peak working hours. Unattended device may not be placed at site.
3	Blasting should be carried out in accordance with the	Blasting procedures have been

	Method Statement submitted. Warning sirens must be deployed before the blast, regardless of how few people are present on Site. At least 15 to 20 minutes must be waited until first entry into tunnel after blast. Complete detonation must be ascertained before entry of mucking vehicles. Blasting must not occur during the quiet hours – it is observed to regularly occur between 11pm and 2am.	provided to concerned staff. with few exceptions mostly blasting is not allowed during night time.
4	Vibration and sound readings of blasting must be submitted to the OE. Blasting schedule should be provided to OE 12 hours before expected blasting time, and confirmed one hour before blasting time.	All the relevant data is being maintained and will be provided to OE.

Annex C-2

UA/UC Observation Cards

Environmental & Social Monitoring Report (April-June 2013)

PC410 - 16-05-2013

DAEWOO UNSAFE ACT / UNSAFE CONDITION OBSERVATION CARD	
Observer's Section (Completed by Observer)	Assessor's Section (Completed by HSE Dept.)
• Observation Date / Time : 14-5-2013 / 3:00 P.M. • Location : Access Bridge / Power House • Contractor / Dept. (Observed): Kyung Dong • Observer's Name : ASIM RIAZ • Observer's ID No. : 8 -	Observation Subject (Tick off only one) <input type="checkbox"/> Lifting Safety <input type="checkbox"/> Work at Height <input type="checkbox"/> Hand & Power Tool Safety <input type="checkbox"/> Driving Safety <input type="checkbox"/> PPE <input type="checkbox"/> Fire Prevention <input type="checkbox"/> Scaffold Safety <input type="checkbox"/> Permit to Work <input type="checkbox"/> Confined Space Entry <input type="checkbox"/> Electrical Safety <input checked="" type="checkbox"/> Others :
Description of Observation - Two excavator operators belonging to Kyungdong company were observed walking on the side barrier/parapet wall of Access Bridge freely, right at the mid length. They were stopped to do so but not followed instructions.	Classification (Tick off only one) <input checked="" type="checkbox"/> UA <input type="checkbox"/> UC <input type="checkbox"/> UA/UC Risk Rating <input checked="" type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L
Immediate Corrective Action (if taken) Forcefully moved away from barrier but again started fun at the bridge site.	Corrective / Preventive Action To search out those workers and give them warning letters. These warning letters must be submitted to the company with which they work. Action Party : HSE Dept. Daewoo Eng. Target Date : 4-Days.
Close-out Confirmation <input type="checkbox"/> Close-out • Close-out Date : 20 May, 2013 • Name / Signature : Adil yusaf	

DAEWOO UNSAFE ACT / UNSAFE CONDITION OBSERVATION CARD	
Observer's Section (Completed by Observer)	Assessor's Section (Completed by HSE Dept.)
• Observation Date / Time : 28/05/2013 8:40am • Location : WEH Access Road. • Contractor / Dept. (Observed): Kyung Dong • Observer's Name : Mehrez Ahmed • Observer's ID No. : 61101-7563561-1	Observation Subject (Tick off only one) <input type="checkbox"/> Lifting Safety <input checked="" type="checkbox"/> Work at Height <input type="checkbox"/> Hand & Power Tool Safety <input type="checkbox"/> Driving Safety <input type="checkbox"/> PPE <input type="checkbox"/> Fire Prevention <input type="checkbox"/> Scaffold Safety <input type="checkbox"/> Permit to Work <input type="checkbox"/> Confined Space Entry <input type="checkbox"/> Electrical Safety <input type="checkbox"/> Others :
Description of Observation Kyung Dong worker across the River through cable trolley but one time two person sitting in the trolley. It is very Dangerous. So one time only one person travel in the cable trolley.	Classification (Tick off only one) <input checked="" type="checkbox"/> UA <input type="checkbox"/> UC <input type="checkbox"/> UA/UC Risk Rating <input checked="" type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L
Immediate Corrective Action (if taken) Informed H.S.E team about this matter and stopped them.	Corrective / Preventive Action Only one man should be allowed to sit on cable trolley. HSE personnel should issue warning letter to the people who are more than one in number. Letter must be sent to Kyungdong about the situation. Action Party : HSE Dept. 15 June 2013 Target Date :
Close-out Confirmation <input type="checkbox"/> Close-out • Close-out Date : 5 June, 2013 • Name / Signature : Adil Yusaf.	

SAMPLE WARNING LETTERS &NCRs


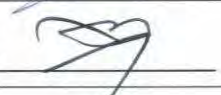


SAFETY VIOLATOR WARNING LETTER

Name: <u>ATIF MUGHAL</u>		Signature: <u>Atif Mughal</u>	
Section: <u>Helper</u>		Job Title: <u>Dump Truck Helper.</u>	
ID No: <u>Having No ID Card.</u>		Company: <u>Kyungdong.</u>	
Date: <u>19 June 2013</u>	Time: <u>8:56 AM</u>		
Warning Reason(s)		Tick here	
1. Fall Protection Violation			
2. PPE Violation (Eye Goggle, Safety Shoes, Hard Hat).		✓	
3. Crossing Barriers.			
4. Unsafe behavior.		✓	
5. Using Faulty Tools/ Equipment.			
6. Failure to Supervise.			
7. Operating without Authorization.		✓	
8. Refusal to Show I.D. Card		✓	
9. Others			
<p>Observation Detail: He was working without Induction training. His age is less than eighteen years. Before two day he came for Induction training but due to underage he was rejected. But after refusal he is working on site area which is violation of HSE rules.</p>			
Name	Signature	Position	Recommendations
Addil Yusaf	<u>Addil Yusaf</u>	HSE Asst. Engineer	
Mr. Aftab Alam	<u>Aftab Alam</u>	Manager HSE	
Distribution: HSE Manager, <u>Manager Kyungdong.</u>			Copy to Violator

Safety Violator Warning Letter

NAME : <i>Atta Ull- Rehman</i>		SIGNATURE : <i>[Signature]</i>	
SECTION : <i>B / Plant (Construction)</i>		JOB TITLE : <i>Loader Helper.</i>	
I.D NO : <i>12201-2771862 -1</i>		COMPANY : <i>Sub-con (Daewoo).</i>	
DATE : <i>03 / 06 / 2013</i>	TIME : <i>11-20 am</i>	Status : <i>ISC.</i>	
Warning Reason (s)			Tick Here
1. Fall Protection Violation.			
2. PPE Violation (Eye Goggle, Safety Shoes, Hard Hat).			<input checked="" type="checkbox"/>
3. Crossing Barriers.			
4. Unsafe Behavior.			
5. Using Faulty Tools / Equipments.			
6. Failure To Supervise.			
7. Operating Without Authorisation.			
8. Refusal To Show I. D. Card.			
9. Others. <i>Work at site w/out S/ Induction and PPEs.</i>			
Issued By			
<i>M- Javed</i>	<i>03/06/2013</i>	<i>HSE, Insp, Eng.</i>	<i>HSE</i>
Name & Signature	Date	Job Title	Section
Distribution: HSES Manager.		Copy to Violator	

NON – CONFORMANCE REPORT			
Pakistan Patrind Hydro Power Project			
NCR No: Patrind-HSE-004 Date: June 25, 2013 STRUCTURE: Weir excavation work		Ref. No: LOCATION: Weir Site	
Description of Non-Conformance: During inspections by Upper site HSE team it has been observed that Sungbo's site staff/workers have not improved site safety standards and lack of supervision on part of sub contractor has also been observed. Following non compliances with project HSE procedures and construction contract have been observed consistently: <ol style="list-style-type: none"> 1. Unsafe acts have been observed by workers, as a dump truck helper Mr. Niaz Ali and others were riding on the running equipment clearly violating the site safety procedures. It also shows the poor supervision on part of sub contractor. 2. No proper use of PPEs has been noticed frequently. 3. Sung Bo's labour/staff had not attended safety training "Work on Height" held on 24th June 2013, despite the Monthly Training Schedule was already submitted to sub contractor's offices. 			
Remedial Action: <ol style="list-style-type: none"> 1. Effective supervision is required on part of sub contractor to ensure that workplace is accident free. 2. Use of PPEs is mandatory at all during working hours. Ensure the stringent compliance on the proper use of PPEs by the workers in your working site (e.g. Helmet, Safety Shoes, Goggles, etc.) Especially full body harness at high work above 1.5 meter. 3. Training and education of workers is essential part of job during construction phase of the project. In future attendance in safety trainings must be ensured. 			
IMPORTANCE:		<input checked="" type="checkbox"/> Critical <input type="checkbox"/> Non Critical	
IDENTIFIED BY:	Mr. Aftab Alam HSE Manager 	Date: 24-06-2013	
NOTED BY:	Mr. Choung Myung Hun HSE Manager 	Date: 25-06-2013	
APPROVED BY:	Mr. Hee Sik Shin Project Manager 	Date: 25-06-2013	
CORRECTIVE ACTION TAKEN BY:	Sub Contractor(Sung Bo C&E) _____	Date:	
CONFIRMATION OF CORRECTIVE ACTION: <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> FURTHER CORRECTIVE ACTION REQUIRED			
		Checked by: _____ Date:	
Response is expected within 3 days .Immediate Action is required for remedy with in stipulated time.			

Annex D-1

MEDIA COVERAGE REGARDING COFFER DAM



Daily SHAMAL Aboatabad

Monday, 27th May 2013

River Kunhar swept away the coffer dam- loss in millions.

Annex D-2

SAMPLE MEDICAL PERSCRIPTION FORM/
CLINICAL RECORD SHEET



HSE Department (First Aid Form)

Name: Raja Izkar Witness: _____
 Designation: helper _____
 Age: 23 y _____
 Date: 6/7/13 Time of Injury: _____
 Time: 5:02 Pm Incident: _____
 No: - Location: - Daewoo

Treatment:

Nature of Injury:

DURTS

Description:

- Tab. levofloxacin
250y

1+1

- Symp. Banadryl

1+1+1

5 days NAD

- Tab. Smep sils

1+1+1

- Tab. Panadol

1+1+1

Systemic Review:

NAD

Examination-

Vitals:

BP. 120/80 mmHg

Pulse. Normal

Temp. Normal

R.R. Normal

General Condition:

Stable

Past Medical History:

Diabetes ☒ TB ☒ Same Illness ☒ Asthma ☒ HTN ☒

Social History:

Smoking ☒ Drinking ☒

Drug History:

Allergies ☒

Referred to:

Doctor/Medical Attendant. Dr. Sofia

KL-Lap/0/- patient form

HSE CLINICAL RECORD

Name	Age	Date & Time	Occupation	Place of Incident	Medical Illness/ Nature of Injury	Description	Treatment Given	Name of Person Making entry
37. Abd Aziz	20yrs	21/6/13	office boy	Daewoo	ΔEP + GBA	- Syp. Mucaine - Tab. Motillium - Tab. Ponstan + IH.		
38. Shakeel	34yrs	24/6/13	cook	Daewoo	ΔEP	- Mucaine - Motillium + IH.		
39. Falk Sher	22yrs	24/6/13	office boy	Daewoo	ΔGBA	- Tab. Ponstan - ASD		
40. Hakam Din	37yrs	25/6/13	Still foreman	KD	ΔTrauma	- Tab. Paracetamol - Tab. Ponstan forte		
41. Md. Azam	23yrs	25/06/13	helper		Δbackache	Tab. Ponstan forte		
42. Md. Iqbal	42yrs	26/6/13	driver	Daewoo	ΔRedness eye	Chloromphenicol drops		
43. Muneer	23yrs	28/6/13	helper	Daewoo	ΔGE	- Evocin + Buscopan - Flayyl + ORS		
44. Jabbar	23yrs	28/6/13	operator	Daewoo	ΔPain arm	- Tab. Ponstan forte - Tab. Evocin + buscopan		
45. Abdul Hafiz	70yrs	28/6/13	ME	Daewoo	ΔGE	- Flayyl		
46. Azmat Hussain	22yrs	29/6/13	Senior	Daewoo	ΔInsect bite	- Tab. Paracetamol + Paracetamol		
47. Naseer	40yrs	29/06/13	labour	Daewoo	ΔGE	- Tab. Evocin - Tab. Flayyl + ORS		
48.								

Doctor/ Medical Attendant: Sofia QadeerHSE Manager: 30/6/13

Annex D-3

DAEWOO ENGINEERING & CONSTRUCTION Co., LTD.	
SAFETY CHECKLIST FOR BATCHING PLANT	
DATE	27 . 06 . 200 13
INSPECTOR	M- Javed.
JOB TITLE	Inspector Eng.
APPROVED BY	
NOTES ; Tick columns A, B or C A : Suitable at time of inspection B : Requires improvement C : Requires immediate action / : Not applicable	

INSPECTION ITEMS	BATCH PLANT 1			BATCH PLANT 2		
	A	B	C	A	B	C
1) Isolation of Plant.	✓					
2) Check aggregate hoppers and protecting wall condition.	✓					
3) Clearance of blockages.	✓					
4) Access and working platforms.	✓					
5) Moving parts guarded/protected.	✓					
6) Control of Vehicles/flagman.	—	✓				
7) Warning Signs.	✓					
8) Authorized Personnel.	✓					
9) Cleaning / housekeeping.	—	✓				
10) Lighting checks of all units.	✓					
11) Check wire rope condition for overhead crane.	✓					
12) Check trolley upper limit switch condition.	—	✓				
13) Check bell warning system for belt conveyor.	✓					
14) Check emergency stop switch at belt conveyor.	✓					
15) Check CCTV for conveyors, hoppers and mixer condition.	—					
16) Check emergency stop switch at mixers unit.	✓					✓
17) Check that breaker switch is in off position before mixer cleaning (Place danger lock out tag).	✓					
18) Check special PPE rubber gloves, rain boots etc. for admixture filling.		✓				
19) Check special PPE leather gloves, nose mask for cement loading.	✓					
20) Check safety harness use during cement loading activity.	✓					
21) Check fire extinguishers condition & location.	✓					
Remarks mixer Unit Pulley block Under Repair, during Repairing used Proper hand gloves, goggles and maintain Permit to work be for work start. more house keeping required.						

HSE,

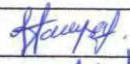
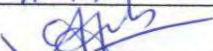
SCL004

27/6/013

CM

Revision : 0

HEAVY EQUIPMENT INSPECTION CHECKLIST


COMPANY NAME: Daewoo E&C		DATE: 19 June 2013	
EQUIPMENT DETAILS:- Wheel loader.		Operator Name: Peer Afzal	
MANUFACTURER:	MODEL: 926E	Plant or Equipment No:	
YEAR OF MANUFACTURE:	TECHNICAL INSPECTION EXPIRY DATE:	OVERALL PASS/FAIL	
	PASS	FAIL	N/A
REMARKS			
Tyre size/type	✓		
Tyre condition	✓		
Roadwheels	✓		
Exhaust system	✓		
Exhaust emissions (smoke)	✓		
Fuel system	✓		
Battery and terminals	✓		
General condition (corrosion etc.)	✓		
Operator Visibility good	✓		
Windscreen wipers effective		✓	Windscreen wipers must be Installed.
Maintenance Check-list available?		✓	
Equipment log-book available?		✓	
Grounding cable and clamp/rod in good condition	✓		
Safety signs attached and in good condition		✓	
Equipment guards in place and in good condition	✓		
Emergency Stop accessible and working	✓		
Operating instruments legible and in English		✓	
Hydraulics in good condition	✓		
Hoses and fittings in good order	✓		
No oil, hydraulic fluid or fuel leaks	✓		
Tracks & Rails			✓
Front Idlers			✓
Top & Bottom Rollers			✓
Drive Sprockets			✓
Pins & Bushings	✓		
Main springs	✓		
Adjusting screws	✓		
Swing frame			✓
Steering linkages	✓		
Master and Steering clutches			✓
Final Drive	✓		
Bellows seals	✓		
Dozer Blade	✓		
Bucket(s)			✓
Outriggers & mats			✓
Comments: General & mechanical condition of wheel loader is satisfactory. Windscreen wipers must work effectively. All the operating instruments must be labeled which are legible in English.			
INSPECTION BY		SIGNATURE	
HSE Ass.Engineer	Addil Yusaf		
Manager HSE	Mr.Aftab Alam		

FIRE EXTINGUISHER INSPECTION RECORD SHEET

Pakistan Patind Hydro Power Project

Date: May18, 2013

Sr.	Type of Fire Extinguisher	Capacity/ Quantity	Location	Condition (Valid/ Expire)	Any Part that need attention	Corrective action taken
18.	BC	6Kg	Security Guard Room	Valid	No	Nil
19.	BC	6Kg	HSE Training Hall	Valid	No	Nil
20.	BC	6Kg	Pakistani Mess	Valid	No	Nil
21.	BC	6Kg	Pakistani Accommodation	Valid	No	Nil
22.	BC	6Kg	Pakistani Accommodation	Valid	No	Nil
23.	BC	6Kg	Pakistani Accommodation	Valid	No	Nil
24.	BC	6Kg	Pakistani Accommodation	Valid	No	Nil
25.	BC	6Kg	Kyung Dong Accommodation	Valid	No	Nil
26.	BC	6Kg	Security Guard Room	Valid	No	Nil
27.	BC	6Kg	Lab QA/QC	Valid	No	Nil
28.	BC	6Kg	Entrance of Block A	Valid	No	Nil
29.	BC	6Kg	Entrance of Block B	Valid	No	Nil
30.	BC	6Kg	QA/QC Office	Valid	No	Nil
31.	BC	6Kg	Server Room	Valid	No	Nil
32.	BC	6Kg	Admin	Valid	No	Nil
33.	BC	6Kg	Korean Mess	Valid	No	Nil
34.	BC	6Kg	Korean Store	Valid	No	Nil
35.	ABC	4kg	Pakistani Mess	Valid	No	No Corrective action required
36.	ABC	4kg	Pakistani Accommodation	Valid	No	No Corrective action required
37.	ABC	4kg	Pakistani Accommodation	Valid	No	No Corrective action required
38.	ABC	4kg	Pakistani Accommodation	Valid	No	No Corrective action required
39.	ABC	4kg	Main Gate Entrance	Valid	No	No Corrective action required
40.	ABC	4kg	Main Gate Entrance	Valid	No	No Corrective action required
41.	ABC	4kg	Main Gate Entrance	Valid	No	No Corrective action required
42.	ABC	4kg	Accommodation First Floor	Valid	No	No Corrective action required


Inspected by:
 ADDIL YUSAF


HSE MANAGER

Annex -E

MOU WITH MUZAFFARABAD GENERAL
HOSPITAL

MEMORANDUM OF UNDERSTANDING (MOU)

Between
Daewoo Engineering & Construction Company (Pakistan Patind Hydropower Project)
&
Muzaffarabad General Hospital

For the Provision of "Emergency Medical Services" (hereinafter referred to as 'EMS')
This Agreement made at 25th Day of June 2013

DAEWOO ENGINEERING AND CONSTRUCTION COMPANY a Company having its Registered office in South Korea (Hereinafter referred to as "Daewoo E&C" which expression shall unless it be repugnant to the context or meaning thereof be deemed to mean and include its successors and assignee's.)

MUZAFFARABAD GENERAL HOSPITAL a hospital located in Muzaffarabad near CMH duly represented through its authorized signatory Mr. /MS Mushtaq Bishwal MD, Hereinafter referred to as HOSPITAL) which expression shall unless it be repugnant to the context or meaning thereof be deemed to mean and include its successors and assignee's.

WHEREAS

1. Daewoo E&C is a Construction Company working at Pakistan Patind Hydropower Project.
2. HOSPITAL is desirous to provide the medical services to Daewoo E&C on the terms and conditions agreed herein.
3. Daewoo E&C has on the basis of representation of the Hospital, on its discretion, agreed to engage Hospital for providing medical services in case of emergency to the workers/ staff of the Daewoo E&C on the terms and conditions agreed herein.

The Parties hereby desire to record the statements, undertakings and covenants on the part of Daewoo E&C and the HOSPITAL and also the terms and conditions of this MOU.
Now this agreement witnessed that

Definitions:

Hospitalization: means admission of the beneficiary to hospital for 24 hours or more for the indoor treatment except in the cases of Dialysis, Chemotherapy, Radiotherapy, Eye surgery (except cosmetic surgery/spectacles/ contact lenses & surgery for correction of refractive errors), Lithotripsy, Tonsillectomy, Coronary Angiography (Coronary Angiography, leading to invasive / noninvasive cardiac treatment requiring hospitalization shall only be covered)

Cashless service: It is a credit arrangement wherein the HOSPITAL will treat the patients without charging any fees and Daewoo E&C will settle the bills of the HOSPITAL directly subject to terms, conditions and provisions of this MOU.

Package Charge: Means a fixed fee for all the necessary, customary and incidental medical expenses such as Room, ICU, ICCU, Nursing, Medical Professional Fees, OT, Medicine, Consumables, and Disposables etc for the defined medical treatment.

PAL: Pre Authorization Letter by the HOSPITAL requesting for approval of treatment and expected bill amount under cashless service.

Article 1: Effective Date:

- 1.1 This agreement will be valid from June, 2013 to December 2016.

Article 2: General Provisions:

- 2.1 The HOSPITAL shall treat workers/staff (patients) in a courteous manner and as per good business practices and standard treatment protocols expected from them.
- 2.2 The HOSPITAL will offer treatment under cashless service and will bill Daewoo E&C as per terms and conditions of this MOU.
- 2.3 HOSPITAL shall allow the officials of Daewoo E&C and /or Clients and /or Sub-Contractors to visit the beneficiary and also check & collect documents of the indoor papers/treatment being given to the beneficiary & ascertain whether the patient is satisfied with the services or not..
- 2.4 Once the Authorization is issued and the treatment is started Daewoo E&C will not revoke or cancel the guarantee of payment / Authorization, unless the facts stated originally by the HOSPITAL suggests otherwise. Daewoo E&C can get in touch with the HOSPITAL and decide on further course on mutual consent, but payment of authorized amount or bill submitted (whichever is less) must be paid in full as per clause of payment, unless the facts stated originally by the HOSPITAL suggests otherwise.

Article 3: Emergency Medical Services:

Hospital will provide 24 hours services at its clinic for the cases mentioned below:

Surgical Cases:

1. Bone Fracture
2. Fire & Electrical burns
3. Major Injury
4. Acute Abdomen
5. Shock

Medical Cases:

1. Hyperventilation (CO₂ Poisoning)
2. Snake + Spider Envenomation
3. Heat Stroke
4. Lightning Injuries
5. Dengue
6. Foreign body (ear+eye)

Article 4: Admission Procedure:

- 4.1 Patient will be hospitalized if needed according to severity of injury/Disease and will be admitted in hospital for operation and treatment.
- 4.2 The authorization letter issued by the Daewoo E&C shall serve as a guarantee for future payment of claim of the HOSPITAL, subject to the submission of claim by the HOSPITAL to Daewoo E&C within stipulated time period.
- 4.3 HOSPITAL can collect the amount up and above the package rate list only under following circumstances,
 - a) If the beneficiary voluntarily opts for the implant of higher cost, room of higher category and gives the written consent for the same. The undertaking also needs to be taken from the beneficiary in such cases that he will not be claiming for the amount to the Daewoo E&C.

Article 5: Fee Schedule:

5.1 HOSPITAL should provide facility to the beneficiaries for consultation @ Rs800/- Per Patient, and regarding treatment as per decided Package list.

5.2 HOSPITAL will not demand any payment from the patient except in cases as mentioned in clause 4.3(a).

Article 6: Duties for the HOSPITAL at the time of patient discharge:

- 6.1. Original discharge summary, original investigation reports, all original prescription & pharmacy receipt must not be given to the patient. These are to be forwarded to billing department who will compile the same and forward along with the bill to the HSE Dept. of Daewoo E&C.
- 6.2. Beneficiary would take the treatment, sign the bills, claim form and claim documents and get discharged. The unsigned claim documents, Bills / claim form shall not be entertained / payable by Daewoo E&C.

Article 7: Billing Procedure:

- 7.1 HOSPITAL will submit all the original medical bills, discharge summary, investigation reports along with the claim documents of hospitalization and the treatment carried on in the hospital, within 7 days from the date of the discharge of the patient.
- 7.2 Daewoo E&C will make payment of eligible bills within 30 days from the date of receipt of such submission.
- 7.3 Payment will be made by at par payable cheque or in the account number as provided by the HOSPITAL in the empanelment form in the name of the hospital, & subject to statutory deduction if any.

Article 8: Limitations of Liability and Indemnity:

- 8.1 Daewoo E&C shall not interfere in the treatment and medical care provided to its beneficiaries.
- 8.2 Daewoo E&C will not be in any way held responsible for the outcome of treatment provided by the HOSPITAL.
- 8.3 The HOSPITAL shall alone be liable to pay any costs, damages and /or compensation demanded by the beneficiary for poor, wrong or bad quality of the test report or treatment given to the beneficiary by the HOSPITAL while executing any assignment of Daewoo E&C.
- 8.4 Claims received after 45 days of date of expiry of the Policy MOU Period shall not be accepted by the Daewoo E&C.

Article 9: Termination:

- 9.1 Either party can terminate this MOU by giving 30 days prior notice.
- 9.2 Daewoo E&C can terminate the MOU without any notice in the following cases:
 - The HOSPITAL violates any of the terms and conditions of this MOU; or
 - The HOSPITAL allows misrepresentation in regards to the identity of the beneficiary taking treatment under the agreement.
 - The HOSPITAL makes any misrepresentation in the documents forwarded at time of Pre-Authorization to get the Cashless authorization.
 - Daewoo E&C comes to know of wrong and fraudulent practices; or
 - Daewoo E&C observe cases of over stay and over provisioning without adequate explanation.
- 9.3 If the HOSPITAL is found to retain the ID cards of the beneficiaries, without any prejudice to legal rights of the Daewoo E&C the hospital will be liable to face any penalty /disciplinary action as decided by Daewoo E&C.
- 9.4 The HOSPITAL undertakes that in an event of failure on its part to comply with any of the provisions of this agreement/MOU Daewoo E&C shall be entitled to take any action against the party as considered appropriate by it.

Article 10: Jurisdiction:

- 10.1 Any amendments in the clauses of the Agreement can be effected as an addendum after the written approval from both the parties.

Signed and delivered by the within named:

On and behalf of

Muzaffarabad General Hospital

Name: Mustafa Bashir

Designation: Medical Director

Address: Muzaffarabad General Hospital,
Radio Station check
Muzd Ask.

Hospital Seal:

On and behalf of Daewoo E&C:

[Pakistan Patind Hydropower PJ]

Name: Mr. Hee Sik Shin

Designation: Project Manager Daewoo E&C

Address: Patind Hydropower Project

Seal:

Witness:

Name: Dr. Norman Manzoor

Address: Defence Colony Gogra MZD

Witness:

Name: Mr. Aftab Alam

Address: HSE Manager



PATRIND HYDRO POWER PROJECT

Annexure

The claim is to be submitted as per the checklist as under:

S.NO	PARTICULARS	YES	NO
1.	Copy of the photo ID card of the patient (beneficiary)		
2.	Copy of Pre –Authorization and Authorization Letter		
3.	Original detailed discharge summary		
4.	Original hospital bill with original payment receipt		
5.	Detailed Breakup of the bill		
7.	Original Investigation reports		
8.	Pharmacy prescription (Of Medicine)		
9.	In case of consumables, provide retailers / wholesalers invoice containing all relevant details of the consumable used.		

I _____ undertake to certify that I have introduced / (name of treating Doctor / Surgeon) hereby
 implanted / placed/ used _____ (consumables) (name of consumable) _____ (variety /
 _____ Type / Quality)

CHECK LIST

Treating Doctor Declaration:



KI-Sept./01 Miscellaneous/MOU

Annex F-1
HSE WEEKLY MEETING

HSE Meetings Record


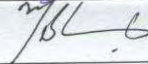






Sr	Date/ Time	Subjects Discussed	Attendance	Location
1.	26/06/2013 11:10	<ol style="list-style-type: none"> 1. Housekeeping 2. Safe access way 3. HSE planning during recovery activities 4. Heavy equipment inspections 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Yasir Ghauri ➤ Kamran Khan ➤ Nisar Ahmed ➤ M. Javed 	HSE Training Hall Weir Site
2.	16/06/2013 11:00	<ol style="list-style-type: none"> 1. Safety procedure and methods 2. Health management 3. Electric Cables/ Heights/ Earth Cables 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Yasir Ghauri ➤ Kamran Khan ➤ Nisar Ahmed ➤ M. Javed 	HSE Training Hall Weir Site
3.	12/06/2013 11:20	<ol style="list-style-type: none"> 5. Working at height and PPEs 6. Safety procedure and methods 7. Electrical Inspections 8. Site Inspections 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Yasir Ghauri ➤ Kamran Khan ➤ M. Javed 	HSE Training Hall Weir Site
4.	05/06/2013 11:00	<ol style="list-style-type: none"> 1. Cable trolley safety plan 2. Workers PPEs 3. Housekeeping 4. Waste Management 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Yasir Ghauri ➤ Kamran Khan ➤ M. Javed 	HSE Training Hall Weir Site
5.	15/05/2013 11:15	<ol style="list-style-type: none"> 5. House Keeping all area 6. Oil Waste/ Storage 7. Electric Cables/ Heights/ Earth Cables 8. Disposable waste concrete/ Material 9. Workers PPEs 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Mushtaq Ahmed ➤ Jang Yong Sik ➤ Attiq-ur-Rehman ➤ Mr. Lee Kwan ➤ M. Kamran ➤ Yasir Ghauri ➤ Kamran Khan 	HSE Training Hall Weir Site
6.	13/05/2013 10:00	<p><u>HSE Statistics and Performance:</u></p> <ol style="list-style-type: none"> 1. MM Visit/ Site inspection Schedule 20th May 2013. 2. Submission of HSE Plan/ Emergency Response Procedure 3. Operator/ Driver/ Helpers safety Training. 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Aftab Alam ➤ Ansar Abbas ➤ Addil Yusaf. 	Camp Office , HSE Dept. (Powerhouse Site)

Sr	Date/ Time	Subjects Discussed	Attendance	Location
		<p>4. Waste water treatment.</p> <p>5. Site visit by manager (Lower & Weir Site).</p> <p><u>New Hazards:</u></p> <p>1. Telephone not in working condition, communication issues</p> <p>2. Fire extinguishers refilling in workshop area and in front of Adit Tunnel Powerhouse Site.</p> <p><u>Other Concerns of HSE:</u></p> <p>1. Safety Training every week.</p> <p>2. Contamination of river water due to the excavated material which must be stopped urgently.</p>		
7.	14/05/2013 10:00	<p><u>Site Inspection:</u></p> <p>1. Improper disposal of used Mobil Oil</p> <p>2. Oil spillage from fuel storage tanks</p> <p>3. Damaged barricades on site.</p> <p>4. Workers PPEs Issues</p> <p>5. Improper disposal of excavated material and waste water.</p> <p><u>HSE Statistics and performance:</u></p> <p>1. Placement of intercom inside the tunnel.</p> <p>2. Replacing old fire extinguishers with new ones</p> <p>3. Provision of documents to OE, HSE program and emergency response procedure.</p> <p>4. Heavy equipment inspections.</p> <p>5. Induction trainings.</p> <p><u>New Hazards:</u></p> <p>1. Lack of barriers and barricade.</p> <p>2. Contamination of river by tunnel waste water.</p> <p>3. Dust on site.</p> <p>4. Repairmen of PVC sheet required.</p>	<p>➤ Chung Myung Hun</p> <p>➤ Aftab Alam</p> <p>➤ Ansar Abbas</p> <p>➤ Addil Yusaf.</p>	Camp Office , HSE Dept. (Powerhouse Site)

Sr	Date/ Time	Subjects Discussed	Attendance	Location
		Other concerns of HSE: <ol style="list-style-type: none"> 1. Provision of water inside washrooms at site. 2. Time duration after blast for entry inside the tunnel should be clearly marked. 3. Proper treatment and disposal of waste material. 		
8.	08/05/2013 11:30	<ol style="list-style-type: none"> 1. Electric Panel and Electric wires 2. Heavy Machinery movement 3. Housekeeping and material stocking 4. Working at height and PPEs 5. Safety procedure and methods 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Mr. Lee Kwan ➤ Jang Yong Sik ➤ Yasir Ghauri ➤ Kamran Khan ➤ M. Kamran ➤ M. Javed 	HSE Training Hall Weir Site
9.	01/04/2013 11:00	<ol style="list-style-type: none"> 1. Health management 2. Proper documentation, emergency exit plan 3. Time management. 4. HSE Reports / Documents. 	<ul style="list-style-type: none"> ➤ Choung Myung Hun ➤ Asma Malik ➤ Kiran Latif ➤ Aftab Alam 	Camp Office , HSE Dept. (Powerhouse Site)
10.	03/04/2013 11:00	<ol style="list-style-type: none"> 1. Electrical Issues 2. Installation of safety net at slope near inlet 3. Housekeeping 4. Hazards present in Adit Tunnel 5. PPEs Issues 	<ul style="list-style-type: none"> ➤ Jang Yong Sik ➤ Lee Kwan ➤ Choung Myung Hun ➤ Yasir Ghauri ➤ M. Javed ➤ Saboor Khan 	HSE Training Hall Weir Site
11.	24/04/2013 11:30	<ol style="list-style-type: none"> 1. Improvement of safety culture at site 2. Adopt HSE Safety Policy at Site 3. Make Sure safe work at site 4. Making the site clean and tidy 5. All staff work together for best results 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Kwak Haen Soo ➤ Yu Won Gyn ➤ Aftab Alam ➤ Nisar Ahmed ➤ Kamran ➤ Ghauri ➤ Mushtaq Ahmed ➤ Saboor Khan ➤ M. Javed 	HSE Training Hall Weir Site

Sr	Date/ Time	Subjects Discussed	Attendance	Location
12.	17/04/2013 11:00	<ol style="list-style-type: none"> 1. Housekeeping issue near Adit Tunnel 2. Proper Storage and cleaning regarding combustible material 3. Unsafe unloading of material, no using of Tagline 4. There should be proper earthing of electrical equipments. 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Lee Kwan ➤ Yasir Ghauri ➤ Muhammad Javed ➤ Kamran Khan ➤ M. Saboor Khan ➤ Mushtaq Ahmed 	HSE Training Hall Weir Site
13.	10/04/2013 11:00	<ol style="list-style-type: none"> 1. Housekeeping and material stocking 2. Work at height and in charging car etc. 3. Electric cables, electric panels and generators 4. Moving heavy machinery 5. Hard fencing near road and yard area 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ Lee Kwan ➤ Mushtaq Ahmed ➤ Sung Hun Lee ➤ Saboor Khan ➤ Yasir Ghauri ➤ M. Javed ➤ Kamran 	HSE Training Hall Weir Site
14.	02/04/2013 13:30	<ol style="list-style-type: none"> 1. Housekeeping and material stocking 2. Implementation of safety policy and PPEs 3. Safety Procedure and standard 4. Movement and inspection of heavy machinery 5. Complete color coding and checking of coded material / Tools. 	<ul style="list-style-type: none"> ➤ Chung Myung Hun ➤ M. Javed ➤ Kamran Khan ➤ Saboor Khan ➤ Nisar Ahmed ➤ Yasir Ghauri 	HSE Training Hall Weir Site

DAEWOO E&C

WEEKLY HSE TEAM MEETING WITH CONSTRUCTION TEAM (UPPER SITE)		
DATE AND TIME: 15-05-2013 11-15		
LOCATION: HSE TRAINING HALL		
SUBJECTS DISCUSSED:		
1) Housekeeping all Area. 2) Oil waste / storage - 3) Electric cables / lights / Earth Cable - 4) Disposable waste concrete / material 5) workers PPEs -		
ATTENDANCE		
S/N	NAME	SIGNATURE
1.	Chung Moung hum	
2.	Mushtaq Ahmed	
3.	Tang Yong Sik	
4.	Attique-ur-Rehman	
5.	이 광 석	
6.	M. KAMRAN	
7.	Yasir Ghauri	
8.	KAMRAN KHAN	
9.		
10.		

Annex F-2

Sample Attendance Sheets and Training Material

[illegible]

HSE TRAINING ATTENDANCE RECORD

Course title:	Safety Training for ^{heavy equipment}	Trainer's Name:	ANSAR-ABBAS
Training Location:	HSE Training Hall	Trainer's Signature:	Ansar
Date	16-5-2013	Time	11:00 AM
Sr.	Name	Badge	Signature
1	M. Ghalib	KYUNG Dong	M. Ghalib
2	Fahim	KYUNG Dong	Fahim
3	Shabbir Ahmad	Daewoo	Shabbir
4	SADABAT ASHKNAZ		Sadbat
5	NASIM		Nasim
6	Sajjad Ahmed	Sunaid-Daewoo	Sunaid
7	Shahzad Ahmed	shah	
8	Daewoo Akbar Awan	Daewoo	Daewoo
9	Syed Sabir Hussain Shah		Syed Sabir
10	M. Ghalib	Daewoo	M. Ghalib
11	Ashad Ahmad	Daewoo	Ashad
12	BASHIR	KYUNG Dong	Bashir
13	JABBAR - HUSSAIN	KYUNG Dong	Jabbar
14	TANVEER ABBAS	KYUNG Dong	Tanveer
15			
16	Orangazib	Daewoo ESC	Orangazib
17			
18	KHALID		Khalid
19	Wahed	K.D.	Wahed
20	RANA NASEEM	DAEWOO	Naseem
21	Tahir Wahed	Daewoo	Tahir
22			
23			



EMERGENCY FIRST AID

MEDICAL EMERGENCIES

Signs or Symptoms

- Pale or flushed skin
- Dizzy, light-headed, weak, confused
- Paralysis
- Breathing difficulty
- Cold sweats
- Nausea or vomiting
- Slurred speech
- Persistent pain or pressure
- Diarrhea
- Severe headache
- Seizure
- Changes in consciousness

First Aid Care

Help victim rest comfortably.
Take history from victim or bystanders. Ask:

1. Are you allergic to anything?
2. Are you on medication?
3. When did you last eat?
4. What led you up to this problem?

- Look for medical alert tags.
- Reassure victim.
- Watch for signals/changes in breathing and consciousness.
- Don't give the victim anything to eat or drink (diabetic emergencies are an exception).
- Keep victim from getting chilled or overheated.
- Seek medical attention if appropriate.

If the Victim

Faints

Position victim on back and then elevate legs 8-10 inches.
Do not elevate legs if you suspect a back or head injury.

Vomits

Place victim in the recovery position
(left side with head resting on arm).

BLEEDING EMERGENCIES

The Bleeding Control Sequence Steps

1. Direct pressure

(At this time,
a direct pressure
bandages may
be applied.)

2. Elevate

(Do no further harm.)

4. Pressure point

(if necessary)

3. Apply Bandage/ Rebandage

First aid care for minor wound with minimal bleeding:

1. Clean wound with warm water and soap.
2. Dress wound with bandage to prevent infection.
(You may leave wound uncovered if it is in a location that is not easy to cover.)

SHOCK

Sign of Shock

Anxiety, restlessness or irritability
Rapid breathing
Weak, helpless feeling

Altered consciousness
Pale, cool, moist skin
Thirst

Rapid pulse rate
Eyes lackluster, dazed look
Nausea

First Aid Care for Shock

Keep the victim lying down if possible.
Speak in a comforting and reassuring tone to relieve stress or anxiety.
Elevate legs 10-12 inches, unless you suspect spinal damage or broken bones.
Do not give victim anything to eat or drink.
If victim is nauseous or begins to vomit, place the victim on his / her left side.

Try to make the victim comfortable.
Control any external bleeding if necessary.
Cover victim. Maintain body temperature.
Provide victim with plenty of fresh air.

BURN CARE

1st & 2nd Degree Burns

- a. Cool the burned area. Immerse in cold water or apply cold cloths.
- b. Cover with clean, loose dressing.
- c. Elevate burned limbs above heart level.
- d. Treat for SHOCK if necessary.

3rd Degree Burns

- a. Cover with clean, loose dressing.
- b. Elevate burned limbs above heart level.
- c. Treat for SHOCK.
- d. Take to hospital immediately.

TRAUMA

First Aid Care for Strains and Sprains

- R. Rest
- I. Ice Apply a cold pack. Do not place ice directly on skin.
- C. Compression or compression wrap, but not too tight.
- E. Elevate above heart level to control internal bleeding.

Neck or Back Injuries

1. Stabilize head

Dislocations and Fractures

1. Immobilize area.
Use pillows, jackets, blankets, etc. Stop movement by supporting injured area.
2. Care for shock. See care for shock.
3. Treat any additional secondary injuries.

BITES & STINGS

First aid care for insect stings

- Wash site.
- Apply a cold pack.
- Monitor victim for allergic reaction.
- Seek medical assistance if appropriate.



Bees/Wasps/Hornets: Leave behind a stinger that may remain embedded in the skin. Do not pull the stinger out directly with fingers or tweezers. This will only inject additional poison into the body. Instead, use the edge of a credit card or something similar. The edge will snag the venom sack above the skin level and pull the embedded stinger out of the skin.

Spiders: Seek medical attention!

Ticks: Ticks must be removed with tweezers. Apply antiseptic ointment. If you are unable to remove head or if rash persists, obtain medical assistance.

First aid care for snake bites

- Do not attempt to suck the venom out of the victim.
- Keep the affected limb below heart level.
- Calm and reassure victim.



SEVERE ALLERGIC REACTIONS

Causes of an allergic reaction include:

- An insect bite or sting.
- An ingested substance (foods such as spices, nuts, fish, shellfish, or medication such as penicillin).
- An inhaled substance (dust, pollen or chemicals).
- An injected substance (antitoxins or drugs such as penicillin).
- An absorbed substance (certain chemicals when in contact with skin can result in a severe allergic reaction).

Signs and Symptoms

- Rash, skin burning, itching and hives
- Confusion
- Fainting, coma
- Noisy and/or difficult breathing
- A feeling of tightness in the chest and throat
- Dizziness
- Swelling of face, neck, lips, and/or tongue
- Nausea

This is a true medical emergency! A severe allergic reaction can become life-threatening. Seek medical attention. Monitor breathing and circulation. Provide necessary life support care until medical help arrives.

POISONING

First Aid Care for Poison Emergencies

1. Assess the scene for clues and safety.
2. Get victim away from poison if necessary.
3. Assess victim response (level of consciousness, breathing and circulation).
4. Provide care for any life-threatening conditions.
5. If the victim is conscious, attempt to get more information.



HEAT & COLD

	Heat Cramps	Heat Exhaustion	Heat Stroke	Mild Hypothermia	Severe Hypothermia
Signs & Symptoms	<ul style="list-style-type: none"> • Painful muscle cramps • Moist, cool skin • Heavy sweating 	<ul style="list-style-type: none"> • Cold and clammy • Heavy sweating • Weak pulse • Shallow breathing • Nausea • Stomach cramps • Weakness, fatigue • Headache 	<ul style="list-style-type: none"> • Hot, dry, red skin • Confusion or unconsciousness • Little or no sweating • Full, rapid pulse 	<ul style="list-style-type: none"> • Shivering, slurred speech, stumbling or staggering (usually, victim is conscious and can talk). 	<ul style="list-style-type: none"> • Body core temperature below 90°F. • Shivering has stopped. • Muscles have become stiff and rigid. • Skin has a bluish appearance. • Skin does not react to pain. • Pulse & respiration slow. • Pupils dilated. • Victim may appear dead.
First Aid Care	<ol style="list-style-type: none"> 1. Move to cool place. 2. Give water or saline solution. 3. Massage muscle. 	<ol style="list-style-type: none"> 1. Move to cool place. 2. Elevate legs. 3. Remove soaked clothing. 4. Apply cool packs. 5. Give water. 6. Monitor. 	<ol style="list-style-type: none"> 1. Move to cool place. 2. Immediately cool victim by fanning and applying cool water. 3. Remove any excess clothing. 4. Seek medical attention. 	<ol style="list-style-type: none"> 1. Remove from cold environment. 2. Provide a source of heat (warm water, fireplace). 3. Replace wet clothes with dry ones. 4. Provide a heat, blankets, coats. 5. Seek medical attention. 	<ol style="list-style-type: none"> 1. Keep victim warm. 2. Do not rewarm if victim can be transported within 12 hrs. 3. Take care when moving victim. Treat victim as if he/she could break. 4. While checking vitals, make sure you perform a thorough pulse check before determining the need for CPR.

For CPR & First Aid Training Contact:

National Training and Resource Centre, Pakistan Red Crescent Society



Pakistan Red Crescent Society

National Headquarters

Sector : H-8, Islamabad 44000, Pakistan

Tel: 92-51- 9250404-5 Fax: 92-51-9250408

E-mail: hidal@isb.comsats.net.pk



ICRC



JRCS

Sponsored by :

INTERNATIONAL COMMITTEE OF RED CROSS AND
RED CRESCENT SOCIETIES.

JAPAN RED CROSS SOCIETY

Annex F-3

Daily Safety Schedule & Sample Report



Daily Safety Manager




Monthly Schedule for Daewoo E&C Staff

(April 2013)

Date	Day	Safety Manager	Department	Site	Remarks
1/4/2013	Monday	M. Saboor khan	HSE	Upper Site	
2/4/2013	Tuesday	Annas Gillani	Construction	Lower site	
3/4/2013	Wednesday	Addil Yousaf	HSE	Upper Site	
4/4/2013	Thursday	M. Aslam	QA/QC	Upper site	
5/4/2013	Friday	TaeHyoKim	Admin	Lower Site	
6/4/2013	Saturday				Weekend
7/4/2013	Sunday				Weekend
8/4/2013	Monday	AhsinGillani	M&E	Upper site	
9/4/2013	Tuesday	Joon Hyun yoon	Planning	Lower Site	
10/4/2013	Wednesday	Qazi Rashid	Planning	Upper site	
11/4/2013	Thursday	Majid Khan	Construction	Lower Site	
12/4/2013	Friday	YasirGhauri	HSE	Upper site	
13/4/2013	Saturday				Weekend
14/4/2013	Sunday				Weekend
15/4/2013	Monday	Muhammad Shahid	Construction	Lower Site	
16/4/2013	Tuesday	Zakir Ahmed	Construction	Upper Site	
17/4/2013	Wednesday	Su-Kwan Kim	Accounts	Lower Site	
18/4/2013	Thursday	Aftab Alam	HSE	Upper site	
19/4/2013	Friday	Chunghyun Cho	Construction	Lower Site	
20/4/2013	Saturday				Weekend
21/4/2013	Sunday				Weekend
22/4/2013	Monday	Malik Kashif	Construction	Upper Site	
23/4/2013	Tuesday	Israr Ahmed	QA/QC	Lower Site	
24/4/2013	Wednesday	Mushtaq Ahmed	Construction	Upper Site	
25/4/2013	Thursday	Song Kheeseon	Planning	Lower Site	
26/4/2013	Friday	Youngsik Jang	Construction	Upper Site	
27/4/2013	Saturday				Weekend
28/4/2013	Sunday				Weekend
29/4/2013	Monday	Ejaz Ahmed	Planning	Lower Site	
30/4/2013	Tuesday	Waqas Ahmed	Construction	Upper Site	

Patrind Hydro Power P.J
Project Manager
HeeSik,Shin

Daily Safety Manager Report				Patind Hydro Power PJ	
Date	2013-06-14	Daily Safety Mgr.	Kim, Tae Hyo	Safety Mgr.	Project Mgr.
Inspection Time	Area	Time	Remark		
	Lower Site	16:00~17:00			

Label	Description	Photo
Main Inspection Action	- The Fence is damaged : The fence is damaged in the site.	
	- Misc. Material is scattered. : This misc. material(Plastic cloth)'s status is look like to be usable again. : Also, any material including the useless should be arranged.	
	- Dangerous Slide Area : When some car and staff pass to this area, the sliding with small stone(there is one excavator on the surge shaft) was happening. : To protect some accident, need to be installed something.	
Remarks	HSE Mgr.	Const. Site Mgr.
	<p>1) Fence was damaged due to heavy wind on 13th June 2013 as per Near Miss Report.</p> <p>2) Site Construction team has been instructed to protect the material for reuse.</p> <p>3) Signalman placement is important on the site and can has been asked to take safety measures.</p> <p>4) Repair of fence should be done ASAP.</p> <p>5) House keeping is necessary at site. Kyung Dong will be instructed to arrange properly.</p> <p>6) S/Taru area road 2 corners, A safety office will be deployed to enforce HSE rules.</p>	

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Annex F-4
Monthly Safety Award

제 13-010 호



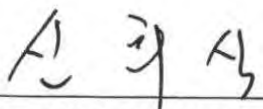
CERTIFICATE OF MERIT

PROJECT	:	Pakistan Patrind Hydropower PJ
NAME	:	SHIN SANG KU
COMPANY	:	KYUNG DONG E&C
TRADE	:	FOREMAN

MANAGEMENT HEREBY CONGRATULATES YOU FOR BEING
ONE OF THE WINNERS OF "BEST MANAGER" AWARD FOR
THE MONTH OF APRIL, 2013.

WE APPRECIATE YOUR OUTSTANDING PERFORMANCE IN
YOUR DUTY AND PROPER ADHERENCE TO THE PROJECT
SAFETY REQUIREMENTS.

WE WISH YOU GREATER ACHIEVEMENTS IN THE MONTHS
AHEAD.


S.S. SHIN / PJ MANAGER

Annex G-1

Pre blasting information dissemination & Safety Plan

NOTICE OF BLASTING

PAKISTAN PATRIND HYDROPOWER PROJECT

It's Possible
DAEWOO E&C

PLEASE BE INFORMED!

1. On May28, 2013 Tuesday, at Project Power House Site adjacent to your village, blasting activity shall be carried out.
2. You are requested to please do not enter into Blasting Site and surrounding during aforementioned time period and also restrict your pets and other animals.
3. While listening warning siren please do not come out of your houses
4. After five minutes of warning siren, countdown will start (1, 2, 3, 4, 5) and then blast will occur.
5. When the blast will be fired, you may feel vibration and air over pressure and it will last for a second or two, therefore, you don't need to be afraid.
6. If you have any questions or concerns regarding the blast, please contact us on 0322-9418179.

Thank you for your kind cooperation.

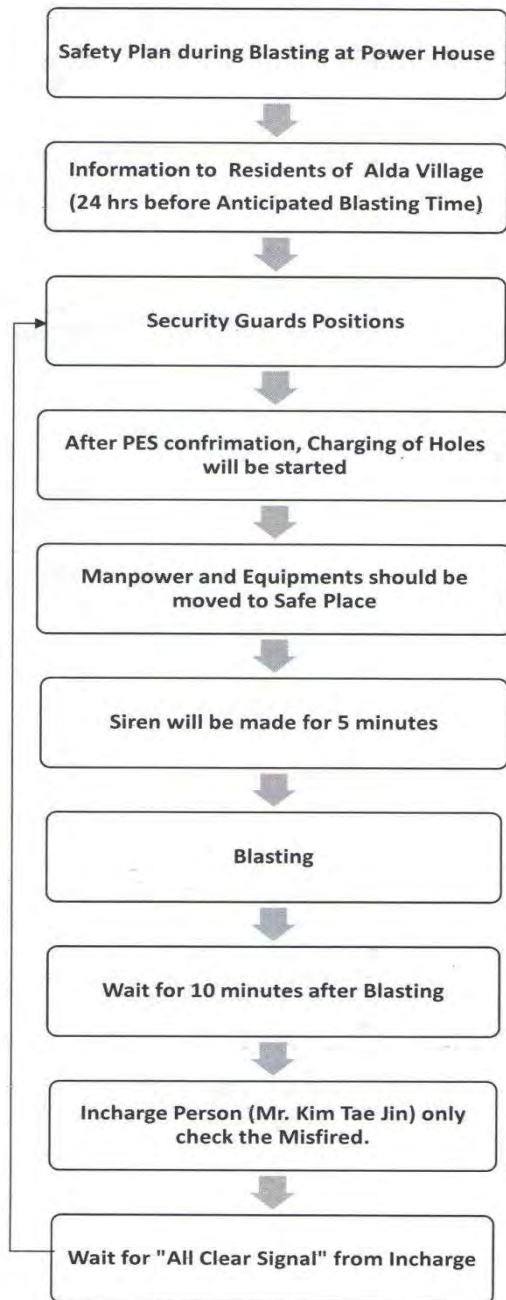
نوٹس:

بمہربانی مطلع رہیں

- 1- مورخہ 28 مئی 2013 بروز منگل، آپ کے گاؤں سے ملحقہ پراجیکٹ کی پاور ہاؤس والی جگہ پر بلاسٹنگ کی جائے گی۔
 - 2- آپ سے گزارش ہے کہ بمہربانی متذکرہ بالا دورانیہ میں بلاسٹنگ سائٹ کے احاطہ اور گرد و نواح میں داخل نہ ہوں اور اپنے پالتو جانوروں اور مویشیوں کو بھی بند رکھیں۔
 - 3- وارننگ سائرن کی آواز سننے پر اپنے گھروں سے باہر نہ نکلیں۔
 - 4- وارننگ سائرن کے 5 منٹ بعد ایک سے پانچ تک گنتی ہوگی اور پھر بلاسٹ ہوگا۔
 - 5- بلاسٹنگ کے دوران ہلکا سا ارتعاش محسوس کر سکتے ہیں جو صرف ایک یا دو سیکنڈ کے دورانیہ کا ہوگا۔
 - 6- بلاسٹنگ کے حوالہ سے اگر آپ کے مزید سوالات یا تحفظات ہیں تو اس نمبر پر رابطہ کریں: 0322-9418179۔
- آپ کے تعاون کا شکریہ۔

SR.	RECEIVERS' NAME/ HOUSE OWNER NAMES	HOUSE NO.	SIGNATURE
1.	ABDUL QYUM	01	
2.	MUHAMMAD ASHRAF	02	
3.	NISAR AHMED	03	
4.	WAGDAR AHMED	04	
5.	FAROOQ ABBASI	05	
6.	LICQAT ABBASI	06	
7.	IMRAN ABBASI	07	
8.	MOHSIN ABBASI	08	
9.	SADAQAT ABBASI	09	
10.	NIKAZ AHMED	10	
11.	GIHULAM ABBAS	11	
12.	ZAHEER ABBAS	12	
13.	RASHID ABBAS	13	
14.	MUHAMMAD ASLAM	14	
15.	ORNGTAXIB QURASHI	15	
16.	CHANNZEB QURASHI	16	
17.	ABDUL KAMEED	17	
18.	RASHID	18	
19.	ZAID QURESHI	19	
20.	TALAL QURASHI	20	
21.	MUHAMMAD SHAXMAN	21	
22.	ADEEB QURASHI	22	
23.	SHAKOOR AHMED	23	
24.			
25.			
26.			
27.			
28.			
29.			
30.			
31.			

Power House Routine Blasting Safety Plan



Kyung Dong	Daewoo E&C
PM	CM

Annex H-1
Environmental Monitoring Proposals



SUPARCO

10405-ES/DEC

M. Aftab Alam

HSE Manager

DAEWOO E&C

Muzaffarabad, AJK

**PAKISTAN SPACE & UPPER ATMOSPHERE RESEARCH COMMISSION
(SUPARCO)**

Date: 17-06-2013

Subject: SUPARCO'S QUOTATION FOR ENVIRONMENTAL TESTING

Reference is our today's telecom conversation on the above subject. SUPARCO would be pleased to carry out the environmental testing regarding ambient air quality, water (surface, wastewater, drinking) quality, soil, noise testing etc. as per Pak. NEQS, WHO World Bank etc guidelines. The rate of various services would be as follows;

Sr. NO	Service	Rates
1	Ambient Air Quality Monitoring (CO, SO ₂ , H ₂ S, O ₃ , NO _x , PM ₁₀ , PM _{2.5} as Pak. NEQS)	Rs 35,000/- per site for 24 hours
2	Vehicular Emission Testing (as per Pak. NEQS)	Rs. 5,500/- per observation
3	Waste water analysis as per Pak. NEQS parameter	Rs. 22,000/- per sample
4	Drinking water analysis as per Pak. NEQS parameters	Rs. 20,000/- per sample
5	Soil Testing (Toxic & Heavy metals)	Rs. 8,000/- per sample
6	Soil Testing (TPH)	Rs. 2,000/- per sample
7	Noise Monitoring (as per Pak. NEQS)	Rs. 500/- per observation
8	TA/DA (for field staff)	Rs. 5,000/- per day for two staff
9	Mobilization a) Equipment b) Personnel	(a) Rs. 50,000/- per visit including movement of Ambient Air Quality Mobile lab. (b) Rs. 30,000/- per visit for effluent waste water, drinking water, soil samples and noise testing per season.

I would like to inform that SUPARCO has state of art equipments for carrying out the above said tests as per approved procedures of national & international agencies such as Pak EPA and USEPA etc. we are also in process of acquiring ISO-14001:2008 Certification and ISO-17025 Accreditation. We also arrange our own
With regards,

(Dr. M. Mansha)
General Manager
Environmental Monitoring and Modeling Div

Sector 28, Gulzar-e-Hijri
Off .University Road,
P.O.Box 8402, Karachi-75270
Pakistan

Phone: (92-21) 34650765-74,
Fax: (92-21) 34644928, 34694941
E-mail: muhammad_mansha@yahoo.co.uk

TECHNICAL AND FINANCIAL PROPOSAL

ENVIRONMENTAL MONITORING

Ref: Env- Lhr / Q – 342/ 2013

To

**DAEWOO E & C
PATRIND HYDROPOWER PROJECT**

Mr. Aftab Alam
HSE Manager
0345-9486677

By

Environmental Services
SGS Pakistan Private Limited



ENV- LHR / Q – 342/ 2013
June 27, 2013

TERMS AND CONDITIONS:

- Client would be required to extend full support and access to SGS staff for proper execution of the jobs and to provide the related safety items and emergency medical facilities as required during his attendance at their premises.
- Turn around time for analysis would be 07 to 10 working days on regular basis while 03 to 05 working days will be required for urgent analysis.
- You are requested to confirm all the necessary arrangements to facilitate our intervention.
- In case of any futile intervention an additional of PKR 9,000.00/- would be charged / day.
- Our services would be in accordance with the General condition of services.
- Validity of our proposal is one year (2013) and unit rates are valid for the mentioned number of samples, points and parameters in the proposal. Unit rates will be revised accordingly if any changing is made in the proposal.
- All inspection & testing orders carried out by the company under its general conditions of Services accessible at http://www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
- All material developed for the clients including the relevant systematic and methodology have been developed by the Company and are copyrighted by it. Clients shall not copy reproduce or disclose to third parties the data as provided by the Company without its prior written consent.

We sincerely hope, the above would suit your requirements, kindly confirm along with our charges enabling us to co-ordinate accordingly.

Best Regards,
Ali Hashim
Assistant Manager
Environmental Service, Lahore

Annex H-2

Daily Gaseous concentration monitoring in Tunnel

GAS TEST RECORD

Location : Adit Tunnel And HRT, Power House Area

P1 : Inlet of the adit tunnel.

P2 : Inlet of HRT.

P3 : Middle of HRT.

			GAS TEST RESULT & ALLOWABLE LIMIT				DAILY VALIDATION		
DATE	STATION	TIME	LEL	H2S	Co	O2	Area Gas Tester:	HSE Manager:	O.E: (Rep)
			0-10%	0-10 PPM	0-50 PPM	19.5%-21.5%	SIGN	SIGN	SIGN
2/5/2013	P1	10:37	0	0	0	20.9	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i> 02/5/2013
	P2	10:39	0	0	0	20.9			
	P3	10:41	0	0	0	20.9			
2/5/2013	P1	4:07PM	0	0	0	20.9	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
	P2	4:09PM	0	0	0	20.9			
	P3	4:11PM	0	0	0	20.9			
3/5/2013	P1								
	P2								
	P3								
3/5/2013	P1	4:05PM	0	0	0	20.9	<i>[Signature]</i>	<i>[Signature]</i>	12B
	P2	4:08PM	0	0	0	20.9			
	P3	4:11PM	0	0	0	20.9			
4/5/2013	P1								
	P2								
	P3								
4/5/2013	P1	4:18PM	0	0	6	20.9	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
	P2	4:20PM	0	0	5	20.9			
	P3	4:23PM	0	0	0	20.9			
5/5/2013	P1								
	P2								
	P3								
5/5/2013	P1								
	P2								
	P3								
6/5/2013	P1	10:40AM	0	0	0	20.9	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
	P2	10:45AM	0	0	0	20.9			
	P3	10:48AM	0	0	0	20.9			
6/5/2013	P1								
	P2								
	P3								