



# Environmental and Social Quarterly Monitoring Report

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Project Number: 38928 (Loan 2198)  
March 2013

## PAKISTAN: New Bong Escape Hydropower Project Environmental and Social Issues Compliance Report (January to March 2013)

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Asian Development Bank



*New Bong Escape Hydroelectric Power Project*

# **Environmental and Social Issues Compliance Report**

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**Quarterly Report**

**January 01, 2013 – March 31, 2013**

**Laraib Energy Limited**

Islamabad

# ENVIRONMENTAL AND SOCIAL COMPLIANCE

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## 1.1 Relevant Environmental Permits or Compliance Certificates

### 1.1.1 Issued by which government agencies

1. Environmental Protection Agency Azad Jammu and Kashmir (EPA-AJ&K).

### 1.1.2 Issuance dates and duration of validity

1. February 26, 2007 for the Project term (the "Original NOC").
2. Revised NOC issued on August 25, 2010 for the Project term (the "Revised NOC")

### 1.1.3 Permit conditions and renewal requirements.

#### From Revised NOC

1. The Company will resolve all social issues if any? like land compensation, human displacement etc at project site.
2. Appropriate land slope stabilization steps will be taken and maintenance of tailrace will be carried out as given in construction plan to forestall the possible soil erosion.
3. Training programs for the officers and workers will be organized under the supervision of AJK-EPA.
4. Periodic water sprinkling will be done to minimize the dust emission and Solid Waste will be properly managed at project site by practicing segregation at source.
5. As part of obligation under IEE, Plantation has been completed on flood protection dike, Total 14,000 plants has been planted at flood protection dike.
6. The Company and Contractor shall provide safe drinking water to all employees/workers. The ground water of the project site is chemically and biologically contaminated and not fit for human consumption hence is avoided for consumption and water analysis to be carried out on fortnightly basis to monitor its quality and results be furnished to EPA.
7. The machinery and all transport will be fixed with double chamber silencers and night time work shall be avoided and music will not be played in high volumes to avoid the noise pollution.
8. The Company and Contractor will be responsible for health and safety of the entire workforce and will provide good working environment. Occasional training programs will be conducted by the Company for the workers to meet with the emergencies. Safety hand gloves, helmets, long shoes, goggles and masks will be provided to all the workers during working hours.
9. The Environmental Compliance Officer of the Company and the Contractor shall present all the time at project site to check/ensure the environmental performances of the project and also to check the progress towards EMP compliance.

10. The Company and the Contractor will provide un-skilled, semi-skilled and skilled Jobs to AJK Nationals on priority and especially to the Local people of the project area.
11. The AJK-EPA can make any surprise visit to check the environmental performances and also to check the progress on EMP.

## 1.2 Incidents of Violations or Non-Compliance

1. The following information regarding incidents of violations or non-compliance has been recorded
  - (i) Nature of non-compliance
  - (ii) Violation or non-compliance based on environmental standards and regulations
  - (iii) Recorded dates and authorities
  - (iv) Media or community reactions (if any)
  - (v) Corrective actions, deadlines, identification of responsible parties
  
2. Incidents of violation and non compliance along with its corrective actions in the form of ESOHS Corrective Action Plan (ESOHS CAP) are attached as “**Exhibit-27**”. The following is the status of ESOHS CAP as of March 31, 2013.
  - Total number of observations 236
  - Number of Issues closed 231
  - Number of Issues In Progress 02
  - Number of Issues open 03

## 1.3 Incidents of Environmental and Safety Accidents

### 1.3.1 Environmental Accidents and Mitigation

1. No Environmental accident has been reported in this quarter.

### 1.3.2 Health and Safety Accidents and Mitigation

1. The summary of accidents encountered from January to March 2013, are as follows;

Type of incident	Jan	Feb	Mar	Total
Near Miss	2	2	1	5
First Aid Cases	1	1	3	5
Critical Injury	0	0	0	0
Occupational injury/illness	6	9	6	21
Incident Property damage	0	0	0	0
Medical Treatment case (routine checkups) (All these cases are seasonal diseases like nausea, flue and cough, headache etc)	43	39	35	117
Total Unsafe Acts/Unsafe Conditions (UA/UC) (All reported UA/UC have been incorporated in ESOHS CAP with the updated progress on each reported UA/UC)	09	10	10	29
<b>Total number of man-hours without LTI &amp;I</b>	<b>971,032</b>			

### **1.3.3 Near Miss:**

1. Mr. Mubasher working as an Auto cad operator was moving in the office for taking his print outs. He got his foot struck in the electric cord in the walk way. Likely he managed his balance and remained safe. The electric cord was providing the power supply to the computer.
2. Hosepipe of the acetylene gas cylinder caught fire during cutting at level 245; the fire was immediately controlled by squeezing flexible pipe and closing the valve of gas cylinder.
3. Scaffolding pipe dropped during assembling the scaffolding in power house closely missing the person working in the vicinity. No human loss or injury is reported.
4. A sweeper fell on floor because of slippery surface, fortunately he remained unhurt. He was busy in cleaning the office floor when he slipped and could not balance him as result he fell but he remained unhurt and safe.
5. During the testing of the turbines a back lash of water produced due to the sudden closure of wicket gates stop log cover up rooted and fell in water, but fortunately it sink down safely without any damage to the machinery or any person.

All above near miss attached as ***"Exhibit 28"***.

### **1.3.4 First Aid Cases:**

- A labor Mr.Allah Ditta was working in the Store. While displacing the T iron Guarder he could not gripped properly and it slipped from his right hand and he got his right hand and ankle hurt. His right hand middle finger swelled up. As a first aid Pain killer gel was applied on the effected part and shifted him to the site clinic for further treatment.
- Mr. Manzoor Husain was working in the power house area while cutting the copper wire with the help of a cutter a small piece of wire injured his little finger of the right hand. He received a small cut on the finger as a first aid pressure bandage was applied on the effected part and shifted him to the site clinic for further treatment.
- Mr. Wong was working in the power house area while going up stairs his knee got hit with the stairs step. His knee become suddenly red and swelled up later on. As a first aid his knee was massaged and a pain killer gel was applied. He was shifted to the site clinic for further treatment.
- Mr. Khalid fell down from height of approximately 4 ft while working and got backache. Message with pain killer gel was done at site and then he visited site clinic for further assistance.
- Mr. Ijaz Ahmed the crane operator got blunt trauma on right knee while going down from the stairs his knee swelled up as a first add pain killer gel was applied at site than he visited the site clinic for further assistance.

Detail of all above first aid cases is attached as ***"Exhibit 29"***.

### **1.3.5 Incident Property damage**

1. No accident occurred during this quarter.

### **1.3.6 Report of Unsafe Acts/Unsafe Conditions**

#### **UA/UC reported in July:**

Twelve unsafe acts/ unsafe conditions (UA/UC) are reported in this quarter.

1. Electrical panel DB cover found missing in staff residence block as a corrective action electrician was called and replace the DB cover with new one.
2. Some oil soaked pieces of cloth and packages waste was observed at 245-elevation as a corrective action remove all the waste from entire area.
3. PDL worker observed working on NBE gates without wearing the life jacket as a corrective action a written warning letter issued to PDL management to strictly ensure the compliance of jackets and safety harness while working near the water body
4. Some sub- contractor worker were observed crossing the tailrace area without any safety measure as a corrective action a verbal warning was given and a tool box talk was conducted.
5. A worker was found working in workshop a gas cutter without wearing safety goggles as a corrective action goggles has arranged and TBT was conducted.
6. At elevation 251 lift elevator shaft / opening was found without guard railing as a corrective action site supervisor was asked to install guard railing.
7. Some workers were observed working at 255- elevation in elevator shaft on scaffolding without hooking the safety harness as a corrective action they were asked to couple the harness properly.
8. Scaffolding at 245 elevations was found without guard railing and planks were placed with a big gap between them. As a corrective action scaffolding Forman was asked to provide the guard railing and some more planks to cover the gap.
9. A worker was found working with the grinding machine without wearing safety goggles. As a corrective action he was asked to stop the work immediately and wear the safety goggles a TBT was also conducted to warn him about the related hazards.
10. During the demolishing of the batching plants some workers were observed sitting on the steel bars roof for demolishing without wearing safety harness. As a corrective action area supervisor was called and asked t o ensure the provision of safety harness. A TBT was also conducted.
11. Heaps of packaging wastes including wooden, paper and polyethylene sheets witnessed behind the batch presenting a dirty look, as a corrective action junk of the load have been removed from site.
12. Lubricant drums placed on ground with a potential of oil spillage as a corrective action triple layer polyethylene sheets have been laid under the drums.
13. Steel bars erected vertically in the foundation of drainage in front of office building presenting a potential of injury in case of fall, as a corrective action the hazardous area has been barricaded with warning tap.
14. A crew of workers was observed workings near openings of downstream stop log without wearing life jackets as a corrective action life jacket were issued the crew.
15. Open entrance in front of security cabin might cause security issue, as a corrective action the entrance is secured with the installation of hard barricades.
16. Plenty of packaging waste observed at different locations in the office building with a potential of fire hazard and presenting a dirt look as a corrective action the entire areas were cleaned and loads were removed at designated place.
17. Excavated trenches observed unmarked and without any barricade might cause fall hazard, as a corrective action the entire area was barricaded with the warning and reflective taps.

18. Sharp Pieces of used welding rods observed near the parking shed with a potential of foot injury, as a corrective action these pieces have been collected and disposed of properly.
19. A large quantity of used oil drums and used tires at workshop might cause spillage, and presents a dirty look as a corrective action the waste items has been handed over to the recycler contractor.
20. A mechanic was observed working at NBE gates without wearing life jacket as corrective action life jackets were issued to avoid any drowning hazard.
21. Electrician was observed working without using safety gloves, as a corrective action area supervisor was advised to ensure the use of gloves while working with the electrical installations.
22. A worker was observed passing through the fence barrier in the stop log area as a corrective action HSE supervisor was asked to block the access by filling the gaps if any in the fence barrier.
23. A local sub contractor crew of workers involved in demolishing of the workshop area was found keeping a gas cylinder with them for cooking purpose as a corrective action gas cylinder was removed and asked them not to keep any such thing with them during working.
24. Some worker observed working at height cleaning window panes by using truck mounted crane were keeping a water container with them placed in an unsafe manner as a corrective action water container was asked to couple with the guard railing to avoid the falling object hazard.
25. A worker was observed sitting at the edge of the roof of top elevation without any support for resting during a repairing work in that area. As corrective he was warned strictly advised not to repeat the practice.
26. In the transformer area extension cables was found damaged and exposed as a corrective action the electrician was called and asked him to insulate the wire properly.
27. Some workers were observed working with grinder without wearing safety glasses. As a corrective action the area supervisor was called and the workers were given verbal warning over the non compliance of the PPE'S.
28. PDL Worker was busy in working of NBE gate modification without wearing life jacket as a corrective action a life jacket was issued.
29. A part of the top cover of the turbine hosing unit 2 was found damage which was a potential trip and fall hazard as a corrective action the area was barricaded supervisor was informed to repair it on immediate basis.

#### 1.4 Labor Relations and Conditions

<i>S.No</i>	<i>Parameter</i>	<i>Actions Taken</i>
I.	Nature of labor dispute or grievance	Since the start of the construction activity, no incidents of violation took place.
II.	Permit conditions and renewal requirements	No new requirements
III.	Authorities in charge of	No new requirements

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investigation/recording

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- IV. Media or community reactions (if any)
- Work on jeepable tailrace bridge is in progress.
  - Filling of ditches of play ground and graveyard in LEHRI village.
  - Laraib contributed 400,000 PKR for the construction of protection dyke in near village Gandy Sarwani.
- V. Corrective actions, deadlines, identification of responsible parties
- No new requirements
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## 1.5 Environmental Capacity

### 1.5.1 Record of Trainings:

1. Contractor delivered a total of 7 trainings to its staff. The distribution is described below.
  - i. Following two training were conducted in this quarter. The training agenda is attached as ***“Exhibit-30”***.
    - a. Handling of the Solid Waste
    - b. Water Safety
    - c. Heat Stress
    - d. First Aid & CPR
    - e. Fire Fighting
    - f. Mandatory Personal Protective Equipments (PPE’s)
    - g. Housekeeping







### 1.5.2 Toolbox Talks:

1. The Contractor delivered a total of 28 toolbox talks to staff. The distribution is described below.

- i. The Contractor has conducted 09 tool box talks in Jan, 2013, 11 in Feb 2013 and 08 in March 2013. The toolbox talk manual is attached as "**Exhibit-31**".
- ii. Keeping in view the established procedures of Environmental Management System (EMS), the Employer has placed UA/UC Card in Site Office for creating awareness about Health and Safety inside the office employees.

## **1.6 Stakeholder Consultation/CSR Activities**

### **1.6.1 Details of consultations**

1. A Community Complaint Register (CCR) is placed at the entrance gate of the Site along with the sign board to communicate its location. All complaints in CCR have been addressed and resolved for developing good relations with the nearby community.
2. Efforts have been made by the Company by the Contractor in developing good relations with the nearby communities.
3. Company's community liaison officers are in closed coordination with community of the project surroundings. Verbal complaints are also received and recorded.
4. Pursuant to the Community complaint regarding water flow from Surat siphon, the Contractor replaced the gabion structure with the flat structure in order to avoid movement of water in nearby private lands. Laraib has also allocated additional funds to take further measures to mitigate any residual impacts of this issue even beyond the project area
5. As a standard practice, the Contractor checks the CCR on daily basis. Additionally, the Company checks the register regularly to ensure smooth functioning of Construction period.
6. Company is promoting community relations as on June 2012, all emerged community complaints have been addressed and no complaint is pending.
7. Local employment has been created to enhance the local employment and community relations.
8. As per the EPC Contract Clause K-B- 4.1, the Contractor will provide facilities for the locals and their cattle's i.e. washing, bathing and animal's drinking water facility along the tail race channels. As the way forward, the Contractor identified three locations for providing such facility. The identified locations are located at RD 6+150 Pindi Siphon, RD 5+400 Chohan Siphon and RD 4+650. Activity has been completed.
9. As CSR activity 5 washrooms is under construction in government school which is necessary requirement of the school. Following are the pictures of toilet construction progress.

10. As part of obligations under the IEE, Plantation at flood protection dike has been completed. Total 14,000 plants have been planted at flood protection dike. Following are the pictures of plantation.

## **1.7 Monitoring and Compliance**

1. Environmental Management Plan (EMP) is the document providing the description of methods and procedures for mitigating and monitoring the impacts of the Project activities. Thus, it acts as a tool which provides assurance of implementing the Project activities in an Environment friendly manner.
2. The Contractor reported Environmental Social Issue Management Plan (ESMP) / Environmental Management Plan (EMP) after incorporating updated status of Environmental Sampling of drinking water, surface water and waste water quality and noise level. Also, the quantification of generated Solid Waste has been included in update ESMP/EMP, attached as "*Exhibit-32*".
3. Laraib and Contractor devised the way of implementing EMP by conducting periodic Audits, Inspections and walkabouts. In order to track the level of implementation of Audits and Inspections, Laraib and the Contractor has formally signed the ESOHS Corrective Action Plan (ESOHS CAP). The Contractor has provided timeframes for completion of actions in various ESOHS weekly meetings held on Site and clearly identified responsibilities for implementation across all parties.
4. In order to reduce soil erosion, culverts have been constructed on the siphon's outlet, joining the tail race. It helps to reduce the soil erosion as well as speed of rain water falling in the tailrace channel.
5. To reduce soil erosion alongside the tail race channel coble and boulders have been placed, after placing geo-textile layer of non woven fabrication at the interface of gravel.

### **1.7.1 Air**

1. Ensuring the dust suppression due to transportation activity, all paved roads are being sprinkled with water on continuous basis. Water is also sprinkled in construction areas regularly.
2. Regular servicing has been conducted, in order to control the smoke emission from the construction vehicles.
3. Keeping in view the dust emissions, speed limits for HTV and LTV vehicles have been communicated and monitored.
4. Loading and unloading of trucks is being carried out at appropriate places on Project Site away from receptors for dust during activity.
5. Emission of SO<sub>x</sub>, NO<sub>x</sub>, CO and CO<sub>2</sub> has been minimized by regular servicing of the light and heavy transport vehicles. Physical monitoring is carried out in this regard.

### 1.7.2 Water (Surface and Groundwater)

1. The Contractor conducts service of the drinking water treatment plant, according to its supplier's instruction. The general method of servicing includes replacement of water filters with the pore size 1 micron and 5 micron, in order to maintain the water quality. Also, all pipes, joints and taps were rinsed with hot water and reaffixed for usual working.
2. Though, the Contractor has properly stored fuel in fuel tank, but, as pro-active approach and standard practice, the Contractor is checking the level difference (if any) of the liquid fuel on monthly basis for determining any leakage. This pro-active approach helps to determine any groundwater contamination.
3. Fuel station and used lubricant storage areas are properly maintained, in order to prevent contamination of surface and ground water sources by accidental spillages of oil and fuel.
4. In order to check any leakage, Level difference (if any) of the liquid fuel in underground fuel storage tanks is measured twice a month at the end and before start of shift. It helps to check whether there is any kind of contamination to the ground water.

### 1.7.3 Waste Generation and Management

1. The Contractor has quantified produced Solid waste for this quarter. Different types of waste produced at site are as follows;

#### January 2013:

#### General Waste:

<i>Type</i>	<i>No. of solid waste generated</i>	<i>Total weight of generated waste (Kg)</i>
Used engine oil	1 drums of 200 liter each	165.6
Cement/ Slag Bags	432 bags of 0.35 kg each	151.2
Waste Tires	1 number of 62 kg each	62
Used batteries	<ul style="list-style-type: none"> <li>• LTV battery of 13 kg each(0)</li> <li>• HTV batteries of 30 kg each(1)</li> </ul>	30
<b>Total</b>		<b>408.8 (Kg)</b>

#### Food Waste

<i>Description</i>	<i>Tetra packs (Kg)</i>	<i>Plastic bags (Kg)</i>	<i>Paper (Kg)</i>	<i>Metal</i>	<i>Food (Kg)</i>
Local Staff Mess hall	2.00	1.00	5.00	2.50	74.00
Local Labor Mess hall	3.25	1.25	7.50	3.50	85.00
Korean Staff Mess hall	1.00	0.75	2.50	2.50	31.50
Offices	1.00	0.50	9.50	1.00	4.50

<b>Sub Total</b>	<b>7.25</b>	<b>3.50</b>	<b>24.50</b>	<b>09.50</b>	<b>195</b>
<b>Total</b>	<b>239.75 Kg</b>				

### **February 2013:**

#### **General Waste:**

<i>Type</i>	<i>No. of solid waste generated</i>	<i>Total weight of generated waste (Kg)</i>
Used engine oil	1 drums of 200 liter each	165.6
Cement/ Slag Bags	175 bags of 0.35 kg each	61.25
Waste Tires	1 number of 62 kg each	62
Used batteries	<ul style="list-style-type: none"> <li>• LTV battery of 13 kg each(0)</li> <li>• HTV batteries of 30 kg each(1)</li> </ul>	30
<b>Total</b>		<b>318.85 (Kg)</b>

#### **Food Waste:**

<i>Description</i>	<i>Tetra packs (Kg)</i>	<i>Plastic bags (Kg)</i>	<i>Paper (Kg)</i>	<i>Metal</i>	<i>Food (Kg)</i>
Local Staff Mess hall	1.75	0.75	4.5	2.00	60.00
Local Labor Mess hall	3.0	1.25	6.00	3.00	75.00
Korean Staff Mess hall	1.00	0.50	2.75	2.00	30.00
Offices	1.25	0.50	10.0	0.75	4.00
<b>Sub Total</b>	<b>7.00</b>	<b>3.00</b>	<b>23.25</b>	<b>7.75</b>	<b>169.0</b>
<b>Total</b>	<b>210.00 Kg</b>				

### **March 2013:**

#### **General Waste:**

<i>Type</i>	<i>No. of solid waste generated</i>	<i>Total weight of generated waste (Kg)</i>
Used engine oil	1 drums of 200 liter each	165.6
Cement/ Slag Bags	70 bags of 0.35 kg each	24.5
Waste Tires	3 number of 62 kg each	182
Used batteries	<ul style="list-style-type: none"> <li>• LTV battery of 13 kg each(1)</li> <li>• HTV batteries of 30 kg each(1)</li> </ul>	43
<b>Total</b>		<b>415.1 (Kg)</b>

#### **Food Waste:**

<i>Description</i>	<i>Tetra packs (Kg)</i>	<i>Plastic bags (Kg)</i>	<i>Paper (Kg)</i>	<i>Metal</i>	<i>Food (Kg)</i>
Local Staff Mess hall	2.0	0.50	3.0	2.5	58.50
Local Labor Mess hall	2.5	1.25	5.5	2.75	67.0
Korean Staff Mess hall	1.00	0.50	3.0	1.75	32.0
Offices	1.5	0.75	14.0	1.25	3.75
<b>Sub Total</b>	<b>7.00</b>	<b>3.00</b>	<b>25.5</b>	<b>8.75</b>	<b>161.25</b>
<b>Total</b>	<b>205.50 Kg</b>				

## 1.8 Recommendations

1. As per MM recommendation Scaffolds are inspected by a competent person, in the current month two inspections are conducted, proper fall protections i.e. railings and braces have been provided at accesses and egresses.
2. As per MM recommendation a local contractor has been hired from Mirpur for the transportation and disposal of non recyclable waste at Mirpur Municipality approved site. The contractor has started services from June 05, 2012 and collecting all the waste from dumping pit also for its safe disposal.
3. In order to eliminate the tripping and falling hazard at project site, housekeeping has been ensured by managing the same kind of items at same place and it is a continuous activity. More over in order to avoid falling hazard permanent guard railing has been installed along the stairs in the office building of power house
4. As per MM recommendation different kinds of incidents are categorized and guidelines have been developed for better understanding, for brief description the document naming "Categorization of Incidents" is attached as "**Exhibit 33**". All incidents are reported accordingly.
5. As per MM recommendation documented chain of custody of recyclable waste is maintained at project site as a continuous activity. It comprises complete address of the contractor, quantity of the waste delivered, date of delivery and receipt of handing over and taking over of the waste.
6. As per MM recommendation smoking area has been designated outside the office, power house and Labor camp.
7. As per MM recommendation new format of risk assessment has been developed including residual risk and is being implemented.
8. As per MM recommendation frequency of scaffold inspection has been increased from monthly to weekly basis and will be implemented from 1st October 2012.

### 1.8.1 Noise and vibration

1. Noise prone activities are avoided during night time.
2. Four (4) samples for noise monitoring have been collected, three samples from the nearest communities and one sample from the project site

3. Provision of necessary safety and personal protective equipment such as ear plugs, ear muffs etc are ensured at high noise area like Powerhouse.
4. Excavators and all heavy machines are lubricated in a routine matter to minimize the noise and to increase the life of equipment.

### **1.8.2 Labor relations and living conditions for construction labor force**

1. As per Annual Management Plan and Company's observation, the Contractor has conducted medical examinations of all appointed food handlers. The examination has been conducted based on following parameters; Hepatitis B&C, Chest X-Ray, blood and Erythrocyte Sedimentation Rate (ESR) test. The results showed absence of any contagious diseases in food handlers.
2. The Contractor has already developed a labor grievance re-dressal mechanism as per IEE.
3. Keeping in view the Security of the staff, the Contractor issued service cards to its employees.
4. Guard house has been constructed on entrance gate of the Project Site and deputed security guards maintain records of incoming staff, visitors and vehicles.
5. To collect safe drinking water from installed water treatment plant, workers and vehicles have been deputed to supply chill drinking water to whole Project Site.
6. The Contractor conducted spraying in labor camp and offices, in order to avoid mosquito breeding.

### **1.8.3 Occupational health and safety**

#### **January 2013:**

1. Mess halls are being visited along with the site Doctor on regular basis and hygienic conditions of food handlers and food items observed satisfactory. Moreover food handlers were advised to cover the food items and don't place the raw items and cooked food together in refrigerator. They were advised to keep the surroundings clean while cooking as dirt and waste around the cooking area might pollute the food and While cutting and peeling vegetables the peels should not be dropped on floor but should be kept in the bins.
2. In order to provide safe drinking water to man power, the water filters of purification plant has been replaced with the new ones. More over service of the plant is done on regular basis as per the instructions of manufacturer.
3. To promote the safety awareness among staff and to encourage the workers Safety Awards are distributed on monthly basis. Dinner was arranged for staff and workers and awards were distributed by Management among the workers. It comprises shields, net cash and appreciation letters.
4. All Fire Extinguishers locations are marked with the proper signs to make it clear and visible for the general workers in order to cope with any fire hazards inside at project site. More over all Fire extinguishers are marked with unique identity numbers.

5. Smoking zones are arranged at different locations at project site. Workers are briefed through tool box talk to avoid smoking here and there except smoking zones and it has been observed that workers are following the condition.
6. HSE key performance indicator report for current month has been prepared and is attached as "**Exhibit 34**".
7. The non recycle able waste is collected and transported from site on regular basis, this is a continuous activity. All kinds of food and camp waste are transferred to the designated area by the Mirpur Municipality for the final disposal.
8. In order to eliminate the tripping and falling hazard at project site, housekeeping has been ensured at site by collecting the rubbish and waste as a continuous activity.
9. In order to make the working site safe all openings are barricaded with hard guard railing and safety signs have been displayed at locations with potential hazards to create awareness among the workforce.
10. Flag men and bank men deployed at head race during excavation of earth plug to control the traffic. A number of safety sign board displayed there to generate awareness among the workers. All entrances have been guarded by deploying securing guards to check the entrance of irrelevant people.
11. Permanent guard Railings have been fixed along embankment walls at head race and downstream to prevent personal fall hazard.
12. Regular inspections of local staff, labour and Korean staff's mess hall are performed in order to monitor the health and hygienic conditions, and it had been observed that all the cooking staff was well aware about the hygienic situations. Furthermore they are briefed them about best practices of hand washing before cooking, serving or washing the utensils.

**February 2013:**

13. In order to provide safe drinking water to man power, the water filters of purification plant has been replaced with the new ones. More over service of the plant is done on regular basis as per the instructions of manufacturer.
14. To promote the safety awareness among staff and to encourage the workers Safety Awards are distributed on monthly basis. Dinner was arranged for staff and workers and awards were distributed by Management among the workers. It comprises shields, net cash and appreciation letters.





15. A safety updates were issued on “ Office Safety” and” Dengue Fever” and is displayed at the notice boards and all important locations to create awareness among the workforce. It is attached as “*Exhibit 35*”.
16. Mess halls are being visited along with the site Doctor on regular basis and hygienic conditions of food handlers and food items observed satisfactory. Moreover food handlers were advised to cover the food items and don’t place the raw items and cooked food together in refrigerator. They were advised to keep the surroundings clean while cooking as dirt and waste around the cooking area might pollute the food and While cutting and peeling vegetables the peels should not be dropped on floor but should be kept in the bins.
17. Smoking zones are arranged at different locations at project site. Workers are briefed through tool box talk to avoid smoking here and there except smoking zones and it has been observed that workers are following the condition.
18. HSE key performance indicator report for current month has been prepared and is attached as “*Exhibit34*”.
19. Annual Management Plan Performance year 2013 is attached as “*Exhibit36*”, clearly describing the status for the month of February 2013.
20. The non recycle able waste is collected and transported from site on regular basis, this is a continuous activity. All kinds of food and camp waste are transferred to the designated area by the Mirpur Municipality for the final disposal.
21. In order to eliminate the tripping and falling hazard at project site, housekeeping has been ensured at site by collecting the rubbish and waste as a continuous activity.
22. In order to make the working site safe all openings are barricaded with hard guard railing and safety signs have been displayed at locations with potential hazards to create awareness among the workforce.
23. Flag men and bank men deployed at head race during excavation of earth plug to control the traffic. A number of safety sign board displayed there to generate awareness among the workers. All entrances have been guarded by deploying securing guards to check the entrance of irrelevant people.
24. Permanent guard Railings have been fixed along embankment walls at head race and downstream to prevent personal fall hazard.
25. Regular inspections of local staff, labour and Korean staff’s mess hall are performed in order to monitor the health and hygienic conditions, and it had been observed that all the cooking staff was well aware about the hygienic situations. Furthermore they are briefed them about best practices of hand washing before cooking, serving or washing the utensils.

**March 2013:**

26. In order to provide safe drinking water to man power, the water filters of purification plant has been replaced with the new ones. More over service of the plant is done on regular basis as per the instructions of manufacturer.
27. Line marking on the public access road and inside the project area has completed in the current month for the purpose of road safety and smooth flow of the traffic adjacent to the project area. The pictures are attached below.



28. Mess halls are being visited along with the site Doctor on regular basis and hygienic conditions of food handlers and food items observed satisfactory. Moreover food handlers were advised to cover the food items and don't place the raw items and cooked food together in refrigerator. They were advised to keep the surroundings clean while cooking as dirt and waste around the cooking area might pollute the food and While cutting and peeling vegetables the peels should not be dropped on floor but should be kept in the bins.
29. To promote the safety awareness among staff and to encourage the workers Safety Awards are distributed on monthly basis. Dinner was arranged for staff and workers and awards were distributed by Management among the workers. It comprises net cash and appreciation letters.
30. Smoking zones are arranged at different locations at project site. Workers are briefed through tool box talk to avoid smoking here and there except smoking zones and it has been observed that workers are following the condition.
31. A trend analysis for 1<sup>st</sup> quarter of year 2013 with a description of the adverse events, Non Compliances, First Aid cases. Minor injuries, major injuries and routine medical cases have been conducted which provides an overview of the quarter. Trend analysis is attached as "**Exhibit37**".
32. HSE key performance indicator report for current month has been prepared and is attached as "**Exhibit 34**".
33. The non recycle able waste is collected and transported from site on regular basis, this is a continuous activity. All kinds of food and camp waste are transferred to the designated area by the Mirpur Municipality for the final disposal.
34. In order to eliminate the tripping and falling hazard at project site, housekeeping has been ensured at site by collecting the rubbish and waste as a continuous activity.
35. In order to make the working site safe all openings are barricaded with hard guard railing and safety signs have been displayed at locations with potential hazards to create awareness among the workforce.
36. Permanent guard Railings have been fixed along embankment walls at head race and downstream to prevent personal fall hazard.  
Regular inspections of local staff, labor and Korean staff's mess hall are performed in order to monitor the health and hygienic conditions, and it had been observed that all the cooking staff was well aware about the hygienic situations. Furthermore they are briefed

them about best practices of hand washing before cooking, serving or washing the utensils.

#### **1.8.4 Audits/Inspections**

Following Inspections were carried out during this quarter:

##### **Weekly**

1. Scaffolding Inspection

##### **Fortnightly**

2. Spraying and Fogging Record

##### **Monthly**

3. Fire Extinguishers
4. Hygiene of Food Handlers
5. Kitchen Hygiene
6. Workshop
7. Lifting Equipments Inspection

Copies of Audits are attached as ***“Exhibit 38”***.

#### **1.8.5 Risk Assessments:**

Following risk assessments has been conducted in this quarter.

1. Discharge of water in tailrace
2. Landscaping

Above risk assessments are attached as ***“Exhibit 39”***.

#### **1.8.6 Community Safety and Security**

1. Community complaint register (CCR) has been placed on the Project Site along with the placement of sign board. As per MM recommendation, the Contractor has inserted all telephone complaints in CCR to follow up the complaints.
2. All complaints on CCR have been addressed and resolved by the Company through Contractor.
3. Necessary road safety sign boards have been affixed to communicate to the community about the temporary diversion road.
4. As routine activity, surprise security checking at night time by the Contractor’s Security Manager has been executed with the aim to strengthen the security surveillance.
5. Site security audit was not conducted during this period.
6. The Contractor developed cordial liaison with concerned Government Departments for explaining Site Security arrangements. For this purpose, Contractor Security Manager conducted various meetings with the Government officials.

### **1.8.7 CO2 displacement by the Project**

The qualitative outcome of potential Carbon dioxide (CO2) emission sources and its mitigation measures to ensure CO2 displacement by the Project activities is attached as ***“Exhibit-40”***.

## Exhibit 27 – ESOHS CAP

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**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Recommendations from EP-AJK	1	Site	Appropriate land slope stabilization steps will be taken and maintenance of tailrace will be carried out as given in construction plan to forestall the possible soil erosion.	Letter on 25/8/2010	Boulder placing and gabions at tail race are completed to forestall the possible soil erosion. An extension of the tailrace has now been initiated. The same engineering and management measures will be implemented.	COD	High	ESOHS Manager	Completed	Backfilling of the powerhouse and landscaping at headrace and tailrace has been completed
Recommendations from EP-AJK	2	Site	Plantation be started in ongoing rainy season and proper protective measures shall be taken to enhance their survival rate.	Letter on 25/8/2010	Small scale implementation is underway. Large scale implementation shall be done after completion of tailrace channel (i.e. after availability of the required land for plantation)	Ongoing activity		ESOHS Manager	Completed	Plantation has been Completed and total 14,000 trees/Shrub has been planted. Maintenance Period has been started.
Recommendations from EP-AJK	3	Site	Necessary Environmental, OHS training are yet not provided to the Project staff and EPC Contractor in presence of EPA AJK staff	Monitoring Report on November 27, 2010	A full scale effective training program is under implementation on Site, however, training under EPA supervision shall be done after fixation of appropriate date	Ongoing activity		ESOHS Manager	Completed	A raining plan has been developed and approved. The same shall be shared with EPA for their participation upon their availability.
Recommendations from MM	1	Site	Provide NEBOSH training to ESOHS officers	Lenders' Engineer Comments of September, October & November 2011 MPR	This observation have been communicated to Management and shall be reported accordingly	01/06/2012		ESOHS Manager	Completed	Reference to MM September report alternative training to the NEBOSH training recommended was satisfactorily undertaken.
Recommendations from MM	2	Site	The contractor should contact the Municipality and reinstate their services in disposing of general waste, paying the appropriate levy for this service	Lenders' Engineer Comments of November 2011 MPR	Services re-instated	16/06/2012		ESOHS officer/ Sambu Management	Completed	Contractor has been hired and services are in-progress
Recommendations from MM	3	Site	A comprehensive waste audit is to be carried out by the ESOHS Officer and all arising actions included on the ESOHS Corrective Action Plan with responsibilities assigned for their early implementation.	Lenders' Engineer Comments of November 2011 MPR	A comprehensive waste Audit has been carried out and reported in the MPR of May 2012.	01/05/2012		ESOHS officer/ Sambu Management	Completed	Included in May report

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Recommendations from MM	4	Site	The third party contractor must remove the enclosure and open fire and use the mess facilities provided on site, this situation must be monitored to ensure compliance	Lenders' Engineer Comments of November 2011 MPR	The polyethylene sheath was used to protect the facility from rainwater. At this stage this polyethylene sheet has been removed hence removing the confined facility.	31/03/2012		Head of Labor Camp/ESOHS officer/ Sambu Management	Completed	It has been removed and all the workers using this facility have been shifted to other mess facilities. For further detail referred to MPR of April 2012.
Recommendations from MM	5	Site	To bring sanitary waste water within the recommended COD limits, a grease trap should be installed prior to the septic tank and the use of non-biological detergents for cleaning purposes implemented	Lenders' Engineer Comments of November 2011 MPR	Pits have been installed and in operation	06/05/2012		ESOHS officer/ Sambu Management	Completed	Grease and oil trap pits for effluents discharged from mess hall has been constructed for each mess hall.
Recommendations from MM	6	Site	Mott MacDonald to explore the potential for the Project to satisfy NEQS for BOD rather than IFC	Lenders' Engineer Comments of November 2011 MPR				Mott MacDonald	Completed	MM explain in July MPR that waste water result is according to the IFC and NEQS so this point is closed Now.
Recommendations from MM	7	Site	PPE has improved considerably and the Project is commended on its ongoing efforts;	Lenders' Engineer Comments of January 2012 MPR	Maintain the current practices	On-going		SAMBU	Completed	100 % PPE's compliance has been ensured at site and had been observed by MM during their site visit in April.
Recommendations from MM	8	Site	Toe boards should be installed on all working platforms to prevent objectives falling from height;	Lenders' Engineer Comments of January 2012 MPR	Agreed to be installed by contractor	On-going		SAMBU	Completed	Scaffoldings were temporarily there and have been removed now.
Recommendations from MM	9	Site	A clean up of the litter and debris on the Old Bong River bank is to be implemented immediately and any resulting waste to be recorded;	Lenders' Engineer Comments of January 2012 MPR	To be cleaned immediately and actions to be taken to ensure no recurrence in the entire project area.	On-going		SAMBU	Completed	Refer to MPR Feb 2012
Recommendations from MM	10	Site	Andritz should be tasked with tidying up their work area before it becomes a more significant issue;	Lenders' Engineer Comments of January 2012 MPR	Clean-up activities to go parallel with other activities	On-going		ANDRITZ	Completed	Satisfactory house keeping had been ensured at site

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Recommendations from MM	11	Site	To demonstrate the Project's Duty of Care, a high level waste form should be developed that includes key information regarding any waste consignment. Relevant staff must be trained in the requirement to complete this for all waste consignments and the records must be collated and held on site;	Lenders' Engineer Comments of January 2012 MPR	A chain of custody to be recorded and trainings to be provided to all related personnel.	On-going		SAMBU	Completed	As per MM recommendation documented chain of custody of recyclable waste is attached as Annex. It comprises complete address of the contractor, quantity of the waste delivered
Recommendations from MM	12	Site	This may be sufficient to reduce the levels of COD and further sampling is recommended to ascertain how effective these controls are;	Lenders' Engineer Comments of January 2012 MPR	Sampling was carried out on June 16, 2012 by SGS and report are expected by 29th of June 2012.	March		SAMBU	Completed	Sampling has been conducted after the construction of oil and grease pits.
Recommendations from MM	13	Site	Further waste streams need to be reported along with the quantities and their disposal routes i.e. recycled, re-used, landfill etc. Mott MacDonald is pleased that the Project responds well to all recommendations made and endeavors to maintain a well managed site from an EHS perspective. However, some unsatisfactory issues raised during the site monitoring visit in January should have been picked up and dealt with more proactively.	Lenders' Engineer Comments of January 2012 MPR	To be implemented	March		SAMBU	Completed	As per MM recommendation documented chain of custody of recyclable waste is attached as Annex. It comprises complete address of the contractor, quantity of the waste delivered
LEL Comments	1	Workshop	Soil contamination has been observed inside workshop.	Inspection by LEL Feb 14, 2012	Contaminated soil has been removed and disposed off accordingly.	25-Feb		H/ E Chief	Completed	Removed and burnt
LEL Comments	2	Lubricant storage area	Soil contamination has been observed.	Inspection by LEL Feb 14, 2012	Contaminated soil has been removed and disposed off accordingly.	25-Feb		H/ E Chief	Completed	Removed and burnt
LEL Comments	3	Oil change facility	Soil contamination has been observed	Inspection by LEL Feb 14, 2012	Contaminated soil has been removed and disposed off accordingly.	25-Feb		H/ E Chief	Completed	Removed and burnt
LEL Comments	4	Besides Workshop	Soil contamination has been observed besides workshop.	Inspection by LEL Feb 14, 2012	Contaminated soil has been removed and disposed off accordingly.	25-Feb		H/ E Chief	Completed	Removed and burnt



**ESOHs RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	5	Besides Workshop	Poor solid waste management has been observed besides workshop. It was also observed that a big container was placed having mixed solid waste comprising of steel waste, wires, drums, plastic bags etc. This activity depicted that segregation at source is not accomplishing.	Inspection by LEL Feb 14, 2012	All kind of waste has been dumped inside the container, and also it has been divided in three segments to store different kind of waste in different segments	20-Feb		H/ E Chief	Completed	waste has been sold to the recycling contractor. Refer to MPR Apr
LEL Comments	6	Powerhouse	Poor housekeeping has been observed in general.	Inspection by LEL Feb 14, 2012	Housekeeping will be maintained by collecting waste and debris,	20-Mar		Site Engineers	Completed	Refer to MPR Mar & Apr 2012
LEL Comments	7	Powerhouse	It was observed that workers were taking their lunch in an open air inside the powerhouse.	Inspection by LEL Feb 14, 2012	Some local workers bring their meal with them, it will be communicated them use mess hall to take their lunch	22-Feb		Site Engineer	Completed	Refer MPR Feb 2012
LEL Comments	8	Powerhouse	It was found that electricity panel with high voltage wires were placed unattended.	Inspection by LEL Feb 14, 2012	It has been noted and the issue will be rectified by placing loose cables in rolls over the wooden planks.	03-Mar		Electrical Engineer	Completed	Refer to MPR Mar 2012
LEL Comments	9	Powerhouse	It was found that high voltage bare electricity wires were placed unattended.	Inspection by LEL Feb 14, 2012	It has been noted and the issue has been rectified.	20-Feb		Electrical Engineer	Completed	Refer to MPR Mar 2012
LEL Comments	10	Powerhouse	It was found that employees were working without wearing proper PPEs.	Inspection by LEL Feb 14, 2012	More safety items will be arranged at site to close the observation.	10-Mar		Electrical Engineer	Completed	Refer to MPR Mar & Apr 2012
LEL Comments	11	Powerhouse	It was found that employees were working in the dust without wearing dust masks.	Inspection by LEL Feb 14, 2012	Dust masks have been provided to the workers working in the dusty environment.	20-Feb		Site Engineer	Completed	All the employees have been provided the dust masks.
LEL Comments	12	Powerhouse	It was found that workers were taking rest on wooden plank inside powerhouse.	Inspection by LEL Feb 14, 2012	All workers have been communicated to avoid sleeping at working area through Tool Box Talk.	20-Feb		Site Engineer	Completed	Refer to TBT Feb 2012
LEL Comments	13	Powerhouse	It was found that gas cylinders were being used without proper protective measures. As, all cylinders were found to be lying down without protective measures.	Inspection by LEL Feb 14, 2012	It has been communicated to the authorities concerned and proper arrangements would be made to fix the cylinders vertical.	05-Mar		Site Engineer	Completed	Refer to TBT Feb & Mar 2012
LEL Comments	14	Powerhouse	Workers were working inside the turbine housing without proper PPEs.	Inspection by LEL Feb 14, 2012	The observation has been noted and will be implemented soon.	10-Mar		Site Engineer	Completed	Refer to MPR Mar & Apr 2012
LEL Comments	15	Powerhouse	It was found that bare high voltage wire joined by tape has been used.	Inspection by LEL Feb 14, 2012	Damaged cables will be replaced with the new one.	03-Mar		Electrical Engineer	Completed	The observation has been rectified
LEL Comments	16	Powerhouse	Workers were working inside the powerhouse in gougers, without safety boots.	Inspection by LEL Feb 14, 2012	The observation has been noted and will be implemented soon.	10-Mar		Site Engineer	Completed	Refer to MPR Mar & Apr 2012

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	17	Powerhouse	A worker was found to use stairs for moving inside the powerhouse without protective equipment. Also, the same worker was moving while talking on mobile phone.	Inspection by LEL Feb 14, 2012	It has been communicated through tool box talk to avoid using mobile phones during work at height.	20-Mar		Site Engineer	Completed	Refer to TBT Feb & Mar 2012
LEL Comments	18	Powerhouse	Workers at near the entrance gate doing the welding work without goggles and other PPEs. Workers belong to Sambu Pakistan	Inspection by LEL June 06, 2012	A tool box talk was conducted on the use of face shield during work, all have been issued the required PPE's at site.	07-Jun		Site Engineer	Completed	
LEL Comments	19	Powerhouse	Workers doing the concrete work of the wall outside the powerhouse near Andrits Expatriates camp wearing no PPEs like coveralls and Harnesses or safety shoes. These workers belong to Sambu Korea.	Inspection by LEL June 06, 2012	All the man power working at site have been issued PPE's.	09-Jun		HSE	Completed	
LEL Comments	20	Headrace	Heavy dust emissions at site around the headrace area.	Inspection by LEL June 06, 2012	Sprinkling frequency has been enhanced to control the dust emissions.	07-Jun		Site Engineer	Completed	
LEL Comments	21	Main Entrance	Safety tap not installed near working area and near slope next to the road in public use.	Inspection by LEL June 06, 2012	Safety tap has been installed at the mentioned locations.	06-Jun		Site Engineer	Completed	
LEL Comments	22	Powerhouse	A worker was observed welding without using face shield.	Inspection by LEL June 20, 2012	He was advised to wear face shield during welding, further a warning letter has been issued.	20-Jun		Site Supervisor	Completed	
LEL Comments	23	Powerhouse	Crane rigger was observed smoking at power house near the transformers.	Inspection by LEL June 20, 2012	A tool box talk on "No smoking" has been conducted, signs installed there and also a warning letter has been issued to the rigger	20-Jun		Site Supervisor	Completed	
LEL Comments	24	Powerhouse	A worker was observed busy in grinding work in the office building without wearing dust masks.	Inspection by LEL June 20, 2012	He was orientated to ensure the use of required PPE's, further warning letter has also been issued to the individual.	20-Jun		Site Supervisor	Completed	

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Accidents By Contractor	1	Power house	The workers were found to use the instrument with coal (angethe) for heating purposes. When one the worker belonging to this room came back after offering his prayer, he found one person vomiting in the room. Another person was found to become dizzy.	Accident in february 2012	<ul style="list-style-type: none"> <li>• Opened the windows and doors, switched on the fans.</li> <li>• Coal burning stove was brought out of the room</li> <li>• Security guard deputed and assigned the task to check all the rooms before the employees sleep and not allowed any employee carrying coal burning stoves inside the rooms. A notice from Project Manager for the strict compliance not using the stoves in the rooms has been circulated and displayed at different location in the labor camp and it was also communicated through Tool box talk. • All employees were briefed about the hazards associated with the burning coal through tool box talks</li> </ul>	01/03/2012		ESOHS Officer	Completed	Refer to Accident Investigation report of February 2012.
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	1	Power house	Workers were working at turbine housing, at area level 245m near round 15 meter deep openings for turbines, without any guard railing. .	UA/UC of Feb MPR 2012	As a corrective measure guard railing was being installed to rectify the falling hazard	Immediately		ESOHS Officer	Completed	It has been verified by Laraib that guard railing has been provided
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	2	Power house	A naked electric cable was observed inside the power house	UA/UC of Feb MPR 2012	as a corrective measure, electrician was informed about it and damaged cable was replaced with the new one.	Immediately		ESOHS Officer	Completed	Damaged cable has been replaced with new one
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	3	Power house	A crew of local workers was observed taking their lunch at working area while sitting on ground. .	UA/UC of Feb MPR 2012	As a corrective measure, workers were briefed to avoid taking their meal in unhygienic place and use the mess hall building for taking their meals	Immediately		ESOHS Officer	Completed	Refer to tool box talk records of feb 2012
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	4	Power house	Workers were observed sleeping at the worksite during lunch break.	UA/UC of Feb MPR 2012	As a corrective measure, tool box talk was conducted to avoid sleeping at workplace	Immediately		ESOHS Officer	Completed	Refer to tool box talk records of feb 2012
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	5	Power house	Workers observed busy in working at turbine housing area level 245m near 15 meter deep openings for turbines without any guard railing there.	UA/UC of Mar MPR 2012	As a corrective measure guard railing was installed there to rectify the falling hazard.	Immediately		ESOHS Officer	Completed	Refer to tool box talk records of Mar 2012
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	6	Power house	One worker found working at height without safety harness.	UA/UC of Mar MPR 2012	As a corrective action he was strictly advised to avoid work at height without safety harness.	Immediately		ESOHS Officer	Completed	Refer to tool box talk records of Mar 2012
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	7	Power house	A damaged ladder with improper railing was observed at power house	UA/UC of Mar MPR 2012	As a corrective action damaged ladder was replaced with the new one and proper railing has also been installed.	Immediately		ESOHS Officer	Completed	It has been verified by Laraib

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	8	Power house	A plank was found missing at a platform while workers were working there. .	UA/UC of Mar MPR 2012	As a corrective action the plank had arranged to fill the gap	Immediately		ESOHS Officer	Completed	it has been verified by Laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	9	Power house	Two laborers were observed handling the heavy wooden sheet during dismantling the form work.	UA/UC of Mar MPR 2012	As a corrective action all the workers working in the vicinity were given tool box talk on safe manual handling of material.	Immediately		ESOHS Officer	Completed	Refer to tool box talk records of Mar 2012
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	10	Office building	Poor housekeeping observed at 4th floor of the office building which may cause slip, trip and fall.	UA/UC of Apr MPR 2012	As a corrective measure the area in charge has been advised to make the area neat and clean.	Immediately		ESOHS Officer	Completed	Refer to tool box talk records of MPR Apr 2012
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	11	Office building	One worker found working at height without safety harness	UA/UC of Apr MPR 2012	He was called down and advised to wear the safety harness always while working at height.	Immediately		ESOHS Officer	Completed	Refer to tool box talk records of MPR Apr 2012
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	12	Power house	A damaged ladder was observed at unloading bay which one used as access and egress to the units at an elevation of 245m.	UA/UC of Apr MPR 2012	As a corrective action the damaged ladder has been replaced with the new one	Immediately		ESOHS Officer	Completed	It has been verified by Laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	13	Power house	One bore hole was observed open at left side of power house building directly under the scaffolding form work and the workers were busy in working at platform vertically above the borehole.	UA/UC of Apr MPR 2012	As a corrective measure the Area Supervisor was called there and advised to place planks or ply wood sheets to cover the open hole and it was covered in the mean time.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	14	Power house	Damaged cable was found lying in the wet floor that may cause shock hazard	UA/UC of Apr MPR 2012	This cable was replaced with the new one and wooden supports were used there to keep the cable at some higher level to keep it safe from wet surface	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	15	Office building	Some spare steel nails observed lying unattended at 2 <sup>nd</sup> floor making the situation unsafe.	UA/UC of Apr MPR 2012	Area supervisor was informed about and nails were collected there to make the area safe for working.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	16	Power house	Electrical distribution panel's door was observed open near the stop lock storage area with a potential of Electric Shock.	UA/UC of May MPR 2012	As a corrective action electrical supervisor was informed and action has been taken.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	17	Power house	Workers were observed busy in grinding work in the GIS room without wearing dust masks.	UA/UC of May MPR 2012	As a corrective action dust masks have been issued to the workers working in the area.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	18	Power house	Workers were observed working at height without guard railing with a potential of falling hazard there.	UA/UC of May MPR 2012	As a corrective action railing has been provide to the workers working at height.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	19	Steel Yard	Mr. Maqsood store helper was found washing hands in the river while sitting at slope of the bank by putting himself in danger	UA/UC of May MPR 2012	Area supervisor was advised to strictly ensure the compliance that no one should be allowed to move near the deep waters.	Immediately		ESOHS Officer	Completed	It has been verified by laraib

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
IFC	1	Safety at work	a. Sub-contractors' staff during civil works found working at height, over scaffoldings, at several locations without safety harnesses in violation to the procedures for 'working at height' thereby engendering potential risk of fatal accident.	Visit May 22, 2012	The existing procedures for working at height, over scaffoldings already provides for wearing of safety harnesses. The sub-contractors will be advised for strict compliance of procedures and standards on working at height. ESOHS officer of Sambu shall carry out daily inspections to ensure compliance.	27/05/12	Hight	Sambu	Completed	100% issuance of Safety harnesses. Regular inspections on daily basis are carried out. Trainnngs and toolbox talks have been conducted. See photographs for reference
IFC	2	Safety at work	b. No safety rails were noted on the scaffoldings for protection of falling tools or construction materials.	Visit May 22, 2012	The sub-contractors shall strictly be advised to revive the practice of installing safety railings on urgent basis and also Sambu shall install safety rails where required. This practice shall not be discontinued during the entire construction phase.	27/05/12		Sambu	Completed	Safety railings have been provided at each necessary location. Please provide the photgraphs of safety railings.
IFC	3	Safety at work	c. Tripping hazards and obstruction due to leftover construction materials observed at several locations, especially in the regular and expected movement trails of workers.	Visit May 22, 2012	Sambu shall ensure a clear passage for each working area. Sambu shall identify and remove all tripping hazards and obstructions. Daily inspections shall be carried out for strict compliance.	27/05/12		Sambu	Completed	Hose keeping has been imprved. All triping hazards have been removed. At least one passage for the movment of workers and matrial has been ensured. Dailly inspections are carried out to check the compliance. Photgraphs
IFC	4	Safety at work	d. Sub-contractors' staff were using exhausted PPE, especially safety shoes of many workers were worn out due to overuse. Some workers were not wearing coverall and were casually dressed.	Visit May 22, 2012	The subcontractors will immediately be provided new PPEs and strict compliance shall be ensure through inspection on daily basis.	15/06/12		Sambu	Completed	100% issuance of new PEEs to all contractor and sub-contractor staff working at site. 100% compliance. Data
IFC	5	Solid waste managemement	a. Contractor selected for solid waste management is not an approved/authorized person from the concerned authorities.	Visit May 22, 2012	The EPA of AJ&K has not approved any recycling contractor in its jurisdiction. Sambu shall approach an approved waste recycling contractor in other cities like Jhelum or Rawalpindi and finalize the arrangement by June 15, 2012.	15/06/12		Sambu	Completed	No approved recycling contractors found also in Jehlum, Rawalpindi and othr cities in the surroundings.

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
IFC	6	Solid waste management	b. The contractor also does not provide necessary evidence for safe disposal of waste item being handed over to him	Visit May 22, 2012	The current recycling contractor shall be advised to start providing the safe disposal records with immediate effect to maintain the evidence of chain of custody.	06-Oct-12		Sambu	Completed	Currently contractor has been provided the Bank account detail, Brusher and purpose of the recycling of waste.
IFC	7	Occupational health	a. Areas in the main building where welding operations were in progress had very poor circulation of fresh air resulting in high concentration of toxic fumes in ambient air. Welding workers were also not using appropriate safety masks to prevent inhalation of hazardous fumes.	Visit May 22, 2012	The mitigation measures for this issue have already been initiated. Movable exhaust fans shall be used to ensure circulation of fresh air in confined areas. Training shall also be conducted on use and benefits of dust masks and ventilation.	15/06/12		Sambu	Completed	Movable exhaust fans have been installed in this working area. Masks have been issued are in use.
LEL Comments	25	Occupational health	Few worker observed without dust Mask.	Inspection by LEL Feb 14, 2012	The Sambu shall carry out daily inspection to ensure that the workers are using dust masks	20-Feb-12		ESOHS Officer	Completed	
IFC	9	Occupational health	b. Poor ventilation conditions in the switch gear room was causing high dust levels during abrasion work of interior walls and ceiling in due course of painting process.	Visit May 22, 2012	Same as above	06/05/2012		Sambu	Completed	Two blowers have been provided and four exhaust fans have been issued in this area.
IFC	10	ESOHS System	a. Gaps were observed in ESOH system coordination and enforcement process. Present ESOH staff of EPC Contractor needs to enforce the provisions of EMP and HSE related procedure on Sub-contractors' workers in a more persistent and diligent manner.	Visit May 22, 2012	Sambu will ensure enforcement of the requirements of the EMP and HSE related procedures by the sub-contractors' workers. The requirement shall be reiterated through a strong official communication.	27/05/12		Sambu	Completed	Evidence of communications to be provided by SAMBU
IFC	11	ESOHS System	b. Additionally, LEL has to appoint appropriate number (at least two) of fulltime well qualified field officers to coordinate, monitor and supervise EHS related performance of the EPC Contractor and Sub-contractors.	Visit May 22, 2012	Action in this respect has already been initiated by Laraib. The hiring process is expected to take some time to comply with HR policy requirements.	30/06/12		Laraib	Completed	ESOHS Officer and Inspector has been appointed.
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	20	Power house	A single plank was observed being used as an access missing the safety railing.	UA/UC of May MPR 2012	As a corrective action the plank was removed and workers were advised to arrange a safe access with proper railings.	Immediately		ESOHS Officer	Completed	It has been verified by laraib

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	21	Power house	A laborer was observed descending down from roof of power house via slope of embankment wall.	UA/UC of May MPR 2012	As a corrective measure his supervisor was informed and he verbally warned to avoid unsafe practices.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	22	Power house	An electrician was observed installing the light at embank wall with out any safe access	UA/UC of May MPR 2012	He was advised to use Crane bucket or proper ladder to reach there.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	23	Power house	Over head falling hazards observed at entrance of office building area of Power house	UA/UC of May MPR 2012	As a corrective action a platform with plywood sheets & wooden batons had been arranged to eliminate the over head falling hazard.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	24	Power house	Openings for elevators observed unguarded with the potential of falling hazard of maximum severity,	UA/UC of May MPR 2012	as a corrective action guard railing has been installed	Immediately		ESOHS Officer	Completed	It has been verified by laraib
LEL Comments	26	Tailrace	Overspeeding dumpers found emitting excessive dust	Inspection by LEL June 27, 2012	Drivers shall be warned and water shall be sprinkled.	10-Jul-12		ESOHS Officer	Completed	Verbally warned and a toolbox talk provided
LEL Comments	27	General	No routine inspection of heavy equipments working at site are conducted by contractor. This activity has been discontinued without information.	Inspection by LEL July 11, 2012	Checklist for inspection for all equipments including cranes, dozers, loaders, dumpers etc shall be developed and monthly inspection shall be carried out	20-Aug-12 01-Sep-12 18-Sep-12		ESOHS Officer	Completed	Inspection check list has been share with laraib ESOHS officer.
LEL Comments	28	Andritz Warehouse	General and packing waste found scattered outside the warehouse area	Inspection August 01, 2012	A general clean up activity to be undertaken in the entire area	13-Sep-12		ESOHS Officer	Completed	Mr. Sardar Azam comment that waste has been segregated and Now this a responsibility of sambu to remove it.
LEL Comments	29	Solid waste management	Mix Construction waste was observed in Batching plant area.	Inspection August 08, 2012	Proper dispose off the waste.	16-Aug-12 28-Aug-12 15-Sep-12 30-Sep-12		ESOHS Officer	Completed	
LEL Comments	30	Head Race	No safety sign boards observed at head race to avoid any public entrance at site.	Inspection August 08, 2012	Arrange sign boards of " No admittance for public" at open places of head race.	18-Aug-12		ESOHS Officer	Completed	Sign Board have been Installed.
LEL Comments	31	Transformer Area	One supervisor found without PPEs	Inspection August 01, 2012	Complete PPEs to be issues to all personnel at site	10-Aug-12		ESOHS Officer	Completed	
LEL Comments	32	Office building	Personel of a third party contractor found without PPEs (ear plugs, gloves, and safety shoes) in an excessive noise area	Inspection August 01, 2012	Ensure issuance of complete PPEs prior mobilization at site	10-Aug-12		ESOHS Officer	Completed	
LEL Comments	33	Office building	General housekeeping of the area found unsatisfactory	Inspection August 01, 2012	Area needed to be cleaned and housekeeping to be improved	10-Aug-12		ESOHS Officer	Completed	

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	34	Andritz Warehouse	A lot of scrap and store item observed in emergency exit way and way almost block	Inspection August 10, 2012	Emergency way needed to be clean and clear.	10-Aug-12		ESOHS Advisor	Completed	



**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	35	All Areas	PPEs compliance at site	Inspection August , 2012	Compile the data of employee without PPEs and share Ensure the issuance and 100 % compliance at site.	10-Aug-12 27-Aug-12 15-Sep-12		ESOHS Officer	Completed	ESOHS Officer visited the project site and PPEs compliance found satisfactory.
LEL Comments	36	Infront of Offices	Visibility of speed breker with marking	Inspection by LEL Aug 27, 2012	Speed Breaker should be clearly mark with florescent paint.	29-Aug-12		ESOHS Officer	Completed	
LEL Comments	37	Water Treatment Plant	Poor House in water treatment plant	Inspection by LEL Aug 27, 2012	Waer Treatment plant should be clear and properly managed by competant person.	01-Sep-12		ESOHS Officer	Completed	
LEL Comments	38	Mess Area	Wild growth arround Mess and Residance Area of sambu.	Inspection by LEL Aug 27, 2012	Grass cutting activity needed to be expedite	08-Sep-12 18-Sep-12 30-Sep-12		ESOHS Officer	Completed	
LEL Comments	39	Mess Area	Safety cage are not available for LPG cylender and pressurized cylender in sambu labor mess and workshop area.	Inspection by LEL Aug 27, 2012	Arrange safety cages on immediate basis and cylender should be placed in their safety cages.	15-Sep-12		ESOHS Officer	Completed	
LEL Comments	40	General	covers of electrical DBs are missing. This is very hazardous condition.	Inspection by LEL Sep 03, 2012	Contractor must arrange the covers of DBs to avoid any accident	08-Sep-12 18-Sep-12 25-Sep-12 30- Oct-12		ESOHS Officer	Completed	
LEL Comments	41	General	Depressurized Fire Extinguishers are observed at different locations of the site	Inspection by LEL Sep 03, 2012	Replace the extinguisher with new one or refill the existing fire extinguisher	12-Sep-12 18-Sep-12 25-Sep-12		ESOHS Officer	Completed	
LEL Comments	42	General	Large No. of old oil Barrels, Batteries and tires observed near work shop	Inspection by LEL Sep 03, 2012	Contractor need to be auction the observed material as soon as possible	25-Sep-12 05-Oct-12		ESOHS Officer	Completed	
LEL Comments	43	Transformer Area	An open hole observed at transformer area.	Inspection by LEL Sep 03, 2012	Hole must be cover with the suitable slab	05-Sep-12		ESOHS Officer	Completed	
LEL Comments	44	Transformer Area	Poor Housekeeping observed in Transformer area.	Inspection by LEL Sep 03, 2012	Remove the waste from entire area and arrange all using equipment.	05-Sep-12		ESOHS Officer	Completed	
LEL Comments	45	Headrace stop log storage area.	An electrical DB installed in open air/ There is no shed.	Inspection by LEL sep18,2012	Shed is needed to be fabricated over the DB or relocate the DB inside the building.	22-Sep-12 01-Oct-12		ESOHS Officer	Completed	DB has relocated.
LEL Comments	46	General	Unattended HSE at night shift	Inspection by LEL sep18,2012	Contractor depute a person who will look after HSE issues at night shift.	25-Sep-12		ESOHS Officer	Completed	Night Shift has been closed.
LEL Comments	47	Andritz warehouse	General Cleaning condition is unsatisfactory	Inspection by LEL sep 25,2012	general cleaning activity need to be performed.	02-Oct-12		ESOHS Officer	Completed	
LEL Comments	48	Andritz warehouse	MSDS of chemicals and flameable liquids is not available in warehouse.	Inspection by LEL sep 25,2012	Place MSDS with every chemical and flameable liquid.	27-Oct-12		ESOHS Officer	Completed	
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	25	Transformer Area	Cover of Manhole of oil collection pit was found missing with a clear danger of falling in the pit,	UA/UC of Sep MPR 2012	as a corrective action manhole was covered with the plywood temporarily, later it was replaced with the permanent steel cover	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib

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Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	26	labor camp,	Wild grass and shrubs observed along the labor camp,	UA/UC of Sep MPR 2012	as a corrective action the grass and shrubs have been scratched.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	27	mess facility	Gas cylinders used for cooking were observed without safety cage outside the mess facility,	UA/UC of Sep MPR 2012	as a corrective action safety cage has been provided for proper protection of gas cylinders.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	28	Project Site	During inspection Empty fire extinguishers were observed at some places,	UA/UC of Sep MPR 2012	as a corrective action fire cylinders were collected immediately and disputed for refilling. After refilling cylinders have been placed at appropriate locations again.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	29	Transformer Area	Poor housekeeping observed at level 260m (transformer area), some packaging wooden and steel items were observed causing the tripping and falling hazard.	UA/UC of Sep MPR 2012	As a corrective action the house keeping of area has been ensured the same day.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	30	labor camp,	Water was observed leaking from water pipes that delivers water supply to electric water coolers, the spilled water was falling on electric cables behind the water coolers which enhancing the potential of electric shock for users.	UA/UC of Sep MPR 2012	As a corrective action damaged pipes have been replaced with the new one to reduce the leaking.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	31	main entrance of power house	Poor housekeeping near main entrance of power house was observed causing tripping and falling hazard,	UA/UC of Sep MPR 2012	as a corrective action the rubbish has been removed.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	32	near the public road	Excavator found working near the public road without proper safety measures	UA/UC of Sep MPR 2012	as a corrective action the area was properly cordoned off with reflective road safety cones to make the area safe.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	33	Power House	Two workers were observed painting in the confined space without any fresh air circulation; it was hard to breath there.	UA/UC of Sep MPR 2012	Immediately the activity was halted and area supervisor was advised to make proper arrangements for fresh air.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	34	workshop	A small quantity of oil was found spilled over the soil near workshop,	UA/UC of Sep MPR 2012	as a corrective action the soil was removed for proper disposal.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	35	headrace	Some workers were observed working at headrace without safety shoes.	UA/UC of Sep MPR 2012	as a corrective action the workers were warned to ensure the use of mandatory PPE's	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	36	Power House	A worker was observed cutting the cemented tiles without wearing dust masks,	UA/UC of Sep MPR 2012	as a corrective action the dust masks were issued him	Immediately		ESOHS Officer	Completed	It has been verified by laraib

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Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	37	electric pylon	A worker was observed working at height wearing the safety harness but not hooked during erecting the electric pylon.	UA/UC of Sep MPR 2012	He was advised to avoid such unsafe acts that put life in danger	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	38	Near road	A wooden baton was found unattended in the way with the tips of steel nails out of surface,	UA/UC of Sep MPR 2012	as a corrective action it was removed from passage and then nail were bent and leveled with the surface.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
LEL Comments	49	Fuel Station	Wild growth near fuel station.	Inspection by LEL sep16,2012	Grass cutting is needed in entire area to avoid the fire.	21-Oct-12		ESOHS Officer	Completed	
LEL Comments	50	Near Batch Plant	Some wooden, plastic and metallic waste observed near Batch plant.	Inspection by LEL sep15,2012	Dump the whole waste at identified location, Segregate and removed frequently.	24-Oct-12 2-Oct-12 31-Dec-12		ESOHS Officer	Completed	Although It is continuous activity But Mr. Azam give a tentative date of completion of this issue.
LEL Comments	51	GIS Room, Work shop, HVAC Room	Pressurized Gas cylinders was observed without safety cages OR any fall protection.	Inspection by LEL Nov 06,2012	Collect all cylinders at designated place and chained or all cylinders placed into the safety cages.	20-Nov-12 24-Nov-12 30-Nov-12		ESOHS Officer Sambu and HSE Advisor Andritz	Completed	Maj sb said that this point tomorrow will close But This point remains same status.
LEL Comments	52	General	Tags of scaffolding found missing.	Inspection by LEL Nov 06,2012	Prepare the scaffolding tags and must hang with every scaffolding.	15-NOV-12 24-Nov-12		ESOHS Officer	Completed	Tags has been prepared But currently not display on scaffolding.
LEL Comments	53	Andritz Warehouse	Some inflammable item like paints and hydrolic oil placed with the general items of store.	Inspection by LEL Nov 06,2012	Segregate all hazardous and flammable material and store at designated and control condition.	15-Nov-12		ESOHS Officer Sambu and HSE Advisor Andritz	Completed	
LEL Comments	54	Andritz Warehouse	Oil spillage observed in front of andritz store.	Inspection by LEL Nov 06,2012	Remove the contaminated soil from entire area and properly dispose off.	15-Nov-12		ESOHS Officer Sambu and HSE Advisor Andritz	Completed	
LEL Comments	55	Andritz Warehouse	Corrosive and Non corrosive material placed with each other.	Inspection by LEL Nov 06,2012	Store, Corrosive and Non corrosive material separately	14-Nov-12		ESOHS Officer Sambu and HSE Advisor Andritz	Completed	
LEL Comments	56	General	Fire Exit and fire extinguisher sign & Numbers are missing.	Inspection by LEL Nov 06,2012	Fire exit and extinguisher sign must displays at all locations and designate the number to every extinguisher.	14-Nov-12		ESOHS Officer	Completed	
LEL Comments	57	Unloading Bay	Fall protection railing was missing.	Inspection by LEL Nov 06,2012	Install railing in identified area	14-Nov-12		ESOHS Officer	Completed	

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Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	58	General	Currently inspection of slings, chains and shakel not in practice.	Inspection by LEL Nov 06,2012	Prepare the inspection check list of lifting equipment and inspect on monthly basis and also introduce the colour code system for power tool and lifting equipments.	15-NOV-12 24-Nov-12		ESOHS Officer	Completed	Check list has been prepared and shall be reported with November MPR.
LEL Comments	59	General	Some workers was observed in loss dress and without safety shoes and helmet at different areas of site.	Inspection by LEL Nov 06,2012	Ensure the 100 % compliance of PPEs and restrict the entry in project site without PPEs and tight dress in early morning before start the duty of workers.	18-NOV-12 27-Nov-12		ESOHS Officer	Completed	PPEs compliance is stisfactory but strickt inspection and compliance is necessary for 100 % compliance.
LEL Comments	60	General	Smoking areas are designated inside the building and some people observed that they are smoking away from the designated area.	Inspection by LEL Nov 06,2012	Designate all smoking area outside the building and educate the employee about the smoking area and keep check on employees.	14-Nov-12		ESOHS Officer	Completed	
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	39	Power House	A worker was observed throwing scaffolding pipes on ground from height without bank man there.	UA/UC of Oct MPR 2012	. Activity was brought to a halt till the deployment of bank man there.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	40	Power house	A welder was observed welding the metal piece without face shield.	UA/UC of Oct MPR 2012	He was advised to wear the mandatory PPE's before welding activity.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	41	Infront of Workshop	A worker was observed riding the tripod stand without safety harness	UA/UC of Oct MPR 2012	he was advised to wear the safety harness and then start the activity.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	42	Erection Bay	Some workers were observed working directly under the lifted load at erection bay	UA/UC of Oct MPR 2012	As a corrective action, a tool box talk was given the working crew about safe crane operations	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	43	electric pylon	A worker was observed working at height wearing the safety harness but not hooked during the erecting the electric pylon	UA/UC of Oct MPR 2012	He was advised to avoid such unsafe acts that put life in danger.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	44	Transformer Area	Mid railing was observed missing at downstream openings of gates	UA/UC of Oct MPR 2012	as a corrective action railing was arranged there.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	45	Power house	A naked wire observed directly plugged in the socket	UA/UC of Oct MPR 2012	as a corrective action a proper plug was arranged to minimize the electric shock hazard	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	46	Office building	Over speeding was observed in front of office area	UA/UC of Oct MPR 2012	as a corrective action driver was advised to follow the safe driving procedure.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	47	Power house	Opening of access lift observed missing the guard railing	UA/UC of Oct MPR 2012	as a corrective action guard railing has been installed there.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	48	Transformer Area	Sharp edges of cable trays observed unattended at transformer area,	UA/UC of Oct MPR 2012	as corrective action all unattended pieces were collected and placed at one place.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib

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LEL Comments	61	General	Fire fighting and evacuation Drill inside the power House.	-	-	10-Jan-12		ESOHS Officer	Completed	Mr. Azam contact to civil Defence Mirpur and invite their fire experts for training at site on Jan 11, 13
LEL Comments	62	General	Hiring of HSE inspector for night time compliance.	-	Recruit a HSE Inspect to increase the vegilance of HSE.			ESOHS Officer	Completed	
LEL Comments	63	Andritz WareHous e	Leakage of oil drum valve	Inspection by LEL Nov 27,2012	Proper maintenance of valve and place the tray under the leakage.	28-Nov-12		ESOHS Advisor	Completed	
LEL Comments	64	General	Housekeeping in Andritz warehouse and Erection Bay.	Inspection by LEL Nov 27,2012	Arrage all store items and remove the useless items.	04-Dec-12		ESOHS Advisor	Completed	
LEL Comments	65	Transforme r Area	ANDRITZ worker was smoking in transformer, Chinese Engineer smooking inside the powerhouse area.An other smoker observed at erection Bay.	Inspection by LEL Dec 12,2012	As per Instruction on John Methews and revised procedure termite him from services.	-		ESOHS Advisor ANDRITZ	Completed	ANDRITZ give a warning letter to him and Engineer have also leave the project
LEL Comments	66	Power house	Cable tray used as a ladder at different location of power House.	Inspection by LEL Dec 12,2012	Use Proper Ladder to minimize the accidents.	14-Dec-12		ESOHS Officer	Completed	
LEL Comments	67	Power house	Unbalance postable Scaffolding obeser at 255 elevation.	Inspection by LEL Dec 12,2012	Hang the Red tag with this portable Ladder.	14-Dec-12		ESOHS Officer	Completed	
LEL Comments	68	Power house	Tags of scaffolding found missing.	Inspection by LEL Dec 12,2012	Display the tags with updated status of inspection.	14-Dec-12		ESOHS Officer	Completed	
LEL Comments	69	Power house	Use LPG cylender for tea making near inflamable liquids in Fire pump House.	Inspection by LEL Dec 12,2012	Remove the LPG cylender and stop the work of that contractor.	13-Dec-12		ESOHS Officer	Completed	
LEL Comments	70	Power house	Cigeratte Buds Observed in Power House	Inspection by LEL Dec 12,2012	Inestigate this matter and terminate the smoker who is smoking inside the power House.	14-Dec-12		ESOHS Officer	Completed	
LEL Comments	71	Power house	Exit Sign are not Visible in darkness/Power shutdown.	Inspection by LEL Dec 12,2012	Exit Sign must be made with refecting matirial.	14-Dec-12		ESOHS Officer	Completed	
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	49	Ware House	Flammable material observed in warehouse along with other items	UA/UC of Nov MPR 2012	as corrective action flammable materials have been removed and shifted to designated places. A safety sign board for flammable items have installed there.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	50	Power house	Smoking points were found inside the working area	UA/UC of Nov MPR 2012	as a corrective action smoking point have been shifted outside the power house and office building to avoid any untoward fire incident.	Immediately		ESOHS Officer	Completed	It has been verified by laraib

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Reported Unsafe Acts/Unsafe Conditions (UA/UC)	51	stop log storage area	A worker was observed grinding the concrete wall of stop log storage area without safety goggles	UA/UC of Nov MPR 2012	as a corrective action he was advised to ensure the use of mandatory PPE's before the commencement of such activities	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	52	Headrace	A steep ramp at headrace with the risk of overturning of vehicles	UA/UC of Nov MPR 2012	as a corrective action a gradual slope was maintained for easy access of dump trucks	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	53	Headrace	A worker was observed swimming in water on a rubber tube at head race,	UA/UC of Nov MPR 2012	as corrective action a disciplinary action was taken against him and he was fired from site to teach the lesson to other workers so that no one should dare to repeat the practice	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	54	Tailrace	A worker was observed walking over slope of embankment wall at downstream	UA/UC of Nov MPR 2012	as a corrective action he was given a verbal warning and advised to avoid such type of practice, warning signs has also been installed on both side embankment wall.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	55	Headrace	Team of worker busy in installation of railing at embankment wall with poor housekeeping	UA/UC of Nov MPR 2012	as a corrective action they were advise to arrange all items properly on ground instead of keeping on embankment wall.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	56	Headrace	A group of workers were busy in the maintenance of NBE gates without any kind of guard railing	UA/UC of Nov MPR 2012	as a corrective action work activity stopped and advise to arrange railing before the commencement of the work.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	57	public road	Poor lighting arrangements at public road	UA/UC of Nov MPR 2012	as a corrective action new lights have been installed there to illuminate the area.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	58	Residence Area	Solid waste observed outside the waste drums placed along the bank of old bong	UA/UC of Nov MPR 2012	as corrective action rubbish was placed inside the waste drums.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib
LEL Comments	72	General	Weekly ESOHS meeting is preplanned and informed through email as well But Participants of contractor does not well prepared for weekly ESOHS meeting.	Inspection by LEL Dec 19,2012	1-They must be Updated with all CAP issues and try to resolve within the target date. 2-Provide the manpower status before the meeting. 3-Provide activity list of upcoming week for risk assesment.	26-Dec-12		ESOHS Officer	Completed	
LEL Comments	73	Sambu Workshop	Oil spillage due to Improper storage of used oil drum.	Inspection by LEL Dec 18,2012	Permanently; Used oil drums must store on concrete floor. Temporarily: Oil Drum Stored on polythene sheet or any other sheet to avoid direct contact of oil and land.	01-Jan-13		ESOHS Officer	Completed	
LEL Comments	74	Sambu Workshop	Sign Board of used oil Drum observed missing during site visit.	Inspection by LEL Dec 18,2012	Install sign board at identified location.	26-Dec-12		ESOHS Officer	Completed	

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	75	Assembly Point No 1	Assembly point is hide behind the grass and many workshop material scattered around the assembly point.	Inspection by LEL Dec 22,2012	Grass cutting and Housekeeping need to be done in entire area.	31-Dec-12		ESOHS Officer	Completed	
LEL Comments	76	239 Elevation	water pit obseved overfill Near the Open and unsafe electric power supply.	Inspection by LEL Dec 22,2012	Water needed to pump out and electrical connection will be channelize in safe manner.	31-Dec-12		ESOHS Officer	Completed	
LEL Comments	77	General	PTW system not implemented yet.	Inspection by LEL Dec 22,2012	Conduct a training, Prepare the procedure and implement Urgently.	-		ESOHS Officer	Completed	Andritz is totally reluctant to implement the PTW system.
LEL Comments	78	Near Parking Area	Reverse siren of Vehicale No 03D-3116 is out of order.	Inspection by LEL Dec 22,2012	Install the alarm ASAP to avoid any emergency and deploy helper with the driver.	09-Jan-13		ESOHS Officer	Completed	HSE departom of sambu stop the all activities of this vehicle and vehicle 02D will perform the activities of Vehicle No 03D.
LEL Comments	79	Landscaping Area	Soil erosion observed at tailrace	Inspection by LEL Dec 31,2012	Refill the eroded area with sweet soil.	12-Jan-13		ESOHS Officer	Completed	
LEL Comments	80	Near Parking Area	No barication observed at excavated area infront of offices.	Inspection by LEL Jan 01,2012	Baricade the excavated area infront of offices.	02-Jan-13		ESOHS Officer	Completed	
LEL Comments	81	Generator Infront of Security Cabin.	Extinguisher Inpection is due and No is also missing.	Inspection by LEL Dec 31,2012	Updated the card after Inspection and assign No to extinguisher.	10-Jan-13		ESOHS Officer	Completed	
LEL Comments	82	General	Numbering and Inspection is required of all slings and riggings equipments.	Inspection by LEL Jan 08,2013	Updated the Inspection check list and assign No to rigging equipment.	18-Jan-13		ESOHS Officer	Completed	
LEL Comments	83	Near Batch Plant	A Heap of waste observe several time near Batching Plant	Inspection by LEL Jan 08,2013	Dump the whole waste at designated location, and removed ASAP.	15-Jan-13		ESOHS Officer	Completed	
LEL Comments	84	Near Entry Gate	A deep excavated area observe without barication.	Inspection by LEL Jan 09,2013	Baricade the excavated area to avoid any accident.	10-Jan-13		ESOHS Officer	Completed	
LEL Comments	85	Transformer Area	Energized area obseved open for all.	Inspection by LEL Jan 09,2013	Restrict the entry of everyone except the relevent people as a sign board installed there.	12-Jan-13		ESOHS Officer	Completed	
LEL Comments	86	Headrace Bridge	Cover of Water Bore hole is not balance.	Inspection by LEL Jan 13,2013	Rectify the civers according to the bore hole	16-Jan-13		ESOHS Officer	Completed	
LEL Comments	87	workshop	Used oil drum store in very casual manner.	Inspection by LEL Jan 13,2013	All used oil drum needed to auction /properly cover and store.	17-Jan-13		ESOHS Officer	Completed	Oil drums have removed and Entire area has ben cleaned-up
LEL Comments	88	Erection Bay	Balance of 30 ton rigging crane is out of calibration	Inspection by LEL Jan 13,2013	Calibrate the balance	22-Jan-13		ESOHS Officer	Completed	



**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	59	11 kV pole	A disk insulator fixed on electric pole of 11 kV line observed broken,	UA/UC of Dec MPR 2012	as a corrective action Wapda (Line owner) was informed and was replaced with the new one on same day.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	60	Headrace	Fabricator observed without life jacket while fixing guard railing at right embankment wall at head race	UA/UC of Dec MPR 2012	as a corrective action area supervisor was advised to avoid such practices near deep waters and he was provided a life jacket	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	61	GIS Room,	Smoking butts observed inside the gear insulated switchyard (GIS) room thrown by some unknown worker.	UA/UC of Dec MPR 2012	as a corrective action area supervisor advised to keep vigilance on smokers and take a stern action.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	62	Electric Pylon No 3	Erection of electric pylons in progress without proper anchoring of safety harness by the erection crew,	UA/UC of Dec MPR 2012	as a corrective action a tool box talk was delivered on use of safety harness.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	63	laraib office	A canister with flammables observed near the smoking point in the back side of laraib office,	UA/UC of Dec MPR 2012	as a corrective action ESOHS officer Laraib was informed and within no time he removed the diesel canister and advised the employees concerned to avoid the practice in future	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	64	Workshop	Used oil drums observed placed on soil having chances of spillage,	UA/UC of Dec MPR 2012	as a corrective action triple layer of polyethylene sheet has been laid beneath the drums.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	65	Power House	Naked wire observed plugged in electric socket,	UA/UC of Dec MPR 2012	as a corrective action two pin electric shoe arranged to make the proper arrangement.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	66	Workshop	Missing of safety sign near oil storage areas,	UA/UC of Dec MPR 2012	as a corrective action respective safety signs have been installed at site.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	67	Transformer Area	Passage of workers through transformer deck observed open	UA/UC of Dec MPR 2012	as a corrective action entry close by installing hard rail.	Immediately		ESOHS Officer	Completed	It has been verified by laraib
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	68	Public road	A bulk quantity of Mud observed on the public road spilled from tailgate of dumper	UA/UC of Dec MPR 2012	as a corrective action the road is cleaned by removing the mud to avoid any slipping hazard	Immediately		ESOHS Officer	Completed	It has been verified by laraib
LEL Comments	89	Contract Voilance	Mr. Munawar stop LEL Inspector to photography in Andritz	Inspection by LEL Jan 13,2013	Conduct a training to Communicate all the staff that client can inspect the every area of project at any time.	30-Jan-13		ESOHS Officer	Completed	
LEL Comments	90	General	Some workers are observed in loss dress again.	Inspection by LEL Jan 19,2013	Take a strict action against the non compliar in the form of warning letter or any show cause as well as Ban the enentry of Non compliar	30-Jan-13		ESOHS Officer	Completed	Security guards are present on both sides of entrane are advised to check the entry of non compliar. So no one in loose dress is allowed to entre the site.



**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	91	General	Some visitors are observe visiting without permission and also observe in loos dress.	Inspection by LEL Jan 27,2013	Circulate the email among all staff that Visitors are not allowed without permission.	30-Jan-13		ESOHS Officer	Completed	
LEL Comments	92	stop log storage area	Trench block with concrete and cause a water blokage.	Inspection by LEL Jan 27,2013	Clean-up the whole trench and ensure the fluent flow of water.	20-Feb-13		ESOHS Officer	Completed	Small trenches have been made at stop log storage area to drain the rain water.
LEL Comments	93	245-Elevation	Housekeeping condition is not acceptable	Inspection by LEL Jan 23,2013	Arrange and Clean-up the whole area.	07-Feb-13		ESOHS Officer	Completed	Housekeeping of area is maintained very well, no rubbish or waste is present at site.
LEL Comments	94	270-Elevation	safety cover of elevator motor pully is not inplace.	Inspection by LEL Feb 04,2013	Arrage safety cover and install asap to avoid any incident.	16-Feb-13		ESOHS Officer	Completed	Safety cover of elevator motor and pully shall be installed before handing over to O&M contractor.
LEL Comments	95	240-Elevation	Hazardious stagnant water pit over flow causing very bad smell	Inspection by LEL Feb 04,2013	Properly pump out the whole water	10-Feb-13		ESOHS Officer	Completed	
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	69	Batching Plant Area	Heaps of packaging wastes including wooden, paper and polyethylene sheets witnessed behind the batch presenting a dirty look	UA/UC of Jan MPR 2013	as a corrective action junk of the load have been removed from site.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	70	Sambu Workshop	Lubricant drums placed on ground with a potential of oil spillage	UA/UC of Jan MPR 2013	as a corrective action triple layer polyethylene sheets have been laid under the drums.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	71	infront of offices	Steel bars erected vertically in the foundation of drainage in front of office building presenting a potential of injury in case of fall,	UA/UC of Jan MPR 2013	as a corrective action the hazardous area has been barricaded with warning tap.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	72	Down-stream stoplog	A crew of workers was observed workings near openings of downstream stoplog without wearing life jackets	UA/UC of Jan MPR 2013	as a corrective action life jacket were issued the crew.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	73	security cabin	Open entrance in front of security cabin might cause security issue.	UA/UC of Jan MPR 2013	as a corrective action the entrance is secured with the installation of hard barricades	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	74	office building	Plenty of packaging waste observed at different locations in the office building with a potential of fire hazard and presenting a dirt look	UA/UC of Jan MPR 2013	as a corrective action the entire areas were cleaned and loads were removed at designated place.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	75	Excavated trenches near sacerity cabin	Excavated trenches observed unmarked and without any barricade might cause fall hazard,	UA/UC of Jan MPR 2013	as a corrective action the entire area was barricaded with the warning and reflective taps	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	76	parking shed	Sharp Pieces of used welding rods observed near the parking shed with a potential of foot injury.	UA/UC of Jan MPR 2013	as a corrective action these pieces have been collected and disposed of properly.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	77	Sambu workshop	A large quantity of used oil drums and used tyres at workshop might cause spillage, and presents a dirty look	UA/UC of Jan MPR 2013	as a corrective action the waste items has been handed over to the recycler contractor.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
LEL Comments	96	Septic Tank	Long length bolt over the ladder of septic tank.	Inspection by LEL Feb 04,2013	Relocate the ladder	16-Feb-13		ESOHS Officer	Completed	
LEL Comments	97	Noise	Noise monitoring of power house is required	Inspection by LEL Feb 04,2013	Arrange Ear muff and plug and also arrange 3rd party noise monitoring.	20-Feb-13		ESOHS Officer	Completed	PPEs has been provided to the worker.
LEL Comments	98	Stoplog Area	Stagnant water observed inside equipment	Inspection by LEL Feb 13,2013	Water needed to drain and clean up the equipment	20-Feb-13		ESOHS Officer	Completed	
LEL Comments	99	Near sambu Mess	Float valve of water tank observed out of order	Inspection by LEL Feb 13,2013	Replace / reaire the floating valve of water tank	20-Feb-13		ESOHS Officer	Completed	During inspection it was observed that float valve was not repaired.
LEL Comments	100	Labor Camp	solid waste and litters observed during visit	Inspection by LEL Feb 13,2013	workers team depute for cleaning of this area	20-Feb-13		ESOHS Officer	Completed	
LEL Comments	101	227-elevation	scatered electric cables are observed in 227 level.	Inspection by LEL Feb 13,2013	All cables needed to channelize.	21-Feb-13		ESOHS Officer	Completed	
LEL Comments	102	Public Bridge	Installed electric poles obseved tilt in one direction and creat a large gap.	Inspection by LEL Feb 13,2013	Ensure the proper installation of poles and cover the gap with wire.	27-Feb-13		ESOHS Officer	Completed	
LEL Comments	103	Landscaping	Rain cuts and damage water trenches obseved in different areas of landscaping	Inspection by LEL Feb 13,2013	ensure the good maintenance practice including repairing of rain cut, watering, trimming and repairing of water trenches.	27-Feb-13 12-Mar-13		ESOHS Officer	In-progress	Rain cuts refilling have been started
LEL Comments	104	Tailrace	There was gravels used instead gabions in idiented location for stablize the land slopes.	Inspection by LEL Feb 13,2013	only gabions are recommended for land slops not gravels.	27-Feb-13		ESOHS Officer	Completed	
LEL Comments	105	Offices	Waste observed behind the offices Andritz and Sambu Pakistan	Inspection by LEL Feb 22,2013	Clean up the entire area.	09-Mar-13		ESOHS Officer	Completed	
LEL Comments	106	Andritz store	Oil spilage was observed infront of Andritz store in oil storage area.	Inspection by LEL Feb 25,2013	Excavate the contaminated soil and replace with fresh .	01-Mar-13		ESOHS Officer	Completed	

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Recommendations from MM	14	PPEs Non compliance	Some worker were observed without safety shoes.	Inspection by LEL March 06 ,2013	Ensure the 100 % compliance of PPEs to avoid any accident	13-Mar-13		ESOHS Officer	Completed	
LEL Comments	107	Smooking	A worker was observed smooking at 270 elevation	Inspection by LEL March 06 ,2013	Issue a warning letter to him and increase the awarness among all the employees	08-Mar-13		ESOHS Officer	Completed	Warning letter has been issued to smooker and tbt has conducted on No smoking also.
Recommendations from MM	15	House keeping	poor housekeeping observer in control room	Inspection by LEL March 06 ,2013	Clean up the ertire area	09-Mar-13		ESOHS Officer	Completed	
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	78	NBE Gates	A mechanic was observed working at NBE gates without wearing life jacket	UA/UC of Feb MPR 2013	as corrective action life jackets were issued to avoid any drowning hazard.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	79	Power House	Electrician was observed working without using safety gloves,	UA/UC of Feb MPR 2013	as a corrective action area supervisor was advised to ensure the use of gloves while working with the electrical installations.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	80	Stoplog Area	A worker was observed passing through the fence barrier in the stop log area	UA/UC of Feb MPR 2013	as a corrective action HSE supervisor was asked to block the access by filling the gaps if any in the fence barrier	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	81	Labor Camp	A local sub contractor crew of workers involved in demolishing of the workshop area was found keeping a gas cylinder with them for cooking purpose	UA/UC of Feb MPR 2013	as a corrective action gas cylinder was removed and asked them not to keep any such thing with them during working.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	82	Parking Area	Some worker observed working at height cleaning window panels by using truck mounted crane were keeping a water container with them placed in an unsafe manner	UA/UC of Feb MPR 2013	as a corrective action water container was asked to couple with the guard railing to avoid the falling object hazard.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	83	270-Elevation	A worker was observed sitting at the edge of the roof of top elevation without any support for resting during a repairing work in that area.	UA/UC of Feb MPR 2013	As corrective he was warned strictly advised not to repeat the practice.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	84	Transformer Area	In the transformer area extension cables was found damaged and exposed	UA/UC of Feb MPR 2013	as a corrective action the electrician was called and asked him to insulate the wire properly.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	85	Power House	Some workers were observed working with grinder without wearing safety glasses	UA/UC of Feb MPR 2013	As a corrective action the area supervisor was called and the workers were given verbal warning over the non compliance of the PPE'S.	Immediately		ESOHS Officer	Completed	It has been verified by laraib ESOHS Officer

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	86	NBE Gates	PDL Worker was busy in working of NBE gate modification without wearing life jacket .	UA/UC of Feb MPR 2013	as a corrective action a life jacket was issued	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib ESOHS Officer
Reported Unsafe Acts/Unsafe Conditions (UA/UC)	87	Erection Bay	A part of the top cover of the turbine hosing unit 2 was found damaged which was a potential trip and fall hazard	UA/UC of Feb MPR 2013	as a corrective action the area was barricaded supervisor was informed to repair it on immediate basis.	Immediately		ESOHS Officer	Completed	It has been verified by Iaraib ESOHS Officer
LEL Comments	108	Erection Bay	Some Chinese engineer observed in open footwear in working area.	Inspection by LEL Mar 11,2013	Strictly Advise to Chinese to wear safety shoes and ensure the compliance.	15-Mar-13		ESOHS Officer	Completed	
LEL Comments	109	Stoplog Area	Rusty stagnant Water observed in stoplog area.	Inspection by LEL Mar 10,2013	Clean up the entire area.	17-Mar-13		ESOHS Officer	Completed	
LEL Comments	110	Boundry Fence	Large gaps observed at different locations	Inspection by LEL Mar 10,2013.	Fill the gaps with existing fence	26-Mar-2013 04-Apr-2013		ESOHS Officer	In-progress	
LEL Comments	111	Turbine 2	Oil leakage observed in governor.	Inspection by LEL Mar 10,2013.	Replace the seal to avoid leakage	27-Mar-13		ESOHS Officer	Completed	
LEL Comments	112	Power house	Drinking water cooler connected with treatment plant without analysis of water.	Inspection by LEL Mar 10,2013.	Disconnect immediately and connected after confirmation that water is fit for human consumption	27-Mar-13		ESOHS Officer	Completed	
LEL Comments	113	Power house	PDL Worker was busy in working of NBE gate modification without wearing PPEs (Life Jackets, Harness, Gloves).	Inspection by LEL Mar 31,2013.	Ensure the provision of PPEs and its 100 % compliance.	05-Apr-13		ESOHS Officer	Completed	
LEL Comments	114	Andritz warehouse and Labor camp	Waste heaps observed in the different areas of labor camp and Andritz warehouse.	Inspection by LEL Mar 31,2013.	Clean up the entire identified area	05-Apr-13		ESOHS Officer	Completed	
LEL Comments	115	Power house	Scaffolding observed without tag.	Inspection by LEL Mar 31,2013.	Arrange a complete inspection of scaffolding and fix a tag on it.	05-Apr-13		ESOHS Officer	Completed	
LEL Comments	116	Andritz Warehouse	Deep excavated area observed near Andritz warehouse	Inspection by LEL Mar 31,2013.	Cordon off the entire area with warning tape.	05-Apr-13		ESOHS Officer	Completed	
LEL Comments	117	HVAC 245-Elevatin	waste observed inside the water treatment and HVAC room.	Inspection by LEL Apr 6,2013.	Clean up the identified area.	41376		ESOHS Officer	Open	
LEL Comments	118	Power house	Permanent water system for landscaping of power house.	Inspection by LEL Apr 6,2013.	Permanent pumping and watering system			ESOHS Officer	Completed	ESOHS officer replied that Permanent watering system is not included in EPC contract.
LEL Comments	119	Power house	Permanent waste bin found missing inside power house	Inspection by LEL Apr 6,2013.	Permanent waste bin should be placed inside power house	14-Apr-13		Manager ESOHS TNBRP	Open	

**ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN**

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Priority	Responsibility	Status	Remarks
LEL Comments	120	Power house	Permanent smoking points found also missing at identified location.	Inspection by LEL Apr 6,2013.	Identify the location and Permanent smoking points should be placed at identified location.	14-Apr-13		Manager ESOHS TNBRP	Open	

## **Exhibit 28 – Near Miss Reports**

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## Near Miss Report

<b>Injured/ Involved Persons</b>		
Name: <i>Mr. Ali</i>	Occupation/Job Title: <i>Operator</i>	
Location: <i>Power house</i>	Date Reported: <i>15/ 01/ 2012</i>	Time: <i>1700 hrs</i>
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>On January 18, 2013 at 1230 hrs hose pipe of acetylene gas cylinder caught fire, immediately the welder squeezed the pipes and fire was put out.</p> <p>According to details the welder Mr. Ali was busy in metal cutting with the help of torch in the power house, when suddenly hose pipe near the torch caught fire. Immediately the welder squeezed the pipes to block the leakage of gases and then he closed the valve. The investigation revealed that one of the flexible hosepipes supplying Acetylene was observed loose that caused the leakage of gas. Fire was controlled without any loss or human injury.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action	<input type="checkbox"/> Improper body position/posture	
<input type="checkbox"/> Poor housekeeping; disorderly workplace	<input type="checkbox"/> Tasks not varied/micro breaks not taken	
<input type="checkbox"/> Slip/trip hazards	<input type="checkbox"/> Unnecessary rushing	
<input type="checkbox"/> Lack of or inappropriate furniture/equipment	<input type="checkbox"/> Improper lifting	
<input type="checkbox"/> Design or arrangement of furniture/equipment	<input type="checkbox"/> Unsafe loading/placement	
<input type="checkbox"/> Defective furniture, tools, equipment or materials	<input type="checkbox"/> Using defective equipment	
<input type="checkbox"/> Inadequate or excessive illumination	<input checked="" type="checkbox"/> Using equipment improperly	
<input type="checkbox"/> Inadequate ventilation	<input type="checkbox"/> Altering or modifying equipment	
<input type="checkbox"/> Excessive noise	<input type="checkbox"/> Not using personal protective equipment or failing to use it properly	
<input type="checkbox"/> Inadequate or improper protective equipment	<input type="checkbox"/> Not following appropriate procedures	
	<input type="checkbox"/> Inappropriate conduct	
	<input type="checkbox"/> Hazardous personal attire	
	<input type="checkbox"/> Other (explain):	

- Fire and explosion hazards
- Inadequate warning systems
- Inadequate client/employee action



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- Adverse weather
- Other (explain):

**Corrective Action**

1. Piping system was inspected and replaced with the new one; area supervisor was advised to check on routine basis.
2. A tool box talk was conducted on compressed gas cylinder safety and workers were briefed as following.
  - Leaks are serious hazards as they are closest to the operator.
  - Always check condition before use, ensure tip is free of obstruction
  - Signs of heat damage around the blow pipe or torch may indicate the equipment has suffered internal damage and is leaking and should be replaced immediately
  - No sign of sideways movement of the cutting lever as this could cause gas leaks within the body of the torch that are difficult to detect.
  - Always fit the correct size nozzle for the job( hole size and pressure set at regulator determine gas flow and gas velocity exiting the nozzle, manufacturer gives a pressure rating for the nozzle being use,.

**Persons Conducting Investigation:**

Name	Signature	Date
Muhammad Azam		16/01/2013
Mr. Park Kesio		16/01/2013



## Near Miss Report



<b>Injured/ Involved Persons</b>		
Name: <i>M. Murtaza</i>	Occupation/Job Title: <i>Scaffolder</i>	
Location: <i>Powerhouse gallery</i>	Date Reported: <i>20/01/2013</i>	Time: <i>0935 hrs</i>
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>A scaffolding pipe fell from height of almost 15 ft in gallery in powerhouse very close to the workers working there. It narrowly escaped the human injury and no such loss is reported.</p> <p>According to details a crew of workers were busy in erecting the scaffolding inside the units, when one of the pipes slipped from the grip of Mr. Murtaza. It fell down in the gallery, although working activity was continue in the area, but workers were strictly warned to have a safe distance and avoid coming under the working area. Mr. Murtaza was trying to handle the scaffolding pipe when it slipped from his hand and fell on the ground just missing the person in the adjacent area. Pipe hit to the electric cable and it chopped the cable. The cause of incident was the oily surface of steel pipe that caused slipping.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action <input type="checkbox"/> Poor housekeeping; disorderly workplace <input checked="" type="checkbox"/> Slip/trip hazards <input type="checkbox"/> Lack of or inappropriate furniture/equipment <input type="checkbox"/> Design or arrangement of furniture/equipment <input type="checkbox"/> Defective furniture, tools, equipment or materials <input type="checkbox"/> Inadequate or excessive illumination <input type="checkbox"/> Inadequate ventilation	<input type="checkbox"/> Improper body position/posture <input type="checkbox"/> Tasks not varied/micro breaks not taken <input type="checkbox"/> Unnecessary rushing <input type="checkbox"/> Improper lifting <input type="checkbox"/> Unsafe loading/placement <input type="checkbox"/> Using defective equipment <input type="checkbox"/> Using equipment improperly <input type="checkbox"/> Altering or modifying equipment <input type="checkbox"/> Not using personal protective equipment or failing to use it properly <input type="checkbox"/> Not following appropriate procedures	

- |  |  |
|--|--|
| <input type="checkbox"/> Excessive noise                             | <input type="checkbox"/> Inappropriate conduct     |
| <input type="checkbox"/> Inadequate or improper protective equipment | <input type="checkbox"/> Hazardous personal attire |
| <input type="checkbox"/> Fire and explosion hazards                  | <input type="checkbox"/> Other (explain):          |
| <input type="checkbox"/> Inadequate warning systems                  |  |
| <input type="checkbox"/> Inadequate client/employee action           |  |
| <hr/>  |  |
| <input type="checkbox"/> Adverse weather                             |  |
| <input type="checkbox"/> Other (explain):                            |  |

### Corrective Action

1. Tool box talk was conducted to avoid use of oily surfaced pipes.
2. Proper housekeeping was ensured at workplace.
3. Chopped cable was replaced with the new one to avoid electric shock hazard.
4. No work is allowed under the work at height, if necessary must use mandatory PPE's including hard hats and safety shoes.

### Persons Conducting Investigation:

Name	Signature	Date
Muhammad Azam		20/01/ 2013
Mr. Park Kesio		20/ 01/ 2013

## Near Miss Report

<b>Injured/ Involved Persons</b>		
Name: <i>Mr. Siddique</i>	Occupation/Job Title: <i>Operator</i>	
Location: <i>Office area</i>	Date Reported: <i>12/ 02/ 2013</i>	Time: <i>0800 hrs</i>
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>On February 11, 2013 at 0930 hrs a sweeper fell on floor because of slippery surface but fortunately he remained unhurt.</p> <p>According to details on above mentioned date Mr. Siddique working as a sweeper in office slipped on wet floor and fell on the ground. He was busy in cleaning the office floor when he slipped and could not balance him as result he fell but he remained unhurt and safe.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action	<input type="checkbox"/> Improper body position/posture	
<input type="checkbox"/> Poor housekeeping; disorderly workplace	<input type="checkbox"/> Tasks not varied/micro breaks not taken	
<input checked="" type="checkbox"/> Slip/trip hazards	<input type="checkbox"/> Unnecessary rushing	
<input type="checkbox"/> Lack of or inappropriate furniture/equipment	<input type="checkbox"/> Improper lifting	
<input type="checkbox"/> Design or arrangement of furniture/equipment	<input type="checkbox"/> Unsafe loading/placement	
<input type="checkbox"/> Defective furniture, tools, equipment or materials	<input type="checkbox"/> Using defective equipment	
<input type="checkbox"/> Inadequate or excessive illumination	<input type="checkbox"/> Using equipment improperly	
<input type="checkbox"/> Inadequate ventilation	<input type="checkbox"/> Altering or modifying equipment	
<input type="checkbox"/> Excessive noise	<input type="checkbox"/> Not using personal protective equipment or failing to use it properly	
<input type="checkbox"/> Inadequate or improper protective equipment	<input type="checkbox"/> Not following appropriate procedures	
<input type="checkbox"/> Fire and explosion hazards	<input type="checkbox"/> Inappropriate conduct	
	<input type="checkbox"/> Hazardous personal attire	
	<input type="checkbox"/> Other (explain):	

- Inadequate warning systems
- Inadequate client/employee action



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- Adverse weather
- Other (explain):

**Corrective Action**

- He was advised to wear ant slippery shoes on wet surfaces to avoid slips.
- Follow the safe working procedure to avoid slip fall hazards.

**Persons Conducting Investigation:**

Name	Signature	Date
Muhammad Azam		12/02/2013
Mr. Park Kesio		12/02/2013

## Near Miss Report



<b>Injured/ Involved Persons</b>		
Name: <i>N/A</i>	Occupation/Job Title: <i>Scaffolder</i>	
Location: <b>Stop Log Area</b>	Date Reported: <i>24/ 02 / 2013</i>	Time: <i>2300 hrs</i>
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>During the testing of the turbines Due to the back lash of water on sudden closure stop log gate cover up rooted and fell in water, but fortunately it sink down safely without any damage to the machinery or any person.</p> <p>According to details on 24<sup>th</sup> of February 2013 at the night time the testing of unit 4 was going on during the testing the wicked gates closed suddenly producing a back lash of water. It created the pressure upward and due to the pressure one of the stop log gate cover up rooted and fell down in the water. Due to the heavy load of the cover it sank down deep inside the water near the turbines. But fortunately no damage was done to the turbine or any other machinery there.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action	<input type="checkbox"/> Improper body position/posture	
<input type="checkbox"/> Poor housekeeping; disorderly workplace	<input type="checkbox"/> Tasks not varied/micro breaks not taken	
<input type="checkbox"/> Slip/trip hazards	<input type="checkbox"/> Unnecessary rushing	
<input type="checkbox"/> Lack of or inappropriate furniture/equipment	<input type="checkbox"/> Improper lifting	
<input type="checkbox"/> Design or arrangement of furniture/equipment	<input type="checkbox"/> Unsafe loading/placement	
<input type="checkbox"/> Defective furniture, tools, equipment or materials	<input type="checkbox"/> Using defective equipment	
<input type="checkbox"/> Inadequate or excessive illumination	<input type="checkbox"/> Using equipment improperly	
<input type="checkbox"/> Inadequate ventilation	<input type="checkbox"/> Altering or modifying equipment	
<input type="checkbox"/> Excessive noise	<input type="checkbox"/> Not using personal protective equipment or failing to use it properly	
	<input type="checkbox"/> Not following appropriate procedures	
	<input type="checkbox"/> Inappropriate conduct	

- |   |  |
|---|--|
| <input type="checkbox"/> Inadequate or improper protective equipment          | <input type="checkbox"/> Hazardous personal attire |
| <input type="checkbox"/> Fire and explosion hazards                           | <input type="checkbox"/> Other (explain):          |
| <input type="checkbox"/> Inadequate warning systems                           |  |
| <input type="checkbox"/> Inadequate client/employee action                    |  |
| <hr/>   |  |
| <input type="checkbox"/> Adverse weather                                      |  |
| <input checked="" type="checkbox"/> Other (explain) tripping of the machinery |  |

**Corrective Action**

1. Covers of the stop log gates were removed and the area was barricaded
2. Related engineers were informed and they recovered the gate cover from the water

**Persons Conducting Investigation:**

Name	Signature	Date
Muhammad Azam		20/01/ 2013
Mr. Park Kesio		20/ 01/ 2013

## Near Miss Report

<b>Injured/ Involved Persons</b>		
Name: <i>Mr. Mubasher</i>	Occupation/Job Title: <i>Cad Operator</i>	
Location: <i>Office area</i>	Date Reported: <i>26/ 03/ 2013</i>	Time: <i>1100 hrs</i>
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>On March 26/3/2013 Mr. Mubasher an Auto Cad Operator while moving around in the office hall struck with the electrical cord in the walk way.</p> <p>According to details on above mentioned date Mr. Mubasher working as an Auto cad operator was moving in the office for taking his print outs. He got his foot struck in the electric cord in the walk way. Likely he managed his balance and remained safe. The electric cord was providing the power supply to the computer.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action	<input type="checkbox"/> Improper body position/posture	
<input type="checkbox"/> Poor housekeeping; disorderly workplace	<input type="checkbox"/> Tasks not varied/micro breaks not taken	
<input checked="" type="checkbox"/> Slip/trip hazards	<input checked="" type="checkbox"/> Unnecessary rushing	
<input type="checkbox"/> Lack of or inappropriate furniture/equipment	<input type="checkbox"/> Improper lifting	
<input type="checkbox"/> Design or arrangement of furniture/equipment	<input type="checkbox"/> Unsafe loading/placement	
<input type="checkbox"/> Defective furniture, tools, equipment or materials	<input type="checkbox"/> Using defective equipment	
<input type="checkbox"/> Inadequate or excessive illumination	<input type="checkbox"/> Using equipment improperly	
<input type="checkbox"/> Inadequate ventilation	<input type="checkbox"/> Altering or modifying equipment	
<input type="checkbox"/> Excessive noise	<input type="checkbox"/> Not using personal protective equipment or failing to use it properly	
<input type="checkbox"/> Inadequate or improper protective equipment	<input type="checkbox"/> Not following appropriate procedures	
<input type="checkbox"/> Fire and explosion hazards	<input type="checkbox"/> Inappropriate conduct	
	<input type="checkbox"/> Hazardous personal attire	
	<input type="checkbox"/> Other (explain):	

- Inadequate warning systems
- Inadequate client/employee action



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- Adverse weather
- Other (explain):

**Corrective Action**

- The electric cord was removed from the walk way and was fixed to another electric plug beside
- He was advised to avoid rushing in the work place

**Persons Conducting Investigation:**

Name	Signature	Date
Muhammad Aslam		26/03/2013
Mr. Park Kesio		26/03/2013



**Exhibit 29 –First Aid Reports**

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## First Aid Report

<b>Injured/ Involved Persons</b>		
Name: Mr. Khalid	Job Title: Electrician	
Location: Power house	Date Reported: 03/ 01/2013	Time: 1415 hrs
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>Mr. Khalid fell down from height of approximately 4 ft while working and got backache. Massage with pain killer gel was done at site and then he visited site clinic for further assistance.</p> <p>According to details on 1<sup>st</sup> of the current month an electrician was working on temporary electrical distribution panels placed on the concrete slab of septic tank adjacent to office building. He did not noticed while moving on slab and fell down on ground from a height of approximately 4 meters. He suffered backache and was delivered first aid at site by massage of painkiller jel. Later he visited the site clinic for further assistance where doctor advised him some painkiller tablets and Jel. It was minor nature of first aid case he was back on his duty the same day.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action <input type="checkbox"/> Poor housekeeping; disorderly workplace <input checked="" type="checkbox"/> Slip/trip hazards <input type="checkbox"/> Lack of or inappropriate furniture/equipment <input type="checkbox"/> Design or arrangement of furniture/equipment <input type="checkbox"/> Defective furniture, tools, equipment or materials <input type="checkbox"/> Inadequate or excessive illumination <input type="checkbox"/> Inadequate ventilation	<input type="checkbox"/> Improper body position/posture <input type="checkbox"/> Tasks not varied/micro breaks not taken <input type="checkbox"/> Unnecessary rushing <input type="checkbox"/> Improper lifting <input type="checkbox"/> Unsafe loading/placement <input type="checkbox"/> Using defective equipment <input type="checkbox"/> Using equipment improperly <input type="checkbox"/> Altering or modifying equipment <input type="checkbox"/> Not using personal protective equipment or failing to use it properly	



<input type="checkbox"/> Excessive noise	<input checked="" type="checkbox"/> Not following appropriate procedures
<input type="checkbox"/> Inadequate or improper protective equipment	<input type="checkbox"/> Inappropriate conduct
<input type="checkbox"/> Fire and explosion hazards	<input type="checkbox"/> Hazardous personal attire
<input type="checkbox"/> Inadequate warning systems	<input type="checkbox"/> Other (explain):
<input type="checkbox"/> Irate client/employee action	
<hr/>	
<input type="checkbox"/> Adverse weather	
<input type="checkbox"/> Other (explain):	

**Corrective Action**

A tool box talk was delivered him and following measures were discussed

- Ensure proper housekeeping of the working site
- Remove the items causing slip, trip and fall.
- Ensure proper use of PPE's while working with electrical equipments.

**Reported by:**

Medical Officer	Dr. Muhammad Asif		
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**Review by:**

ESOHS Officer	Muhammad Azam		
Site & ESOHS Manager	Mr. Park Kessio		



## First Aid Report

<b>Injured/ Involved Persons</b>		
Name: Mr. Ijaz	Job Title: Electrician	
Location: Power house	Date Reported: 11/ 02/ 2013	Time: 1215 hrs
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>Mr. Ijaz Ahmad the crane operator got a blunt trauma injury on right knee while going down from stairs.</p> <p>According to details on 11<sup>th</sup> of February the crane operator while getting off from the crane his foot slipped from the foot rest or stair and he got a blunt trauma injury on right knee. Pain killer gel was applied on the effected part and shifted him to the site clinic for further treatment.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action <input type="checkbox"/> Poor housekeeping; disorderly workplace <input checked="" type="checkbox"/> Slip/trip hazards <input type="checkbox"/> Lack of or inappropriate furniture/equipment <input type="checkbox"/> Design or arrangement of furniture/equipment <input type="checkbox"/> Defective furniture, tools, equipment or materials <input type="checkbox"/> Inadequate or excessive illumination <input type="checkbox"/> Inadequate ventilation <input type="checkbox"/> Excessive noise <input type="checkbox"/> Inadequate or improper protective equipment	<input type="checkbox"/> Improper body position/posture <input type="checkbox"/> Tasks not varied/micro breaks not taken <input type="checkbox"/> Unnecessary rushing <input type="checkbox"/> Improper lifting <input type="checkbox"/> Unsafe loading/placement <input type="checkbox"/> Using defective equipment <input type="checkbox"/> Using equipment improperly <input type="checkbox"/> Altering or modifying equipment <input type="checkbox"/> Not using personal protective equipment or failing to use it properly <input checked="" type="checkbox"/> Not following appropriate procedures <input type="checkbox"/> Inappropriate conduct <input type="checkbox"/> Hazardous personal attire	



<input type="checkbox"/> Fire and explosion hazards <input type="checkbox"/> Inadequate warning systems <input type="checkbox"/> Inadequate client/employee action <hr/> <input type="checkbox"/> Adverse weather <input type="checkbox"/> Other (explain):	<input type="checkbox"/> Other (explain):
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**Corrective Action**



A tool box talk was delivered him and following measures were discussed

- Ensure proper housekeeping of the working site
- Remove the items causing slip, trip and fall.
- Ensure proper use of PPE's while working with electrical equipments.

**Reported by:**

Medical Officer	Dr. Muhammad Asif		
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**Review by:**

ESOHS Officer	Muhammad Azam		
Site & ESOHS Manager	Mr. Park Kessio		



## First Aid Report

<b>Injured/ Involved Persons</b>		
Name: Mr. Allah Dita	Job Title: labor	
Location: Sambu Store	Date Reported: 05/03/ 2013	Time: 1400 hrs
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>Mr. Allah Dita got his right hand finger and right ankle hurt while lifting a T iron Guarder.he got some swelling in the finger.</p> <p>According to details on 5<sup>th</sup> of March a labor Allah Dita was working in the Sambu Store. While displacing the T iron Guarder he could not gripped properly and it slipped from his right hand and he got his right hand and ankle hurt. His right hand middle finger swelled up. As a first aid Pain killer gel was applied on the effected part and shifted him to the site clinic for further treatment.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action	<input type="checkbox"/> Improper body position/posture	
<input type="checkbox"/> Poor housekeeping; disorderly workplace	<input type="checkbox"/> Tasks not varied/micro breaks not taken	
<input type="checkbox"/> Slip/trip hazards	<input type="checkbox"/> Unnecessary rushing	
<input type="checkbox"/> Lack of or inappropriate furniture/equipment	<input checked="" type="checkbox"/> Improper lifting	
<input type="checkbox"/> Design or arrangement of furniture/equipment	<input type="checkbox"/> Unsafe loading/placement	
<input type="checkbox"/> Defective furniture, tools, equipment or materials	<input type="checkbox"/> Using defective equipment	
<input type="checkbox"/> Inadequate or excessive illumination	<input type="checkbox"/> Using equipment improperly	
<input type="checkbox"/> Inadequate ventilation	<input type="checkbox"/> Altering or modifying equipment	
<input type="checkbox"/> Excessive noise	<input type="checkbox"/> Not using personal protective equipment or failing to use it properly	
<input type="checkbox"/> Inadequate or improper protective	<input type="checkbox"/> Not following appropriate procedures	
	<input type="checkbox"/> Inappropriate conduct	



<input type="checkbox"/> equipment	<input type="checkbox"/> Hazardous personal attire
<input type="checkbox"/> Fire and explosion hazards	<input type="checkbox"/> Other (explain):
<input type="checkbox"/> Inadequate warning systems	
<input type="checkbox"/> Inadequate client/employee action	
<hr/> <input type="checkbox"/> Adverse weather	
<input type="checkbox"/> Other (explain):	

**Corrective Action**



A tool box talk was delivered him and following measures were discussed

- Ensure proper use of PPE's while working with electrical equipments.
- Ensure to follow the safe operating procedure.

**Reported by:**

Medical Officer	Dr. Muhammad Asif		
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**Review by:**

ESOHS Officer	Muhammad Azam		
Site & ESOHS Manager	Mr. Park Kessio		



## First Aid Report

<b>Injured/ Involved Persons</b>		
Name: Mr. Manzoor Hussain	Job Title: labor	
Location: Power House area	Date Reported: 06/03/ 2013	Time: 1800 hrs
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>Mr. Manzoor Hussain a labor got his little finger of the right hand injured while working cutting the copper wires with the help of a cutter.</p> <p>According to details on 6<sup>th</sup> of march 2013 Mr. Manzoor Husain was working in the power house area while cutting the copper wire with the help of a cutter a small piece of wire injured his little finger of the right hand. He received a small cut on the finger As a first aid pressure bandage was applied on the effected part and shifted him to the site clinic for further treatment.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action <input type="checkbox"/> Poor housekeeping; disorderly workplace <input type="checkbox"/> Slip/trip hazards <input type="checkbox"/> Lack of or inappropriate furniture/equipment <input type="checkbox"/> Design or arrangement of furniture/equipment <input type="checkbox"/> Defective furniture, tools, equipment or materials <input type="checkbox"/> Inadequate or excessive illumination <input type="checkbox"/> Inadequate ventilation <input type="checkbox"/> Excessive noise <input checked="" type="checkbox"/> Inadequate or improper protective	<input type="checkbox"/> Improper body position/posture <input type="checkbox"/> Tasks not varied/micro breaks not taken <input type="checkbox"/> Unnecessary rushing <input type="checkbox"/> Improper lifting <input type="checkbox"/> Unsafe loading/placement <input type="checkbox"/> Using defective equipment <input checked="" type="checkbox"/> Using equipment improperly <input type="checkbox"/> Altering or modifying equipment <input type="checkbox"/> Not using personal protective equipment or failing to use it properly <input type="checkbox"/> Not following appropriate procedures <input type="checkbox"/> Inappropriate conduct	





<input type="checkbox"/> equipment <input type="checkbox"/> Fire and explosion hazards <input type="checkbox"/> Inadequate warning systems <input type="checkbox"/> Inadequate client/employee action <hr/> <input type="checkbox"/> Adverse weather <input type="checkbox"/> Other (explain):	<input type="checkbox"/> Hazardous personal attire <input type="checkbox"/> Other (explain):
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**Corrective Action**



A tool box talk was delivered him and following measures were discussed.

- Ensure proper use of PPE's while working with electrical equipments.
- Ensure to follow the safe operating procedure.

**Reported by:**

Medical Officer	Dr. Muhammad Asif		
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**Review by:**

ESOHS Officer	Muhammad Azam		
Site & ESOHS Manager	Mr. Park Kessio		

## First Aid Report

<b>Injured/ Involved Persons</b>		
Name: Mr. Wong	Job Title: electric engineer	
Location: Power House area	Date Reported: 19/03/ 2013	Time: 1300 hrs
<p><i>Describe what happened and, if applicable, describe injury. Attach an accident/incident diagram, if appropriate:</i></p> <p>Mr. Wong a chine's engineer got hit on knee while going up stairs in the power house. His knee became red and swelled up.</p> <p>According to details on 19<sup>th</sup> of march 2013 Mr. Wong was working in the power house area while going up stairs his knee got hit with the stairs step. His knee become suddenly red and swelled up later on. As a first aid his knee was massaged and a pain killer gel was applied. He was shifted to the site clinic for further treatment.</p>		
<b>Causes: Check (✓) all that are applicable</b>		
<b>Conditions</b>	<b>Practices</b>	
<input type="checkbox"/> Congestion or restricted action <input type="checkbox"/> Poor housekeeping; disorderly workplace  <input checked="" type="checkbox"/> Slip/trip hazards  <input type="checkbox"/> Lack of or inappropriate furniture/equipment  <input type="checkbox"/> Design or arrangement of furniture/equipment  <input type="checkbox"/> Defective furniture, tools, equipment or materials  <input type="checkbox"/> Inadequate or excessive illumination <input type="checkbox"/> Inadequate ventilation  <input type="checkbox"/> Excessive noise  <input type="checkbox"/> Inadequate or improper protective	<input checked="" type="checkbox"/> Improper body position/posture  <input type="checkbox"/> Tasks not varied/micro breaks not taken  <input checked="" type="checkbox"/> Unnecessary rushing  <input type="checkbox"/> Improper lifting  <input type="checkbox"/> Unsafe loading/placement  <input type="checkbox"/> Using defective equipment  <input type="checkbox"/> Using equipment improperly  <input type="checkbox"/> Altering or modifying equipment  <input type="checkbox"/> Not using personal protective equipment or failing to use it properly  <input type="checkbox"/> Not following appropriate procedures  <input type="checkbox"/> Inappropriate conduct	



<input type="checkbox"/> equipment <input type="checkbox"/> Fire and explosion hazards <input type="checkbox"/> Inadequate warning systems <input type="checkbox"/> Inadequate client/employee action <hr/> <input type="checkbox"/> Adverse weather <input type="checkbox"/> Other (explain):	<input type="checkbox"/> Hazardous personal attire <input type="checkbox"/> Other (explain):
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**Corrective Action**



A tool box talk was delivered him and following measures were discussed.

- Be aware of the hazard in the work place while moving around at the site
- Do not rush while going up stairs or coming down stairs

**Reported by:**

Medical Officer	Dr. Muhammad Asif		
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**Review by:**

ESOHS Officer	Muhammad Azam		
Site & ESOHS Manager	Mr. Park Kessio		

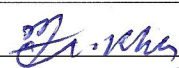
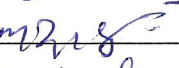
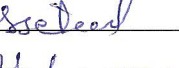
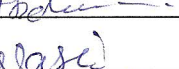
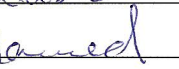

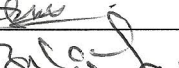

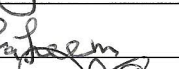

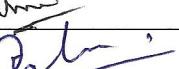

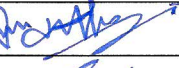


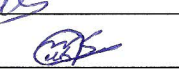
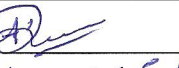

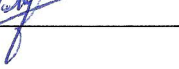
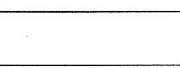



## Exhibit 30 – Trainings

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## Attendance sheet

Venue: Conference Room				Date: 10/01/13
A training program on First Aid & CPR				
Sr. No	Name	Designation	Company	Signature
1	shahbaz	STOR CH	SAMBU	[Signature]
2	MADISOOD KHAN	M. CHACKER	SAMBU	[Signature]
3	M. Riyaz	Elect. Helper	SAMBU	[Signature]
4	Ashfaq Hussain	Electrician	SAMBU	[Signature]
5	Abdul Razaq	Rigger	SAMBU	[Signature]
6	M. Wasim	Mechanic	SAMBU	[Signature]
7	M. Amin	Mechanic	SAMBU	[Signature]
8	Asif Maqsood	Doctor	Sambu	[Signature]
9	M. Jamil	Chief Svy	Sambu	[Signature]
10	Faheem Khalid	Electrical Engr	Sambu	[Signature]
11	Imran Khan	Site Engr.	Sambu	[Signature]
12	Muhammad Sohail	E.S.OFFS officer	Karachi	[Signature]
13	Major Assad Nazeem	M. S	Sambu	[Signature]
14	Major Sardar Azam Khan	HSE ADVISOR	ANDRITZ	[Signature]
15	S. Haidar Alif Hashmi	Assistant Engineer	ANDRITZ	[Signature]
16	IMRAN KHAN	HSE Inspector	ANDRITZ	[Signature]
17	FAHEEM AKBAR	T. Helper	ANDRITZ	[Signature]
18	Abdul Latif	HSE - Supervisor	Sambu	[Signature]
19	Billal Ullah	Manager BHS	TINBRP	[Signature]
20	Ajzeel Shahzad	Survey Helper	SAMBU	[Signature]
21	Mubashar Hussain	CAD operator	Sambu	[Signature]
22	Abdul Qadir	Forman	Sambu. Co	[Signature]
23	ZAHHEER AHMAD	Elect/Engineer	SAMBU	[Signature]
24	FARMAN ULLAH	ESOFFS officer	TINBRP	[Signature]

## Attendance sheet

Venue: Conference Room				Date: 10/01/13
A training program on Fire Fighting				
Sr. No	Name	Designation	Company	Signature
01.	MADSOOD KHAN	M. CHAACKER	SAMBUI	
2.	M. Riya	Elect. Helper	"	
3.	Ashfaq Hussain	Electrician	"	
4.	Abdul Rauf	Rigger	"	
5.	Wasiim	Mechanic	"	
6.	Hameed	Mechanic	"	
7.	NASIR	CIVIL FOREMAN	"	
8.	M. Usman Nadeem	ASST-T/keeper	"	
9.	Bilal Khan	Manager IBHS	TNBRP	
10	M. Jamil	Chief Svy	Sambu	
11	Faheem Khalid	Electrical Engg	Sambu	
12	Imran Khan	Site Engineer	Sambu Pak	
13	Muhammed Sohail	ESOHs Officer	Laravis	
14	Faizan Ullah	ESOHs Officer	TNBRP	
15	S. Heider Ali Khan	Assistant Engineer	ANDRITZ	
16	IMRAN KHAN	HSE INSPECTOR	ANDRITZ	
17	FAHEEM AKBAR	Tech. Helper	ANDRITZ	
18	M. Isam	Assit-Surveyor	Sambu	
19	Aqeel Shahzad	Survey Helper	Sambu	
20	Mubashar Hussain	Cad Operator	Sambu	
21	Abdul Quddus	Site Engineer Civil	Sambu	
22	ZAMEER Ch.	Elect/Engineer	SAMBU.	
23	Abdul Rauf	H.S. E/Supervisor	Sambu.	



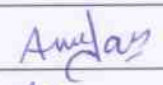






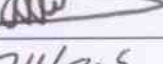




## Training Attendance sheet

Topic: House Keeping

Venue: Conference room

Project: New Bing Escape Hydro Electric Power Complex

Date: 25-02-2013

Sr. No	Name	Company	Designation	Signature
1.	Ali Adnan	SAMBU	Mech. Engineer	
2	Ali Akbar	SAMBU	mech. Engr	
3.	Imran Khan	ANDRITZ HYDRO	HSE Inspector	
4	Abdul Raziq	Process Dynamics	Project manager	
5	M. Razaq	SAMBU	Security incharge	
6	Fazal Rehman	SAMBU	Electric F/M	
7.	M. Inam Ullah	Sambu Pak	Cons. Manager	
8	M. Murtaza	Sambu	P.M	
9	Waqas Ahmed	Site Engr	Site Engr	
10	M. Jamil	Site Engr	Site Engr	
11	Danish Tunawiz	Sambu	HSE officer	
12	Abdul Latif	Sambu	H.S.E/Supervisor	

  
 Delivered by \_\_\_\_\_

  
 ESOHS Officer \_\_\_\_\_







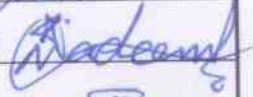

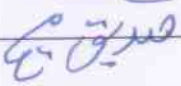

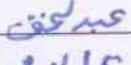
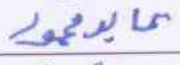


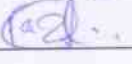
## Training Attendance sheet

Topic: House Keeping

Venue: Conference room

Project: New Bing Escape Hydro Electric Power Complex

Date: 25-02-2013

Sr. No	Name	Company	Designation	Signature
1	M Imran Abbasi	Andritz	A-s Forman	
2	Asad Shahzad	Sambu	Survey Helper	
3	FAEED IOBIL	Sambu	Labour	
4	M. Iqbal	Sambu	Labour	
5	Abul Quddus	Sambu	Forman	
6	M. Zahoor Abbasi	Sambu	Helper	
7	M. Iqbal	Andritz	Pipe Fabricator	
8	AZHAR KHAN	Andritz	T.C.H HELPER	
9	M. Saddique			
10				
11	Tahir Hussain	Andritz	Fleet	
12	Abdul haq Butt	Sambu Pak	Mason	
13	Abid Aziz	Sambu Pak	Labour	
14	M. Noor			
15	M. Zahoor	PDL		
	Faisal		CoD.OP.	

  
Delivered by

  
ESHS Officer





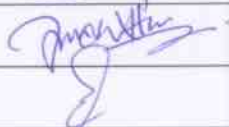



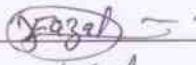
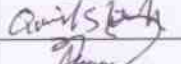

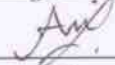

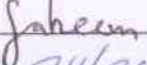

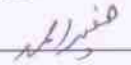
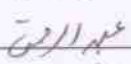

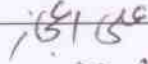
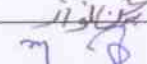

## Training Attendance sheet

Topic: Water Safety, Heat Stress

Venue:

Project: New Bing Escape Hydro Electric Power Complex

Date: 26-03-13

Sr. No	Name	Company	Designation	Signature
1	Abdul Latif	Sambu-Const	H.S.E. Super	
2	Majid (R) Sardar <sup>ADAM KHAN</sup>	ANDRITZ	H.S.E ADVISOR	
3	Imran Khan	ANDRITZ	H.S.E Inspector	
4	Imran Khan	Sambu Pak	Site Engr.	
5	M. Nawaz	Sambu Pak	Forman	
6	ABDULGUDDUS.	Sambu. com.co	Superviser	
7	Fazal Rahim	Sambu cor	Electric. FM	
8	Qasid Shah	Sambu	Labour.	
9	M. Zulfiqar Ali	"	T/keeper.	
10	Amir Afzar.	"	Foreman.	
11	M. Ashfaq	Sambu Pakistan	Q.S.	
12	Fahem Khalid	SAMBU	Electrical Engineer	
13	Waqas Ahmed	Sambu Co	Site Engr	
14	MUNAWAR, IQBAL	Sambu Co	Sace Folder	
15	Sagheer Ahmad	Sambu Co	" "	
16	Abdul Rahman	Sambu Co	" "	
17	Mujahid Hamid	"	Labour.	
18	Ali Ejaz	"	"	
19	Chau Nawaz	"	"	
20	M. Jamil	Sambu	S. Engineer	

  
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ESOHS Officer

## Training Attendance sheet

Topic: Handling the soild waste

Venue:

Project: New Bing Escape Hydro Electric Power Complex

Date: 13-3-13

Sr. No	Name	Company	Designation	Signature
1	Sadique Masih	Sambu.	Sweeper	سابقہ
2	Aslam Victor	"	Sweeper	اسلام
3	Baga Masih	"	Sweeper	بگہ
4	Sadique Masih	"	Sweeper	سابقہ
5	Niaz Ahmed	"	Tandari	نیاز احمد
6	Khalid	"	Cook	خالد
7	M. Rafiq	"	Cook	محمد رفیق
8	M. Jamil	"	Tandari	محمد جمیل
9	M. Nawaz	"	Cook	نواز
10	Umar Dargy	"	Dish Washer	عمر دراز
11	M. Ramzan	"	Dish Washer	محمد رمضان
12	M. Nadeem	"	Camp Boys	محمد نديم

  
Delivered by

  
ES&HS Officer

## **Exhibit 31 – Tool Boxes Talks**

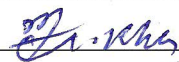
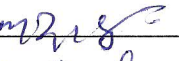
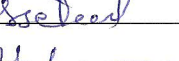
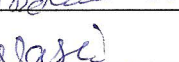
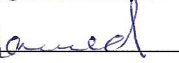

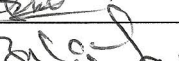

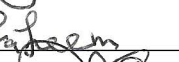





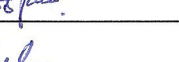
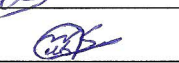


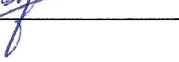
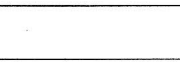



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## Attendance sheet

Venue: Conference Room				Date: 10/01/13
A training program on First Aid & CPR				
Sr. No	Name	Designation	Company	Signature
1	shahbaz	STOR CH	SAMBU	[Signature]
2	MADISOOD KHAN	M. CHACKER	SAMBU	[Signature]
3	M. Riyaz	Elect. Helper	SAMBU	[Signature]
4	Ashfaq Hussain	Electrician	SAMBU	[Signature]
5	Abdul Razaq	Rigger	SAMBU	[Signature]
6	M. Wasim	Mechanic	SAMBU	[Signature]
7	M. Amin	Mechanic	SAMBU	[Signature]
8	Asif Maqsood	Doctor	Sambu	[Signature]
9	M. Jamil	Chief Svy	Sambu	[Signature]
10	Faheem Khalid	Electrical Engr	Sambu	[Signature]
11	Imran Khan	Site Engr.	Sambu	[Signature]
12	Muhammad Sohail	E.S.OFFS officer	Karachi	[Signature]
13	Major Assad Nazeem	M. S	Sambu	[Signature]
14	Major Sardar Azam Khan	HSE ADVISOR	ANDRITZ	[Signature]
15	S. Haidar Alif Hashmi	Assistant Engineer	ANDRITZ	[Signature]
16	IMRAN KHAN	HSE Inspector	ANDRITZ	[Signature]
17	FAHEEM AKBAR	T. Helper	ANDRITZ	[Signature]
18	Abdul Latif	HSE - Supervisor	Sambu	[Signature]
19	Billal Ullah	Manager BHS	TINBRP	[Signature]
20	Ajzeel Shahzad	Survey Helper	SAMBU	[Signature]
21	Mubashar Hussain	CAD operator	Sambu	[Signature]
22	Abdul Qadir	Forman	Sambu. Co	[Signature]
23	ZAHKEER AHMAD	Elect/Engineer	SAMBU	[Signature]
24	FARMAN ULLAH	ESOFFS officer	TINBRP	[Signature]



## Attendance sheet

Venue: Conference Room				Date: 10/01/13
A training program on Fire Fighting				
Sr. No	Name	Designation	Company	Signature
01.	MADSOOD KHAN	M. CHAACKER	SAMBUI	
2.	M. Riyaq	Elect. Helper	"	
3.	Ashfaq Hussain	Electrician	"	
4.	Abdul Rauf	Rigger	"	
5.	Wasiim	Mechanic	"	
6.	Hameed	Mechanic	"	
7.	NASIR	CIVIL FOREMAN	"	
8.	M. Usman Nadeem	ASST-T/keeper	"	
9.	Bilal Khan	Manager IBHS	TNBRP	
10	M. Jamil	Chief Svy	Sambu	
11	Faheem Khalid	Electrical Engg	Sambu	
12	Imran Khan	Site Engineer	Sambu Pak	
13	Muhammed Sohail	ESOHs Officer	Laravis	
14	Faizan Ullah	ESOHs Officer	TNBRP	
15	S. Heider Ali Khan	Assistant Engineer	ANDRITZ	
16	IMRAN KHAN	HSE INSPECTOR	ANDRITZ	
17	FAHEEM AKBAR	Tech. Helper	ANDRITZ	
18	M. Isam	Assit-Surveyor	Sambu	
19	Aqeed Shahzad	Survey Helper	Sambu	
20	Mubashar Hussain	Cad Operator	Sambu	
21	Abdul Quddus	Site Engineer Civil	Sambu	
22	ZAMEER Ch.	Elect/Engineer	SAMBU.	
23	Abdul Rauf	H.S. E/Supervisor	Sambu.	

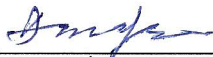
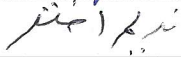


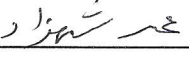
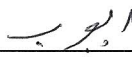
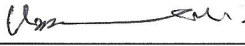

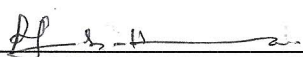
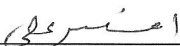



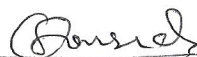


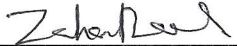

## Tool Box Talk Record Sheet

Venue: Power House.

Date: 5-1-13


Topic: Use of safety belt.

Delivered by: Ab: Latif.

Sr. No	Name	Designation	Signature
	Amir Afsar	E/M	
	Nadeem Akhtar	Labor	
	Ab: Hameed	Labor	
	Raisal Saleem	Labor	
	Umar Shehzad	Labor	
	M. Ayub	Helper	
	Umair Maneer	Helper	
	M. Kamran	Helper	
	Aftab Hussain	Carpenter	
	Afsar Ali	Carpenter	
	Channowz	Carpenter	
	Shabir Hussain	Mason	
	Rashid Iqbal	Mason	
	Qasid Hussain	Mason	
	M. Nadeem	Helper	
	Tawed	Helper	
	Zahoor Ahmed	Helper	
	Asif Ali	=	

Sambu Construction Co., Ltd

Conducted by 

  
ESCHS Officer

### Tool Box Talk Record Sheet

Venue: Power House

Date: 14-1-13

Sr. No	Name	Designation	Signature
	<u>Naris Nazeem.</u>	<u>E/M.</u>	<u>(N) Nazeem.</u>
	<u>Abdul Qudus</u>	<u>E/M.</u>	<u>Abdul Qudus.</u>
	<u>Munawar Iqbal.</u>	<u>S/Solder.</u>	<u>(M) Munawar.</u>
	<u>Shamroz Khan</u>	<u>Labor</u>	<u>(S) Shamroz.</u>
	<u>Zahid Hameed.</u>	<u>Mason</u>	<u>Zahid Hameed.</u>
	<u>Sajjad.</u>	<u>Labor</u>	<u>(S) Sajjad.</u>
	<u>Rhuzam</u>	<u>Helper</u>	<u>Rhuzam.</u>
	<u>Tunaid</u>	<u>Labor.</u>	<u>(T) Tunaid.</u>
	<u>Mujahid.</u>	<u>Helper</u>	<u>(M) Mujahid.</u>
	<u>M-Usman</u>	<u>Labor.</u>	<u>(U) Usman.</u>
	<u>Afan</u>	<u>Labor.</u>	<u>(A) Afan.</u>
	<u>Fayazul.</u>	<u>Labor.</u>	<u>Fayazul.</u>
	<u>Saeed Iqbal.</u>	<u>Labor</u>	<u>(S) Saeed.</u>
	<u>Zahoor</u>	<u>Steel fixer.</u>	<u>(Z) Zahoor.</u>
	<u>Rizwan. Khan</u>	<u>Helper</u>	<u>(R) Rizwan.</u>
	<u>Maksoob-</u>	<u>Helper</u>	<u>Maksoob-</u>

Sambu Construction Co., Ltd

(Signature)  
Conducted by

(Signature)  
ESOHS Officer

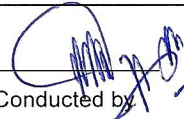


## Tool Box Talk Record Sheet

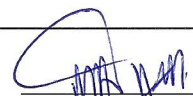
Venue: *Power House.*

Date: *17-1-13*

Sr. No	Name	Designation	Signature
	<i>Rioz Khan</i>	<i>E/M.</i>	<i>[Signature]</i>
	<i>Seulab Shah</i>	<i>E/M.</i>	<i>[Signature]</i>
	<i>Sagheer Ahmed</i>	<i>S/folder.</i>	<i>[Signature]</i>
	<i>Zahoor Ahmed</i>	<i>S/fixer.</i>	<i>Zahoor Ahmed</i>
	<i>Ab. Rehman</i>	<i>S/folder.</i>	<i>A Rehman</i>
	<i>Aftab Hussain</i>	<i>Mason.</i>	<i>[Signature]</i>
	<i>Allah Ditta</i>	<i>Mason.</i>	<i>Allah Ditta</i>
	<i>Asif Khan.</i>	<i>Mason.</i>	<i>[Signature]</i>
	<i>Fareed</i>	<i>Mason.</i>	<i>[Signature]</i>
	<i>Ali Ejaz.</i>	<i>Labor</i>	<i>[Signature]</i>
	<i>Sohail.</i>	<i>Labor.</i>	<i>Sohail</i>
	<i>Sajjad Ahmed.</i>	<i>Helper</i>	<i>[Signature]</i>
	<i>M. Usman</i>	<i>Helper</i>	<i>[Signature]</i>
	<i>M. Shakeeb</i>	<i>Labor</i>	<i>[Signature]</i>
	<i>SheerZaman</i>	<i>Helper.</i>	<i>SheerZaman.</i>
	<i>Adeel</i>	<i>Helper.</i>	<i>[Signature]</i>
	<i>Tufan Iqbal.</i>	<i>Helper</i>	<i>Tufan Iqbal</i>
	<i>Ali Ejaz.</i>	<i>Labor</i>	<i>[Signature]</i>
	<i>Sajjad Ali</i>	<i>Helper</i>	<i>[Signature]</i>

Conducted by 

Sambu Construction Co., Ltd

  
ESHS Officer



## Tool Box Talk Record Sheet

Venue: P/ House.

Date: 25-1-13.

Sr. No	Name	Designation	Signature
	<u>Ab: Rehman</u>	<u>F/M.</u>	<u>[Signature]</u>
	<u>Shabeel.</u>	<u>Labor.</u>	<u>[Signature]</u>
	<u>Ali Jaz.</u>	<u>Labor.</u>	<u>[Signature]</u>
	<u>Aftab.</u>	<u>Mason</u>	<u>[Signature]</u>
	<u>Sajjad. Ali</u>	<u>Helper</u>	<u>[Signature]</u>
	<u>Sagheer</u>	<u>S/fixer</u>	<u>[Signature]</u>
	<u>Zahoor</u>	<u>S/folder</u>	<u>[Signature]</u>
	<u>Amir Afsar</u>	<u>F/M.</u>	<u>[Signature]</u>
	<u>M-Ayub</u>	<u>Helper.</u>	<u>[Signature]</u>
	<u>Afsar Ali</u>	<u>Carpenter</u>	<u>AFSARALI</u>
	<u>Omar Muneer</u>	<u>Helper</u>	<u>[Signature]</u>
	<u>Rashid Uchaz.</u>	<u>Mason.</u>	<u>[Signature]</u>
	<u>Channawez</u>	<u>Carpenter.</u>	<u>[Signature]</u>
	<u>Nadeem</u>	<u>Helper.</u>	<u>[Signature]</u>
	<u>Faisal Saleem</u>	<u>Labor.</u>	<u>[Signature]</u>

Sambu Construction Co., Ltd

Conducted by [Signature]

ESOS Officer [Signature]

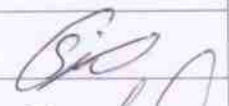
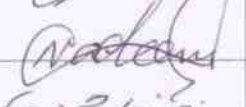
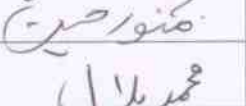
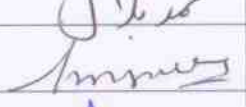

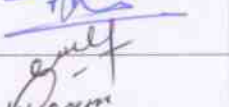

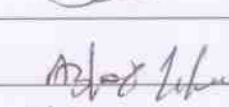

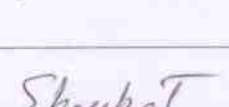
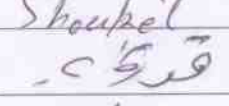
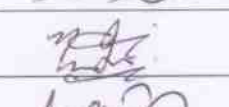
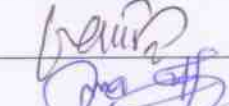

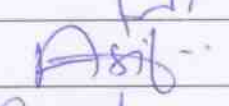
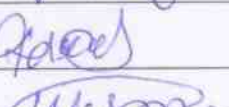
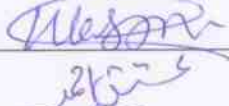




## Tool Box Talk Attendance sheet

Topic: Manuall Handling

Venue: 14-02-13

Project: NBE Hydro Electric Power Complex

Date:

Sr. No	Name	Company	Designation	Signature
1	SHADAR ALI	Andritz	فولر	
2	<del>Waleem</del>		فٹر	
3	میر حسین		وولٹر	
4	M. Bilal		الٹریشن	
5	M Imran ABBASI		Foreman	
6	Adeel ur Rehman		Tech Helper	
7	Jugale		Fitter	
8	Waseem Ahmed		T. Helper	
9	Abdul-Latif		Rigger	
10	AZHAR KHAN		T.H HELPER	
11	M. Asif		Fitter	
12	G. Mustafa		T-H Helper	
13	Shauketullah		Folder	
14	Radi chul.		Forman	
15	M. KARAM		Mill Right	
16	FARIS		Ele. Tech	
17	Imran Khan		HSE Inspector	
18	M. Usman		Fitter	
19	M. Asif Khan		Tech Helper	
20	Adeel ur Rehman		Store keeper	
21	Hafiz Waseem		Tech Helper	
22	A-Tijze Ahmed		Electracion	

Sign:   
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Sign:   
ESOHs Officer

## Tool Box Talk Record Sheet

Venue:

Date:

16-02-13

Sr. No	Name	Designation	Signature
1	Mattoob Hussain	Labour	
2	Irfan Hussain	"	
3	Munawar Iqbal	scaffolder	
4	Lizwan Khan	Labour	
5	Majahid Majeed	"	
6	M. Usman	Time Keeper	
7	Rhuzran Shezad	Helper	
8	Zabeer Ahmed	steelfixer	
9	Adeel Hussain	Helper	
10	Irfan Latif	"	
11	M. Asif Khan	Mason	
12	Ab. Fareed	"	
13	Aftab	"	
14	Aftab Hussain	carpenter	
15	Fayaz Qureshi	Labour	
16	Shabir Hussain	carpenter	
17	Ali Ejaz	Labour	
18	Mubhdaz Shah	"	
19	Shakeel Hussain	"	
20	Sabeel	"	
21	Ab. Qadus	Foreman	
22	Mulab Shah	"	
23	Atikhan Ahmed	"	
24	M. Riaz	"	
25	Ab. Rehman	"	
26			
27			
28			
29			

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**Tool Box Talk Attendance sheet**

Topic: Food Safety

Venue: Mess Hall

Project: NBE Hydro Electric Power Complex

Date: 18-02-13

Sr. No	Name	Company	Designation	Signature
	M. Khaleed	Sambus	Cook	<i>[Signature]</i>
	Jamel Ahmed	9	Bread Maker	<i>[Signature]</i>
	Jameel	-	Bread Maker	<i>[Signature]</i>
	umer Hayat	0	Helper	<i>[Signature]</i>
	Nawaz	9	Helper	<i>[Signature]</i>
	Tayyab	9	Cook	<i>[Signature]</i>
	Ghulam Jelani	7	Bread Maker	<i>[Signature]</i>

Sign: *[Signature]*  
Delivered by

Sign: *[Signature]*  
ESOHS Officer

## Tool Box Talk Record Sheet

Venue: Acomodation area.

Date: 18-02-13

Sr. No	Name	Designation	Signature
1	Shfaq Hussain	Foreman	esrebil
2	Tasaddug Hussain	labor	
3	Amanat Ali	labor	
4	Abhlag Hussain	labor	
5	Sheer Badshah	labor	
6	Shah Wali	labor & Foreman	
7	Ahmed Haleem	labor	
8	Umar Rehman	labor	
9	Magsood	labor	
10	Yasir Khan	labor	
11	Jonran	labor	
12	Raheem Shah	labor	
13	Bhesat Rehman	labor	
14	Schait Irshad	Foreman	
15	Nouroz	labor	
16	Irshad	labor	
17	Fageer Taj	labor	
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			

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## Tool Box Talk Attendance sheet

Topic: Slip, Trip, Fall

Venue: 3-03-13

Project: NBE Hydro Electric Power Complex

Date:

Sr. No	Name	Company	Designation	Signature
1	Irfan Latif	Sambu	Helper	عرفان لطف
2	Irfan Hussain		Labour	عرفان حسین
3	Mateeb Hussain		"	مطہر حسین
4	Zahoor Ahmed		steeltixer	Zahoor
5	Rizwan Khan		Labour	رضوان خان
6	Sagheer Ahmed		scottfolds	ساجیر احمد
7	Ab. Rehman		"	ابو رحمان
8	Rhussam		Helper	رشام
9	Payy3 Lul.		Labour	پایز لول
10	Ali Jaz		"	علی جاز
11	M. Shafiq		"	مشفق
12	Sabeel Ahmed		"	سبیل احمد
13	Mukhtar		"	مختار
14	Mukhtar Shah		"	مختار شاہ
15	Afsar Ali		carpenter	افسار علی
16	Ayub		"	ایوب
17	Mujahid Mujeeb		Labour	مجاہد مجیب
18	Adel Hussain		Helper	آدل حسین
19	Chan Nawaz		carpenter	چن نواز
20	Ramzan		Helper	رفزان
21	Qulab Shah		orman	قولاب شاہ
22	Iftikhar Hussain		orman	افتخار حسین

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## Tool Box Talk Attendance sheet

Topic: UA/UC

Venue:

Project: NBE Hydro Electric Power Complex

Date: 9-03-13

Sr. No	Name	Company	Designation	Signature
1	محمد اسلم	Sambu-	Mesh Maker-	محمد اسلم
2	عبد الحميد		=	عبد الحميد
3	محمد فؤيد		=	محمد فؤيد
4	محمد اقبال		=	اقبال
5	محمد نياز		=	نياز
6	محمد افضل		=	محمد افضل
7	محمد رفيع		=	رفيع
8	محمد رمضان		=	محمد رمضان
9	محمد اختر		=	محمد اختر
10	منظور حسين		=	منظور حسين
11	محمد رفيع		=	محمد رفيع
12	محمد زلف		=	محمد زلف
13	محمد امير		=	محمد امير
14	غلام قادر		=	غلام قادر
15	جمال دين		=	جمال دين
16	صفيير حسين		=	صفيير حسين
17	الذاريقا		Foreman	الذاريقا
18	محمد جليل		Mesh Maker	محمد جليل
19	محمد جميل		=	محمد جميل
20	لياقت حسين		=	لياقت حسين
21	مستاق احمد		=	مستاق احمد
22	عيسى		Foreman-	Abbas Khan

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## Tool Box Talk Attendance sheet

Topic: *Safe Stacking on Site*

Venue:

Project: NBE Hydro Electric Power Complex

Date: *18-03-13*

Sr. No	Name	Company	Designation	Signature
1	<i>Tal Saeed</i>	<i>Sub-Contr</i>	<i>Forman</i>	<i>تال سعید</i>
2	<i>Fahad</i>	<i>Sambu</i>	<i>Laborer</i>	<i>فہاد</i>
3	<i>Abrar</i>		<i>Laborer</i>	<i>ابوار</i>
4	<i>Rehmatullah</i>		<i>Laborer</i>	<i>رحمت اللہ</i>
5	<i>Zareen</i>		<i>Laborer</i>	<i>زارین</i>
6	<i>Imran Khan</i>		<i>Laborer</i>	<i>عمران خان</i>
7	<i>Imran Khan</i>		<i>Laborer</i>	<i>عمران خان</i>
8	<i>Tawed. Khan</i>		<i>Laborer</i>	<i>Javed Khan</i>
9	<i>Ramzan Khan</i>		<i>Laborer</i>	<i>رمضان خان</i>
10	<i>Rehman</i>		<i>Laborer</i>	<i>Rehman</i>
11	<i>Umras Rehman</i>		<i>Forman</i>	<i>امراس رحمان</i>
12	<i>Nawroz</i>		<i>Laborer</i>	<i>نوروز</i>
13	<i>Faqeer Taj</i>		<i>Laborer</i>	<i>فقیر تاج</i>
14	<i>Amant Ali</i>		<i>Laborer</i>	<i>امانت علی</i>
15	<i>Abhilag Hussain</i>		<i>Laborer</i>	<i>ابھیلگ حسین</i>
16	<i>Tasadag Hussain</i>		<i>Forman</i>	<i>تسادگ حسین</i>
17	<i>M. Waqar</i>		<i>Laborer</i>	<i>Waqar</i>
18	<i>Tarique</i>		<i>Laborer</i>	<i>طارق</i>

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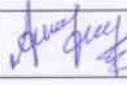
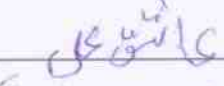
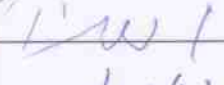
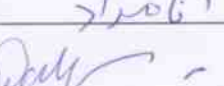

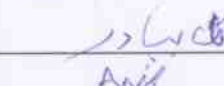



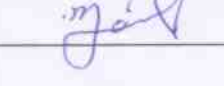
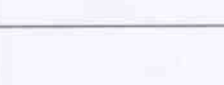

## Tool Box Talk Attendance sheet

Topic: Load Safety

Venue:

Project: NBE Hydro Electric Power Complex

Date: 19-03-13

Sr. No	Name	Company	Designation	Signature
1	Rana Tariq Javed	Sambu.	Foreman	
2	Aashiq Ali	4	Labor	
3	Ijaz Gul		Labor	
4	Namdas		Labor	
5	Wahab		Labor	
6	M. Gul.		Labor	
7	Gul Bahadur		Labor	
8	Amir Afsar.		Foreman	
9	AQEEL SWANIZD		Helper	
10	Aftab Shah		Carpenter	
11	Afsar Ali		Carpenter	
12	M. Jamil	11	Engineer	

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Sign:   
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**Exhibit 32 – ESMP**

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## ENVIRONMENTAL MANAGEMENT PLAN/ ENVIRONMENTAL SOCIAL ISSUE MANAGEMENT PLAN

Project: NBE Hydro Electric Power Complex

Date: 19-09-2012

Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
1	Site Preparation	Community effect	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM	Yearly	Headrace Channel Tailrace Channel	Feb 20, 2010 as per project activity	Throughout Project Period	Alternate routes has been provided. Project Employment opportunities have been created to suite the particular skills or enhanced skills from nearby villages of Project Site. Total number of Employees: 688 Number of Local and Nearabouts: 259 Contractor persons are not involved in any interaction with the nearby community
		Loss of Cultivation/ flora	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM in coordination with ESOHS Officer	Yearly	Headrace Channel Tailrace Channel	Aug, 2012	Aug, 2012	Tree Plantation Plan has been implemented,trees has been planted along tailrace, it has been planted the five times of the trees that has been cut. The land scaping of Power house is in progress and will be finalized in the end of the current year.
		Solid Waste	Revised IEE, Pak NEQS, Solid Waste Management System, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Yearly	Headrace Channel Tailrace Channel	—	Throughout Project Period	Proper solid waste handling has been accomplished. All rubbish and non reuseable waste is handed over to local contractor for safe disposal at Mirpur municipality approved site. The recycleable waste handed and reuseable waste produced from commencement of the project is handed over to recyclic contractor
2	Transportation of Power house Equipment	Air Quality	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi-annual for 1st year of Construction. Annual for next two years	Power house	May 30, 2010 Dec 30, 2010. Dec 30, 2011 June 16, 2012	May 7, 2010 Feb 1, 2011 Jun 15, 2012	Fugitive dust emissions are minimized by spraying water on soil, where required and appropriate. Air Quality monitoring has been conducted thrice since the commencement of the project site and test results were found satisfactory within the limits of Pak NEQS, WHO and IFC Standards. Vehicular traffic through the communities are avoided as far as possible. Vehicle speeds is under limit at project stie as well out out side the site.
		Noise	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Construction. Annual for next two years	Power house	May 30, 2010 Dec 30, 2010. Dec 30, 2011 June, 2012	May 7, 2010 Feb 1, 2011 Aug 25, 2011 Jun 15, 2012	Vehicles have exhaust mufflers (silencers) to minimize noise generation. Noise monitoring has been conducted Four time since the commencement of the project and results found satisfactory within the limits of Pak NEQS, WHO and IFC standards. Night time traffic is avoided near the communities. Vehicular traffic through the communities is avoided as far as possible. Vehicle speed is under limit and horns are not being used while passing through or near the communities as far as practically possible.
		Safety Hazards	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / PM in coordination with ESOHS Officer	Annual	Power house Office area	Dec 30, 2010. Dec 30, 2011. Sep 20, 2012	Sep. 2010 Aug. 2012	Road signage are fixed at appropriate locations to reduce safety hazard associated with project-related vehicular traffic. A number of safety sessions and traings have been conducted on defensive driving. Project drivers are trained on defensive driving. Further permanat safety signs along with the new public road have also been displayed in the month of August 2012.
		Damage to Infrastructure	Revised IEE, IFC Environmental, Health, and Safety General Guidelines	Sambu / PM	Annual	1) Headrace Channel 2) Power house 3) Tailrace Channel	—	No damage has been done till Sep, 2012	Damaged infrastructure will be restored to original or better condition.



## ENVIRONMENTAL MANAGEMENT PLAN/ ENVIRONMENTAL SOCIAL ISSUE MANAGEMENT PLAN

Project: NBE Hydro Electric Power Complex

Date: 19-09-2012

Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
3	Contractor Mobilization	Air Quality	Pakistan NEQS, IFC Environmental, Health, and Safety	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Power house	June 30, 2010 Dec 30, 2010. Sep. 20, 2012	May 7, 2010 Feb 1, 2011 Jun, 15, 2012	Fugitive dust emission are minimized by spraying water on soil, where required and appropriate. Vehicular traffic through the communities is avoided as far as possible. Vehicle speeds to be kept low. Air quality has been monitored thrice since the commencement of project and results found within the limits of PAK NEQS, WHO and IFC standards.
		Noise	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction Annual for next two years	Power house Lehri Village Chichian Village Afzal Pur Village	June 30, 2010 Dec 30, 2010. July 31, 2011 June.2012	May 7, 2010 Feb 1, 2011 Aug 25, 2011 Jun 15, 2012	Vehicles have exhaust mufflers (silencers) to minimize noise generation. Noise monitoring has been conducted Four time since the commencement of the project and results found satisfactory within the limits of Pak NEQS, WHO and IFC standards. Night time traffic is avoided near the communities. Vehicular traffic through the communities is avoided as far as possible. Vehicle speed is under limit and horns are not being used while passing through or near the communities as far as practically possible.
		Safety Hazards	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM in coordination with ESOHS Officer	Annual	Power house	Dec 30, 2010. Dec 30, 2011. Sep 20, 2012	Sep 2010 Aug 2012	Road signage are fixed at appropriate locations to reduce safety hazard associated with project-related vehicular traffic. A number of safety sessions and trainings have been conducted on defensive driving. Project drivers are trained on defensive driving. Further permanat safety signs along with the new public road have also been displayed in the month of August 2012.
		Community effect	IFC Performance Standards on Social & Environmental Sustainability	Sambu / ESOHS Officer	Annual	Whole Project Site	Through out Project Construction Period	All grievances have been settled	Contractor persons are communicated through tool box talks not to involve in any interaction with the Community. Community Complaint Register is placed on entrance gate of Project Site. This is being checked by Sambu regularly and monthly by Laraib. All complaints registered in the register have been rectified with the consultation of Employer and Effectees. The presence of Community Complaint Register has been communicated by displaying board in front of Project entrance. Community Grievance Committee has been established to deal with community concerns Community Liaison Officer has been appointed by Laraib
4	Excavation and Construction of Headrace Channel	Air Quality	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	1st year of Project activity (2010)	Headrace Channel	Dec 30, 2010. Dec 30, 2011 Jun, 2012	May 7, 2010 Feb 1, 2011 Jun 15, 2012	Fugitive dust emissions are minimized by spraying water on soil, where required and appropriate. Air Quality monitoring has been conducted thrice since the commencement of the project site and test results were found satisfactory within the limits of Pak NEQS, WHO and IFC Standards. Vehicular traffic through the communities are avoided as far as possible. Vehicle speeds is under limit at project stie as well out out side the site.
		Noise	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	1st year of Project activity (2010)	Headrace Channel	Dec 30, 2010.	May 7, 2010 Feb 1, 2011 Aug 25, 2011 Jun 15, 2012	Vehicles have exhaust mufflers (silencers) to minimize noise generation. Noise monitoring has been conducted Four time since the commencement of the project and results found satisfactory within the limits of Pak NEQS, WHO and IFC standards. Night time traffic is avoided near the communities. Vehicular traffic through the communities is avoided as far as possible. Vehicle speed is under limit and horns are not being used while passing through or near the communities as far as practically possible.



## ENVIRONMENTAL MANAGEMENT PLAN/ ENVIRONMENTAL SOCIAL ISSUE MANAGEMENT PLAN

Project: NBE Hydro Electric Power Complex

Date: 19-09-2012

Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
4	Excavation & Construction of head race channel	Surface water Quality	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	1st year of Project activity (2010)	Headrace Channel	Dec 30, 2010. Aug, 2011 Jun, 2012	Sep 2, 2010 Aug 26, 2011 Jun 16, 2012	Vehicles and construction machinery movement very close to the canal/channel banks is minimized, as these may cause water contamination. Management practices have been employed to minimize leakage and spillage of oils, chemicals and fuels to the ground. This is being accomplished by applying regular inspection system of vehicles. Vehicles and equipment are being repaired in the specified location (Workshop) having impervious sheathing/ cement pad to avoid soil and water contamination. Spill containment trays are used, while repairing vehicles outside the Workshop.
		Soil Erosion	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	1st year of Project activity (2010)	Headrace Channel	Through out Project Construction Period	Aug, 2012	Excavated slopes are not left untreated/unattended for long durations. Appropriate slope stabilization measures have been taken, All Slopes along tailrace are covered with Geo textile and cobbles & boulders to minimize the soil erosion and to stabilize the soil. Vehicle and construction machinery movement very close to the canal/channel banks is minimized, as these may cause soil erosion
		Loss of flora	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM in coordination with ESOHS Officer		Headrace Channel	Aug, 2012	Aug, 2012	Tree Plantation Plan has been implemented, trees have been planted along tailrace, it has been planted five times of the trees that has been cut. The land scaping of Power house is in progress and will be finalized in the end of the current year.
		Community effect	IFC Performance Standards on Social & Environmental Sustainability	Sambu / ESOHS Officer	1st year of Project activity (2010)	Headrace Channel	Through out Project Construction Period	All grievances have been settled	Contractor persons are communicated through tool box talks not to involve in any interaction with the Community. Temporary alternate routes have been provided. Community Complaint Register has been placed on entrance gate of Project Site. This is being checked by Sambu regularly and monthly by Larai. The complaints registered in the register have been rectified already. Community Grievance Committee has been established to deal with community concerns. Community Liaison Officer has been appointed by Larai.
		Safety Hazards	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM in coordination with ESOHS Officer	Annual	Headrace Channel	Dec 30, 2010. Dec 30, 2011. Sep 20, 2012	Sep 2010 Aug 2012	Road signage are fixed at appropriate locations to reduce safety hazard associated with project-related vehicular traffic. A number of safety sessions and trainings have been conducted on defensive driving. Project drivers are trained on defensive driving. Further permanent safety signs along with the new public road have also been displayed in the month of August 2012.
5	Excavation and construction of Power house	Air Quality	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Power house	Dec 30, 2010. Dec 30, 2011 Jun, 2012	May 7, 2010 Feb 1, 2011 Jun 15, 2012	Fugitive dust emissions are minimized by spraying water on soil, where required and appropriate. Air Quality monitoring has been conducted thrice since the commencement of the project site and test results were found satisfactory within the limits of Pak NEQS, WHO and IFC Standards. Vehicular traffic through the communities are avoided as far as possible. Vehicle speeds are under limit at project site as well as outside the site.



## ENVIRONMENTAL MANAGEMENT PLAN/ ENVIRONMENTAL SOCIAL ISSUE MANAGEMENT PLAN

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Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
5	Excavation and construction of Power house	Noise	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Power house	May 30, 2010 Dec 30, 2010. Dec 30, 2011 June, 2012	May 7, 2010 Feb 1, 2011 Aug 25, 2011 Jun 15, 2012	Vehicles have exhaust mufflers (silencers) to minimize noise generation. Noise monitoring has been conducted Four time since the commencement of the project and results found satisfactory within the limits of Pak NEQS, WHO and IFC standards. Night time traffic is avoided near the communities. Vehicular traffic through the communities is avoided as far as possible. Vehicle speed is under limit and horns are not being used while passing through or near the communities as far as practically possible.
		Soil Erosion	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Power house	Through out Project Construction Period	Aug, 2012	Excavated slopes are not left untreated/unattended for long durations. Appropriate slope stabilization measures have been taken, All Slopes along tailrace are covered with Geo textile and cobbles & boulders to minimize the soil erosion and to stabilize the soil. Vehicular and construction machinery movement very close to the canal/channel banks is minimized, as these may cause soil erosion
		Loss of flora	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM in coordination with ESOHS Officer		Power house	as per project activity	Aug-12	Tree Plantation Plan has been implemented, trees have been planted along tailrace, it has been planted the five times of the trees that has been cut. The landscaping of Power house is in progress and will be finalized in the end of the current year.
		Safety Hazards	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM	Annual	Power house	Dec 30, 2010. Dec 30, 2011. Sep 20, 2012	Sep 2010	Temporary Protective fencing was installed in Sep 2010 where as permanent road fencing has been installed in Aug 2012.
		Community effect	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM	----	Power house	----	-----	-----
		Air Quality	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / PM in coordination with ESOHS Officer	Semi annual for 1st year of Excavation/ Construction Annual for next two years	Tailrace Channel	June 30, 2010 Dec 30, 2010. Jun, 2012	May 7, 2010 Feb 1, 2011 Jun, 15, 2012	Fugitive dust emission are minimized by spraying water on soil, where required and appropriate. Vehicular traffic through the communities is avoided as far as possible. Vehicle speeds to be kept low. Air quality has been monitored thrice since the commencement of project and results found within the limits of PAK NEQS, WHO and IFC standards.
		Noise	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Tailrace Channel	May 30, 2010 Dec 30, 2010. Dec 30, 2011 June, 2012	May 7, 2010 Feb 1, 2011 Aug 25, 2011 Jun 15, 2012	Vehicles have exhaust mufflers (silencers) to minimize noise generation. Noise monitoring has been conducted Four time since the commencement of the project and results found satisfactory within the limits of Pak NEQS, WHO and IFC standards. Night time traffic is avoided near the communities. Vehicular traffic through the communities is avoided as far as possible. Vehicle speed is under limit and horns are not being used while passing through or near the communities as far as practically possible.
		Surface water Quality	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Tailrace Channel	Jun 30, 2010 July, 2011 Jun, 2012	Se 2, 2010 Aug 25, 2011 Jun 16, 2012	Vehicles and construction machinery movement very close to the canal/channel banks are minimized, as these may cause water contamination. Management practices have been employed to minimize leakage and spillage of oils, chemicals and fuels to the ground. This is accomplished by applying regular inspection system of vehicles. Vehicles and equipment are repaired in the specified location (Workshop) having impervious sheathing/ cement pad to avoid soil and water contamination. If repairing is unavoidable in open field, then impervious sheathing is always used.



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Date: 19-09-2012

Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
5	Excavation and construction of Power house	Soil Erosion	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Entire Project Period	Tailrace Channel	Through out Project Construction Period	Aug, 2012	Excavated slopes are not left untreated/unattended for long durations. Appropriate slope stabilization measures have been taken, All Slopes along tailrace are covered with Geo textile and cobbles & boulders to minimize the soil erosion and to stabilize the soil. Vehicle and construction machinery movement very close to the canal/channel banks is minimized, as these may cause soil erosion
		Solid Waste		Sambu/ PM	1 <sup>st</sup> year of Excavation Activity	Tailrace Area	As per Project Excavation schedule	Event based	Trees cut down have been taken up by relevant Government Department.
		Solid Waste	Revised IEE, Pak Solid Waste Mang. System, IFC Env, Health, & Safety Gen. Guidelines	Sambu/ PM	1st year of Excavation Activity	Tailrace Area	As per Project Excavation schedule	Event based	Shrubs have been sold to recycling contractor
		Wastewater	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu/ PM in Coordination with ESOHS Officer	Throughout excavation and construction activity	Tailrace area	May 30, 2010 Dec 30, 2011 June, 2012	May 7, 2010 Aug 26, 2012 Jun 16, 2012	Waste water analysis has been conducted and found within the limit of WHS and IFC. No need for the temporary toilet facility as tailrace work is near to camp area
		Loss of flora	IFC Environmental, Health, and Safety General Guidelines	Sambu / PM in coordination with ESOHS Officer	Throughout excavation and construction activity	Tailrace Channel	as per project activity	Aug-12	Tree Plantation Plan has been implemented, trees have been planted along tailrace, it has been planted five times of the trees that have been cut. The landscaping of Power house is in progress and will be finalized in the end of the current year.
		Loss of Aquatic Biota/ Fauna	IFC Performance Standards on Social & Environmental Sustainability	Sambu / ESOHS Officer	Throughout excavation and construction activity	Tailrace Channel		No damage till to date.	The project staff are not allowed to indulge in any hunting or trapping activities. Necessary awareness has been provided to all staff by carrying out various awareness sessions or toolbox talks.
		Community effect	IFC Performance Standards on Social & Environmental Sustainability Revised IEE	Sambu/ PM	Entire Project Period	Tailrace Channel	Through out Project Construction Period	Sep, 2010	Contractor persons are not allowed to be involved in any interaction with the Community. Temporary alternate route has been provided. Community Complaint Register has been placed on entrance gate of Project Site. This is being checked by Sambu regularly and monthly by Laraib. Community Grievance Committee has been established to deal with community concerns. Community Liaison Officer has been appointed by Laraib. Footbridge will be provided for crossing over the tailrace area at specified location.



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Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
6	Construction of Camp Establishment and Operation	Soil Erosion / Contamination	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Monthly	Left side of Old Bong Escape	30th of every month till entire Project Period	Sep, 2010	<p>Vehicle and construction machinery movement very close to the canal/channel banks is minimized, as these may cause soil erosion.</p> <p>Management practices are employed to minimize leakage and spillage of oils and fuels to the ground. These includes building containment dikes around fuels/oils/chemical storage, storing these in covered areas, constructing a concrete pad for machinery/ vehicle maintenance areas, inspecting machinery and vehicles for any leakage, and removing contaminated soils for appropriate disposal.</p> <p>Equipment and vehicles are kept in good working condition and properly tuned, in order to minimize the exhaust emissions.</p> <p>Vehicles and equipment are repaired in the specified location (Workshop) having impervious sheathing/ cement pad to avoid soil and water contamination.</p> <p>If repairing is unavoidable in open field, then impervious sheathing is always used.</p>
		Air Quality Deterioration	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Left side of Old Bong Escape	May 30, 2010 Dec 30, 2010. Dec 30, 2011 June 16, 2012	May 7, 2010 Feb 1, 2011 Jun 15, 2012	<p>Fugitive dust emissions are minimized by spraying water on soil, where required and appropriate. Air Quality monitoring has been conducted thrice since the commencement of the project site and test results were found satisfactory within the limits of Pak NEQS, WHO and IFC Standards.</p> <p>Vehicle traffic through the communities are avoided as far as possible. Vehicle speeds is under limit at project site as well out side the site.</p>
		Surface Water Contamination	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Left side of Old Bong Escape	June 30, 2010 Dec 30, 2010. Dec 30, 2011 Sep. 20, 2012	Sep 2, 2010 Aug 26, 2011 Jun 16, 2012	<p>Septic tanks and soakage pits have been constructed having adequate capacity.</p> <p>Monitoring of sewage wastewater is being conducted twice a year.</p> <p>No Littering Policy has been formulated and executed on Project Site.</p> <p>All employees have been provided awareness/training about No Littering on Project Site.</p> <p>No Littering Policy has been communicated to all employees through HSE Information board.</p>
		Solid Waste	Revised IEE, Pakistan Solid Waste Management System, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer			Left side of Old Bong Escape		Sep, 2010





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Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
6	Construction of Camp Establishment and Operation	Loss of Vegetation	IFC Performance Standards on Social & Environmental Sustainability	Sambu / ESOHS Officer		Left side of Old Bong Escape	As per project activity	Refer to pint 4.	Cutting of trees and other natural vegetation are avoided as far as possible. The construction crew are provided with LPG as cooking (and heating, if required) fuel. Tree Plantation Plan has been established and will be executed on Project Site.  The planted trees will be at least 5 times the trees cut as part of the construction activities.
		Noise	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Left side of Old Bong Escape	June 30, 2010 and Dec 30, 2010. July 31, 2011 and Sep. 20, 2012	Noise level of powerhouse has been measured in May 7, 2010 Feb 1, 2011 Aug 25 2011	Generators and vehicles have exhaust mufflers (silencers) to minimize noise generation. Noise monitoring of generators was conducted and test results found within the limits of Pak NEQS, WHO and IFC Standards. Management practices have been employed to avoid noise pollution by generators. This include the construction of generator room (confined body) as practically possible.
		Noise							Noise has been measured at Lehri, Chechian and Ferozabad. And found within the IFC and PAK NEQS limits.
		Safety Hazards	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM in coordination with ESOHS Officer	Annual	Left side of Old Bong Escape	December 30, 2010 December 30, 2011 September 20, 2012	Sep-10	Protective fencing has been installed around the Camp to avoid any accidents.
		Gender Issues	IFC Performance Standards on Social & Environmental Sustainability	Sambu / ESOHS Officer	Monthly	Left side of Old Bong Escape	30th of every month till entire Project Period	No issue till 2010 March, 2010	Camp is more than 1,500 feet from the nearest community. Construction crew are instructed to avoid entering the nearby villages and settlements. Training has been conducted on Gender and Cultural Sensitization. Awarenesses are being created among all employees in form of toolbox talks, by HSE bulletin.
		Soil Erosion / Contamination	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Monthly	Left side of New Bong Escape	30th of every month till entire Project Period	Sep-10	Vehicle and construction machinery movement very close to the canal/channel banks minimized, as these may cause soil erosion. Management practices are employed to minimize leakage and spillage of oils,
		Air Quality Deterioration	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Monthly	Left side of New Bong Escape	June 30, 2010 Dec 30, 2010. Sep. 20, 2012	Powerhouse air quality has been measured on May 7, 2010 feb 1, 2011	Fugitive dust emissions are minimized by spraying water on soil, where required and appropriate. Vehicles are properly tuned to minimize air pollution. Vehicles smoke tests were conducted in the current year and test results found within the limits of Pak NEQS, WHO and IFC standards.  Vehicles are inspected on regular basis.



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Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
6	Construction of Residential Colony	Surface Water Contamination	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. 2) Annual for next two years	Left side of New Bong Escape		Sewage water is regularly monitored May 7, 2010 Aug 25, 2011 Jun 16, 2012	Septic tanks and soakage pits have been constructed having adequate capacity. Monitoring of sewage wastewater has done twice since the commencement of the project & test results found satisfactory within the limits of Pak NEQS, WHO and IFC standards. No Littering Policy has been formulated and executed on Project Site. All employees have been provided awareness/training about No Littering on Project Site. No Littering Policy has been communicated to all employees through HSE Information board.
		Solid Waste	Revised IEE, Pakistan Solid Waste Management System, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Monthly	Left side of New Bong Escape		Sep 2010 July 2011	Covered bins have been provided inside the room of labour and on Project specified location to avoid open dumping of solid waste. Solid Waste Management System has been established and implemented. This includes quantification of the solid waste (paper, food waste etc), segregation of waste, transfer and transportation and disposal. Food waste and paper waste etc has been quantified and the total waste generated for the month of September & October is 780 Kg. barricadation of the waste management area will be done. Provision of adequate safety signs on identified Compost location. Handling of recycling waste is done by handing over the recycling waste to recycling contractors or dispose off in a safe manner.
		Solid Waste	Revised IEE, Pakistan Solid Waste Management System, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Monthly	Left side of New Bong Escape		Sep 2010 July 2011	No Littering Policy has been formulated and executed on Project Site. All employees have been provided awareness/training about No Littering on Project Site. No Littering Policy has been communicated to all employees through HSE Information board. Food waste and paper waste etc has been quantified and the total waste generated for the month of September & October is 780 Kg. Internal Audits/ inspections/walk about have been conducted for the camp area and cooking areas and no major observation has been raised.
			IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM in coordination with ESOHS Officer		Left side of New Bong Escape	As per project activity	Refer to point 4	Cutting of trees and other natural vegetation is avoided as far as possible. Tree Plantation Plan has been established and will be executed on Project Site. The planted trees will be at Least five times the tree cut during Construction period
		Noise	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semi annual for 1st year of Excavation/ Construction. Annual for next two years	Left side of New Bong Escape	May 30, 2010 Dec 30, 2010. Dec 30, 2011 June, 2012	May 7, 2010 Feb 1, 2011 Aug 25, 2011 Jun 15, 2012	Vehicles have exhaust mufflers (silencers) to minimize noise generation. Noise monitoring has been conducted Four time since the commencement of the project and results found satisfactory within the limits of Pak NEQS, WHO and IFC standards. Night time traffic is avoided near the communities. Vehicular traffic through the communities is avoided as far as possible. Vehicle speed is under limit and horns are not being used while passing through or near the communities as far as practically possible.



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Sr No.	Activities	Impacts	Key Performance Indicators (KPIs)	Responsible Party/ Person	Monitoring frequency	Monitoring Location	Target date	Completion date	Mitigation Measures/ Actions
7	Excavation and Construction of Subsidiary Outfall	Damage to Infrastructure	IFC Performance Standards on Social & Environmental Sustainability	Sambu / PM	Annual	Left side of New Bong Escape	Dec 30, 2010. Dec 30, 2011. Sep 20, 2012	No damage till to day	Damaged infrastructure will be restored to original or better condition.
		Soil Erosion / Contamination	IFC Performance Standards on Social & Environmental Sustainability	Sambu / ESOHS Officer	Monthly	Project Area	Throughout the project construction activitie	Monthly done	Vehicle and construction machinery movement very close to the canal/channel banks are minimized, as these may cause soil erosion. Management practices are employed to minimize leakage and spillage of oils, chemicals and fuels to the ground. These includes building containment dikes around fuels/oils/chemical storage, storing these in covered areas, constructing a concrete pad for machinery/ vehicle maintenance areas, inspecting machinery and vehicles for any leakage, and removing contaminated soils for appropriate disposal. Equipment and vehicles are kept in good working condition and properly tunned, in order to minimize the exhaust emissions. Vehicles and equipment are repaired in the specified location (Workshop) having impervious sheathing/ cement pad to avoid soil and water contamination.
		Air Quality Deterioration	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semiannual for 1st year of Excavation/ Construction. Annual for next two years	Project Area	June 30, 2010 Dec 30, 2010. Sep. 20, 2012	May 7, 2010 Feb 1, 2011 Jun, 15, 2012	Fugitive dust emission are minimized by spraying water on soil, where required and appropriate. Vehicular traffic through the communities is avoided as far as possible. Vehicle speeds to be kept low. Air quality has been monitored thrice since the commencement of project and results found within the limits of PAK NEQS, WHO and IFC standards.
		Surface Water Contamination	Pakistan NEQS, IFC Environmental, Health, and Safety General Guidelines	Sambu / ESOHS Officer	Semiannual for 1st year of Excavation/ Construction. Annual for next two years	Project Area	June 30, 2010 Dec 30, 2010. July 31, 2011 Jun, 2012	Tailrace water has been analysed for turbidity in Sep 2, 2010 & Aug 26, 2011 & Jun 16, 2012	Septic tanks and soakage pits have been constructed having adequate capacity. Monitoring of sewage wastewater has been done in the month of June, 2012 and found satisfactory. No Littering Policy has been formulated and will be executed on Project Site. All employees have been provided awareness/training about No Littering on Project Site. No Littering Policy has been communicated to all employees through HSE Information board.

## Exhibit 33 – Categorization

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# CATEGORIZATION

- **Lost Time Injury (LTI)** occurs when a person is injured in the execution of his/her duties and as a result of this injury is unable to perform his/her regular duty for one full shift or more on the day following day which the injury was incurred.
- **Incident** is defined an unplanned event having potential for injury, ill health, damage or other loss. Incidents may involve actual or potential injury/illness, property/environment damage, or near misses.
- **Accident:** An Accident is defined as an unplanned event that causes harm to people or damage to property.
- **Near Miss** is a situation in which no injury or damage occurred but might have if conditions had been slightly different. Near misses however highlight workplace hazards and the need to initiate corrective action, e.g.: tripping without falling.
- **Medical Aid** refers to any injury not severe enough to warrant more than the day of injury off, but where medical treatment by a doctor is given.
- **First Aid** is the assistance or treatment given to a casualty for any injury or sudden illness before the arrival of an ambulance or qualified medical expert. It may involve improvising with facilities and materials available at the time.
  - Cleaning, flushing or soaking wounds on skin surface
  - Use of wound covering such as bandages, gauze pads, etc.
  - Use of non prescription medications including antiseptics
  - Visit to health care limited to observation
  - Removal of foreign bodies not embedded in the eye if only irrigation or removal with a cotton swab is required.
  - Removal of splinters of foreign material from areas other than the eyes by irrigation, tweezers, cotton swabs or other simple means.
- **Occupational Illness** is defined as a condition resulting from a worker's exposure to chemical, biological or physical agents or ergonomics in the workplace to the extent that the health of the worker is impaired. All kinds of agents are as following.

Biological agents include such organisms as bacteria, viruses, fungus, parasites, spores and moulds.

Chemical agents can include such things as battery acid, solvents, and pesticides.

Physical agents include various forms of energy that may harm a worker, for example, heat, cold, light, vibration, noise and radiation.

Ergonomic hazards are associated with work such as lifting or moving of heavy objects and tasks where there is excessive repetitive motion

- **Medical Treatment cases** "Medical Treatment" means the management and care of a patient to combat disease because of seasonal and habitual reasons or due to personal life style or chronic problems diagnosed by doctor.
- **Minor Injury** means an injury or illness that only causes discomfort or short-term pain, has no lasting effect, has no foreseeable potential to worsen, and was caused by trivial causes. Typical examples include paper cuts, small burns, bruises and minor scratches etc
- **Critical Injury** is defined as an injury of a serious nature that:
  - a) Places life in jeopardy;
  - b) Results in substantial loss of blood;
  - c) Involves the fracture of a leg or arm but not a finger or toe;
  - d) Involves the amputation of a leg, arm, hand or foot but not a finger or toe;
  - e) Consists of burns to a major portion of the body; or
  - f) Causes the loss of sight to an eye.

## **Exhibit 34 – Key Performance Indicators**

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## ESOHS Key Performance Indicator Report

Project:NBE Hydro Electric Power Complex

From 01/01/13 to 31/01/13

SR. NO	Key Performance Indicator (KPI)	Frequency/ Applicable Standard	Target	Status
1	No of LTI	Monthly	0	0
2	No of hours without LTI	Monthly		Total= 765970
3	Number of incidents at site including fatalities/ major/ minor/ first aid/near misses/ property damages etc.	Monthly	Major =0	Major Injuries= 0
				Minor Injuries = 05
				Occupational illness = 6
				First Aid= 1
				Property damage=0
				Nearmisses=2
				UA/UC=9
4	Investigation of incidents irrespective of their level of severity	Monthly	As & when	It will be reported in the MPR of March
5	Number of Last work days in case of LTI	Monthly	0	0
6	Air emission	Annual/ NEQS and IFC Standards	NEQS	Compliance
7	Noise Analysis	Annual/ NEQS and IFC Standards		Compliance
8	Water Analysis	Semi Annual/ NEQS and IFC Standards		Compliance
9	Achievement of HSE Objectives	Quarterly	No 1= 100 %	100%
			No 2= 100 %	
10	Risk Assessments	Monthly	2	2
11	Inspection	Weekly	4	4
		Fortnightly	1	1
		Monthly	5	5
12	Evacuation Drills	Monthly	2	2
13	Trainings	Monthly	2	2
14	ESOHS Monthly Meeting	Monthly	1	1



## ESOHS Key Performance Indicator Report

Project:NBE Hydro Electric Power Complex

From 01/02/13 to 28/02/13

SR. NO	Key Performance Indicator (KPI)	Frequency/ Applicable Standard	Target	Status
1	No of LTI	Monthly	0	0
2	No of hours without LTI	Monthly		Total= 862860
3	Number of incidents at site including fatalities/ major/ minor/ first aid/near misses/ property damages etc.	Monthly	Major =0	Major Injuries= 0
				Minor Injuries = 4
				Occupational illness = 9
				First Aid= 1
				Property damage=0
				Nearmisses=2
				UA/UC=10
4	Investigation of incidents irrespective of their level of severity	Monthly	As & when	0
5	Number of Last work days in case of LTI	Monthly	0	0
6	Air emission	Annual/ NEQS and IFC Standards	NEQS	Compliance
7	Noise Analysis	Annual/ NEQS and IFC Standards		Compliance
8	Water Analysis	Semi Annual/ NEQS and IFC Standards		Compliance
9	Achievement of HSE Objectives	Quarterly	No 1= 100 %	will be reported in the month of march
			No 2= 100 %	
10	Risk Assessments	Monthly	2	3
11	Inspection	Weekly	4	4
		Fortnightly	1	1
		Monthly	5	5
12	Evacuation Drills	Monthly	2	2
13	Trainings	Monthly	2	2
14	ESOHS Monthly Meeting	Monthly	1	1

## ESOHS Key Performance Indicator Report

Project: NBE Hydro Electric Power Complex

From 01/03/13 to 31/03/13

SR. NO	Key Performance Indicator (KPI)	Frequency/ Applicable Standard	Target	Status
1	No of LTI	Monthly	0	0
2	No of hours without LTI	Monthly		Total= 971032
3	Number of incidents at site including fatalities/ major/ minor/ first aid/near misses/ property damages etc.	Monthly	Major =0	Major Injuries= 0
				Minor Injuries = 3
				Occupational illness = 6
				First Aid= 3
				Property damage=0
				Nearmisses=1
UA/UC=10				
4	Investigation of incidents irrespective of their level of severity	Monthly	As & when	0
5	Number of Last work days in case of LTI	Monthly	0	0
6	Air emission	Annual/ NEQS and IFC Standards	NEQS	Compliance
7	Noise Analysis	Annual/ NEQS and IFC Standards		Compliance
8	Water Analysis	Semi Annual/ NEQS and IFC Standards		Compliance
9	Achievement of HSE Objectives	Quarterly	No 1= 100 %	Objective 1= 37.75 % Objective 2= 28.87 % (For first quarter)
			No 2= 100 %	
10	Risk Assessments	Monthly	2	3
11	Inspection	Weekly	4	4
		Fortnightly	1	1
		Monthly	5	5
12	Evacuation Drills	Monthly	2	2
13	Trainings	Monthly	2	3
14	ESOHS Monthly Meeting	Monthly	1	1

## **Exhibit 35 – Safety Update**

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# Dengue Fever

Dengue is a disease caused by any one of four closely related virus (DEN-1, DEN-2, DEN-3, DEN-4). The viruses are transmitted to humans by the bite of an infected mosquito. The virus circulates in the blood leading to fever. Infection with one strain does not provide cross protection against another strain.



## To protect yourself against Dengue Fever:

- Use a mosquito repellent containing DEET.
- Dress in protective clothing – long – sleeved shirts, long pants, socks, and shoes.
- Keep unscreened windows and doors closed.
- Keep window and door screens repaired.
- Get rid of areas where mosquitoes breed, such as standing water in flower pots or discarded tires.
- Use mosquito netting over beds, and screens on windows and doorways.

Dengue fever symptoms appear within 5 to 6 days of being bitten by an infected mosquito, and last for 1 to 2 weeks, including:

- The sudden onset of a high fever, up to 39 °C.
- Severe headache.
- Retro-orbital (behind the eye) pain.
- Severe joint and muscle pain.
- Nausea and vomiting.
- Rash appearing on the arms or legs 3 to 4 days after fever begins.
- Abnormal bleeding and very low blood pressure (shock) may occur in severe cases.



### Diagnosis

Blood test: PCR for Dengue, Dengue IgG and IgM. The PCR based method is more effective in the first few day of infection.

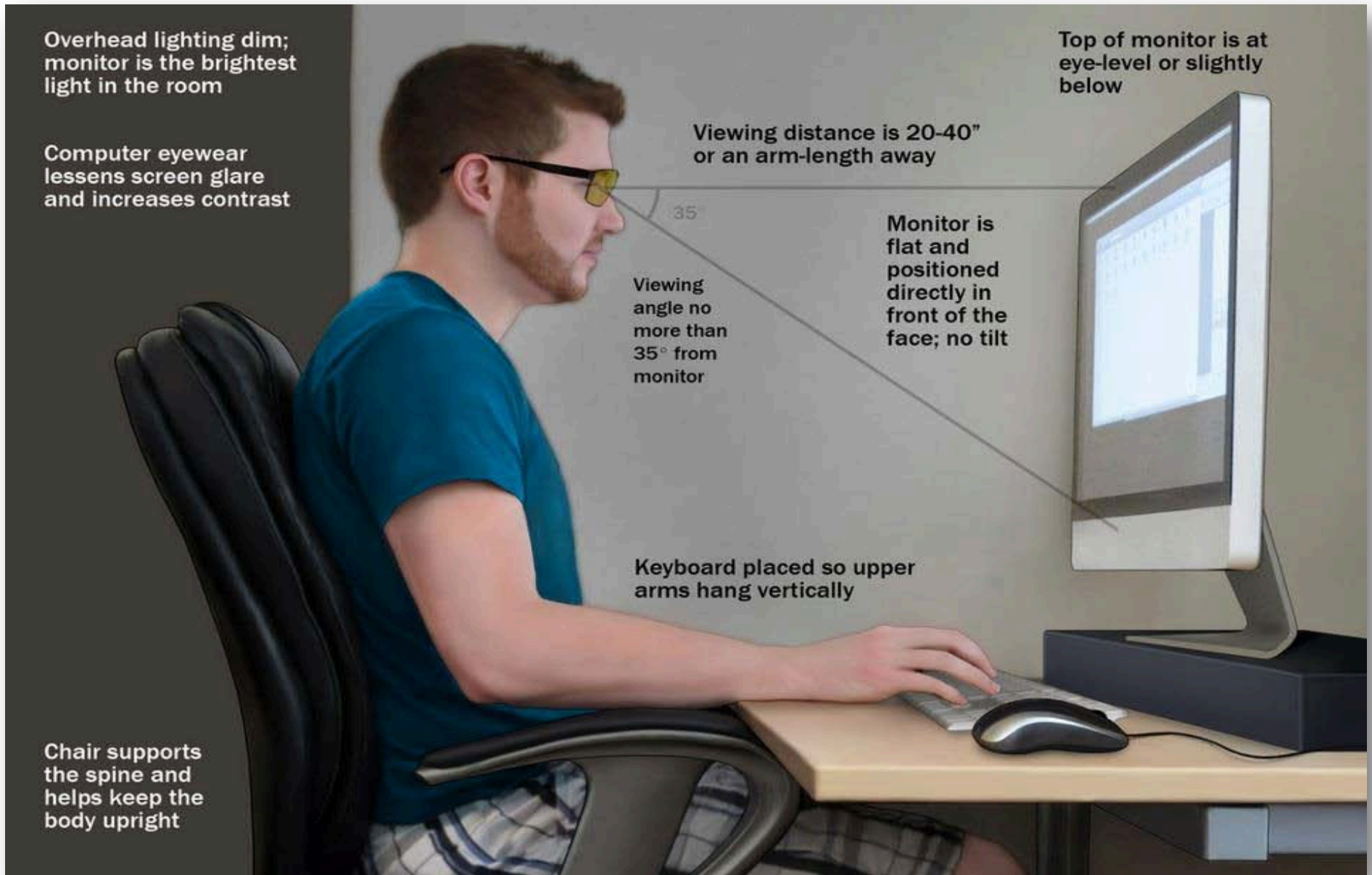
### If you get Dengue Fever

- Visit your physician.
- Rest.
- Drink plenty of water.
- Take medicine to reduce your fever, but avoid Aspirin.

**Safety Alert**

## Safety Alert (Office Safety)

Follow the Given instruction for your safety while working in the office



## **Exhibit 36 – Annual Management Plan**

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# Annual Management Plan Performance 2013

## Environmental, Social, Occupational, Health and safety

	Well on Track
	Partially done
	Not done

Project: NBE Hydro Electric Power Complex

Date: 28/02/2013

Sr. No	Activities	Performance Parameters	Monthly Progress Update & Timelines													Responsibility	Traffic Light	
			Target Yearly	Jan	Feb	Mar	Apr	May	Jun	Ju	Aug	Sep	Oct	Nov	Dec			
1	Contractor's ESOHS Committee	To establish fix agenda for ESOHS Committee meeting.	1	1													ESOHS Officer	
		To conduct meeting every month & issue minutes do follow up with relevant people.	12	1	1	1	1	1	1	1	1	1	1	1	1	1		
2	Contractor's Monthly ESOHS Reports	Format attached as Appendix 1	12	1	1	1	1	1	1	1	1	1	1	1	1	1	ESOHS Officer	
		Reporting time line to Laraib is 7th of every month.																
3	ESOHS Key performance indicators (KPIs)	To Develop & report KPI's monthly on every 5th of current month.	12	1	1	1	1	1	1	1	1	1	1	1	1	1	ESOHS Officer	
		Report to LEL																
4	ESOHS Local Legislative Requirements Relevant Environmental Permits or Compliance Certificates	IEE/EIA. (ESMP) Action plan monitoring for EMP implementation.	2													1	ESOHS Officer	
		EPA-AJK monitoring reports																
5	H&S Risk Assessment Environmental, Chemical & Machinery Risk Assessment	As per schedule twice a month or any activity under taken will be carted for.	24	2	2	2	2	2	2	2	2	2	2	2	2	2	ESOHS Officer	
6	Environnemental Sampling (Air, Water, noise, Light, Ambient Air Quality)	Sampling planning for environmental parameters to be done twice for the first year and then once annually.	1							1						1	ESOHS Officer	
		Analysis for Air Pollution	1							1								







# Annual Management Plan Performance 2013

## Environmental, Social, Occupational, Health and safety

	Well on Track
	Partially done
	Not done

Project: NBE Hydro Electric Power Complex

Date: 28/02/2013

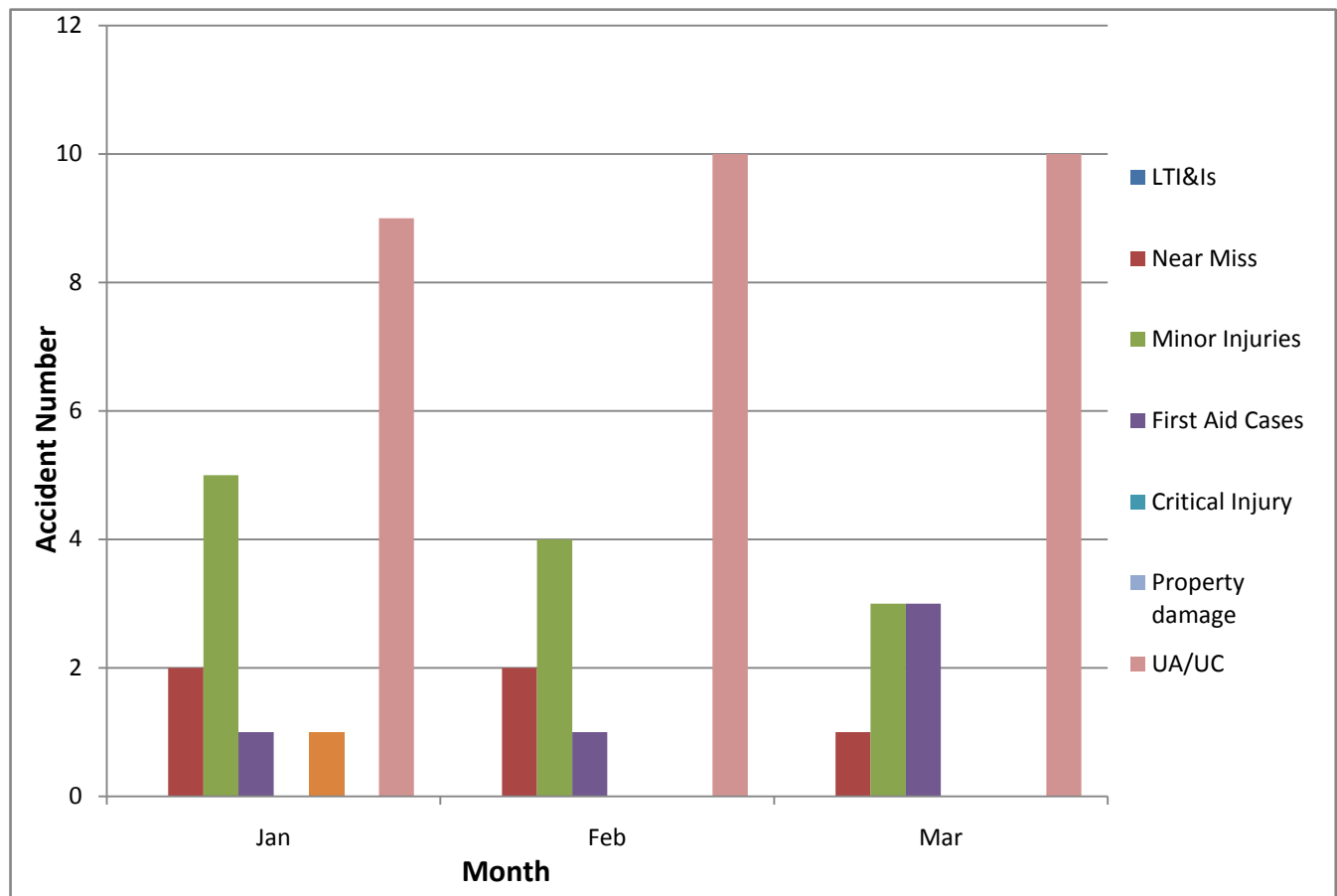
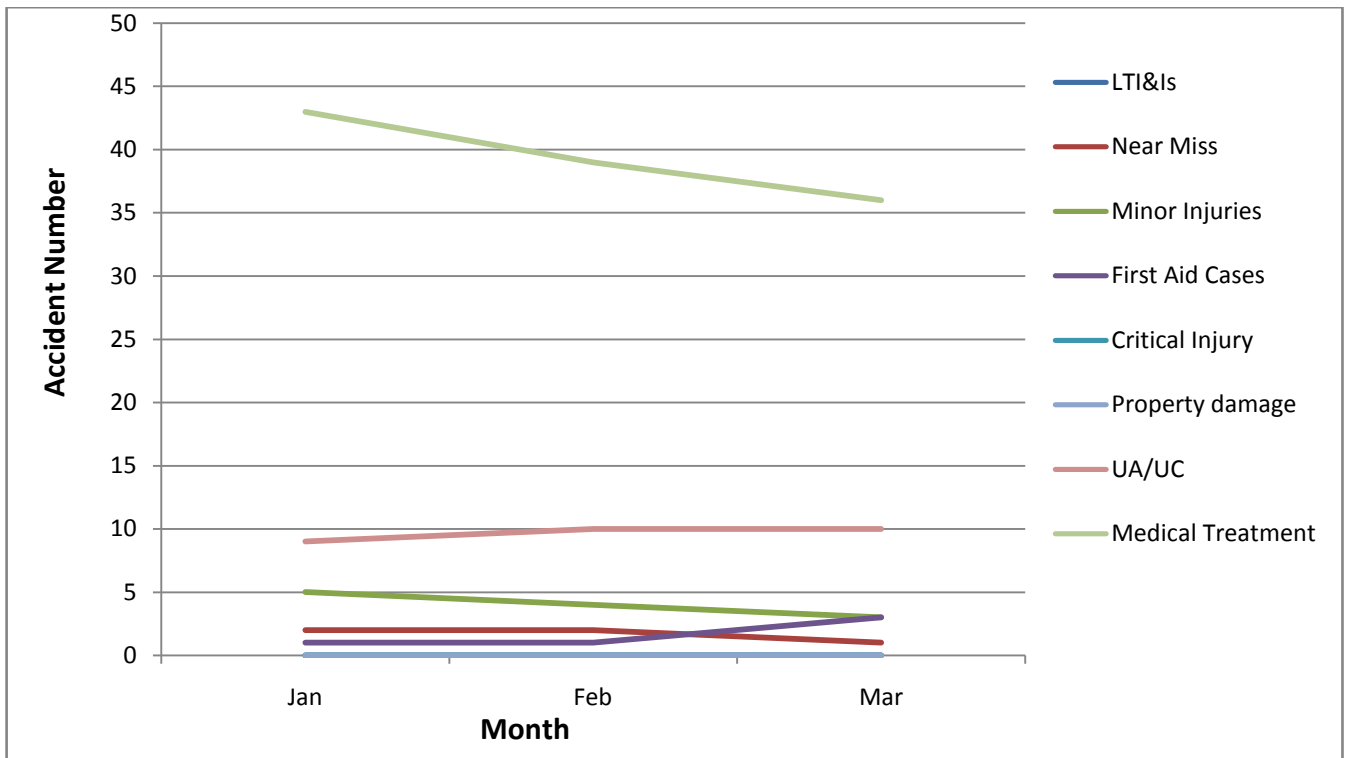
Sr. No	Activities	Performance Parameters	Monthly Progress Update & Timelines												Responsibility	Traffic Light			
			Target Yearly	Jan	Feb	Mar	Apr	May	Jun	Ju	Aug	Sep	Oct	Nov			Dec		
		They will provide recommendations on observations found in Audit	4			1				1			1			1			
		To conduct follow up of their recommendations and implement																	
15	Quarterly ESOHS Trend Charts	To report Accidents, Near misses, UA/UC and First aid trends on Quarterly basis	4			1				1			1			1		ESOHS Officer	
16	ESOHS CAP	Total number of Observations	As required															ESOHS Officer	
17	Inspections	Three inspection at least in a month	36	3	3	3	3	3	3	3	3	3	3	3	3	3	3	ESOHS Officer	

## **Exhibit 37 – Trend Chart Analysis (1<sup>st</sup> Quarter 2013)**

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### Jan- March, 2013 (First Quarter)

	Jan	Feb	Mar
LTI&Is	0	0	0
Near Miss	2	2	1
Minor Injuries	5	4	3
First Aid Cases	1	1	3
Critical Injury	0	0	0
Property damage	0	0	0
UA/UC	9	10	10
Medical Treatment	43	39	36



## **Exhibit 38 – Inspections Check Lists**

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## Hygienes of Food Handlers

Project: New Bong Escape Hydro Electric Power Complex

Inspected by: ESOHS Officer, Medical Officer

Area to be Inspected: Hygienes of Food Handlers

Inspection Date: 06/01/13

Sr. No	Description	Y	N	Comments	Action Taken
1	Do all kitchen staff fulfilled the requirements of the Medical Officer.	Y			
2	Is any evidence of reported sickness among kitchen staff to the concerned person?	Y		The medical examinations were conducted in May 2012 and no severe illness observed.	
3	Has monthly checking of nails/hands of kitchen staff been done?	Y		Monthly inspections are carried out in routine	
4	Are daily hygiene practices monitored by the concerned person and all corrective actions have been completed?	Y		Camp supervisor daily monitor all the cooking staff.	
5	Is the kitchen staff been provided with warm water and soap/liquid hand wash for personal hygiene?	Y		Separate hot and cold water facility is available in kitchens.	
6	Do the food handlers wash their hands as often as necessary?	Y		Doctor briefs them regularly about hand washing techniques.	
7	Is all jewellery including watches removed prior to commencing direct food handling?	Y			
8	Is there any evidence of smoking in food preparation areas?	Y		"No Smoking" safety signs have been displayed in the mess halls.	
9	Do kitchen personnel wear appropriate uniform like protective clothing and protective head coverings during food preparation?	Y		Aprons and head cover have been provided to the kitchen staff.	
10	All staff understands their responsibilities with regards to reporting of illness?	Y			
11	Is sick staff excluded from working inside the kitchen with food?	Y		No such sickness is reported in the current month.	
12	Is there a first-aid box available/ wounds are covered with coloured, water proof dressings?	Y		First Aid Box available in the labor camp near the mess hall.	
13	Is staff aware of food safety practices and their responsibilities?	Y		Food safety procedure has been discussed with the food handlers & also displayed on notice boards	
14	Is staff aware they must not be at work when they may be suffering from a food borne illness or condition?	Y			
15	Are kitchen staffs trained on proper hand washing?	Y		Proper hand washing techniques have been discussed and HSE up dates on hand washing techniques is displayed in mess halls.	
16	Is staff aware of food hygiene through awareness sessions?	Y			
17	Are kitchen staffs trained on proper use and storage of chemicals/ detergents?	Y		No detegents or chemicals are stored in kitchens.	
18	Is any training/awareness sessions' record available?	Y		Refrence to Pervious MPRs	
19	Are training schedule present?	Y			
20	Are food handlers' trained on use of fire extinguishers?	Y			

## Fire Extinguishers Inspection Record Sheet

Project: New Bong Escape Hydro Electric Power Complex

Date: 15/01/13

F/ E No	Type of Fire Extinguisher	Capacity/ Quantity	Location	Condition (Valid/ Expire)	Any Part that Need Attention	Corrective Action Taken
1	DCP	06 Kg	Confrence Room	Valid	Nil	
2	DCP	06 Kg	Transformer Area- P/H	Valid	Nil	
3	DCP	06 kg	Korean Mess	Expire	Nil	
4	DCP	06 Kg	Ware house- Sambu	Valid	Nil	
5	DCP	05 kg	Korean Residence	Valid	Nil	
6	DCP	50 kg	Fuel Pump	Valid	Nil	
7	DCP	06 kg	Fuel Pump	Valid	Nil	
8	DCP	06 kg	Workshop	Valid	Nil	
9	DCP	06 kg	Erection Bay- P/ H	Valid	Nil	
10	DCP	06 kg	Unit 1&2 - P/H	Valid	Nil	
11	DCP	04kg	Unit 3 &4 - P/H	Valid	Nil	
12	DCP	06 Kg	Generator Room	Valid	Nil	
13	DCP	06 kg	Transformer Area- P/H	Valid	Nil	
14	DCP	06 kg	G.I.S Room- P/H	Valid	Nil	
15	DCP	06 Kg	Staff Mess	Valid	Nil	
16	DCP	04 Kg	Erection Bay- P/ H	Valid	Nil	
17	DCP	05 Kg	Transformer Area- P/H	Valid	Nil	
18	DCP	06kg	Transformer Area- P/H	Valid	Nil	

**Instructions:**

- 1 Check accessibility of Fire Extinguisher
- 2 Check the Pressure of Fire Extinguisher
- 3 Check nozel and pipe of Fire Extinguisher (are they in good condition)
- 4 Check the pin and seal weather they are intact or not
- 5 Check any dents leaks, rust, chemical deposits and other corrsion sign on Fire Extinguisher
- 6 Shake the dry chemical Powder Fire Extinguishers after inspection
- 7 If Fire Extinguisher is expired report and replace it immediately







## Kitchen Hygiene and Sanitary Inspection Checklist

Project: NBE Hydro Electric Power Complex

Date: 16/01/13

Sr. No	Activities / area	Satisfactory	Un Satisfactory	Proposed corrective action in case of unsatisfactory	Tentative Date of completion	Status to date	Remarks
1	General House Keeping	-	✓	Ensure the housekeeping to avoid slip, trip and fall	17/01/13	Ok	House keeping has been ensured by the target date and found satisfactory.
2	Food is properly stored & protected from contamination.	✓	-				Vegetables observed stored proply on shelves
3	Food stored area is clean	-	✓	Immediately remove rubbish and make the area clean	17/01/13	Ok	Rubbish material has been removed and store observed satisfactory.
4	Raw food s & vegetable are washed before serving.	✓	-				It is monitored by camp supervisor
5	Refrigeration is maintained at below 40 degrees and the freeze at 0 °F.	✓	-				Refrigerators are working properly
6	Food is being bought from reliable supplier.	✓	-				Local market, marts and shopping centers
7	Work surface are washed & clean after using.	✓	-				Floor observed neat and clean.
8	All small equipment utensils including cutting board are cleaned before using.	✓	-				Yes, A number of safety talk on heath hygiene and washing have been conducted.
9	Sink is properly set up for washing.	✓	-				Yes
10	Kitchen dust bin are emptied as necessary.		✓	Waste Drums observed full of waste outside the mess	17/01/13	Ok	After corrective action, the area has been made neat and clean.
11	Lighting condition	✓					It has been rechecked and observed satisfactory.
12	Table & chairs arrangement	✓	-				Desks and tables are available in labor mess hall
13	fan working properly.	✓	-				yes, it is working properly
14	Drinking water test are carried out	✓	-				As per Mgmt plan, tests are carried out and found satisfactory.
15	Pipe line of drain water in kitchen are free of any kind of choking	✓	-				Drainage pipe lines are properly working

## Inspection Checklist

Project: New Bong Escape Hydro Electric Power Complex

Date: 25/01/2013

Area to be Inspected: Workshop

Inspected by: ESOHS Officer, H/E Supervisor

Sr. No	Description	Y	N	Comments	Action Taken
<b>A General</b>					
1	Is the Floor space clear of Objects/ debris?		N	It is observed neat and clean	
2	Are the warning signs clearly visible?	Y		All kinds of warning signs are displayed in the workshop	
3	Are the records of Personal Protective Equipment (PPE) requirements for the workshop available?	Y		Record is available with the store I/C.	
4	Are the PPE's requirement followed?	Y			
5	Are all equipments located in an appropriate locations within the workshop?		N	Some gas cylinders were observed lying on the ground.	Supervisor advised to ensure arrangement of a proper trolley.
6	Does Floor clear of slip, trip & fall hazards?	Y		There is no slippage how ever minor trip hazards exist	Ensure proper house keeping.
7	Is there a preventative maintenance program in place for Vehicles and equipments in the workshop?	Y		All dump trucks and excavators are maintained properly as per the manufacturer's recommendation,	
8	Are people appropriately trained in maintenance of vehicles and equipment?	Y		Experience certificates are available with the workshop supervisor.	
<b>B Emergency Response</b>					
1	Are all access and egress points clear of obstructions?	Y		Open access and egress exists.	
2	Are appropriate fire extinguishers visible and clear of obstructions?	Y		Fire Extinguishers are available at visible places.	
3	Have fire extinguishers/ equipment been serviced in last 6 months?	Y		All Fire Extinguishers are refilled in the month of september.	
5	Is the Emergency Evacuation procedure clearly displayed?	Y			
6	Is the First Aid facility readily accessible?	Y		Clinic is hardly 15-20 meter from workshop area.	
7	Are there First Aid personnel identified?	Y		First aiders are available round the clock in the site clinic.	
<b>C Lubricants</b>					
1	Is there appropriate containment to prevent spread of major spills?	Y		Concrete containment is available for the storage of lubricants.	
2	Are Lubricants protected from direct sun heat?	Y		New lubricants are protected from direct sun heat where as used lubricants are stored in open sun.	
3	Is the MSDS or other Safety information available for lubricants?	Y		MSDS is available in workshop	
4	Is the security restricted access to store areas?	Y		no passage allowed other than the workers deputated at the job	

Sr. No	Description	Y	N	Comments	Action Taken
5	Is dip tray available to control spillage during maintenance or changing the engine oil or hydraulic oils?	Y		Dip trays are available and are used during maintenance or changing the oil.	
6	Are Lubricants and used engine oils stored in separate designated areas?	Y		Separate storage signs are also visible.	
<b>D</b>	<b>Abrasive Wheels</b>				
1	Are goggles or face shield always worn when grinding?	Y		Use of PPE's is ensured during grinding/cutting.	
2	Is the work rest used and kept adjusted to within 1/8 inch of the wheel?	Y			
3	Is the maximum RPM rating of each abrasive wheel compatible with the RPM rating of the grinder motor?	Y			
4	Before new abrasive wheels are mounted, are they visually inspected?	Y			
5	Are fixed or permanently mounted grinders connected to their electrical supply system with metallic conduit or other permanent wiring method?	Y			
6	Does each grinder have an individual on and off control switch?	Y			
7	Is housekeeping maintained around grinders?	Y			
<b>E</b>	<b>Gas Cylinders Safety</b>				
1	Are gas cylinders securely chained and the valve safe?	Y		Gas cylinders are secured and chained.	
2	Are all cylinders at least 3m away from potential ignition sources?	Y		there is concrete wall barrier between source and gas cylindr.	
3	Are gas cylinders stored appropriately within the workshop?	Y		Gas cylinders are stored in the covered area and in erected position.	
4	Are filled & empty gas cylinders stored in separate designated areas?	Y		Separate areas are designated in the workshop	
<b>F</b>	<b>Welding Safety</b>				
1	Are staff appropriately trained in performing welding tasks?	Y		Well experienced staff is hired for welding jobs.	
2	Are welding operators provided with the appropriate PPE for the task?	Y		Mandatory PPE's are in use	
3	Is there adequate ventilation for welding tasks?	Y		Open space is available	
4	Are there appropriate warning signs in welding areas?	Y		Warning signs also displayed in the workshop	
5	Are welding screens used when performing welding tasks?	Y		Use of welding screen is mandatory during welding	





## Rigging Equipments Inspection Checklist

Date:11/01/13

Project: New Bong Escape Hydro Electric Power Complex

Inspected by:Rigging Supervisor, ESOHS Officer

Sr. No	Description	Y	N	Comments	Action Taken
1	Is the rigging stored properly?		N	rigging equipments was observed stored properly	
2	Is the load rating present?	Y			
3	Are the wire ropes free of rust or broken wires?	Y		No such damages are observed	
4	Are ropes free of crushing or any other damage resulting in the distrotion of rope structure?	Y		No evidence of crushing or distortion is witnessed.	
5	Are defective ropes cut off or marked as unusable?	Y		Defective equipments are not stored at site, and properly stored at designated location.	
6	Are protruding ends of strands in splices on slings and bridles covered or blunted?	Y			
7	Are all fiber ropes protected from freezing, excessive heat or corrosive materials?	Y		No such sign of excessive heat or corrosive materials are obseved.	
8	Are all ropes protected from abrasion?	Y			
9	Do all the rope slings have a minimum clear length of 40 times the diameter of component ropes between each end fitting or ee splice?	Y			
10	Is each synthetic web sling marked or color coded?	Y		Synthetic web sling are not in use.	
11	Are the drums, sheaves and pulley smooth and free of surface defects that may damage rigging?	Y		It found satisfactory	
12	Have all the damaged drums and pullys been removed from service?	Y		No damage equipment observed there.	
13	Are all shackles and hooks sized properly?	Y			
14	Do all drums have sufficient rope capacity?	Y		Sufficient rope is available with each drum	
15	Is the drum end of the rope anchored by a clamp securely attached to the drum in a manner approved by the manufacturer?	Y		Each drum end of rope is secured by fixing with clamps	

## Scaffolding Inspection Checklist

Project: New Bong Escape Hydro Electric Power Complex

Date: 14/01/2013

Area to be Inspected: Scaffolding (Power house)

Inspected by: Site Engineer, ESOHS Officer

Sr. No	Description	Y	N	Comments	Action Taken
1	Is the scaffolding being erected under the direction of competent person?	Y		Qualified person is supervising the erection & dismantling of scaffolding	
2	Are footings of scaffold sound & rigid, not set on the soft ground or resting on blocks?	Y		Footing on solid concrete bed.	
3	Is the scaffold level?	Y		Scaffolding is erected on concrete bed at levelled surface.	
4	Are all braces, bearers and clamps secured, all sections pinned or appropriately secured?	Y		Clamps observed properly secured.	
5	Are scaffold equipped with guard rails consisting of toprail (38"-45" from platform) & mid railing (centre of top railing and platform)?		N	Guard railing observed missing at railing used in office building	Railing was installed the same day.
6	Are scaffolds adequately braced horizontally and vertically?	Y		All scaffolds are properly braced horizontally and vertically.	
7	Are the load bearing scaffold poles (ladder steps) not curved.	Y			
8	Does uncleated plank extend the end support a minimum of six inches.	Y			
9	Where planks are overlapped are they lapped over the supports?	Y			
10	Are the top and bottom surfaces of the plank visible and free from paint and other opaque finishes?	Y		All planks are free from any paint and opaque finishing	
11	If scaffold components of different manufacturers are used, do they fit together without force and has a competent person determined that they are safe for use?	Y		Mostly the scaffold of one manufacturer is being used at site.	
12	Have all components been inspected for defects such as broken welds, corroded members, and missing locks, bent or dented pipes?	Y		All components of scaffold found satisfactory.	
13	Are guardrails and midrails installed on all open sides and open ends of the platform?	Y		Guard railing and Midrailing are found satisfactory	
14	Have cross braces been prohibited as a means of access?	Y		Tool box talk is also conducted on safe access.	
15	Are tools, material, and debris removed from scaffold to prevent an accumulation?	Y		All items are of same manufacturer.	
16	Are the ladders specifically designed for use with the type of scaffold used?	Y		All items are of same manufacturer.	
17	Are the rungs of ladder at least 8 inches in length?	Y		Proper Korean manufactured ladders are being used.	
18	Have all planks been properly secured to the scaffold structure to prevent them blowing off in the event of high winds?	Y		All planks are tied at both ends to secure them blowing off.	
19	Has it prohibit the use of ladders and other devices to increase working heights on platforms.	Y		Platforms are not used to extend the height.	
20	Has the Safety briefing made to all people working on / for scaffolding?	Y		Tool box talks are provided on scaffolding regularly	
21	Are all employees aware not to use a scaffold with broken or missing parts	Y			
22	Are all employees aware that before moving the scaffolds there are no power lines or other obstructions overhead?	Y		everyone is well aware and No over head power lines near the Power house.	
23	Are employee not allowed to work at plat forms during high winds and bad weather?	Y		During bad weather no one is allowed to work there.	

## Hygienes of Food Handlers

Project: New Bong Escape Hydro Electric Power Complex

Inspected by: ESOHS Officer, Medical Officer

Area to be Inspected: Hygienes of Food Handlers

Inspection Date: 06/02/13

Sr. No	Description	Y	N	Comments	Action Taken
1	Do all kitchen staff fulfilled the requirements of the Medical Officer.	Y			
2	Is any evidence of reported sickness among kitchen staff to the concerned person?	Y		The medical examinations were conducted in May 2012 and no severe illness observed.	
3	Has monthly checking of nails/hands of kitchen staff been done?	Y		Monthly inspections are carried out in routine	
4	Are daily hygiene practices monitored by the concerned person and all corrective actions have been completed?	Y		Camp supervisor daily monitor all the cooking staff.	
5	Is the kitchen staff been provided with warm water and soap/liquid hand wash for personal hygiene?	Y		Separate hot and cold water facility is available in kitchens.	
6	Do the food handlers wash their hands as often as necessary?	Y		Doctor briefs them regularly about hand washing techniques.	
7	Is all jewellery including watches removed prior to commencing direct food handling?	Y			
8	Is there any evidence of smoking in food preparation areas?	Y		"No Smoking" safety signs have been displayed in the mess halls.	
9	Do kitchen personnel wear appropriate uniform like protective clothing and protective head coverings during food preparation?	Y		Aprons and head cover have been provided to the kitchen staff.	
10	All staff understands their responsibilities with regards to reporting of illness?	Y			
11	Is sick staff excluded from working inside the kitchen with food?	Y		No such sickness is reported in the current month.	
12	Is there a first-aid box available/ wounds are covered with coloured, water proof dressings?	Y		First Aid Box available in the labor camp near the mess hall.	
13	Is staff aware of food safety practices and their responsibilities?	Y		Food safety procedure has been discussed with the food handlers & also displayed on notice boards	
14	Is staff aware they must not be at work when they may be suffering from a food borne illness or condition?	Y			
15	Are kitchen staffs trained on proper hand washing?	Y		Proper hand washing techniques have been discussed and HSE up dates on hand washing techniques is displayed in mess halls.	
16	Is staff aware of food hygiene through awareness sessions?	Y			
17	Are kitchen staffs trained on proper use and storage of chemicals/ detergents?	Y		No detegents or chemicals are stored in kitchens.	
18	Is any training/awareness sessions' record available?	Y		Refrence to Pervious MPRs	
19	Are training schedule present?	Y			
20	Are food handlers' trained on use of fire extinguishers?	Y			

## Fire Extinguishers Inspection Record Sheet

Project: New Bong Escape Hydro Electric Power Complex

Date: 18/02/13

F/ E No	Type of Fire Extinguisher	Capacity/ Quantity	Location	Condition (Valid/ Expire)	Any Part that Need Attention	Corrective Action Taken
1	DCP	06 Kg	Confrence Room	Expire	Nil	Dispatched for refilling
2	DCP	06 Kg	Transformer Area- P/H	Valid	Nil	
3	DCP	06 kg	Korean Mess	Valid	Nil	
4	DCP	06 Kg	Ware house- Sambu	Valid	Nil	
5	DCP	05 kg	Korean Residence	Valid	Nil	
6	DCP	50 kg	Fuel Pump	Valid	Nil	
7	DCP	06 kg	Fuel Pump	Valid	Nil	
8	DCP	06 kg	Workshop	Valid	Nil	
9	DCP	06 kg	Erection Bay- P/ H	Valid	Nil	
10	DCP	06 kg	Unit 1&2 - P/H	Valid	Nil	
11	DCP	04kg	Unit 3 &4 - P/H	Valid	Nil	
12	DCP	06 kg	Transformer Area- P/H	Valid	Nil	
13	DCP	06 kg	G.I.S Room- P/H	Valid	Nil	
14	DCP	06 Kg	Staff Mess	Expire	Nil	Dispatched for refilling
15	DCP	04 Kg	Erection Bay- P/ H	Valid	Nil	
16	DCP	05 Kg	Transformer Area- P/H	Valid	Nil	
17	DCP	06kg	G.I.S Room- P/H	Valid	Nil	

**Instructions:**

- 1 Check accessibility of Fire Extinguisher
- 2 Check the Pressure of Fire Extinguisher
- 3 Check nozel and pipe of Fire Extinguisher (are they in good condition)
- 4 Check the pin and seal weather they are intact or not
- 5 Check any dents leaks, rust, chemical deposits and other corrsion sign on Fire Extinguisher
- 6 Shake the dry chemical Powder Fire Extinguishers after inspection
- 7 If Fire Extinguisher is expired report and replace it immediately







## Kitchen Hygiene and Sanitary Inspection Checklist

Project: NBE Hydro Electric Power Complex

Date: 13/02/13

Sr. No	Activities / area	Satisfactory	Un Satisfactory	Proposed corrective action in case of unsatisfactory	Tentative Date of completion	Status to date	Remarks
1	General House Keeping	✓					House keeping is well maintained and satisfactory.
2	Food is properly stored & protected from contamination.		✓	food should be stored seperately in properly cleaned shelves to avoid any spoilage.			meat and vegitables were found stored together on same shelves
3	Food stored area is clean	-	✓	Immediately remove rubbish and make the area clean	14/02/13	Ok	Rubbish material has been removed and store observed satisfactory.
4	Raw food s & vegetable are washed before serving.	✓	-				It is monitored by camp supervisor
5	Refrigeration is maintained at below 40 degrees and the freeze at 0 °F.	✓	-				Refrigerators are working properly
6	Food is being bought from reliable supplier.	✓	-				Local market, marts and shopping centers
7	Work surface are washed & clean after using.	✓	-			Ok	Floor and food handling surfaces were found neat and clean.
8	All small equipment utensils including cutting board are cleaned before using.	✓	-				Yes, A number of safety talk on heath hygiene and washing have been conducted.
9	Sink is properly set up for washing.	✓	-				Yes
10	Kitchen dust bin are emptied as necessary.		✓	Dustbin should be emptied after regular intervals	14/02/13		Dust bins were found emptied after regular intervals.
11	Lighting condition	✓					It has been rechecked and observed satisfactory.
12	Table & chairs arrangement	✓	-				Desks and tables are available in labor mess hall
13	fan working properly.	✓	-				yes, it is working properly
14	Drinking water test are carried out	✓	-				As per Mgmt plan, tests are carried out and found satisfactory.
15	Pipe line of drain water in kitchen are free of any kind of choking	✓	-				Drainage pipe lines are properly working





## Hygienes of Food Handlers

Project: New Bong Escape Hydro Electric Power Complex

Inspected by: ESOHS Officer, Medical Officer

Area to be Inspected: Hygienes of Food Handlers

Inspection Date: 08/03/13

Sr. No	Description	Y	N	Comments	Action Taken
1	Do all kitchen staff fulfilled the requirements of the Medical Officer.	Y			
2	Is any evidence of reported sickness among kitchen staff to the concerned person?		N	The medical examinations were conducted in May 2012 and no severe illness observed.	
3	Has monthly checking of nails/hands of kitchen staff been done?	Y		Monthly inspections are carried out in routine	
4	Are daily hygiene practices monitored by the concerned person and all corrective actions have been completed?	Y		Camp supervisor daily monitor all the cooking staff.	
5	Is the kitchen staff been provided with warm water and soap/liquid hand wash for personal hygiene?	Y		Separate hot and cold water facility is available in kitchens.	
6	Do the food handlers wash their hands as often as necessary?	Y		Doctor briefs them regularly about hand washing techniques.	
7	Is all jewellery including watches removed prior to commencing direct food handling?	Y			
8	Is there any evidence of smoking in food preparation areas?	Y		"No Smoking" safety signs have been displayed in the mess halls.	
9	Do kitchen personnel wear appropriate uniform like protective clothing and protective head coverings during food preparation?	Y		Aprons and head cover have been provided to the kitchen staff.	
10	All staff understands their responsibilities with regards to reporting of illness?	Y			
11	Is sick staff excluded from working inside the kitchen with food?	Y		No such sickness is reported in the current month.	
12	Is there a first-aid box available/ wounds are covered with coloured, water proof dressings?	Y		First Aid Box available in the labor camp near the mess hall.	
13	Is staff aware of food safety practices and their responsibilities?	Y		Food safety procedure has been discussed with the food handlers & also displayed on notice boards	
14	Is staff aware they must not be at work when they may be suffering from a food borne illness or condition?	Y			
15	Are kitchen staffs trained on proper hand washing?	Y		Proper hand washing techniques have been discussed and HSE up dates on hand washing techniques is displayed in mess halls.	
16	Is staff aware of food hygiene through awareness sessions?	Y		trainings and tool box talks are being conducted for the food handlers .	
17	Are kitchen staffs trained on proper use and storage of chemicals/ detergents?	Y		No detegents or chemicals are stored in kitchens.	
18	Is any training/awareness sessions' record available?	Y		Refrence to Pervious MPRs	
19	Are training schedule present?	Y			
20	Are food handlers' trained on use of fire extinguishers?	Y			

## Fire Extinguishers Inspection Record Sheet

Project: New Bong Escape Hydro Electric Power Complex

Date: 19/03/13

F/ E No	Type of Fire Extinguisher	Capacity/ Quantity	Location	Condition (Valid/ Expire)	Any Part that Need Attention	Corrective Action Taken
1	DCP	06 Kg	Confrence Room	Expire	Nil	Dispacted for refilling
2	DCP	06 Kg	Transformer Area- P/H	Valid	Nil	
3	DCP	06 kg	Korean Mess	Valid	Nil	
4	DCP	06 Kg	Ware house- Sambu	Valid	Nil	
5	DCP	05 kg	Korean Residence	Valid	Nil	
6	DCP	50 kg	Fuel Pump	Valid	Nil	
7	DCP	06 kg	Fuel Pump	Valid	Nil	
8	DCP	06 kg	Workshop	Valid	Nil	
9	DCP	06 kg	Erection Bay- P/ H	Valid	Nil	
10	DCP	06 kg	Unit 1&2 - P/H	Valid	Nil	
11	DCP	04kg	Unit 3 &4 - P/H	Valid	Nil	
12	DCP	06 kg	Transformer Area- P/H	Valid	Nil	
13	DCP	06 kg	G.I.S Room- P/H	Valid	Nil	
14	DCP	06 Kg	Staff Mess	Expire	Nil	Dispatched for refilling
15	DCP	04 Kg	Erection Bay- P/ H	Valid	Nil	
16	DCP	05 Kg	Transformer Area- P/H	Valid	Nil	
17	DCP	06kg	G.I.S Room- P/H	Valid	Nil	

**Instructions:**

- 1 Check accessibility of Fire Extinguisher
- 2 Check the Pressure of Fire Extinguisher
- 3 Check nozel and pipe of Fire Extinguisher (are they in good condition)
- 4 Check the pin and seal weather they are intact or not
- 5 Check any dents leaks, rust, chemical deposits and other corrsion sign on Fire Extinguisher
- 6 Shake the dry chemical Powder Fire Extinguishers after inspection
- 7 If Fire Extinguisher is expired report and replace it immediately



## Fogging/ Spraying Record

Project: New Bong Escape Hydro Electric Power Complex

Area	Jan 2013		Feb 2013		Mar 2013		Apr 2013		May 2013		Jun 2013	
	13-Jan	28-Jan	12-Feb	27-Feb	14-Mar	29-Mar						
Office Area	✓	✓	✓	✓	✓	✓						
Korean Staff Residences	✓	✓	✓	✓	✓	✓						
Work Shop	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 01	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 02	✓	✓	✓	✓	✓	✓						
Local Staff Mess	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 03/1	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 03/2	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 03/3	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 03/4	✓	✓	✓	✓	✓	✓						
Labour Mess Hall	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 04/1	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 04/2	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 04/3	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 04/4	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 05/1	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 05/2	✓	✓	✓	✓	✓	✓						



## Fogging/ Spraying Record

Project: New Bong Escape Hydro Electric Power Complex

Area	Jan 2013		Feb 2013		Mar 2013		Apr 2013		May 2013		Jun 2013	
	13-Jan	28-Jan	12-Feb	27-Feb	14-Mar	29-Mar						
Local Staff Residence # 05/3	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 05/4	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 06/1	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 06/2	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 06/3	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 06/4	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 07/1	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 07/2	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 07/3	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 07/4	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 08/1	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 08/2	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 08/3	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 08/4	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 09/1	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 09/2	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 09/3	✓	✓	✓	✓	✓	✓						
Local Staff Residence # 09/4	✓	✓	✓	✓	✓	✓						



## Kitchen Hygiene and Sanitary Inspection Checklist

Project: NBE Hydro Electric Power Complex

Date: 12/03/13

Sr. No	Activities / area	Satisfactory	Un Satisfactory	Proposed corrective action in case of unsatisfactory	Tentative Date of completion	Status to date	Remarks
1	General House Keeping	✓					House keeping is well maintained and satisfactory.
2	Food is properly stored & protected from contamination.	✓					
3	Food stored area is clean	✓					
4	Raw food s & vegetable are washed before serving.	✓	-				It is monitored by camp supervisor
5	Refrigeration is maintained at below 40 degrees and the freeze at 0 °F.		✓	proper maintainace of refrigrator should be done to maintain the required	15-3-13	Ok	Refrigerators are working properly
6	Food is being bought from reliable supplier.	✓	-				Local market, marts and shopping centers
7	Work surface are washed & clean after using.	✓	-			Ok	Floor and food handling surfaces were found neat and clean.
8	All small equipment utensils including cutting board are cleaned before using.	✓	-				Yes, A number of safety talk on heath hygiene and washing have been conducted.
9	Sink is properly set up for washing.	✓	-				Yes
10	Kitchen dust bin are emptied as necessary.		✓	Dustbin should be emptied after regular intervals	03/12/2013		Dust bins were found emptied after regular intervals.
11	Lighting condition	✓					It has been rechecked and observed satisfactory.
12	Table & chairs arrangement	✓	-				Desks and tables are available in labor mess hall
13	fan working properly.	✓	-				yes, it is working properly
14	Drinking water test are carried out	✓	-				As per Mgmt plan, tests are carried out and found satisfactory.

15	Pipe line of drain water in kitchen are free of any kind of choking	√	-				Drainage pipe lines are properly working
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## Rigging Equipments Inspection Checklist

Date:10/03/13

Project: New Bong Escape Hydro Electric Power Complex

Inspected by:Rigging Supervisor, ESOHS Officer

Sr. No	Description	Y	N	Comments	Action Taken
1	Is the rigging stored properly?	Y		rigging equipments was observed stored properly	
2	Is the load rating present?	Y			
3	Are the wire ropes free of rust or broken wires?	Y			All the wire ropes were found satisfactory
4	Are ropes free of crushing or any other damage resulting in the distrotion of rope structure?	Y		No evidence of crushing or distortion is witnessed.	
5	Are defective ropes cut off or marked as unusable?	Y		Defective equipments are not stored at site, and properly stored at designated location.	
6	Are protruding ends of strands in splices on slings and bridles covered or blunted?		N	some strands were found not covered or blunted.	defected strands was asked to be removed or repaired.
7	Are all fiber ropes protected from freezing, excessive heat or corrosive materials?	Y		No such sign of excessive heat or corrosive materials are obseved.	
8	Are all ropes protected from abrasion?	Y			
9	Do all the rope slings have a minimum clear length of 40 times the diameter of component ropes between each end fitting or splice?	Y			
10	Is each synthetic web sling marked or color coded?			Synthetic web sling are not in use.	
11	Are the drums, sheaves and pulley smooth and free of surface defects that may damage rigging?	Y		It found satisfactory	
12	Have all the damaged drums and pullys been removed from service?	Y		No damage equipment observed there.	
13	Are all shackles and hooks sized properly?	Y			
14	Do all drums have sufficient rope capacity?	Y		Sufficient rope is available with each drum	
15	Is the drum end of the rope anchored by a clamp securely attached to the drum in a manner approved by the manufacturer?	Y		Each drum end of rope is secured by fixing with clamps	

## Scaffolding Inspection Checklist

Project: New Bong Escape Hydro Electric Power Complex

Date:04/03/13

Area to be Inspected: Scaffolding (Power house)

Inspected by:Site Engineer, ESOHS Officer

Sr. No	Description	Y	N	Comments	Action Taken
1	Is the scaffolding being erected under the direction of competent person?	Y		Qualified person is supervising the erection & dismantling of scaffolding	
2	Are footings of scaffold sound & rigid, not set on the soft ground or resting on blocks?	Y		Footing on solid concrete bed.	
3	Is the scaffold level?	Y		Scaffolding is erected on concrete bed at levelled surface.	
4	Are all braces, bearers and clamps secured, all sections pinned or appropriately secured?	Y		All elements were secured	
5	Are scaffold equipped with guard rails consisting of toprail (38"-45" from platform) & mid railing (centre of top railing and platform)?		N	Few scaffoldings were found without guard railings	Supervisor was asked to arrange for the guard railings immediately
6	Are scaffolds adequately braced horizontally and vertically?	Y		All scaffolds are properly braced horizontally and vertically.	
7	Are the load bearing scaffold poles (ladder steps) not curved.	Y			
8	Does uncleaned plank extend the end support a minimum of six inches.	Y		some planks were observed extended more than six inches	supervisor was asked to revise the plank extension accordingly
9	Where planks are overlapped are they lapped over the supports?	Y		Over lap is proper	
10	Are the top and bottom surfaces of the plank visible and free from paint and other opaque finishes?	Y		All planks are free from any paint and opaque finishing	
11	If scaffold components of different manufacturers are used, do they fit together without force and has a competent person determined that they are safe for use?	Y		Mostly the scaffold of one manufacturer is being used at site.	
12	Have all components been inspected for defects such as broken welds, corroded members, and missing locks, bent or dented pipes?	Y		All components of scaffold found satisfactory.	
13	Are guardrails and midrails installed on all open sides and open ends of the platform?		N	mid railing in some scaffoldings found missing	scaffolding forman was asked to provide the mid railing on all open sides
14	Have cross braces been prohibited as a means of access?	Y		Tool box talk is also conducted on safe access.	
15	Are tools, material, and debris removed from scaffold to prevent an accumulation?	Y			
16	Are the ladders specifically designed for use with the type of scaffold used?	Y		All items are of same manufacturer.	
17	Are the rungs of ladder at least 8 inches in length?	Y		Proper Korean manufactured ladders are being used.	
18	Have all planks been properly secured to the scaffold structure to prevent them blowing off in the event of high winds?		N	some planks were observed tied with ordinary rope.	rope was removed and asked the scaffolder to tie it in a proper way
19	Has it prohibit the use of ladders and other devices to increase working heights on platforms.	Y		Platforms are not used to extend the height.	
20	Has the Safety briefing made to all people working on / for scaffolding?	Y			
21	Are all employees aware not to use a scaffold with broken or missing parts	Y		Tool box talks are provided on scaffolding regularly	
22	Are all employees aware that before moving the scaffolds there are no power lines or other obstructions overhead?			No over head power lines near the Power house.	
23	Are employee not allowed to work at platforms during high winds and bad weather?			No scaffoldings are there in open space	



## Scaffolding Inspection Checklist

Project: New Bong Escape Hydro Electric Power Complex

Date:11/03/13

Area to be Inspected: Scaffolding (Power house)

Inspected by:Site Engineer, ESOHS Officer

Sr. No	Description	Y	N	Comments	Action Taken
1	Is the scffolding being erected under the direction of competent person?	Y		Qualified person is supervising the erection & dismantling of scaffolding	
2	Are footings of scaffold sound & rigind, not set on the soft ground or resting on blocks?	Y		Footing on solid concrete bed.	
3	Is the scaffold level?	Y		Scaffolding is erected on concrete bed at levelled surface.	
4	Are all braces, bearers and clamps secured, all sections pinned or appropriately secured?	Y		All elements were secured	
5	Are scaffold equiped with guard rails consisting of toprail (38"-45" from platfrom) & mid railing (centre of top railing and platform)?	Y		All elements were found satisfactory	
6	Are scaffolds adequately braced horizontally and vertically?	Y		All scaffolds are properly braced horizontally and vertically.	
7	Are the load bearing scaffold poles (ladder steps) not curved.	Y			
8	Does uncleated plank extend the end support a minimum of six inches.	Y			
9	Where planks are overlapped are they lapped over the supports?	Y		Over lap is proper	
10	Are the top and bottom surfaces of the plank visible and free from paint and other opaque finishes?	Y		All planks are free from any paint and opaque finishing	
11	If scaffold components of different manufacturers are used, do they fit together without force and has a competent person determined that they are safe for use?	Y		Mostly the scaffold of one manufacturer is being used at site.	
12	Have all components been inspected for defects such as broken welds, corroded members, and missing locks, bent or dented pipes?	Y		All components of scaffold found satisfactory.	
13	Are guardrails and midrails installed on all open sides and open ends of the platform?	Y		Guard railing installed properly.	
14	Have cross braces been prohibited as a means of access?	Y		Tool box talk is also coducted on safe access.	
15	Are tools, material, and debris removed from scaffold to prevent an accumulation?	Y			
16	Are the ladders specifically designed for use with the type of scaffold used?	Y		All items are of same manufacturer.	
17	Are the rungs of ladder at least 8 inches in length?	Y		Proper Korean manufactured ladders are being used.	
18	Have all planks been properly secured to the scaffold structure to prevent them blowing off in the event of high winds?	Y		All planks are tied at both ends to secure them blowing off.	
19	Has it prohibit the use of ladders and other devices to increase working heights on platforms.	Y		Platforms are not used to extend the height.	
20	Has the Safety briefing made to all people working on / for scaffolding?	Y			
21	Are all employees aware not to use a scaffold with broken or missing parts	Y		Tool box talks are provided on scaffolding regularly	
22	Are all employees aware that before moving the scaffolds there are no power lines or other obstructions overhead?			No over head power lines near the Power house.	
23	Are employee not allowed to work at plat forms during high winds and bad weather?			No scaffoldings are there in open space	

## Scaffolding Inspection Checklist

Project: New Bong Escape Hydro Electric Power Complex

Date:18/03/13

Area to be Inspected: Scaffolding (Power house)

Inspected by:Site Engineer, ESOHS Officer

Sr. No	Description	Y	N	Comments	Action Taken
1	Is the scffolding being erected under the direction of competent person?	Y		Qualified person is supervising the erection & dismantling of scaffolding	
2	Are footings of scaffold sound & rigind, not set on the soft ground or resting on blocks?	Y		Footing on solid concrete bed.	
3	Is the scaffold level?	Y		Scaffolding is erected on concrete bed at levelled surface.	
4	Are all braces, bearers and clamps secured, all sections pinned or appropriately secured?	Y		All elements were secured	
5	Are scaffold equiped with guard rails consisting of top rail (38"-45" from platform) & mid railing (centre of top railing and platform)?	Y			
6	Are scaffolds adequately braced horizontally and vertically?	Y		All scaffolds are properly braced horizontally and vertically.	
7	Are the load bearing scaffold poles (ladder steps) not curved.	Y			
8	Does uncleated plank extend the end support a minimum of six inches.	Y			
9	Where planks are overlapped are they lapped over the supports?	Y		Over lap is proper	
10	Are the top and bottom surfaces of the plank visible and free from paint and other opaque finishes?	Y		All planks are free from any paint and opaque finishing	
11	If scaffold components of different manufacturers are used, do they fit together without force and has a competent person determined that they are safe for use?	Y		Mostly the scaffold of one manufacturer is being used at site.	
12	Have all components been inspected for defects such as broken welds, corroded members, and missing locks, bent or dented pipes?	Y		All components of scaffold found satisfactory.	
13	Are guardrails and midrails installed on all open sides and open ends of the platform?	Y		All components of scaffold found satisfactory.	
14	Have cross braces been prohibited as a means of access?	Y		Tool box talk is also coducted on safe access.	
15	Are tools, material, and debris removed from scaffold to prevent an accumulation?	Y			
16	Are the ladders specifically designed for use with the type of scaffold used?	Y		All items are of same manufacturer.	
17	Are the rungs of ladder at least 8 inches in length?	Y		Proper Korean manufactured ladders are being used.	
18	Have all planks been properly secured to the scaffold structure to prevent them blowing off in the event of high winds?		N	few planks are found not secured	forman was asked to tie the planks properly
19	Has it prohibit the use of ladders and other devices to increase working heights on platforms.	Y		Platforms are not used to extend the height.	
20	Has the Safety briefing made to all people working on / for scaffolding?	Y			
21	Are all employees aware not to use a scaffold with broken or missing parts	Y		Tool box talks are provided on scaffolding regularly	
22	Are all employees aware that before moving the scaffolds there are no power lines or other obstructions overhead?			No over head power lines near the Power house.	
23	Are employee not allowed to work at plat forms during high winds and bad weather?			No scaffoldings are there in open space	

# Inspection Checklist

Project: New Bong Escape Hydro Electric Power Complex

Date: 22/03/2013

Area to be Inspected: Workshop

Inspected by: ESOHS Officer, H/E Supervisor

Sr. No	Description	Y	N	Comments	Action Taken
<b>A</b>	<b>General</b>				
1	Is the Floor space clear of Objects/ debris?		N	some objects and tools were observed scattered on the floor	workshop incharge was asked to keep the area clear from objects
2	Are the warning signs clearly visible?	Y		All kinds of warning signs are displayed in the workshop	
3	Are the records of Personal Protective Equipment (PPE) requirements for the workshop available?	Y		Record is available with the store I/C.	
4	Are the PPE's requirement followed?		N	Some workers were found without PPEs while working inside the	strictely asked to wear the PPEs
5	Are all equipments located in an appropriate locations within the workshop?	Y		All gas cylinders were well arranged and erected properly.	
6	Does Floor clear of slip, trip & fall hazards?	Y			
7	Is there a preventative maintenance program in place for Vehicles and equipments in the workshop?	Y		All dump trucks and excavators are maintained proeprly as per the manufacturer's recommendation,	
8	Are people appropriately trained in maintenance of vehicles and equipment?	Y		Experience certificates are available with the workshop supervisor.	
<b>B</b>	<b>Emergency Response</b>				
1	Are all access and egress points clear of obstructions?	Y		Open access and egress exists.	
2	Are appropriate fire extinguishers visible and clear of obstructions?	Y		Fire Extinguihers are available at visible places.	
3	Have fire extinguishers/ equipment been serviced in last 6 months?	Y		All Fire Extinguishers are refilled in the month of september.	
5	Is the Emergency Evacuation procedure clearly displayed?	Y			
6	Is the First Aid facility readily accessible?	Y		Clinic is very close to the workshop area.	
7	Are there First Aid personnel identified?	Y		First aiders are available round the clock in the site clinic.	
<b>C</b>	<b>Lubricants</b>				
1	Is there appropriate containment to prevent spread of major spills?	Y		Concrete containment is available for the storage of lubricants.	
2	Are Lubricants protected from direct sun heat?	Y		New lubricants are protected from direct sun heat where as used lubricants are stored in open sun.	
3	Is the MSDS or other Safety information available for lubricants?	Y		MSDS is available in workshop	
4	Is the security restricted access to store areas?	Y		no passage allowed othe than the workers deputed at the job	

Sr. No	Description	Y	N	Comments	Action Taken
5	Is dip tray available to control spillage during maintenance or changing the engine oil or hydraulic oils?	Y		Dip trays are available and are used during maintenance or changing the oil.	
6	Are Lubricants and used engine oils stored in separate designated areas?	Y		Separate storage signs are also visible.	
<b>D</b>	<b>Abrasive Wheels</b>				
1	Are goggles or face shield always worn when grinding?	Y		Use of PPE's is ensured during grinding/ cutting.	
2	Is the work rest used and kept adjusted to within 1/8 inch of the wheel?	Y			
3	Is the maximum RPM rating of each abrasive wheel compatible with the RPM rating of the grinder motor?	Y			
4	Before new abrasive wheels are mounted, are they visually inspected?	N/A			
5	Are fixed or permanently mounted grinders connected to their electrical supply system with metallic conduit or other permanent wiring method?	N/A			
6	Does each grinder have an individual on and off control switch?	Y			
7	Is housekeeping maintained around grinders?	Y			
<b>E</b>	<b>Gas Cylinders Safety</b>				
1	Are gas cylinders securely chained and the valve safe?		N	two gas cylinders were found not secured with chain	workshop incharge was asked to secure them with chain
2	Are all cylinders at least 3m away from potential ignition sources?	Y		there is concrete wall barrier between source and gas cylindr.	
3	Are gas cylinders stored appropriately within the workshop?	Y		Gas cylinders are stored in the covered area and in erected position.	
4	Are filled & empty gas cylinders stored in separate designated areas?	Y		Separate areas are designated in the workshop	
<b>F</b>	<b>Welding Safety</b>				
1	Are staff appropriately trained in performing welding tasks?	Y		Well experienced staff is hired for welding jobs.	
2	Are welding operators provided with the appropriate PPE for the task?	Y		Mandatory PPE's are in use	
3	Is there adequate ventilation for welding tasks?	Y		Open space is available	
4	Are there appropriate warning signs in welding areas?	Y		Warning signs also displayed in the workshop	
5	Are welding screens used when performing welding tasks?	Y		Use of welding screen is mandatory during welding	

## Scaffolding Inspection Checklist

Project: New Bong Escape Hydro Electric Power Complex

Date:25/03/13

Area to be Inspected: Scaffolding (Power house)

Inspected by:Site Engineer, ESOHS Officer

Sr. No	Description	Y	N	Comments	Action Taken
1	Is the scffolding being erected under the direction of competent person?	Y		Qualified person is supervising the erection & dismantling of scaffolding	
2	Are footings of scaffold sound & rigind, not set on the soft ground or resting on blocks?	Y		Footing on solid concrete bed.	
3	Is the scaffold level?	Y		Scaffolding is erected on concrete bed at levelled surface.	
4	Are all braces, bearers and clamps secured, all sections pinned or appropriately secured?	Y		All elements were secured	
5	Are scaffold equiped with guard rails consisting of toprail (38"-45" from platfrom) & mid railing (centre of top railing and platform)?	N			
6	Are scaffolds adequately braced horizontally and vertically?	Y		All scaffolds are properly braced horizontally and vertically.	
7	Are the load bearing scaffold poles (ladder steps) not curved.	Y			
8	Does uncleated plank extend the end support a minimum of six inches.	Y			
9	Where planks are overlapped are they lapped over the supports?	Y		Over lap is proper	
10	Are the top and bottom surfaces of the plank visible and free from paint and other opaque finishes?	Y		All planks are free from any paint and opaque finishing	
11	If scaffold components of different manufacturers are used, do they fit together without force and has a competent person determined that they are safe for use?	Y		Mostly the scaffold of one manufacturer is being used at site.	
12	Have all components been inspected for defects such as broken welds, corroded members, and missing locks, bent or dented pipes?	Y		All components of scaffold found satisfactory.	
13	Are guardrails and midrails installed on all open sides and open ends of the platform?		N	guard railing in some scaffolds found missing	scaffolding forman was asked to provide the gaurd railing on all open sides
14	Have cross braces been prohibited as a means of access?	Y		Tool box talk is also coducted on safe access.	
15	Are tools, material, and debris removed from scaffold to prevent an accumulation?		N	some tools were observed not removed	removed from the scaffolds.
16	Are the ladders specifically designed for use with the type of scaffold used?	Y		All items are of same manufacturer.	
17	Are the rungs of ladder at least 8 inches in length?	Y		Proper Korean manufactured ladders are being used.	
18	Have all planks been properly secured to the scaffold structure to prevent them blowing off in the event of high winds?	Y		All planks are tied at both ends to secure them blowing off.	
19	Has it prohibit the use of ladders and other devices to increase working heights on platforms.	Y		Platforms are not used to extend the height.	
20	Has the Safety briefing made to all people working on / for scaffolding?	Y			
21	Are all employees aware not to use a scaffold with broken or missing parts	Y		Tool box talks are provided on scaffolding regularly	
22	Are all employees aware that before moving the scaffolds there are no power lines or other obstructions overhead?			No over head power lines near the Power house.	
23	Are employee not allowed to work at plat forms during high winds and bad weather?			No scaffoldings are there in open space	

## Exhibit 39 – Risk Assessments

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## HSE Risk Assessment Discharge of Water in Tailrace

Project: New Bong Escape Hydro Electric Power Complex

Assessor Name: ESOHS Officer, Area Supervisor

Sr. No	Activities	Responsibility	Identified Health & Safety Hazard / Environmental Aspects	Potential Risks	Assessment for Element (As per evaluation criteria)							Control Measures	Residual Risk		
					Legal Implications	Policy Requirements	Interested Party Requirements	Public Image / Local Problems & Concern	Likelihood / Probability	Severity / Intensity	Total		Likelihood / Probability	Severity / Intensity	Rating
1	Discharge of Water in tailrace channel	Area Supervisor	Drowning Hazards	Loss of Life	3	3	3	2	3	4	12	<p>Arrange safety signs to enhance the safety awareness among the public. Arrange sittings with the local community to aware them the water related hazards.</p> <p>Announcements through loud speakers in the mosques before the discharge of water. Ring the siron/ hooter prior the release of water. Keep the security check strict and no one should be allowed boating, fishing or swimming in the tail race.</p>	2	2	4
			Slippery surfaces	Injury/ Loss of Life	3	3	3	2	3	4	12	<p>Arranging announcements through loud speakers in the mosques before discharge of water. Warning alerts to local community through local newspaper or any other means. Arrange sittings with the local community to keep aware them the water related hazards. Boating, swimming or fishing should not allowed in the tailrace. Arrange safety signs to creat awareness among the masses.</p>	2	2	4



## HSE Risk Assessment LandScaping

Project: New Bong Escape Hydro Electric Power Complex

Assessor Name: ESOHS Officer, Area Supervisor

Sr. No	Activities	Responsibility	Identified Health & Safety Hazard / Environmental Aspects	Potential Risks	Base Risk							Control Measures	Residual Risk		
					Legal Implications	Policy Requirements	Interested Party Requirements	Public Image / Local Problems & Concern	Likelihood / Probability	Severity / Intensity	Total		Likelihood / Probability	Severity / Intensity	Rating
1	Landscaping	Area Supervisor	Hand tools (including Long and small diggers, mowers and post hole diggers )	Amputation, crushing, cuts	2	3	2	1	2	3	6	Ensure only trained persons carryout the work. Keep safe distance between work and other people. Provide appropriate personal protective equipment (PPE) including hearing protection	2	2	4
			Slips, trips and falls (working on uneven surfaces, slippery or loose ground, embankments)	Broken bones, Sprain and strains	2	3	2	1	2	3	6	Provide appropriate trainings. Remove falling and tripping hazards( e.g holes not filled in, electrical leads left on the ground)	2	2	4
			Hazardous substances and dangerous goods (including , herbicides, Fertilizers, Petrol for generators and mowers)	Skin contact or accidental swallowing can result in nausea, allergic reaction and/or poisoning	2	3	2	1	2	2	4	Use the least hazardous product for each job. Provide safety information on label and through Material Safety Data Sheet. Provide Personal Protective Equipments	2	1	2





## HSE Risk Assessment LandScaping

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Sr. No	Activities	Responsibility	Identified Health & Safety Hazard / Environmental Aspects	Potential Risks	Base Risk							Control Measures	Residual Risk		
					Legal Implications	Policy Requirements	Interested Party Requirements	Public Image / Local Problems & Concern	Likelihood / Probability	Severity / Intensity	Total		Likelihood / Probability	Severity / Intensity	Rating
	Landscaping	Area Supervisor	Heat and Cold	Fatigue, Weather Conditions	3	3	2	1	3	3	9	Beaware of weather conditions- rest and seek assistance if you feel that heat and or cold may be effecting you. Wear clothing appropriate to the conditions. Avoid working in extreme cold especially during rainy days.	2	2	4
			Manual Handling (bending, reaching, pulling, lifting)	Musculoskeletal disorders, including sprains and strains	2	3	2	1	2	3	6	Use team works and ensure the maximum use of mechanical aids where possible. Follow instruction and trainings.	2	2	4

## Exhibit 40 – CO<sub>2</sub> Displacement

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The project activities, sources of potential CO<sub>2</sub> emission and its corrective/preventive mitigation measures are summarized below;

Sr.No.	Project Activities	Source of Potential CO <sub>2</sub> emission	Corrective/ Preventive Actions
1	Excavation of Headrace Channel.	Use of excavation machinery	<p><b>Brand New Machinery:</b> 1. The Contractor has delivered brand new machinery to the Project Site, hence mitigating the potential source of emission of CO<sub>2</sub> in the atmosphere.</p> <p><b>Regular servicing of the Machinery:</b> 2. As pro-active approach, the Contractor is conducting regular tuning/servicing of the machinery, again mitigating the potential source of CO<sub>2</sub> evolution.</p>
		Tree removal	<p><b>Tree Plantation Plan:</b></p> <p>The clearance of Headrace channel involved removal of 508 trees, which can increase the concentration of CO<sub>2</sub> in the Project Site atmosphere. Therefore, as corrective approach, Tree Plantation Plan has been developed and will be implemented as soon as practically possible.</p>

Sr.No.	Project Activities	Source of Potential CO <sub>2</sub> emission	Corrective/ Preventive Actions
			<p>However, presently ornamental plants have been grown alongside the office area for maximization of CO<sub>2</sub> sequestration on the Project Site.</p>
		Solid Waste Disposal	<p><b>Waste Management Plan:</b></p> <p>The cutting of trees, shrubs and left over on headrace channel will produce solid waste. The open dumping of the above mentioned items have the potential to evolve and accumulate CO<sub>2</sub> in the atmosphere.</p> <p>To avoid open dumping of the shrubs and left over on the Project Site, Waste Management plan have been established and implemented. One such practice dealing with this issue is handing over of shrubs and left over to local recycling contractor, as trees have been taken up by the Government Department.</p>
2	Excavation and construction of Powerhouse	<ol style="list-style-type: none"> <li>1. Use of excavation machinery</li> <li>2. Use of Construction machinery comprising of concrete mix, Dumpers, Excavators, Crane etc</li> </ol>	<p><b>Brand New Machinery:</b></p> <ol style="list-style-type: none"> <li>1. The Contractor has delivered brand new machinery to the Project Site, hence mitigating the potential source of emission of CO<sub>2</sub> in the atmosphere.</li> </ol>

Sr.No.	Project Activities	Source of Potential CO <sub>2</sub> emission	Corrective/ Preventive Actions
			<p><b>Regular servicing of the Machinery:</b></p> <p>2. As pro-active approach, the Contractor is conducting regular tuning/servicing of the machinery, again mitigating the potential source of CO<sub>2</sub> evolution.</p>
		Solid Waste Disposal	<p><b>Waste Management Plan:</b></p> <p>The Site clearance for Powerhouse involved cutting of shrubs and left over, producing solid waste. The open dumping of the above mentioned items have the potential to evolve and accumulate CO<sub>2</sub> in the atmosphere.</p> <p>To avoid open dumping of the shrubs and left over on the Project Site, Waste Management plan have been established and implemented. One such practice dealing with this issue is handing over of shrubs and left over to local recycling contractor.</p>
			<p><b>Air Quality Monitoring:</b></p> <p>Considering pro-active approach, the Contractor has conducted Air Quality Monitoring in the Powerhouse area in May.</p>

Sr.No.	Project Activities	Source of Potential CO <sub>2</sub> emission	Corrective/ Preventive Actions
			<p>2010. The results illustrated the concentration of CO<sub>2</sub> within the permissible limits as set by Pakistan NEQS and IFC Standards</p> <p>Moreover, Air Quality Monitoring plan for the Construction phase has been established and implemented on the Project Site.</p>
3	Excavation of Tailrace channel	Use of excavation machinery	<p><b>Brand New Machinery:</b></p> <p>1. The Contractor has delivered brand new machinery to the Project Site, hence mitigating the potential source of emission of CO<sub>2</sub> in the atmosphere.</p> <p><b>Regular servicing of the Machinery:</b></p> <p>2. As pro-active approach, the Contractor is conducting regular tuning/servicing of the machinery, again mitigating the potential source of CO<sub>2</sub> evolution.</p>
		Tree removal	<p><b>Tree Plantation Plan:</b></p> <p>The clearance of Tailrace area involved removal of approximately 1200 trees, which can increase the concentration of CO<sub>2</sub> in the Project Site atmosphere. Therefore, as corrective approach, Tree Plantation Plan has</p>

Sr.No.	Project Activities	Source of Potential CO <sub>2</sub> emission	Corrective/ Preventive Actions
			<p>been developed and will be implemented as soon as practically possible.</p> <p>However, presently ornamental plants have been grown alongside the office area for maximization of CO<sub>2</sub> sequestration on the Project Site</p>
			<p><b>Air Quality Monitoring:</b></p> <p>Considering pro-active approach, the Contractor has conducted Air Quality Monitoring in the Tailrace area in May 2010. The results illustrated the concentration of CO<sub>2</sub> within the permissible limits as set by Pakistan NEQS and IFC Standards</p> <p>Moreover, Air Quality Monitoring plan for the Construction phase has been established and implemented on the Project Site.</p>
4	Construction of office area and Labor camp	Use of excavation machinery	<p><b>Brand New Machinery:</b></p> <p>1. The Contractor has delivered brand new machinery to the Project Site, hence mitigating the potential source of emission of CO<sub>2</sub> in the atmosphere.</p>

Sr.No.	Project Activities	Source of Potential CO <sub>2</sub> emission	Corrective/ Preventive Actions
			<p><b>Regular servicing of the Machinery:</b></p> <p>2. As pro-active approach, the Contractor is conducting regular tuning/servicing of the machinery, again mitigating the potential source of CO<sub>2</sub> evolution.</p>
		Solid Waste Disposal after construction	<p><b>Solid Waste Management Plan:</b></p> <p>After the construction and execution of office and camp area, solid waste comprising of food waste, plastic waste, paper, cardboard etc will be generated.</p> <p>The open dumping of the above mentioned items will be the source of CO<sub>2</sub> emission. Therefore, Solid Waste Management plan has been developed and implemented by composting the food waste and handling of the recyclables to the local Contractor.</p>