

Environmental and Social Monitoring Report

Project Number: 38928
March 2014

PAKISTAN: New Bong Escape Hydropower Project Laraib Energy Limited Environmental and Social Issues Compliance Report (January 2014 to March 2014)

Prepared by Laraib Energy Limited for the Asian Development Bank

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New Bong Escape Hydroelectric Power Project

Environmental and Social Issues Compliance Report

Quarterly Report

Jan 01, 2014 – Mar 31, 2014

Laraib Energy Limited

Islamabad

ENVIRONMENTAL AND SOCIAL COMPLIANCE

1. 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 noncompliance 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 Mar 31, 2014.
 - Total number of observations 90
 - Number of Issues closed 87
 - Number of Issues In Progress 01
 - Number of Issues open 02

2.0 HSE Statistics:

The summary of accidents encountered from Jan to Mar 2014, are as follows;

Safe Man Hours	First Aid (FA)	Incidents	Medical Treatment (MT)	Restricted Work Injury (RWI)	Lost Work Injury (LTI)	Near Miss
323476	01	00	00	00	00	00

First Aid Case:

On January 24, 2014 a technician crew was working in confined space (Unit 2) fell dizziness due to epoxy paint which was applying by the subcontractor workers inside the confined space. At that time site first aid was not available and all affected persons sent to the DHQ Mirpur where doctor administered the oxygen as a first aid and all technician back to work.

3.0 ISO Project - Development of QMS, EMS and OHSMS

FAS International has been hired by TNBRP AJK as a consultant in order to achieve its goal of Certification.

FAS International has provided drafts to the management for their review and necessary feedback. After finalization of all the documents, these shall be duly

approved by the Plant General Manager. Internal Audit Training for the ISO committee members shall be conducted during next months, probably April.

3.1 Quality Management System QMS 9001:2008

New Bong Escape Hydroelectric Power Plant (NBE HPP) Quality Management System is to be based on the requirements of ISO 9001:2008.

Management Representative (MR): **Samsudin Ahmad.**

Activity Description	Progress Update	Remarks
Awareness Training	Done	3 Sessions have been conducted
Gap Analysis	Done	Conducted by FAS International
Quality Manual Level 1 Preparation	Done	Provided by FAS International
Quality Manual Level 1 Review	In Progress	To be completed by 31.03.2014
Procedure Level 2 & Level 3 Preparation	In Progress	§ General Procedures have been provided by FAS. § Process Control Procedures are in progress. Pending procedures is as per file attached. § To be completed by 31.03.2014
Procedures, Work Instructions, Forms & Check sheets Review	After completion of Quality Manual & Procedures Preparation	01.04.2014 – 09.04.2014
Distribution of ISO Documents	10.04.2014	
System Familiarization	2 Weeks	
Internal Audit Training	23.04.2014	
Internal Audit	24.04.2014	Mandatory Requirement of ISO Certification
Stage 1 Audit by FAS International	25.04.2014	
Management Review Meeting	30.04.2014	Mandatory Requirement of ISO Certification
External Audit by Certification Body	07.05.2014	DAS Certification UK

3.2 Environmental Management System EMS 14001:2004

NBE HPP Environmental Management System is to be based on the requirements of ISO 14001:2004.

Management Representative (MR): **Abdul Rais Abdul Hamid.**

Activity Description	Progress Update	Remarks
Awareness Training	Done	3 Sessions have been conducted
Gap Analysis	Done	Conducted by FAS International
Aspect Impact Training	Done	
Aspect Impact Register Preparation	25 %	To be completed by 11.04.2014
Quality Manual Level 1 Preparation	Done	Provided by FAS International
Quality Manual Level 1 Review	In Progress	To be completed by 11.04.2014
Procedure Level 2 Preparation	In Progress	To be completed by 30.04.2014
Procedures, Aspect Impact Register , Forms Review	After completion of Aspect Impact, Quality Manual	05.05.2014 – 12.05.2014
Distribution of ISO Documents	14.05.2014	
System Familiarization	2 Weeks	
Internal Audit Training	23.04.2014	
Internal Audit	28.05.2014	Mandatory Requirement of ISO Certification
Stage 1 Audit by FAS International	29.05.2014	
Management Review Meeting	30.05.2014	Mandatory Requirement of ISO Certification
External Audit by Certification Body	04.06.2014	Royal Cert Germany

3.3 Occupational Health & Safety Management System OHSAS 18001:2007

NBE HPP Occupational Health and Safety Management System shall be based on the requirements of OHSAS (Occupational Health & Safety Assessment Series) 18001:2007.

Management Representative (MR): **Bilal Khan.**

Activity Description	Progress Update	Remarks
Awareness Training	Done	3 Sessions have been conducted
Gap Analysis	Done	Conducted by FAS International
HIRARC Training	Done	
HIRARC Preparation	50 %	To be completed by 31.03.2014
Quality Manual Level 1 Preparation	Done	Provided by FAS International
Quality Manual Level 1 Review	In Progress	To be completed by 24.03.2014
Procedure Level 2 Preparation	Done	
Procedures, HIRARC, Forms Review	After completion of HIRARC, Quality Manual	01.04.2014 – 09.04.2014
Distribution of ISO Documents	10.04.2014	
System Familiarization	2 Weeks	
Internal Audit Training	23.04.2014	
Internal Audit	24.04.2014	Mandatory Requirement of ISO Certification
Stage 1 Audit by FAS International	25.04.2014	
Management Review Meeting	30.04.2014	Mandatory Requirement of ISO Certification
External Audit by Certification Body	07.05.2014	DAS Certification UK

4.0 HSE Induction:

HSE induction for all new inductees, trainees, internees and visitors is being carried out as per the procedure. A proper record of all induction sessions is maintained.

In this quarter HSE Induction session was conducted for forty-two visitors, one trainee engineer and two workers hired for Annual Maintenance at NBE HPP.

4.1 HSE Induction highlights in January

S. No.	HSE Induction Sessions for	No. of Personnel
1	Employees (Permanent or Temporary)	03
2	Visitors	02

4.2 HSE Induction highlights in February

S. No.	HSE Induction Sessions for	No. of Personnel
1	Employees (Permanent or Temporary)	00
2	Visitors	40

4.3 HSE Induction highlights in March

S. No.	HSE Induction Sessions for	No. of Personnel
1	Employees (Permanent or Temporary)	00
2	Visitors	00

5.0 Safety Management Committee (SMC)

Safety Management Committee is comprised of representatives both from staff as well as management. All SMC meetings are chaired by Plant General Manager, Chairman of SMC.

Third quarterly meeting of SMC was held on January 2014. All important matters like ISO Certification, moving on to adopt Du-Pont system as desired by HUBCO, LEL's Parent Company, were discussed along with all other relevant HSE issues.

In order to make this committee effective and functional with a more enthusiastic approach towards safety aspects, special training sessions shall be carried out for the members. This will not only benefit the respective members but also quite helpful in

the development of a true HSE culture at NBE HPP.

Fourth quarterly meeting of SMC is scheduled in April 2014.

6.0 HSE Awareness Programs

6.1 Health & Safety Leaflet for Staff, Contractors and Visitors

Health and Safety Leaflet gives a brief description of necessary HSE Policies and Procedures being followed at New Bong Escape Hydroelectric Power Plant.

The leaflet is currently being used for our guests visiting the plant site and it narrates the emergency response procedure and steps to be taken during any sort of emergency like Fire etc.

6.2 Safety Tool Box Talk

Maintenance Log books along-with Toolbox Records have been developed that are being conducted by relevant Supervisor (Senior Engineer / Chargeman). These log books are being properly maintained by C&I and Electrical section currently.

6.3 HSE Bulletin

Safety and Health Bulletins is one of OSHA's tool used to inform internal staff and the public of significant occupational health and safety issues concerning hazard recognition, evaluation, and control in the workplace and at emergency response sites.

Legislation:

- OSHA Instruction CPL 02-00-065
- OSHA 29 CFR 1926
- OHSAS 18001:2007 Best Practices

EHS Department issues monthly bulletin to all departments along with display on notice boards as well. HSE Bulletin for the month of December 2013 was on "**Fog Safety**".

6.4 Health & Safety Posters

HSE department develops and communicates Job Specific and Activity relevant Notices / Posters. This is a very effective tool and promotes health and safety awareness for employees, visitors and the general public.

Health and Safety is our number one priority and we believe that 'one accident is too many' so we highlight HSE issues through good health and safety posters in designated locations.



6.5 Safety Dialogue

Safety dialogues on topics like Lockout/Tagout procedures, importance of PPEs while working on the plant site, hearing protection and proper use of safety gears are being carried out frequently with the staff.

7.0 Contractor EHS Compliance:

HSE team of TNBRP AJK with cooperation and guidance of ESOHS team LEL is fully committed to develop, promote and sustain a true safety culture at NBE HPP.

Activities for Annual Maintenance have been completed by all Contractors without any LTI. HSE staff from TNB as well as LEL kept on visiting the site frequently throughout the annual shutdown period. If any Unsafe Condition / Unsafe Act were observed, the relevant supervisor was informed immediately along with a solution to the problem.

All staff from our maintenance section as well as contractors' staff cooperated and were determined to fully comply with all HSE requirements. Main observations found during site visits by TNBRP AJK as well as LEL's HSE personnel are as under;

- Housekeeping (Sambu & Andritz)
- Painting inside the Confined Space (Andritz)
- CSEP requirements
- Area barricading to avoid fall hazard
- Slip hazard due to oil leakage at erection bay El. 245 as well as El. 227
- Scaffolding Erection and dismantling (Andritz)
- Scaffolding Tagging (TNBRP AJK)

All above mentioned observations were communicated to relevant supervisors / staff and necessary remedial measures were taken in most cases and issues resolved.

Some good practices like barricading the area for hazardous activity (erection bay El. 245) complying with all CSEP requirements etc. were also observed. Supervisory staff of all these activities was appreciated for their good work and motivated to keep-up the good practices.

8.0 HSE Trainings:

8.1 External Trainings

Following are the details;

8.1.1 Training Sessions by FAS International

8.1.1.1. Awareness Session 2 & 3 – QMS 9001, EMS 14001 & OHSAS 18001

Training Date	9 th Jan – 16 th Jan 2014
Training Topics	<ol style="list-style-type: none">1. Quality Management System QMS 9001:20082. Environmental Management System, EMS 14001:20043. Occupational Health & Safety Management System OHSAS 18001:2007
Training Organizer	HSE Department
Trainer(s)	Farhad Ali Shahzad, CEO FAS International
Training Participants	<ul style="list-style-type: none">➤ Awareness Session 2: TNBRP & LEL Management➤ Awareness Session 3: Operation Staff
Training Venue	NBE HPP, Mirpur AJK
Training Material	None
Participant's Evaluation	A verbal test was taken at the end of each training session.
Certification	None

8.1.1.2. Two Days training by FAS International

Training Date	12 th March – 13 th March 2014
Training Topics	<ol style="list-style-type: none">1. Hazard Identification, Risk Assessment & Determining Control2. Environmental Aspect / Impact Assessment
Training Organizer	HSE Department
Trainer(s)	Mohsin Jamshaid, Sr. Trainer FAS

Training Participants	TNBRP O&M staff (23)
Training Venue	NBE HPP, Mirpur AJK
Training Material	None
Participant's Evaluation	Practical assessments were carried out after each training session.
Certification	None

8.1.2 Training on PTW for Contractor's Staff

Training Date	26 th February 2014
Training Topics	1. Permit To Work System at NBE HPP
Training Organizer	HSE Department
Trainer(s)	Farman Ullah, HSE Executive
Training Participants	➤ Mechatronics Engineering (05)
Training Venue	Guest Room, NBE HPP
Training Material	None
Participant's Evaluation	A verbal test was taken at the end of training session.
Certification	None

8.1.3 Three Days by SBS

Training Date	4 th March – 6 th March 2014
Training Topics	1. Scaffolding Safety – Day 1 2. Forklift Safety – Day 2 3. Crane Safety – Day 3
Training Organizer	HSE Department
Trainer(s)	Muhammad Dawood, GM / Sr. Trainer & Advisor
Training Participants	➤ HSE TNBRP AJK (02) ➤ Maintenance Mechanical (07) ➤ Support Services (01)
Training Venue	NBE HPP, Mirpur AJK

Training Material	Delegate Manuals were provided to the participants during all three sessions.
Participant's Evaluation	A written test was taken at the end of training each day. Practical assessments were also carried out for Scaffolding and forklift.
Certification	Successful participants shall be awarded with Training Completion Certificates by SBS.

8.2 In-House EHS Trainings:

Following EHS Trainings were conducted for employees in this quarter;

8.2.1 Contingency Plan for NBE HPP Operation Staff

	Shift D	Shift A
Training Date	7 th March 2014	11 th March, 25 th March 2014
Trainer(s)	Bilal Khan, HSE Manager	Bilal Khan, HSE Manager
Training Participants	Operation staff (05)	Operation staff (05)
Training Duration	04 hours	08 hours
Training Venue	Control Room, NBE HPP	Control Room, NBE HPP

8.2.2 HSE Awareness Sessions for Italtec Support Staff

	Emergency Response & Evacuation Plan	Manual Handling	Elevator Emergencies & Zonal Classification
Training Date	11 th March 2014	18 th March 2014	25 th March 2014
Trainer(s)	Farman Ullah, HSE Executive		
Training Participants	Italtec Support Services Staff (14)		
Training Duration	0.5 hours	0.5 hours	0.5 hours
Training Venue	Guest Room, NBE HPP		

9.0 HSE Audits / Inspections:

Regular HSE audit/inspection of the plant area is conducted to ensure the procedural compliances. Shortcomings observed during the audit were conveyed to the concerned.

Following inspections/ audits were carried out during the last month.

- Monthly housekeeping Inspection conducted
- PPEs Compliance Survey – Italtec camp boss has provided necessary PPEs (helmets and safety shoes) to staff from support service department working at NBE HPP. Some of the maintenance staff is yet to receive replacement for their worn-out safety shoes.
- First Aid Boxes
- Ambulance Inspection
- Monthly Fire Extinguisher Inspection.

9.1 Management HSE Walkabout

In this quarter, several HSE walkabouts were conducted by Plant General Manager (PGM) TNBRP AJK. Observations were communicated to relevant parties, EPC contractor / Sub-Contractors in some cases and necessary remedial measures were requested.

In January, one HSE walkabout was conducted by Plant General Manager (PGM) accompanied by HSE Inspector, TNBRP AJK. Another HSE walkabout was conducted by PGM accompanied by trainee engineer electrical.

In February, HSE walkabout was conducted by Plant General Manager (PGM) accompanied by Special Officer (SO) to PGM on weekly basis. The pictorial reports of all observations during these walkabouts were prepared by SO and discussed with all staff in daily meeting.

In March, HSE walkabout was conducted by Head of Operations (Acting PGM) on 20th March. The report of all observations during the walkabouts was prepared by Head of Operations and communicated to all relevant staff.

They were all requested to take necessary remedial actions as advised in the report and revert back with the updated status through HSE department.



Management Safety Walkabout

20th March 2014

EL 255m, Workshop, EL 245m & EL 227m

9.2 Management Safety Audit (MSA)

Management Safety Audit by LEL management on regular basis. They are accompanied either by HSE Officer LEL or ESOHS Manager LEL during the MSA.

MSA observations are communicated to TNBRP management through an MSA Audit form. All observations are then forwarded to relevant sections for necessary action in order to close the highlighted issues.

In January, second Management Safety Audit was carried out by a team lead by Mr. Azhar Masood Panni, HOO LEL. He was accompanied by Mr. Farrukh Ahmad, AM ESOHS LEL, Mr Muhammad Sohail, HSE Officer LEL.

In February, third Management Safety Audit was carried out by Mr Asif, AM Mechanical, LEL. He was accompanied by Mr Muhammad Sohail, HSE Officer LEL.

In March, fourth and fifth Management Safety Audits were carried out by Mr Asif, AM Mechanical, LEL. He was accompanied by Mr Muhammad Sohail, HSE Officer LEL.

MSA are attached as “**Exhibit 28**”.

10.0 Third Party Inspection / Monitoring

10.1 Third Party Inspection of Cranes & Elevators

In the last quarter, Lifting tools at NBE HPP were inspected and Certified by Inspectest based in Lahore, as per the requirement of OHSMP. Inspectest carried out all required inspections on their site, found most of the items satisfactory and reported some items to be defective / un-satisfactory.

Rejected items are currently out of use and shall not be used until re-inspected and certified by the said vendor.

10.2 Drinking / Waste Water Analysis

As per the ESMP requirements drinking water as well as waste water at NBE HPP has to be tested every 6 months. RFQ was floated and based on technical and commercial evaluation was awarded to Hagler Bailly Pakistan.

Hagler Bailly Pakistan carried out the activity of water testing at NBE HPP. Their team comprised of two experts came to the site for collection of samples, drinking water as well as waste water.

They sent their report on 17th March which stated that the drinking water was complying with all national and international standards and is "Fit for Drinking". As for as waste water is concerned, it also complies with all national and international standards.

11.0 HSE Reporting

Reporting of all observations regarding HSE matters are discussed with the Owner on weekly basis.

11.1 Weekly HSE Meeting

Weekly HSE meeting is conducted between TNBRP AJK & Laraib Energy every Wednesday. All important matters are discussed and recorded in the form of a CAP "Corrective Action Plan". This CAP is further forwarded to respective managements for their info & record.

Exhibit 27 – ESOHS CAP

ESOHs RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	103C	Landscaping	Rain cuts and damage water trenches observed 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.	On going Activity	Manager HSE	Close	Done by Sambu/ TNBRP
LEL Comments	2	Precurment	Some workers of TNBRP were found working without Life Jackets and Safety Harniss.	Inspection by LEL May 15,2013	Precurment of life jackets and safety harniss is mandatory.	15-Jun-13	Manager HSE	Close	-
LEL Comments	3	Outside Power House	This is observed that there is no sufficient arrangment for night shift security guards	Inspection by LEL May 16,2013	Provision of mosqioto repelent is very necessary in these wheather condition.	28-May-13	Manager HSE	Close	-
LEL Comments	4	Machine Hall	Naked wire of vaccume cleaner have pluged directly.	Inspection by LEL May 26,2013	Arrange the 2 pin shoes and the attached with vacume cleaner wire	Immediate	Manager HSE	Close	-
LEL Comments	5	Power House	Lock out /Tag out sytem are found missing	Inspection by LEL May 26,2013	Prepare a LOTO procedure and implement accordngly.	15-Jun-13	Manager HSE/Operation	Close	-
LEL Comments	6	Headrace area	A lot of trash accomulated at stoplog area.	Inspection by LEL Jun 17,2013	Clean up the entire area safely.	20-Jun-13	Manager HSE	Close	-
LEL Comments	7	Headrace area	Dead animals was floating at headrace and creating a lot bad smell.	Inspection by LEL Jun 17,2013	Arrange a crane and proper PPEs for the safe escape of dead animal from water surface of headrae.	21-Jun-13	Manager HSE	Close	-
LEL Comments	8	Overhead Crane	Oil leakage from slings of overhead canes.	Inspection by LEL Jun 17,2013	Identify the root cause and fix the issue as soon as possible.	21-Jun-13	Manager HSE	Close	-
LEL Comments	9	PPEs Non Compliance	A TNB's worker observed without safety shoes at 245 elevation.	Inspection by LEL Jun 26,2013	Arrange & provide safety shoes to him and ensure the 100 % PPEs compliance . Picture of this guy is already share with HSE department TNB	28-Jun-13	Manager HSE	Close	-
LEL Comments	10	245-Elevation	Safety railing of unit 3 found missing.	Inspection by LEL Jun 26,2013	This is an unsafe condition may leads to a major accident so portable raing is already available to secure the area. Ensure the compliance.	Immediate	Manager HSE	Close	-
LEL Comments	11	245-Elevation	Security guard is deputed at 245-elevation to check the PPEs of all contractors, sub contractors, consultants and client but during my today's survey it was observed that many employee were working at 245-elevation without PPEs.	Inspection by LEL Jun 26,2013	Keep the strict check and ensure the compliance and conduct daily inspection, surprize audits and training regading importance of PPEs and other safe work practices.	Immediate	Manager HSE	Close	-
TNBRP comments	12	Procedural Voilation	Some worker not of Andritz and Sambu observed working without PTW.	Inspection by TNB Jun 26,2013	This is a clear procrdural violaiton , all contractor must be follow the company procedure and this should be implemented immedialy.	Immediate	Management	Close	Panni sb circulate an email regarding compliance of PTW procedure to all concerns.

ESOHs RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	13	245-Elevation	Wire plug-in directly without using the 2 pin shoe.	Inspection by LEL July 2nd,2013	Immediately arrange a 2 pin shoe and installed before starting the activity.	Immediate	TNBRK HSE Manager	Close	-
LEL Comments	14	Intake	Stoplog gate opening of Unit 4 found without cover and railing and warning sign board also found missing at upstream stoplog area.	Inspection by LEL July 2nd,2014	Cover the open area / if any maintenance work is in-progress, block the access with scaffolding, install warning board and employee must wear life jackets and safety harness before execution of any activity.	Immediate	TNBRK HSE Manager	Close	
LEL Comments	15	Water Treatment Plant	Stagnant water observed in water treatment plant at 245-elevation.	Inspection by LEL July 2nd,2015	First of all rectify any leakage if observed in water treatment plant and then clean up the entire area.	-	TNBRK HSE Manager	Close	TR has been raised for uneven surface of water treatment floor to Sambu by TNBRP.
LEL Comments	16	LandScaping & Plantation	Landscaping and plantation of entire power house badly affected by last 2-3 days rain.	Inspection by LEL July 2nd,2016	Expedite the maintenance activity of landscaping	-	TNBRK HSE Manager	Close	
LEL Comments	17	Machine Hall	Poor housekeeping observed at 245-elevation creating the slip, trip and falling hazard.	Inspection by LEL July 2nd,2017	Clean up the entire area to avoid any undesired incident.	Immediate	TNBRK HSE Manager	Close	
TNBRP comments	18	WareHouse	The Chemicals provided by EPC Contractor without Proper Labeling (Manufacturer Name, Chemical Name,concentration) etc.	Inspection by TNB Jun 26,2013	Contractor asked to fulfill the standard requirements.	-	1-EPC Representative 2- Head of Maint. 3-Warehouse Officer	Close	A reminder will be send to EPC contractor in coming week.
TNBRP comments	19	PPEs Non Compliance	A Contractor workers observed without safety shoes at 245 elevation.	Inspection by TNBRP July 02,2013	Arrange & provide safety shoes to all the contractor staff and Contractor / TNBRP ensure the 100 % PPEs compliance .	Immediate	EPC Representative / Manager EHS	Close	
TNBRP comments	20	WareHouse	Improper storage arrangements for oils / paints etc	Inspection by TNBRP July 02,2013	All such items in the warehouse need to be stored in a proper manner as they are hazardous in nature	21-Jul-13	TNBRP	Close	
TNBRP comments	21	Plant Main Entrance (Security)	Entry Pass System for Complex	Inspection by TNBRP July 02,2013	All Companies must be followed the entry pass and issue employment cards to all their employees working at NBE HPP	Immediate	EPC/OE/TNBRP	Close	Issue is still open due unavailability of employees list of Androtz and Sambu.
LEL Comments	22	270 Elevation	Some workers observed working in unsafe manner without PTW.	Inspection by LEL July 17,2013	Stop the activity and arrange a certified crane for the execution of work.	Immediate	EPC/OE/TNBRP	Close	
LEL Comments	23	Power House	Awariness session regarding accident reporting needed to be conducted for O&M contractor.	Inspection by LEL Aug 08,2013	A full training session needed to conducted by LeL with the coordination of TNB HSE deptt.	31-Aug-13	Officer ESOHS LEL/Manager EHS TNB	Close	

ESOHs RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	24	Power House	Scaffolding erected by sambu near transformer dyke is not safe for working.	Inspection by LEL Aug 08,2013	Complete scaffolding inspection needed to be carried out by a competent person and after rectification of all discrepancies employees allow to use otherwise it may cause an accident.	31-Aug-13	TNBRK HSE Manager	Close	
LEL Comments	25	NBE Gates	Local people are fishing near NBE gates which are on high risk.	Inspection by LEL Aug 08,2013	TNB security should stopped the all local to enter in the identified. Because section 144 are still applicable. CLO meet with SDM and discuss the matters and solve it ASAP.	Immediate	Manager Security/ CLO	Close	
LEL Comments	26	Power House	Construction worker was observed working at height without coupling the harness with scaffolding pipe .	Inspection by LEL Aug 17,2013	conduct a tool box talk on safe working at heaight and keep strickt check on all activities of power house.	31-Aug-13	TNBR HSE Manager	Close	
LEL Comments	27	Power House	Hight of Emergency light hanger at diffrent elevation is not suitable and have the potential to cause serious injury.	Inspection by LEL Aug 22,2013	Fix all hangers above six feet height	31-Aug-13	TNBRP HSE Manager	Close	
LEL Comments	28	Landscaping	Landscaping & plantation of power are not maintaining properly.	Inspection by LEL Aug 28,2013	Entire landscaping needs proper trimming immediatly.	Onging Process	TNBRP HSE Manager	in-progress	-
LEL Comments	29	Elevation 245 (Machine Hall)	Termination cables of Diesel generator was found without cover.Theseare high voltage cables which could be dagrous when diesel generator was operational.	Inspection by LEL Sep 08,2013	Cover with (Rubber) terminal insulator. Or communicate with maitenance department taking the proper remedial measure.	10-Oct-13	TNBR HSE Manager	Close	
LEL Comments	30	Elevation 245 (Machine Hall)	A lot of waste observed at unit 2 and unit three.	Inspection by LEL Sep 09,2013	Communicate to concernd department and cleaning and house keeping of this area	16-Sep-13	TNBR HSE Manager	Close	
LEL Comments	31	Headrace area	Some gardner are working without gloves and safety shoes	Inspection by LEL Sep 10,2013	Provide gloves and safety shoes to avoid the bio hazards.	12-Sep-13	TNBR HSE Manager	Close	
LEL Comments	32	Procedure	Some comments in risk assessment procedure is highlightd and communicated to TNB.	Inspection by LEL Sep 16,2013	Address all comments and submitt the final procedure.	24-Sep-13	TNBR HSE Manager	Close	
LEL Comments	33	Firefighting Equipment	Inspection tags found missing on portable fire extinguisher	Inspection by LEL Sep 23,2013	Prepare, inspection tags for all extinguisher and inspect frequently	15/10/2013 10/11/2013	Medium	Close	PO has been issued
LEL Comments	34	Elevation 227	Open main hole obseved without barication.	Inspection by LEL Sep 23,2013	Baricade if working on it and cover if no work remaining.	08-Oct-13	Medium	Close	This activity has been included in risk reduction project , which will be initiated on 01 Nov, 2013.

ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	35	Power House	Tagging is found missing at Machine hall and 251 El. Of power house.	Inspection by LEL Sep 28,2013	Tag the entire power house for the identification of area and equipment.	15-Oct-13	TNBR HSE Manager	Close	
LEL Comments	36	Power House	Noise test is pending since long time.	Inspection by LEL Sep 28,2013	Conduct 3rd party noise tecting and prepare a map on the basis of results	15-Oct-13	TNBR HSE Manager	Close	-
LEL Comments	37	Power House	Noise level poster/Tags of each elevation is not available on notice board.	Inspection by LEL Oct 22,2013	Prepare a Noise Map for each section of Power House and proposed PPEs will also mention in that map.	15-Nov-13	HSE Officer LEL, TNBRP HSE Manager	Close	-
LEL Comments	38	-	Comment of MM on ESMP and OHSMP is still pending.	Inspection by LEL Oct 24,2013	Address these comment ASAP for apporoval of plans.	01-Nov-13	TNBRP HSE Manager, HSE Officer LEL	Close	-
LEL Comments	39	-	It was observed that Evacuation Plans of each elevation was not available.	Inspection by LEL Oct 27,2013	This is very necessary that peoples has to be aware about evacuation in any emergency situation. Prepare a plan and fix on suitable location of power house.	20/11/2013, 13/12/2013	TNBR PHSE Manager.	Close	-
LEL Comments	40	-	Risk Assessment of power house is still pending.	Inspection by LEL Oct 27,2013	Start the risk assessment accoding to the submitted procedure.	20/11/2013, 13/12/2013	TNBRP HSE Manager.	Close	-
LEL Comments	41	-	It was observed that HSE statistics received on Oct 30 was report on previous catagorization, only summy was changed.	Inspection by LEL Oct 30,2013	study the OSHA Clause 1904.7 for incident recording and change the definitions in exiting formate and report accordingly.	05-Nov-13	TNBRP HSE Manager.	Closed	Summary of incident reporting was OK as described in OSHA.
LEL Comments	42	Elevation 251, 245	Tripping Hazard due to joint repairing methodology on the floor of 245 and 251 elevation.	Inspection by LEL Nov04,2013	Fluorescent Paint should applied for warning of tripping Hazard.	10/12/2013 10/01/2014	TNBRP HSE Manager.	Close	-
LEL Comments	43	Power House	Tagging is found missing on emergency calling booths, main breakers and eye & head wash shower.	Inspection by LEL Nov04,2013	Tagging and posters plays a vital to improve the awarness level among employees so all identified location needed to be tagged.	27/11/2013	TNBRP HSE Manager.	Close	-
LEL Comments	44	227-Elevation	Passage way obseved block which could be very severe in emergency situation	Inspection by LEL Nov04,2013	All scaffolding pipes, planks and joints which cause blokage of passage way needed to remove.	27/11/2013	TNBRP HSE Manager.	Close	-
LEL Comments	45	Power House	Poor Housekeeping observed in water treatment plant and workshop.	Inspection by LEL Nov11,2013	Entire area needed to be clean and Clear.	27/11/2013	TNBRP HSE Manager.	Close	
LEL Comments	46	Overhead Crane Entry Point	Open electrical box of emergency light with naked wires was observed.	Inspection by LEL Nov11,2013	elecrical box should be closed or isolate if some work needed to be done.	26/11/2013	TNBRP HSE Manager.	Close	
LEL Comments	47	245-Elevation	HVAC duct Safety cover found missing in air compressor area.	Inspection by LEL Nov19,2013	Fabricate and install safety cover on identified location.	10/12/2013	TNBRP HSE Manager.	Close	Risk Reduction project has been temporary stoped due to Annual
LEL Comments	48	Work Shop	Some Gardners were observed without PPEs in work shop area	Inspection by LEL Nov22,2013	Entry should be restricted in workshop, only relevant employees allow to enter the workshop.	27/11/2013	TNBRP HSE Manager.	Close	

ESOHs RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	49	Plant Elevator	No tag has been found inside the elevator which guide in emergency situations	Inspection by LEL Nov22,2013	Guidance poster/Tag needed to be paste in side elevator which properly guide the user.	15/12/2013	TNBRP HSE Manager.	Close	
LEL Comments	50	NBE Gates	Life Jacket Tags found missing at NBE gates.	Inspection by LEL Dec 01, 2013	Life jacket Tag should be pasted on avery gate for the awareness of staff.	15/12/2013	TNBRP HSE Manager.	Close	
LEL Comments	51	Transformer Deck	A proper cover was not placed on Transformer oil drainage tank.	Inspection by LEL Dec 12, 2013	Proper cemented/metallic cover needed to cover the tank	22/12/2013	TNBRP HSE Manager.	Close	
LEL Comments	52	Transformer Deck	Cable Trench found open in transformer deck.	Inspection by LEL Dec 17, 2013	All trenched sould be cover with suitable covers.	22/12/2014	TNBRP HSE Manager.	Close	
LEL Comments	53	Parking Area	A trench covers with wooden piece near parking area which is a tripping hazard.	Inspection by Ceo LEL Jan15,2014	It should be properly covered with a cemented blocks.	01/03/2013	TNBRP HSE Manager.	Close	
LEL Comments	54	Work Shop Store	Metal scrape was dumped in very poor manner near parking area with gardener's routine used equipment.	Inspection by Ceo LEL Jan15,2014	Specific area should be designated for the scrape which should be separated from all routine work areas.	01/03/2014	TNBRP HSE Manager.	Close	
LEL Comments	55	CCTV Room 255-Elevation	CCTV Camera No. 24 found out of order and display screen is very small.	Inspection by Ceo LEL Jan15,2014	Camera has to installed according to drawing and small screen should be replace with large one	-	TNBRP HSE Manager.	Close	24th No is a spare CCTV Camera connection, rest are OK.
LEL Comments	56	Electrical Room 1	Portable fire extinguisher inspection tags found blank.	Inspection by Ceo LEL Jan15,2014	All inspection tags should be up to date according to inspection frequency.	16/01/2014	TNBRP HSE Manager.	Close	
LEL Comments	57	Elevation 245 (Machine Hall)	Oil spill observed on the floor of 245-elevation which is slipping hazard.	Inspection by Ceo LEL Jan15,2014	Floor should be clean and dry.	16/01/2014	TNBRP HSE Manager.	Close	
LEL Comments	58	Elevation 245 (Machine Hall)	Trench cover has found on floor which is tripping hazard.	Inspection by Ceo LEL Jan15,2014	During maintenance work area should be barricaded.	16/01/2014	TNBRP HSE Manager.	Close	
LEL Comments	59	Elevation 245 (Machine Hall)	A laborer was performing cleaning of metal with oil without wearing the gloves.	Inspection by Ceo LEL Jan15,2014	Rubber gloves should be used which working with oil / chemicals.	16/01/2014	TNBRP HSE Manager.	Close	
LEL Comments	60	Elevation 245 (Machine Hall)	Loose portable railing observed at unit one 245-elevation.	Inspection by CEO LEL Jan15,2014	A warning tag and tape should display at location.Raise TR for the rectification of issue.	-	TNBRP HSE Manager.	Open	TR has been raised .
LEL Comments	61	Elevation 245 (Machine Hall)	Portable railing chain of Unit 1 (bulb nose hatch cover) was not properly installed and has a potential of serious injury (tripping and falling hazard).	Inspection by Ceo LEL Jan15,2014	Acess way which used for monkey ladder accesss should clear and chain needed to be remove from access way.	16/01/2014	TNBRP HSE Manager.	Close	
LEL Comments	62	227-Elevation	Some emergency lights found out of order, it could very dangerous in emergency situation.	Inspection by Ceo LEL Jan15,2014	A thorough inspection of all emergency lights should be carried out during the annual turn around.	16/02/2014	TNBRP HSE Manager.	Close	Rectification work is in progress
LEL Comments	63	227-Elevation	Slippery stairs and floor of 227-Elevation.	Inspection by Ceo LEL Jan15,2014	Floor should be clean and dry.	-	TNBRP HSE Manager.	Close	This point will be close after annual maintenance.

ESOHs RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	64	227-Elevation	Oil pump motor covers with plastic sheet.	Inspection by Ceo LEL Jan15,2014	A proper shed has to fabricate to avoid the seepage water.	16/02/2014	TNBRP HSE Manager.	Close	A fiber cover has already fabricated which is removed temporarily due to annual turn around
LEL Comments	65	227-Elevation	Drainage waterarea Lights at 227-elevation observed out of order and No alternative arrangement is available.	Inspection by Ceo LEL Jan15,2014	TR Needed to be raised	-	TNBRP HSE Manager.	Close	TR has been raised
LEL Comments	66	Control Room	Loose wiring used in control with SCADA system.	Inspection by Ceo LEL	All loose wiring needed to be channelize properly through a duct.	-	TNBRP HSE Manager.	Close	-
LEL Comments	67	Transformer Deck	Rusty scaffolding used to barricade the transformer area.	Inspection by Ceo LEL Jan15,2014	Scaffolding should be painted.	28/02/2014	TNBRP HSE Manager.	Close	-
LEL Comments	68	Intake Stop log area	Electric cable lying on ground at intake stop log area which is a tripping hazard.	Inspection by Ceo LEL Jan15,2014	Cable should be passing through the underground.	-	TNBRP HSE Manager.	Open	TR raised
LEL Comments	69	227-Elevation	Rusty door observed at 227-elevation,	Inspection by Ceo LEL Jan15,2014	it should be painted in annual turn around.	28/02/2014	TNBRP HSE Manager.	Close	-
LEL Comments	70	Elevation 245 (Machine Hall)	Tea containers placed on electric cable tray near entrance door to stairs for Elevation 227 where No tray to collect dripping tea.	Inspection by LEL Jan29,2014	Tea container valve (tap) needed to rectify and area should be clean.	28/02/2014	Business Support Services	Close	-
LEL Comments	71	Elevation 245 (Machine Hall)	Warning sign found missing on all doors accessing to the cable shaft which is falling hazard and have a potential of fatality	Inspection by LEL Jan29,2014	All doors which are not used in routine should be locked. And warning sign should be pasted on all doors accessing the cable shaft	28/02/2014	HSE Dept.	Close	-
LEL Comments	72	Elevation 245 (Machine Hall)	Telephone connection boxes found open and improper cables observed.	Inspection by LEL Jan29,2014	All wiring should be properly dressed and cover closed.	28/02/2014	Maintenance (C & I)	Close	-
LEL Comments	73	Elevation 245 (Machine Hall)	Waste material observed behind newly installed 11 kV colony power supply feed	Inspection by LEL Jan29,2014	Area should be cleaned	28/02/2014	Business Support Services	Close	-
LEL Comments	74	Elevation 245 (Machine Hall)	750 kVA DG radiator's water overflow pipe direction on floor which may cause slippery hazard when overflow.	Inspection by LEL Jan29,2014	Plastic contained be placed under the overflow pipe.	28/02/2014	Operation Dept.	Close	-
LEL Comments	75	Elevation 241	Sewerage tank overflow on El. 241 causing bad smell in stair case and adjoining floor.	Inspection by LEL Jan29,2014	TR should be raised and matter needed to resolve on urgent basis.	28/02/2014	Maintenance (C & I)	Close	-
LEL Comments	76	Elevation 255	"No smoking" signboard found missing inside visitor room of Power Complex.	Inspection by LEL Feb 03,2014	No Smoking board should be pasted on wall.	15/02/2014	TNBRP HSE Manager.	Close	-
LEL Comments	77	Elevation 255	Area segregation signboard inside the workshop is found missing for essential requirement of PPEs.	Inspection by LEL Feb 03,2014	Poster should be pasted for the clarity of red and green zone.	02/03/2014	TNBRP HSE Manager.	Close	-

ESOHs RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	78	Power House	Warning sign found missing on all doors accessing to the cable shaft which falling hazard and have a potential of fatality.	Inspection by LEL Feb 03,2014	All doors which are not used in routine should be locked and warning sign should be pasted on all doors and panels.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	79	Elevation 255	Portable fire extinguisher at El. 255 is not inspected and duly filled inspection card.	Inspection by LEL Feb 03,2014	All extinguishers should be inspected on regular interval as defined in procedure.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	80	Elevation 245 (Machine Hall)	Safety hand railing at EL. 245 is found loose which has potential of fatality during the maintenance activities.	Inspection by LEL Feb 03,2014	Proper arrangement be made for properly fixing the safety railing.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	81	Elevation 245 (Machine Hall)	Signboard for Emergency exit /evacuation plan found missing on each notice boards at each Elevations.	Inspection by LEL Feb 03,2014	Evacuation plan for each elevation have already prepared and should be displayed on each elevation.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	82	Elevation 265, 270	Warning signs on doors accessing to cable shaft as highlighted earlier by other team members are still missing at both elevations.	Inspection by LEL Feb 12,2014	All doors which are not used in routine should be locked and warning sign should be pasted on all doors and panels.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	83	Elevation 265, 270	Safety Cover on Starting Switch to operate fire shutter in case of emergency is found missing at El 265.	Inspection by LEL Feb 12,2014	Requisite arrangement to avoid mishandling is required to be provided at the earliest	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	84	Elevation 265, 270	Special arrangements at emergency exit access ladder at El 265 may be provided to avoid falling hazard.	Inspection by LEL Feb 12,2014	Requires discussion and implementation, if required by considering all safety parameters	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	85	Elevation 265, 270	Pressure Gauge of portable fire extinguisher at El 265 is showing pressure near to the alarming level.	Inspection by LEL Feb 12,2014	Monitoring is required on regular basis to fulfill the requisite purpose.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	86	Elevation 265, 270	Hard Copies of As Built Drawings and O&M Manuals are placed near 400V Electrical Panels inside Fire Fighting Room at El 265 which can become source of fire in case of short circuiting.	Inspection by LEL Feb 12,2014	Immediate action is required to store the data in an appropriate manner to avoid any mishap.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	87	Elevation 265, 270	Inspection of Portable Fire Extinguisher inside Telecom Room at El 265 is not carried out.	Inspection by LEL Feb 12,2014	Monitoring of firefighting equipment should be implemented as per preventive maintenance schedule.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	88	Elevation 265, 270	Maintenance of PABX is carried out but unnecessary material is left inside the Panel.	Inspection by LEL Feb 12,2014	Compliance of standards to clear the area after completion of work is required to be implemented at all times.	02/03/2014	TNBRP HSE Manager.	Close	-

ESOHS RECOMMENDED ACTION ITEMS/ CORRECTIVE ACTION PLAN

Source	No	Location	Finding	Reference/Date	Action Required	Target Date	Responsibility	Status	Remarks
LEL Comments	89	Elevation 265, 270	Violation of smoking policy was observed at El 270, as unnecessary stuff was spread all over the place even below the Water Tank.	Inspection by LEL Feb 12,2014	Relevant section to monitor and ensure implementation of policy.	02/03/2014	TNBRP HSE Manager.	Close	-
LEL Comments	90	Elevation 265, 270	Both Inlet and Outlet valves of Water Tank were found unlocked.	Inspection by LEL Feb 12,2014	These must be kept locked to avoid any mishandling.	02/03/2014	TNBRP HSE Manager.	Close	-

Exhibit 28 – Management Safety Audit

MANAGEMENT SAFETY AUDIT FORM

Area Inspected:	Elevation 245 Elevation 251 Elevation 227 Elevation 270	Date of Audit:	03-Feb-2014	Audit Team	AM MECH, Officer ESOHS
Time Begin:	1500 hrs	Time Ended:	1700 hrs	No. of People observed	10 Approx.
Audit Duration:	02 Hours	Total unsafe situation	07	Unsafe Situation / Audit Hour:	-
Observations with Recommendations			Group Responsible	Type of Violation (SRV, UA, UC)	Injury Potential (Fatality Serious or Minor Injury)
1. "No smoking" signboard found missing inside visitor room of Power Complex.			HSE Dept.	UC	Serious/Minor
2. Area segregation signboard inside the workshop is found missing for essential requirement of PPEs.			HSE Dept.	UC	Serious/Minor
3. Warning sign found missing on all doors accessing to the cable shaft which falling hazard and have a potential of fatality. All doors which are not used in routine should be locked and warning sign should be pasted on all doors and panels.			HSE Dept.	UC	Fatality
4. Portable fire extinguisher at El. 255 is not inspected and duly filled inspection card.			HSE Dept.	UC	Serious/Minor
5. Portable fire extinguisher at El. 251 in warehouse is not properly maintained			HSE Dept.	UC	Serious/Minor
6. Safety hand railing at EL. 245 is found loose which has potential of fatality during the maintenance activities. Proper arrangement be made for properly fixing the safety railing			Maintenance (Civil) Dept	UC	Fatality
7. Signboard for Emergency exit /evacuation plan found missing on each notice boards at each Elevations.			HSE Dept	Procedure violation	Serious

MANAGEMENT SAFETY AUDIT FORM

Photographs are attached



Observation No. 01



Observation No. 02



Observation No. 03



Observation No. 04



Observation No. 05



Observation No. 06

MANAGEMENT SAFETY AUDIT FORM



Observation No. 07

MANAGEMENT SAFETY AUDIT FORM

Area Inspected:	Elevation 245 Elevation 241	Date of Audit:	29-Jan-2014	Audit Team	HOO, AM ESOHS, Officer ESOHS
Time Begin:	1030 hrs	Time Ended:	1130 hrs	No. of People observed	16 Approx.
Audit Duration:	1 Hour	Total unsafe situation	06	Unsafe Situation / Audit Hour:	-
Observations with Recommendations		Group Responsible	Type of Violation (SRV, UA, UC)	Injury Potential (Fatality Serious or Minor Injury)	
1. Tea containers placed on electric cable tray near entrance door to stairs for Elevation 227 where No tray to collect dripping tea. Tea container valve (tap) needed to rectify and area should be clean.		Support Services Dept.	UC	Serious/Minor	
2. Warning sign found missing on all doors accessing to the cable shaft which is falling hazard and have a potential of fatality. All doors which are not used in routine should be locked. And warning sign should be pasted on all doors accessing the cable shaft.		HSE Dept.	UC	Fatality	
3. Telephone connection boxes found open and improper cables observed. All wiring should be properly dressed and cover closed.		Maintenance (C & I) Dept.	UC	Minor	
4. Waste material observed behind newly installed 11 kV colony power supply feed. Area should be cleaned		Support Services Dept.	UC	Minor	
5. 750 kVA DG radiator's water overflow pipe direction on floor which may cause slippery hazard when overflow. Plastic contained be placed under the overflow pipe.		Operation Dept.	UC	Minor	
6. Sewerage tank overflow on El. 241 causing bad smell in stair case and adjoining floor.		Maintenance (C & I) Dept	UC	Serious/Minor	

Photographs are attached

MANAGEMENT SAFETY AUDIT FORM



Observation No. 01



Observation No. 02



Observation No. 03



Observation No. 04



Observation No. 05



Observation No. 06

MANAGEMENT SAFETY AUDIT FORM

Area Inspected:	Power Complex	Date of Audit:	15-Jan-2014	Audit Team	CEO & ESOHS Officer
Time Begin:	1630 hrs	Time Ended:	1745 hrs	No. of People observed	-
Audit Duration:	1 Hour 15 Minutes	Total unsafe situation	16	Unsafe Situation / Audit Hour:	02
Observations with Recommendations		Group Responsible	Category (Click Link For Details)	Type of Violation (SRV, UA, UC)	Injury Potential (Fatality Serious or Minor Injury)
1. A trench covers with wooden piece near parking area which is a tripping hazard. It should be properly covered with a cemented blocks.		Civil Dept. (TNBRP/SAMBU)	-	UC	Serious/Minor
2. Metal scrape was dumped in very poor manner near parking area with gardener's routine used equipment. Specific area should be designated for the scrape which should be separated from all routine work areas.		Maintenance (Mech) Dept.	-	UC	Serious/Minor
3. CCTV Camera No. 24 found out of order and display screen is very small. Camera has to installed according to drawing and small screen should be replace with large one		Maintenance (C & I) Dept.	-	UC	Minor
4. Power house floor joints cover is tripping hazard. Warning paint (yellow/black) should be applied on all covers.		Support Services Dept.	-	UC	-
5. Portable fire extinguisher inspection tags found blank. All inspection tags should be up to date according to inspection frequency.		HSE Dept.	-	UC	-
6. Oil spill observed on the floor of 245-elevation which is slipping hazard. Floor should be clean and dry.		Support Services Dept.	-	UC	Minor
7. Trench cover has found on floor which is tripping hazard. During maintenance work area should be barricaded.		Maintenance (Elec) Dept.	-	UA	Minor
8. A laborer was performing cleaning of metal with oil without wearing the gloves. Rubber give should be used which working with oil / chemicals.		Maintenance (Mech) Dept.	-	UA	Minor
9. Loose portable railing observed at unit one 245-elevation. A warning tag and tape should display at location.		Maintenance (Mech) Dept.	-	UC	Fatality
10. Portable railing chain of Unit 1 (bulb nose hatch cover) was not properly installed and has a potential of serious injury (tripping and falling hazard).		Maintenance (Mech) Dept.	-	UC	Serious/Minor
11. Some emergency lights found out of order, it could very dangerous in emergency situation. A thorough inspection of all emergency lights should be carried out during the annual turn around.		Maintenance (Elec) Dept.	-	UC	Serious/Minor
12. Slippery stairs and floor of 227- Elevation. Floor should be clean and dry.		Support Services Dept.	-	UC	Minor
13. Oil pump motor covers with plastic sheet. A proper shed has to fabricate to avoid the seepage water.		Maintenance (Mech) Dept.	-	UC	Serious/Minor
14. Drainage water Lights at 227- elevation observed out of order and No alternative arrangement is available.		Maintenance (Elec) Dept.	-	UC	Serious/Minor
15. Loose wiring used in control with SCADA system. All loose wiring needed to be channelize properly through a duct.		Maintenance (Elec) Dept.	-	UC	Serious/Minor
16. Rusty scaffolding used to barricade the transformer area. Scaffolding should be painted.		Maintenance (Mech) Dept.	-	UC	Serious/Minor
17. Electric cable lying on ground at intake stop log area which is a tripping hazard. Cable should be passing through the underground.		Maintenance (Elec) Dept.	-	UC	Serious/Minor
18. Rusty door observed at 227- elevation, it should be painted.		Maintenance (Mech) Dept.	-	UC	Minor

Photographs are attached

MANAGEMENT SAFETY AUDIT FORM



Observation No. 01



Observation No. 02



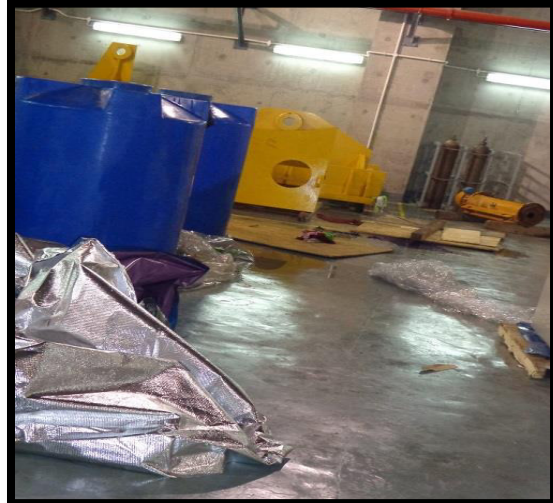
Observation No. 03



Observation No. 04



Observation No. 05



Observation No. 06

MANAGEMENT SAFETY AUDIT FORM



Observation No. 07



Observation No. 08



Observation No. 09



Observation No. 10



Observation No. 11



Observation No. 12

MANAGEMENT SAFETY AUDIT FORM



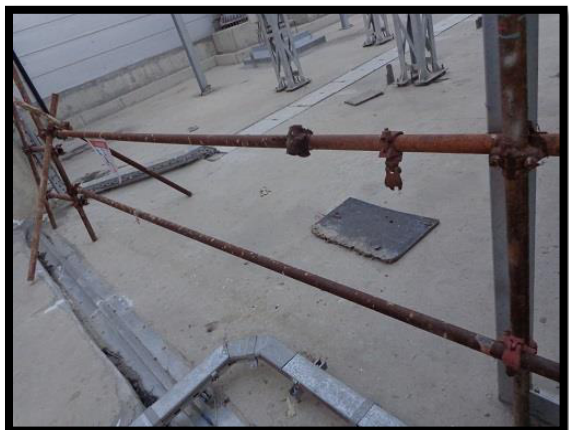
Observation No. 13



Observation No. 14



Observation No. 15



Observation No. 16



Observation No. 17



Observation No. 18

MANAGEMENT SAFETY AUDIT FORM

Area Inspected:	Power Complex	Date of Audit:	15-Jan-2014	Audit Team	CEO & ESOHS Officer
Time Begin:	1630 hrs	Time Ended:	1745 hrs	No. of People observed	-
Audit Duration:	1 Hour 15 Minutes	Total unsafe situation	16	Unsafe Situation / Audit Hour:	02
Observations with Recommendations		Group Responsible	Category (Click Link For Details)	Type of Violation (SRV, UA, UC)	Injury Potential (Fatality Serious or Minor Injury)
1. A trench covered with a wooden piece near the parking area which is a tripping hazard. It should be properly covered with cemented blocks.		Civil Dept. (TNBRP/SAMBU)	-	UC	Serious/Minor
2. Metal scrap was dumped in very poor manner near the parking area alongwith gardener's routine used equipment. Specific area should be designated for the scrap which should be separated from all routine work areas.		Maintenance (Mech) Dept.	-	UC	Serious/Minor
3. CCTV Camera No. 24 found out of order and the display screen is very small. Camera has to be installed according to the drawing and the small screen should be replaced with a large one.		Maintenance (C & I) Dept.	-	UC	Minor
4. Power house floor joints cover is a tripping hazard. Warning paint (yellow/black) should be applied on all covers.		Support Services Dept.	-	UC	Serious/Minor
5. Portable fire extinguisher inspection tags found blank. All inspection tags should be up to date according to inspection frequency.		HSE Dept.	-	UC	Serious/Minor
6. Oil spill observed on the floor of 245-elevation which is slipping hazard. Floor should be clean and dry.		Support Services Dept.	-	UC	Minor
7. Trench cover was found on floor which is a tripping hazard. During maintenance work area should be barricaded.		Maintenance (Elec) Dept.	-	UA	Minor
8. A laborer was performing cleaning of metal with oil without wearing gloves. Rubber gloves provided should be used while working with oil / chemicals.		Maintenance (Mech) Dept.	-	UA	Minor
9. Loose portable railing observed at unit one 245-elevation. A warning tag and tape should be displayed at the location. Permanent arrangement for ensuring no lose scaffolding should be implemented at this and all other potential locations having similar problems urgently.		Maintenance (Mech) Dept.	-	UC	Fatality
10. Portable railing chain of Unit 1 (bulb nose hatch cover) was not properly installed and has potential of serious injury (tripping and falling hazard).		Maintenance (Mech) Dept.	-	UC	Serious/Minor
11. Some emergency lights found out of order, it could be very dangerous in emergency situation. A thorough inspection of all emergency lights should be carried out immediately.		Maintenance (Elec) Dept.	-	UC	Serious/Minor
12. Slippery stairs and floor of 227- Elevation. Floor should be clean and dry.		Support Services Dept.	-	UC	Minor
13. Oil pump motor covers with plastic sheet. A proper shed has to be fabricated to avoid any damage from the seepage water.		Maintenance (Mech) Dept.	-	UC	Serious/Minor
14. Drainage water Lights at 227- elevation observed out of order and No alternative arrangement is available.		Maintenance (Elec) Dept.	-	UC	Serious/Minor

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MANAGEMENT SAFETY AUDIT FORM

15. Loose wiring in control room with SCADA system. All loose wiring needs to be put into a channel/duct properly.	Maintenance (Elec) Dept.	-	UC	Serious/Minor
16. Rusty and untidy scaffolding used to barricade the transformer area. Proper scaffolding should be installed.	Maintenance (Mech) Dept.	-	UC	Serious/Minor
17. Electric cable lying on ground at intake stop log area which is a tripping hazard. Cable should be passing through the underground.	Maintenance (Elec) Dept.	-	UC	Serious/Minor
18. Rusty door observed at 227- elevation, it should be painted.	Maintenance (Mech) Dept.	-	UC	Minor

Photographs are attached

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