NORTHERN POWER GENERATION COMPANY LIMITED

TeleNo. 066-9200296

Fax No. 066-9200166

Office Of The
Chief Executive Officer
Genco-III, NPGCL, TPS,
Muzaffargarh

No. CEO/MZG/Dir (MMS)/2531-33

Dated 07/03/2013

Head of Project Implementation Unit,
USAID GTIP Project,
AEAI, Islamabad.

Subject: **IMPLEMENTATION OF ENVIRONMENTAL MITIGATION & MONITORING PLAN (EMMP) FOR REPAIR AND REHABILITATION WORK AT MUZAFFARGARH THERMAL POWER STATION.**

It is hereby intimated please that, as per Waste Disposal Plan, proper Handling/Storage of equipment and consequent waste produced hereafter installation, is being ensured.

Further Block wise progress report for the period from May 2012 to Feb-2013, on the prescribed proforma, by collecting all data relating to procurement/installation and consequent waste generation, as instructed in the EMMP Plan is prepared and is hereby being attached for your information as desired please.

Chief Engineer/Technical Director
NPGCL, TPS Muzaffargarh

DA/Progress Report

C.C To:

- Mr. Aziz Khan Manager Environment Technology Hagler Bailly Pakistan.
- PA to CEO TPS Muzaffargarh.

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
Date	07-03-2013	Distribution	
Reference	US AID	Page	01
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
Rehabilitation of Boiler Super Heater Tubes	Boiler Super Heater Tubes have been replaced.

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
Steel Alloy	Boiler No.1, 2 & 3	20000 Kg	Survey report has been submitted to Convener of Survey Committee (Dir. Technical)

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	Nil	Nil	Nil	Nil	Nil	Nil
2	Nil	Nil	Nil	Nil	Nil	Nil

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	Nil	Nil	Nil	Nil	Nil	Nil
	Nil	Nil	Nil	Nil	Nil	Nil

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
Date	07-03-2013	Distribution	
Reference	US AID	Page	02
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Inspection

A-Rating Codes for the Checklist

Rating Code	Rating	Description
3	Excellent	The activity, area, system, and/or knowledge are superior comments detailing
2	Adequate	The activity, area, system, and/or knowledge meet the basic minimum Requirements which includes proper documentation and full implement
1	Deficient	The activity, area, system, and/or knowledge are weak and not up to acceptable standard {Documented and not implemented or implemented and not documented). Comments outlining weaknesses required
0	Unsatisfactory	The activity, area, system, and/or knowledge are missing or of such a nature to warrant serious no compliance. Comments detailing concerns required.
N/A	Not Applicable	The question is not applicable to the type of operation, or the item was unable to be addressed durir the audit.

B-Checklist

Requirement	3	2	1	0	N/A	Details
A. Waste Handling and Storage						
1- Use of protective leather gloves while handling sharp edged metals	√					
2. All parts and machines dispatched from site to storage yard after dismantling, preferably on the same day		√				
3. Marking and segregation of wastes in scrap yard and a clear passage way marked by lines on the ground for walking of staff. No waste stored within the passage way.		√				
4. Sharp edged metal are not to be left unattended at any time. In the storage yard, the storage area for sharp edged metals cordoned off using clearly visible tapes.	√					
5. All Parts and machines dispatched from site after dismantling to store yard as soon as possible, preferably on the same day		√				
6. Before final disposal, any potentially hazardous substance such as lead or material containing lead are identified and disposed of accordingly.	√					

Requirement	3	2	1	0	N/A	Details
7. To the extent possible any oil or grease in the equipment to be replaced is removed before dismantling of the equipment					√	
8. All efforts are made to avoid spilling the oil on the floor					√	
9. Any spillage is removed immediately. For this purpose, spill control kits are made available near the work areas.					√	
10. Waste oil is stored in leak proof containers					√	
11. Oil is stored in designated and clearly marked areas. The oil storage area is lined with impervious flooring					√	
12.The oil storage area is away from direct heat and fire source					√	
13. The oil storage area has dykes constructed around it to control accidental leakages and					√	
14. All type of plastic is collected and stored in separate bins marked for this purpose		√				
15. Plastic waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site	√					
16. Nails are removed from the woods	√					
17. All type of waste is collected and stored in separate bins marked for the designated purpose	√					
18. The equipment are opened only under the supervision of a qualified person. Any potentially hazardous material such as mercury is identified prior to dismantling and appropriate safety measures are taken.	√					
19. Masks are used to avoid respiratory infections while handling carbon soot	√					
20. Soot is transported and stored in covered containers	√					
21. Soot is preferably disposed as soon as it is removed from the duct. Prolonged storage, particularly at the site, is generally avoided.		√				
22. Waste is not burnt in open air or disposed of by dumping in the areas surrounding the plant site	√					

Requirement	3	2	1	0	N/A	Details
23. Standard protective equipment including eye protective glass, gloves and mask are used.	√					

B- Waste Disposal

1. Separate oil contaminated parts from the rest					√	
2. The oil contaminated parts of waste is cleaned before being fed into furnace. Alternatively, the cleaning may be undertaken at power station.					√	
3. Segregate wires and other copper material and insulation material from the rest.					√	
4. Before final disposal, any potentially hazardous substance such as lead or material containing lead is identified.	√					
5. The risk associated with the wastes is identified, and accepted disposal methods for such waste are followed.	√					
6. Only certified recycling contractors are used for disposal from the relevant agencies.	√					
7. Agreement with the contractors for the disposal of plastic waste in the designated pre-identified municipal landfill site.					√	
8. The soot is disposed of in an onsite landfill.	√					
9. The landfill design shall be located on land owned by MTPS; in areas with deep water table (> 20 m); preferably in an area with hard rock bed.	√					
10. After dumping of the soot in the landfill, it is immediately spread into layer and a layer of soil is spread over it.		√				
11. Soot is transported and stored in covered containers		√				
12. It is preferable to dispose of the soot as soon as it is removed from the duct. Prolonged storage, particularly at the site, is avoided.		√				

C- Transportation of Equipment from Karachi to MTPS

1. Vehicles used for the transportation are NEQS compliant for the emissions and noise.	√					

Requirement	3	2	1	0	N/A	Details

D. Onsite Handling and Storage of New Equipment

1. The new equipment is stored in properly demarcated and identified areas	√					
2.Separate storage of each item is adopted and each area is marked either on floor or cordoned off by tapes	√					
3. Lifting equipment (cranes) used for the equipment follows the prescribed safety specification.	√					
4. Material Safety Data Sheet (MSDS) for chemicals, if any, shall accompany the consignment. A copy of the MSDS is available near the storage area at all times.		√				

E. Repair, Rehabilitation and Installation Activities—General

1. Appropriate PPE is provided to the workers and ensured that the PPEs[1] are used.		√				
2. The staff is provided with training in use of PPE.	√					
3. Proper scaffolding platforms are provided for all work areas located more than 1 m above floor level.	√					
4. First Aid facilities and fire protection devices are placed in areas where activates are to be performed	√					
5. Ear protection devices are used if the noise level is above 85 dB(A)	√					

F. Repair, Rehabilitation and Installation Activities—Working in Confined Spaces

1. All confined spaces are identified	√					
2. The temperature of the confined spaces is in the human tolerance range		√				
3. Artificial and intrinsically safe lighting are provided in the confined spaces	√					
4. If there is a risk of gases or fumes in the confined space the provisions for ventilation is made.	√					

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
Date	07-03-2013	Distribution	
Reference	US AID	Page	01
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
Special Cooling Water Treatment	Re-tendering is in process

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
NA	NA	NA	NA

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	NA	NA	NA	NA	NA	NA
2	NA	NA	NA	NA	NA	NA

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
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Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
Use of Fuel Oil Additive	Tender Evaluation is in process

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
NA	NA	NA	NA

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	NA	NA	NA	NA	NA	NA
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Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
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Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
Replacement of cold layer Element for RAH	Material has been replaced.

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
Carton Steel "A"	RAH Unit # 1,2&3	18000 Kg	Survey report has been submitted to Convener of Survey Committee (Dir. Technical)

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	Nil	Nil	Nil	Nil	Nil	Nil
2	Nil	Nil	Nil	Nil	Nil	Nil

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	Nil	Nil	Nil	Nil	Nil	Nil
	Nil	Nil	Nil	Nil	Nil	Nil

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Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

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Date	07-03-2013	Distribution	
Reference	US AID	Page	03
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Requirement	3	2	1	0	N/A	Details
7. To the extent possible any oil or grease in the equipment to be replaced is removed before dismantling of the equipment					√	
8. All efforts are made to avoid spilling the oil on the floor					√	
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C- Transportation of Equipment from Karachi to MTPS

1. Vehicles used for the transportation are NEQS compliant for the emissions and noise.	√					

Requirement	3	2	1	0	N/A	Details

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1. All confined spaces are identified	√					
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4. If there is a risk of gases or fumes in the confined space the provisions for ventilation is made.	√					

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Date	07-03-2013	Distribution	
Reference	US AID	Page	01
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
Modification of Excitation System (03 Set)	In Progress

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
NA	NA	NA	NA

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	NA	NA	NA	NA	NA	NA
2	NA	NA	NA	NA	NA	NA

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
Date	07-03-2013	Distribution	
Reference	US AID	Page	01
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
Electric Motor for CT Fan (02 Nos.)	Received and installed at site in February, 2013

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
Repairable	Cooling Tower Unit No.1, 2 & 3	02 x 3000 Kgs.	To be Repaired

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	NA	NA	NA	NA	NA	NA
2	NA	NA	NA	NA	NA	NA

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
Date	07-03-2013	Distribution	
Reference	US AID	Page	01
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
Electric Motor for GRC Fan (01 No.)	Received on Dated: 18-10-2012 and will be replaced in ABI

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
NA	NA	NA	NA

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	NA	NA	NA	NA	NA	NA
2	NA	NA	NA	NA	NA	NA

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
Date	07-05-2012	Distribution	
Reference	US AID	Page	01
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
DC Storage Batteries (01 Set)	The Batteries have been installed at Unit # 1

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
Batteries (Cell)	Batteries of Unit # 1	130 Nos. (7150 Kg.)	Disposed of safely by the release committee of GENCO-III

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	Nil	Nil	Nil	Nil	Nil	Nil
2	Nil	Nil	Nil	Nil	Nil	Nil

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	Nil	Nil	Nil	Nil	Nil	Nil
	Nil	Nil	Nil	Nil	Nil	Nil

Report No	Unit No.1, 2 & 3 Phase-I TPS, Muzaffargarh	Prepared By	Office of RE (M) U 1~4
Date	07-03-2013	Distribution	
Reference	US AID	Page	01
Reporting Period	08-05-2012 to 06-03-2013		
Monitoring / Inspection Team	Mr. Rasheed Ahmad Bhatti (Convener) , AE of each Section & ASM-I		

Project Activities Carried Out

Activity	Status
220 KV Circuit Breaker S.F-6 (06 Nos.)	Purchase Order issued Dated: 27-03-2012 (In Progress)

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
NA	NA	NA	NA

Summary of Occupational Safety and Health Environmental Issues Identified

No	Issue	Location	Discussion	Decision / Action	Responsible Person	Target Date
1	NA	NA	NA	NA	NA	NA
2	NA	NA	NA	NA	NA	NA

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revise Target Date
	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA

NORTHERN POWER GENERATION COMPANY LTD

GENCO-III

IMPLEMENTATION OF ENVIRONMENTAL MITIGATION & MONITORING PLAN (EMMP) FOR REPAIR AND REHABILITATION WORK AT UNIT NO.4 MUZAFFARGARH THERMAL POWER STATION

PROGRESS REPORT

FOR THE PERIOD FROM 20-NOVEMBER-2012 TO

28-FEBRUARY-2013

NPGCL, (GENCO-III), TPS, MUZAFFARGARH

INTRODUCTION

The Government of united States of America(USG) through united States Agency for International Development (USAID) is funding the repair and rehabilitation of three Thermal Power Plants-Guddu, Muzaffargarh and Jamshoro (GENCO-I,II&III) and one Hydropower Plant (Tarbela). For the implementation of the Projects, USAID has tasked Advanced Engineering Associates International (AEAI) to carry out monitoring and support for the implementation of the Projects, part of which is to ensure that all repair and rehabilitation works are environmentally compliant in accordance with the applicable USG and Government of Pakistan policies and regulations.

AEAI acquired the services of Hagler Bailly Pakistan (HBP) to Develop Environmental Mitigation and Monitoring Plans (EMMPs) for the four projects. This report presents the EMMP of Unit-4, Muzaffargarh Thermal Power Station (MTPS).

BRIEF HISTORY

- Purchase order issued on dated: 16.08.2011 to M/s Shanghai Sitico International trading company P. R. China.
- Purchase order No.CEO/MZG/RE-4/T-1730(B)/PO/4442-52.
-

Item No.	Description of Stores	Qty
Lot-B i)	Turbine Berings HP/IP gov. end bearings Complete Drg. No.A156.08.71-IE (Titling Pad Type)	1 No.
ii)	HP/IP gov. end bearings Complete Drg. No.A156.08.72-IE (Titling Pad Type)	1 No.
iii)	Thrust bearing Complete Drg. No.A156.08.03-IE	1 No.
iv)	Exciter (Type:ZL WS-WH)Bearing Complete Dia :228.84mm (Titling Pad Type)	1 No.

- Total FOB value of the order RMB 933,600.00
- Country of Origin : China.
- Material received at site Unit-4 TPS, Muzaffargarh dated:09.01.2013
- Inspection of material carried out by the surveyor along-with inspection committee Dated:28.02.2013.

A committee comprising of following Members constituted vide letter No.CEO/MZG/RE-4/3931-37 dated:07.05.2012 to implement Environment Mitigation & Monitoring Plan (EMMP) for repair and rehabilitation work at Unit-4 Thermal Power Station, Muzaffargarh.

1. Mr. Mansoor Hussain — Health & Safety Executive
   Asstt:Resident Engineer(M)Unit-4
2. Mr.Muhammad Aslam Anjum — Member
   Asstt:Mech.Engineer(Unit-4)
3. Mr.Muhammad Shahzad — Member
   Asstt:Inst.Engineer (Unit-4)
4. Mr.Azeem Abbasi — Member
   Asstt:Elect.Engineer

5. Mr.Muhammad Usman Member
   Asstt:Store Manager

Part No.	03	Prepared By:	
Date	07.03.2013	Distribution	
Reference		Page	
Reporting Period	20-November to 28-February-2013		
Monitoring/Inspection Team	Mansoor Hussain HSE, Muhammad Aslam (Member), Muhammad Usman (Member)		

Project Activities Carried Out.

Activity	Status
Turbine Bearings	To be installed during Major overhauling in February-2013

Waste Generated and Handled

Waste Type	Sources	Quantity	Status
N.A.			

Summary of Occupational Safety and Health and Environmental Issued Identified.

No	Issue	Location	Discussion	Decision/Action	Responsible Person	Target Date
1	Nil	-	-	-	-	-
2						

Follow-up of Outstanding Issues

No.	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revised Target Date
	N.A.	-	-	-	-	-

Inspection

A. Rating Codes for the Checklist

Rating Code	Rating	Description
3	Excellent	The activity, area, system, and/or knowledge are superior comments detailing.
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B. Checklist

Requirement	3	2	1	0	N/A	Details
A. Waste Handling and Storage						
1. Use of protective leather gloves while handling sharp edged metals.					√	
2. All parts and machines dispatched from site to storage yard after dismantling, preferably on the same day.					√	
3. Marking and segregation of wastes in scrap yard and a clear passage way marked by lines on the ground for walking of staff. No waste stored within the passage way.					√	
4. Sharp edged metal are not to be left unattended at any time.					√	
5. All parts and machines dispatched from site after dismantling to store yard as soon as possible, preferably on the same day.					√	
6. Before final disposal, and potentially hazardous substance such as lead or material containing lead are identified and disposed off accordingly.					√	

7. To the extent possible any oil or grease in the equipment to be replaced is removed before dismantling of the equipment.					√	
8. All effort are made to avoid spilling the oil on the floor.					√	
9. Any spillage is removed immediately. For this purpose, spill control kits are made available near the work areas.					√	
10. Waste oil is stored in leak proof containers.					√	
11. Oil is stored in designated and clearly marked areas. The oil storage area is lined with impervious flooring.					√	
12. The oil storage area is away from direct heat and fire source.					√	
13. The oil storage area has dykes constructed around it to control accidental leakages and spills.					√	
14. All type of plastic is collected and stored in separate bins marked for this purpose.					√	
15. Plastic waste is not burnt in open air or disposed off by during in the areas surrounding the plant site.					√	
16. Nails are removed from the woods.					√	
17. All type of waste is collected and stored in separate bins marked for the designated purpose.					√	
18. The equipment are opened only under the supervision of a qualified person. Any potentially hazardous material such as mercury is identified prior to dismantling and appropriate safety measures are taken.					√	
19. Masks are used to avoid respiratory infections while handling carbon soot.					√	
20. Soot is transported and stored in covered containers.					√	

21. Soot is preferably disposed as soon as it is removed from the duct. Prolonged storage, particularly at the site, is generally avoided.					√	
22. Waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site.					√	
23. Standard protective equipment including eye protective glass, gloves and mask are used.					√	
B. Waste Disposal						
1. Separate oil contaminated parts from the rest.					√	
2. The oil contaminated parts of waste is cleaned before being fed into furnace. Alternatively, the cleaning may be undertaken at power station.					√	
3. Segregate wires and other copper material and insulation material from the rest.					√	
4. Before final disposal, any potentially hazardous substances such as lead or material containing lead is identified.					√	
5. The risk associated with the wastes is identified, and accepted disposal methods for such waste are followed.					√	
6. Only certified recycling contractors are used for disposal from the relevant agencies.					√	
7. Agreement with the contractors for the disposal of plastic waste in the designated pre-identified municipal landfill site.					√	
8. The soot is disposed off in an onsite landfill.					√	
9. The landfill design shall be located on land owned by MTPS, in areas with deep water table (>20m); preferably in an area with hard rock bed.					√	
10. After dumping of the soot in the landfill, it is					√	

immediately spread into layer and a layer of soil is spread over it.						
11. Soot is transported and stored in covered containers.					√	
12. It is preferable to dispose of the soot as soon as it is removed from the duct. Prolonged storage, particularly at the site, is avoided.					√	
C. Onsite handling and storage of new equipment						
1. The new equipment is stored in properly demarcated and identified areas.					√	
2. Separate storage of each item is adopted and each area is marked either on floor or cordoned off by tapes.					√	
3. Lifting equipment(cranes) used for the equipment follows the prescribed safety specification.					√	
4. Material safety data sheet(MSDS) for chemicals, if any, shall accompany the consignment. A copy of the MSDS is available near the storage area at all times.					√	
D. Repair, rehabilitation and installation activities-General						
1. Appropriate PPE is provided to the workers and ensured that the PPEs' are used.					√	
2. The staff is provided with training in use of PPE.					√	
3. Proper scaffolding platforms are provided for all work areas located more than 1m above floor level.					√	
4. First aid facilities and fire protection devices are placed in areas where activates are to be performed.					√	
5. Ear protection devise are used if the noise level is above 85 dB(A).					√	
E. Repair, rehabilitation and installation activities-Working in confined spares						
1. All confined spaces are identified.					√	

2.	The temperature of the confined space are in the human tolerance range.					√	
3.	Artificial and intrinsically safe lighting are provided in the confined spaces.					√	
4.	If there is a risk of gases of fumes in the confined space the provisions for ventilation is made					√	

MUHAMMAD USMAN
ASSTT:STORE MANAGER
UNIT-4, TPS, M.GARH

MUHAMMAD ASLAM ANJUM
ASSTT:MECH.ENGINEER
UNIT-4, TPS, M.GARH

MANSOOR HUSSAIN
ASSTT:RESIDENT ENGINEER
UNIT-4, TPS, M.GARH

Brief History of T-1719

- Purchase Order issued on dated 13-08-2011 to M/S Harbin Integrated Power Control Engineering Limited, China
- Purchase Order No. C.E.O/MZG/RE-4/T-1719/PO/4405 dated 13-08-2011
- Description of Tender:-

01. Rotor / Impeller Assembly	02Sets
02. Regulating Dampers of Gas Recycle Fan	02Sets

- Total FOB value of the order RMB 214,600.00
- Country of Origin:- China
- L/C No. 0580 ILC 003631
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 16-07-2012
- Inspection of Material carried out by the surveyor along with inspection committee dated 29-08-2012.
- Material taken on stock dated 03.09.2012(SMB)
- Goods receipt note (GRN) issued dated 12.12.2012

Report No	02	Prepared By:	
Date	07-03.2013	Distribution	
Reference		Page	
Reporting Period	May 2012 to 7 March 2013		
Monitoring/ Inspection Team	Muhammad Akram I.E.II, Atif Ali ASM Kamran Ali (A.E.E) Abdul Qayyum AME		

Project Activities Carried Out

Activity	Status
Installation of G.R.C Fans Impeller / Rotor	Partially installed, Material will be installed completely during forthcoming Shut Down, 4 & 5 & 6

Waste Generated and Handled

Waste Type	Sources	Quantity	Status

Summary of Occupational safety and health and environmental issues Identified

No	Issue	Location	Discussion	Decision/Action	Responsible Person	Target Date
1						
2						

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revised Target Date

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Date		Distribution	
Reference		Page	
Reporting Period			
Monitoring/ Inspection Team			

Inspection

A. Rating Codes for the Checklist

Rating Code	*Rating*	*Description*
3	Excellent	The activity, area, system, and/or knowledge are superior Comments detailing
2	Adequate	The activity, area, system, and/or knowledge meet the basic minimum requirements which includes proper documentation and full implementation.
1	Deficient	The activity, area, system, and/or knowledge are weak and not up to acceptable standards (documented and not implemented or implemented and not documented). Comments outlining weaknesses required.
0	Unsatisfactory	The activity, area, system, and/or knowledge are missing or of such a nature to warrant serious no compliance. Comments detailing concerns required.
N/A	Not Applicable	The question is not applicable to the type of operation, or the item was unable to be addressed during the audit.

B. Checklist

Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
A. Waste Hadling and Storage						
1. Use of protective leather gloves while handling sharp edged metals		✓				
2. All parts and machines dispatched from site to storage yard after dismantling, preferably on the same day			✓			
3. Marking and segregation of wastes in scrap yard and a clear passage way marked by lines on the ground for walking of staff. No waste stored within the passage way.		✓				
4. Sharp edged metal are not to be left unattended at any time. In the storage yard, the storage area for shard edged metals cordoned off using clearly visible tapes.		✓				
5. All parts and machines dispatched from site after dismantling to store yard as soon as possible, preferably on the same day		✓				
6. Before final disposal, any potentially hazardous substance such as lead or material containing lead are identified and		✓				

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Date		Distribution	
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Reporting Period			
Monitoring/ Inspection Team			

Requirement	3	2	1	0	N/A	Details
disposed off accordingly.						
7 To the extent possible any oil or grease in the equipment to be replaced is removed before dismantling of the equipment		✓				
8. All effort are made to avoid spilling the oil on the floor		✓				
9. Any spillage is removed immediately. For this purpose, spill control kits are made available near the work areas.		✓				
10. Waste oil is stored in leak proof containers		✓				
11. Oil is stored in designated and clearly marked areas. The oil storage area is lined with impervious flooring			✓			
12. The oil storage area is away from direct heat and fire source		✓				
13. The oil storage area has dykes constructed around it to control accidental leakages and spills				✓		
14. All type of plastic is collected and stored in separate bins marked for this purpose				✓		
15. Plastic waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site				✓		
16. Nails are removed from the woods				✓		
17. All type of waste is collected and stored in separate bins marked for the designated purpose		✓				
18. The equipment are opened only under the supervision of a qualified person. Any potentially hazardous material such as mercury is identified prior to dismantling and appropriate safety measures are taken.		✓				
19. Masks are used to avoid respiratory infections while handling carbon soot		✓				
20. Soot is transported and stored in covered containers		✓				
21. Soot is preferably disposed as soon as it is removed from the duct. Prolonged storage, particularly at the site, is generally avoided.		✓				
22. Waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site		✓				

Report No		Prepared By:	
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Monitoring/ Inspection Team			

Requirement	3	2	1	0	N/A	Details
23. Standard protective equipment including eye protective glass, gloves and mask are used						
B. Waste Disposal						
1. Separate oil contaminated parts from the rest.		✓				
2. The oil contaminated parts of waste is cleaned before being fed into furnace. Alternatively, the cleaning may be undertaken at power station.			✓			
3. Segregate wires and other copper material and insulation material from the rest					✓	
4. Before final disposal, any potentially hazardous substance such as lead or material containing lead is identified.		✓				
5. The risk associated with the wastes is identified, and accepted disposal methods for such waste are followed.		✓				
6. Only certified recycling contractors are used for disposal from the relevant agencies.		✓				
7. Agreement with the contractors for the disposal of plastic waste in the designated pre-identified municipal landfill site.		✓				
8. The soot is disposed off in an onsite landfill.		✓				
9. The landfill design shall be located on land owned by MTPS; in areas with deep water table (> 20 m); preferably in an area with hard rock bed.		✓				
10. After dumping of the soot in the landfill, it is immediately spread into layer and a layer of soil is spread over it.		✓				
11. Soot is transported and stored in covered containers			✓			
12. It is preferable to dispose of the soot as soon as it is removed from the duct. Prolonged storage, particularly at the site, is avoided.		✓				
C. Transportation of equipment from Karachi to ~~JTPS~~ MTPS						
1. Vehicles used for the transportation are NEQS compliant for the emissions and noise.		✓				

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Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
D. Onsite handling and storage of new equipment						
1. The new equipment is stored in properly demarcated and identified areas	✓					
2. Separate storage of each item is adopted and each area is marked either on floor or cordoned off by tapes	✓					
3. Lifting equipment (cranes) used for the equipment follows the prescribed safety specification.	✓					
4. Material Safety Data Sheet (MSDS) for chemicals, if any, shall accompany the consignment. A copy of the MSDS is available near the storage area at all times.	✓					
E. Repair, rehabilitation and installation activities–General ✓						
1. Appropriate PPE is provided to the workers and ensured that the PPEs' are used		✓				
2. The staff is provided with training in use of PPE.		✓				
3. Proper scaffolding platforms are provided for all work areas located more than 1 m above floor level.	✓					
4. First Aid facilities and fire protection devices are placed in areas where activates are to be performed		✓				
5. Ear protection devise are used if the noise level is above 85 dB(A)	✓					
F. Repair, rehabilitation and installation activities–Working in confined Spaces ✓						
1. All confined spaces are identified	✓					
2. The temperature of the confined space are in the human tolerance range	✓					
3. Artificial and intrinsically safe lighting are provided in the confined spaces	✓					
4. If there is a risk of gases or fumes in the confined space the provisions for ventilation is made	✓					

Brief History of T-1723

- Purchase Order issued on dated 30-01-2012 to M/S Harbin Integrated Power Control Engineering Ltd , China.
- Purchase Order No. C.E.O/MZG/RE-4/T-1723/P.O/6101-11 dated 11-10-2011
- Description of Tender:-

A. Parts For Cooling Tower Fan

01. Gear Box Complete Assembly	08 Nos.
02. Driving Bevel Gear	06 Nos.
03. Driven Bevel Gear	06 Nos.
04. Mechanical Seal Complete	08 Nos.
05. Driving Shaft	06 Nos.
06. Fan Blades	08 Sets (48 Nos.)
07. Driving Shaft Set	06 Nos.

- Total FOB value of the order RMB =1,523,144.00
- Country of Origin:- China
- L/C No. 0580 ILC 003636
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 13-08-2012
- Inspection of Material carried out by the surveyor along with inspection committee dated 18-09-2012
- Material taken on stock dated 14.12.2012(SMB)
- Goods receipt note (GRN) issued dated 19.12.2012
- Partial Material issued on :

i) **MRS No.** 050106 Dated 14/12/2012

Description: Gear Box, Complete Assembly LF 80-400
Issue = 05 Sets
Total Quantity = 08Set

ii) **MRS No**. 050106 Dated 14/12/2012

Description: Fans Blade Blck
Issue = 03 Set

Report No	01.	Prepared By:	
Date	07.03.2013	Distribution	
Reference		Page	
Reporting Period	May - 2012 to 07 March 2013		
Monitoring/ Inspection Team	Muhammad Akram A.E-15, Atif Ali ASM, Kamran Ali A.E-12		

Project Activities Carried Out

Activity	Status
Installation of Cooling Tower Fans, Gear Box & its parts	Partially installed. Material will be installed completely during forth-coming Shut downs (Rehabilitation). U#6 16.03.13 to 23.04.13, U#5 24.04.13 to .05.13.

Waste Generated and Handled

Waste Type	Sources	Quantity	Status

Summary of Occupational safety and health and environmental issues Identified

No	Issue	Location	Discussion	Decision/Action	Responsible Person	Target Date
1						
2						

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revised Target Date

Report No		Prepared By:	
Date		Distribution	
Reference		Page	
Reporting Period			
Monitoring/ Inspection Team			

Inspection

A. Rating Codes for the Checklist

Rating Code	*Rating*	*Description*
3	Excellent	The activity, area, system, and/or knowledge are superior Comments detailing
2	Adequate	The activity, area, system, and/or knowledge meet the basic minimum requirements which includes proper documentation and full implementation.
1	Deficient	The activity, area, system, and/or knowledge are weak and not up to acceptable standards (documented and not implemented or implemented and not documented). Comments outlining weaknesses required.
0	Unsatisfactory	The activity, area, system, and/or knowledge are missing or of such a nature to warrant serious no compliance. Comments detailing concerns required.
N/A	Not Applicable	The question is not applicable to the type of operation, or the item was unable to be addressed during the audit.

B. Checklist

Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
A. Waste Hadling and Storage						
1. Use of protective leather gloves while handling sharp edged metals		✓				
2. All parts and machines dispatched from site to storage yard after dismantling, preferably on the same day			✓			
3. Marking and segregation of wastes in scrap yard and a clear passage way marked by lines on the ground for walking of staff. No waste stored within the passage way.					✓	
4. Sharp edged metal are not to be left unattended at any time. In the storage yard, the storage area for shard edged metals cordoned off using clearly visible tapes.				✓		
5. All parts and machines dispatched from site after dismantling to store yard as soon as possible, preferably on the same day		✓				
6. Before final disposal, any potentially hazardous substance such as lead or material containing lead are identified and					✓	

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Requirement	3	2	1	0	N/A	Details
disposed off accordingly.						
7 To the extent possible any oil or grease in the equipment to be replaced is removed before dismantling of the equipment		✓				
8. All effort are made to avoid spilling the oil on the floor		✓				
9. Any spillage is removed immediately. For this purpose, spill control kits are made available near the work areas.		✓				
10. Waste oil is stored in leak proof containers		✓				
11. Oil is stored in designated and clearly marked areas. The oil storage area is lined with impervious flooring			✓			
12. The oil storage area is away from direct heat and fire source		✓				
13. The oil storage area has dykes constructed around it to control accidental leakages and spills					✓	
14. All type of plastic is collected and stored in separate bins marked for this purpose					✓	
15. Plastic waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site					✓	
16. Nails are removed from the woods		✓				
17. All type of waste is collected and stored in separate bins marked for the designated purpose			✓			
18. The equipment are opened only under the supervision of a qualified person. Any potentially hazardous material such as mercury is identified prior to dismantling and appropriate safety measures are taken.		✓				
19. Masks are used to avoid respiratory infections while handling carbon soot			✓			
20. Soot is transported and stored in covered containers			✓			
21. Soot is preferably disposed as soon as it is removed from the duct. Prolonged storage, particularly at the site, is generally avoided.			✓			
22. Waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site					✓	

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Requirement	3	2	1	0	N/A	Details
23. Standard protective equipment including eye protective glass, gloves and mask are used						
B. Waste Disposal						
1. Separate oil contaminated parts from the rest.					✓	
2. The oil contaminated parts of waste is cleaned before being fed into furnace. Alternatively, the cleaning may be undertaken at power station.					✓	
3. Segregate wires and other copper material and insulation material from the rest					✓	
4. Before final disposal, any potentially hazardous substance such as lead or material containing lead is identified.					✓	
5. The risk associated with the wastes is identified, and accepted disposal methods for such waste are followed.					✓	
6. Only certified recycling contractors are used for disposal from the relevant agencies.			✓			
7 Agreement with the contractors for the disposal of plastic waste in the designated pre-identified municipal landfill site.					✓	
8. The soot is disposed off in an onsite landfill.		✓				
9. The landfill design shall be located on land owned by MTPS; in areas with deep water table (> 20 m); preferably in an area with hard rock bed.					✓	
10. After dumping of the soot in the landfill, it is immediately spread into layer and a layer of soil is spread over it.					✓	
11. Soot is transported and stored in covered containers					✓	
12. It is preferable to dispose of the soot as soon as it is removed from the duct. Prolonged storage, particularly at the site, is avoided.					✓	
C. Transportation of equipment from Karachi to JTPS MTPS						
1. Vehicles used for the transportation are NEQS compliant for the emissions and noise.					✓	

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Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
D. Onsite handling and storage of new equipment						
1. The new equipment is stored in properly demarcated and identified areas.		✓				
2. Separate storage of each item is adopted and each area is marked either on floor or cordoned off by tapes		✓				
3. Lifting equipment (cranes) used for the equipment follows the prescribed safety specification.	✓					
4. Material Safety Data Sheet (MSDS) for chemicals, if any, shall accompany the consignment. A copy of the MSDS is available near the storage area at all times.					✓	
E. Repair, rehabilitation and installation activities–General ✓						
1. Appropriate PPE is provided to the workers and ensured that the PPEs' are used		✓				
2. The staff is provided with training in use of PPE.			✓			
3. Proper scaffolding platforms are provided for all work areas located more than 1 m above floor level.						
4. First Aid facilities and fire protection devices are placed in areas where activates are to be performed		✓				
5. Ear protection devise are used if the noise level is above 85 dB(A)		✓				
F. Repair, rehabilitation and installation activities–Working in confined Spaces ✓						
1. All confined spaces are identified		✓				
2. The temperature of the confined space are in the human tolerance range		✓				
3. Artificial and intrinsically safe lighting are provided in the confined spaces	✓					
4. If there is a risk of gases or fumes in the confined space the provisions for ventilation is made		✓				

Brief History of T-1747(D

- Purchase Order issued on dated 30-01-2012 to M/S Gansu Shuanglin Machinery & Electrical Equipment Co.LTD, China
- Purchase Order No. C.E.O/MZG/RE-4/T-1747(D)/P.O/558-68 dated 30-01-2012
- Description of Tender:-

01.	Three Phase Induction Motor	02 Nos.

- Total FOB value of the order US$ 8462.00
- Country of Origin:- China
- L/C No. 0580 ILC 004465
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 10-08-2012
- Inspection of Material carried out bt the surveyor along with inspection committee dated 18-09-2012
- Material taken on stock dated 27.11.2012(SMB)
- Goods receipt note (GRN) issued dated 29.11.2012
- Partial Material Issued on :

MRS No. 040903 Dated 13/12/2012

Description: 0.4Kv Cooling Towers Fan Motors 3-φ
Issue = 01 No

Report No		Prepared By:	
Date		Distribution	
Reference		Page	
Reporting Period			
Monitoring/ Inspection Team			

Inspection

A. Rating Codes for the Checklist

Rating Code	*Rating*	*Description*
3	Excellent	The activity, area, system, and/or knowledge are superior Comments detailing
2	Adequate	The activity, area, system, and/or knowledge meet the basic minimum requirements which includes proper documentation and full implementation.
1	Deficient	The activity, area, system, and/or knowledge are weak and not up to acceptable standards (documented and not implemented or implemented and not documented). Comments outlining weaknesses required.
0	Unsatisfactory	The activity, area, system, and/or knowledge are missing or of such a nature to warrant serious no compliance. Comments detailing concerns required.
N/A	Not Applicable	The question is not applicable to the type of operation, or the item was unable to be addressed during the audit.

B. Checklist

Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
A. Waste Hadling and Storage						
1. Use of protective leather gloves while handling sharp edged metals	✓					
2. All parts and machines dispatched from site to storage yard after dismantling, preferably on the same day	✓					
3. Marking and segregation of wastes in scrap yard and a clear passage way marked by lines on the ground for walking of staff. No waste stored within the passage way.	✓					
4. Sharp edged metal are not to be left unattended at any time. In the storage yard, the storage area for shard edged metals cordoned off using clearly visible tapes.	✓					
5. All parts and machines dispatched from site after dismantling to store yard as soon as possible, preferably on the same day		✓				
6. Before final disposal, any potentially hazardous substance such as lead or material containing lead are identified and	✓					

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Date	07-03-2013	Distribution	
Reference		Page	
Reporting Period	May 2012 to 07, March 2013		
Monitoring/ Inspection Team	Muhammad Akram T-E-II, Alif Ali ASM Kamran Ali A.E.E		

Project Activities Carried Out

Activity	Status
Installation of 0.4KV Motors for Cooling Tower Fans, A.P.H	Partially installed

Waste Generated and Handled

Waste Type	Sources	Quantity	Status

Summary of Occupational safety and health and environmental issues Identified

No	Issue	Location	Discussion	Decision/Action	Responsible Person	Target Date
1						
2						

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revised Target Date

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Monitoring/ Inspection Team			

Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
disposed off accordingly.						
7. To the extent possible any oil or grease in the equipment to be replaced is removed before dismantling of the equipment		✓				
8. All effort are made to avoid spilling the oil on the floor		✓				
9. Any spillage is removed immediately. For this purpose, spill control kits are made available near the work areas.		✓				
10. Waste oil is stored in leak proof containers		✓				
11. Oil is stored in designated and clearly marked areas. The oil storage area is lined with impervious flooring		✓				
12. The oil storage area is away from direct heat and fire source		✓				
13. The oil storage area has dykes constructed around it to control accidental leakages and spills		✓				
14. All type of plastic is collected and stored in separate bins marked for this purpose					✓	
15. Plastic waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site					✓	
16. Nails are removed from the woods		✓				
17. All type of waste is collected and stored in separate bins marked for the designated purpose		✓				
18. The equipment are opened only under the supervision of a qualified person. Any potentially hazardous material such as mercury is identified prior to dismantling and appropriate safety measures are taken.	✓					
19. Masks are used to avoid respiratory infections while handling carbon soot	✓					
20. Soot is transported and stored in covered containers		✓				
21. Soot is preferably disposed as soon as it is removed from the duct. Prolonged storage, particularly at the site, is generally avoided.		✓				
22. Waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site		✓				

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Date		Distribution	
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Monitoring/ Inspection Team			

Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
23. Standard protective equipment including eye protective glass, gloves and mask are used						
B. Waste Disposal						
1. Separate oil contaminated parts from the rest.		✓				
2. The oil contaminated parts of waste is cleaned before being fed into furnace. Alternatively, the cleaning may be undertaken at power station.		✓				
3. Segregate wires and other copper material and insulation material from the rest		✓				
4. Before final disposal, any potentially hazardous substance such as lead or material containing lead is identified.		✓				
5. The risk associated with the wastes is identified, and accepted disposal methods for such waste are followed.	✓					
6. Only certified recycling contractors are used for disposal from the relevant agencies.	✓					
7. Agreement with the contractors for the disposal of plastic waste in the designated pre-identified municipal landfill site.	✓					
8. The soot is disposed off in an onsite landfill.		✓				
9. The landfill design shall be located on land owned by MTPS; in areas with deep water table (> 20 m); preferably in an area with hard rock bed.		✓				
10. After dumping of the soot in the landfill, it is immediately spread into layer and a layer of soil is spread over it.	✓					
11. Soot is transported and stored in covered containers	✓					
12. It is preferable to dispose of the soot as soon as it is removed from the duct. Prolonged storage, particularly at the site, is avoided.	✓					
C. Transportation of equipment from Karachi to JTPS MTPS						
1. Vehicles used for the transportation are NEQS compliant for the emissions and noise.						

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Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
D. Onsite handling and storage of new equipment						
1. The new equipment is stored in properly demarcated and identified areas	✓					
2. Separate storage of each item is adopted and each area is marked either on floor or cordoned off by tapes	✓					
3. Lifting equipment (cranes) used for the equipment follows the prescribed safety specification.	✓					
4. Material Safety Data Sheet (MSDS) for chemicals, if any, shall accompany the consignment. A copy of the MSDS is available near the storage area at all times.	✓					
E. Repair, rehabilitation and installation activities–General ✓						
1. Appropriate PPE is provided to the workers and ensured that the PPEs' are used		✓				
2. The staff is provided with training in use of PPE.		✓				
3. Proper scaffolding platforms are provided for all work areas located more than 1 m above floor level.	✓					
4. First Aid facilities and fire protection devices are placed in areas where activates are to be performed		✓				
5. Ear protection devise are used if the noise level is above 85 dB(A)		✓				
F. Repair, rehabilitation and installation activities–Working in confined Spaces ✓						
1. All confined spaces are identified	✓					
2. The temperature of the confined space are in the human tolerance range	✓					
3. Artificial and intrinsically safe lighting are provided in the confined spaces	✓					
4. If there is a risk of gases or fumes in the confined space the provisions for ventilation is made	✓					

Brief History of T-1618(D)

- Purchase Order issued on dated 22-02-2010 to M/S Shanghai East Best Arts, Crafts Co. China
- Purchase Order No. 4189/GMT/P&S/MZG/T-1618(D) dated 22-02-2010.
- Description of Tender:-

01.	Interlock Switch	25 Nos.
02.	Control Switch	50 Nos.
03.	Seal Oil Cooler (H_2 side)	04 Nos.
04.	Seal Oil Cooler (Air side)	04 Nos.
05.	Lube Oil Pump for main transformer	02 Nos.
06.	Lube Oil Pump for Starting transformer	02 Nos.

- Total FOB value of the order US$ 63,528.00
- Country of Origin:- China
- L/C No. 10580 FLC 13381-10 Dated 30.06.2010
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 24-12-2010
- Inspection of Material carried out by the surveyor along with inspection committee dated 03-01-2011
- Material taken on stock dated 03.01.2011 (SMB)
- Goods receipt note (GRN) issued dated 13.01.2011
- Partial Material Issued on:

MRS Nos. 034908 Dated 05/09/12
Description: Seal Oil Cooler Air
Issue = 01Nos

Brief History of T-1618(C)

- Purchase Order issued on dated 04.03.2010 to M/S chlight Corporation. China
- Purchase Order No. 4191/GMT/P&S/MZG/T-1618(C) dated 04-03-2010.
- Description of Tender:-

01.	De- Excitation MK Breaker	02 Nos.
02.	Silicon Controlled Rectifier	18 Nos.
03.	Pilot Exciter	02 Nos.

- Total FOB value of the order US$ 116,529.48
- Country of Origin:- China
- L/C No. 10580 FLC 13385-10
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 10-02-2011.
- Inspection of Material carried out by the surveyor along with inspection committee dated 28-02-2011.
- Material taken on stock dated 16.04.2011(SMB)
- Goods receipt note (GRN) issued dated 26.04.2011.
- Partial Material Issued on:

MRS No.045869 Dated 18/10/2012
Description: De-Excitation MK Breaker, Type DM2 2500/60 V=500v
Issue = 01 No
Total Quantity = 02 Nos

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Monitoring/ Inspection Team	Muhammad Akram, I.E-II, Alif Ali, ATM Kamran Ali A.E.E		

Project Activities Carried Out

Activity	Status
Installation of 11kV breaker, Seal oil coolers PMG	Partially installed.

Waste Generated and Handled

Waste Type	Sources	Quantity	Status

Summary of Occupational safety and health and environmental issues Identified

No	Issue	Location	Discussion	Decision/Action	Responsible Person	Target Date
1						
2						

Follow-up of Outstanding Issues

No	Date Issue Raised	Issue and Action	Status	Discussion	Responsible Person	Revised Target Date

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Inspection

A. Rating Codes for the Checklist

Rating Code	*Rating*	*Description*
3	Excellent	The activity, area, system, and/or knowledge are superior Comments detailing
2	Adequate	The activity, area, system, and/or knowledge meet the basic minimum requirements which includes proper documentation and full implementation.
1	Deficient	The activity, area, system, and/or knowledge are weak and not up to acceptable standards (documented and not implemented or implemented and not documented). Comments outlining weaknesses required.
0	Unsatisfactory	The activity, area, system, and/or knowledge are missing or of such a nature to warrant serious no compliance. Comments detailing concerns required.
N/A	Not Applicable	The question is not applicable to the type of operation, or the item was unable to be addressed during the audit.

B. Checklist

Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
A. Waste Hadling and Storage						
1. Use of protective leather gloves while handling sharp edged metals	✓					
2. All parts and machines dispatched from site to storage yard after dismantling, preferably on the same day	✓					
3. Marking and segregation of wastes in scrap yard and a clear passage way marked by lines on the ground for walking of staff. No waste stored within the passage way.		✓				
4. Sharp edged metal are not to be left unattended at any time. In the storage yard, the storage area for shard edged metals cordoned off using clearly visible tapes.		✓				
5. All parts and machines dispatched from site after dismantling to store yard as soon as possible, preferably on the same day		✓				
6. Before final disposal, any potentially hazardous substance such as lead or material containing lead are identified and	✓					

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Requirement	3	2	1	0	N/A	Details
disposed off accordingly.						
7. To the extent possible any oil or grease in the equipment to be replaced is removed before dismantling of the equipment	✓					
8. All effort are made to avoid spilling the oil on the floor	✓					
9. Any spillage is removed immediately. For this purpose, spill control kits are made available near the work areas.	✓					
10. Waste oil is stored in leak proof containers	✓					
11. Oil is stored in designated and clearly marked areas. The oil storage area is lined with impervious flooring		✓				
12. The oil storage area is away from direct heat and fire source		✓				
13. The oil storage area has dykes constructed around it to control accidental leakages and spills		✓				
14. All type of plastic is collected and stored in separate bins marked for this purpose		✓				
15. Plastic waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site		✓				
16. Nails are removed from the woods		✓				
17. All type of waste is collected and stored in separate bins marked for the designated purpose	✓					
18. The equipment are opened only under the supervision of a qualified person. Any potentially hazardous material such as mercury is identified prior to dismantling and appropriate safety measures are taken.		✓				
19. Masks are used to avoid respiratory infections while handling carbon soot		✓				
20. Soot is transported and stored in covered containers	✓					
21. Soot is preferably disposed as soon as it is removed from the duct. Prolonged storage, particularly at the site, is generally avoided.	✓					
22. Waste is not burnt in open air or disposed off by dumping in the areas surrounding the plant site		✓				

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Requirement	*3*	*2*	*1*	*0*	*N/A*	*Details*
23. Standard protective equipment including eye protective glass, gloves and mask are used						
B. Waste Disposal						
1. Separate oil contaminated parts from the rest.		✓				
2. The oil contaminated parts of waste is cleaned before being fed into furnace. Alternatively, the cleaning may be undertaken at power station.		✓				
3. Segregate wires and other copper material and insulation material from the rest		✓				
4. Before final disposal, any potentially hazardous substance such as lead or material containing lead is identified.	✓					
5. The risk associated with the wastes is identified, and accepted disposal methods for such waste are followed.	✓					
6. Only certified recycling contractors are used for disposal from the relevant agencies.		✓				
7. Agreement with the contractors for the disposal of plastic waste in the designated pre-identified municipal landfill site.	✓					
8. The soot is disposed off in an onsite landfill.		✓				
9. The landfill design shall be located on land owned by MTPS; in areas with deep water table (> 20 m); preferably in an area with hard rock bed.		✓				
10. After dumping of the soot in the landfill, it is immediately spread into layer and a layer of soil is spread over it.	✓					
11. Soot is transported and stored in covered containers	✓					
12. It is preferable to dispose of the soot as soon as it is removed from the duct. Prolonged storage, particularly at the site, is avoided.		✓				
C. Transportation of equipment from Karachi to JTPS MTPS						
1. Vehicles used for the transportation are NEQS compliant for the emissions and noise.						

Brief History of MZF-27

- Purchase Order issued on dated 29-11-2011 to M/S Harbin Integrated Power Control Engineering Ltd , China
- Purchase Order No. C.E.O/MZG/RE-4/MZF-27/PO/7013-23 dated 29-11-2011
- Description of Tender:-

01.	Economizer Tubes	02 Sets
02.	Service Charges	

- Total FOB value of the order RMB= 11,125,000.00
- Country of Origin:- China
- L/C No. 0580 ILC 004467 dated: 12-04-05
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 02-11-2012
- Inspection of Material carried out by the surveyor along with inspection committee dated 19-12-2012.
- Material taken on stock dated 17.01.2013(SMB)
- Goods receipt note (GRN) issued dated 24.01.2013.

Brief History of T-1747(A)

- Purchase Order issued on dated 02-08-2011 to M/S Harbin Electrical International Co. LTD, China
- Purchase Order No. C.E.O/MZG/RE-4/T-1747(A)/P.O/4135-45 dated 02-08-2011
- Description of Tender:-

01.	Rotor for Boiler Feed Pump with Journal Bearings	02 Nos.
02.	Three Phase Induction Motor for Air Pre-Heater.	02 Nos.

- Total FOB value of the order RMB 555,680.00
- Country of Origin:- China
- L/C No. 0580 ILC 003638
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 15-10-2012
- Inspection of Material carried out by the surveyor along with inspection committee dated 13-11-2012
- Vertical Motor required so Letter in this regard written to respective firm by Sectional Head.

Brief History of T-1747-C & 1738-A

- Purchase Order issued on dated 01-10-2011 to M/S Harbin Integrated Power Control Engineering Ltd , China
- Purchase Order No. C.E.O/MZG/RE-4/P.O/T-1747-C & 1738-A/5586-96 Dated 01-10-2011
- Description of Tender:-

T-1747-C

04.	Rotor for Condensate Pump Motor	02 Nos.

T-1738-A

01.	6.6 KV Motor for Boiler Feed Pump	01 No.
02.	6.6 KV Motor for Induced Draft Fan	01 No.
03.	6.6 KV Motor for Forced Draft Fan	01 No.
04.	6.6 KV Motor for Condensate Pump	01 No.

- Total FOB value of the order RMB = 2,691,532.00
- Country of Origin:- China
- L/C No. 0580 ILC 003672
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 02-11-2012
- Inspection of Material carried out by the surveyor along with inspection committee dated 26-12-2012.
- Material taken on stock dated 15.02.2013(SMB)
- Goods receipt note (GRN) issued dated 18.02.2013

Brief History of T-ICB-07(A)

- Purchase Order issued on dated 11-07-2012 to M/S Shanghai SITCO International Trading Company, China
- Purchase Order No. C.E.O/MZG/RE-1/T-ICB-07(A)/PO/8168-78 dated 11-07-2012
- Description of Tender:-

  Heating Elements & Baskets for RAH alongwith seals:

01.	Hot End Elements Layer	03 Sets
02.	Radial Leaf for Clockwise Rotation (a, b, c) :	96 Nos. each
03.	Radial Leaf for Counter Clockwise Rotation (a, b, c):	96 Nos. each

- Total FOB value of the order RMB= 1,244,139.00
- Country of Origin:- China
- L/C No. 0580 ILC 006830
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 04-03-2013
- Letter to DG Insurance Wapda for appointment of Surveyor for Inspection of Material has been written on dated 04-03-2013.

Brief Historyof T-ICB-07(C)

- Purchase Order issued on dated 11-07-2012 to M/S Harbin Integrated Power Control Engineering Limited, China
- Purchase Order No. C.E.O/MZG/RE-1/T-ICB-07(C)/PO/6577-87 dated 16-08-2012
- Description of Tender:-

  01. Furnace Oil Burner Guns 32 Nos.

- Total FOB value of the order CNY= 200,000.00
- Country of Origin:- China
- L/C No. 0580 ILC 006818
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 25-02-2013
- Letter to DG Insurance Wapda for appointment of Surveyor for Inspection of Material has been written on dated 26-02-2013.

Brief History of FT-01

- Purchase Order issued on dated 28-09-2011 to M/S Shanghai Electric E & A, Industrial Development Company Limited, China
- Purchase Order No. C.E.O/MZG/RE-4/P.O/FT-01/5465-75 dated 28-09-2011
- Description of Tender:-

01.	Air Inlets	08 Nos.
02.	Inlet Air Boxes	04 Nos.
03.	Service Charges	

- Total FOB value of the order US$ 196,877.00
- Country of Origin:- China
- L/C No. 0580 ILC 004115
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 10-10-2012
- Inspection of Material carried out by the surveyor along with inspection committee dated 13-11-2012.
- Material taken on stock dated 27.11.2012(SMB)
- Goods receipt note (GRN) issued dated 29.11.2012

Brief History of T-01

- Purchase Order issued on dated 30-01-2012 to M/S Harbin Integrated Power Control Engineering Ltd , China.
- Purchase Order No. C.E.O/MZG/RE-4/T-01/P.O/7024-34 dated 30-01-2011
- Description of Tender:-

01.	6.6 KV Switchgear Drawout AC Metal enclosed switchgear for Boiler Feed Pump Motor	01 No.
02.	Drawout AC Metal enclosed Switchgear for GRC Fan Motor	01 No.
03.	Drawout AC Metal enclosed Switchgear for Common Station Transformer	01 No.
04.	Drawout AC Metal enclosed Switchgear for Water Pre-treatment Plant Transformer	01 No.
05.	Drawout AC Metal enclosed Switchgear for incoming Supply	01 No.

- Total FOB value of the order RMB 1,559,678.00
- Country of Origin:- China
- L/C No. 0580 ILC 004112 Date: 12-03-05
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 01-11-2012
- Inspection of Material carried out by the surveyor along with inspection committee dated 18-12-2012

Brief History of T-1738(B)

- Purchase Order issued on dated 31-01-2012 to M/S Gansu Shuanglin Machinery & Electrical Equipment Co. Ltd , China
- Purchase Order No. C.E.O/MZG/RE-4/T-1738(B)/PO/596-606 dated 31-01-2012
- Description of Tender:-

  01. 6.6 KV Motor for Circulating Water Pump 01 Nos.

- Total FOB value of the order US $ = 116,200.00
- Country of Origin:- China
- L/C No. 0580 ILC 004466 dated: 05-04-2012
- Material received at site Units 5 & 6, TPS, Muzaffargarh dated 22-01-2013
- Inspection of Material carried out by the surveyor along with inspection committee dated 19-02-2013.
- Material taken on stock dated 20.02.2013(SMB)
- Goods receipt note (GRN) issued dated 04.03.2013.