

Environmental Monitoring Report

Semiannual Report (January to June 2021)
July 2021

India: Delhi-Meerut Regional Rapid Transit System
Investment Project - Tranche 1

Annexes 2-4

Prepared by the National Capital Region Transport Corporation (NCRTC), Government of India
for the Asian Development Bank.

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ANNEXES 2-4



SITE VISIT NO	PACKAGE	MONTH	YEAR
	03	05	21

Reference No. – NCRTC/DM049/AIA/RP/SH/00046

Issued By – Ashok Kumar Yadav, Chief SHE Expert

Approved By – David Finnamore / Project Director

Date: 15-05-2021

Sub:- L&T, PKG-3, (Lot-2), Environment Audit Report

Name of the persons attended Environmental Audit inspection conducted for L & T, pkg-3, Lot-2, at Parthapur Casting Yard, on 12.05.2021. Compliance report shall be sent within 05 days after receiving of this report.

GC representatives:


A .Lakshmi Narayanan, Sr. Environment Health Expert

Contractor representatives:

Jay Prakash, Environmental Manager

NCRTC representatives:

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SL NO	OBSERVATION & RECOMMENDATION	PHOTOGRAPHS	RISK CATEGORY (H/M/L)	COMPLIANCE ACTION BY CONTRACTOR	COMPLIED ON
1	<p><u>OBSERVATION:</u> Rebar Scraps not disposed from the yard</p> <p><u>RECOMMENDATION:</u> Rebar scraps shall be disposed time to time maintaining the waste register</p>		M		

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2	<p><u>OBSERVATION:</u> Oil spillages not attended immediately</p> <p><u>RECOMMENDATION:</u> Oil spillages shall be wiped by cotton and disposed it as hazardous waste. The oil soaked cotton must be disposed as hazardous waste</p>		M		
3	<p><u>OBSERVATION:</u> The sedimentation trap not maintained properly</p> <p><u>RECOMMENDATION:</u> The sedimentation trap must be maintained regularly by removing the slush / slurry time to time.</p>		M		

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4	<p><u>OBSERVATION:</u> The surrounding area of RMC is not maintained</p> <p><u>RECOMMENDATION:</u> The surrounding area of RMC shall be maintained for neat & tied.</p>		M		
5	<p><u>OBSERVATION:</u> The drainage not maintained</p> <p><u>RECOMMENDATION:</u> The drainage shall be maintained by removing the blockage</p>		M		

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6	<p><u>OBSERVATION:</u> The cement spillages found in the cement go down</p> <p><u>RECOMMENDATION:</u> The cement spillages must be collected by sweeping and use for secondary grade works</p>		M		
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7	<p><u>OBSERVATION:</u> The iron thread not removed and disposed.</p> <p><u>RECOMMENDATION:</u> The iron thread must be disposed by maintaining the record</p>		M		
8	<p><u>OBSERVATION:</u> Unwanted materials along with wooden scraps not removed.</p> <p><u>RECOMMENDATION:</u> The unwanted materials along with wooden scraps must be disposed by maintaining register.</p>		M		

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9	<p><u>OBSERVATION:</u> Empty cement bags not removed / disposed</p> <p><u>RECOMMENDATION:</u> Empty cement bags must be disposed accordingly by maintaining the register</p>		M		
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10	<p><u>OBSERVATION:</u> The tested cubes not removed which is lying in front of QA / QC lab</p> <p><u>RECOMMENDATION:</u> The tested cubes shall be disposed as C & D wastes by maintaining register</p>		M		
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Environmental Audit Report – L & T, Pkg-3, Lot-2, conducted on 12.05.2021 at Parthapur Casting Yard

Representative from NCRTC/GC

A.Lakshmi Narayanan, Sr.Environment Health expert

Representative from L & T

Jay Prakash, Env. Mgr.

Inspection Items	Implemented?				Remarks:(i.e. specify location, good practices, problem observed, possible cause of nonconformity and/or proposed corrective/ preventive actions)
	Yes	No*	N/A		
Air Pollution					
Are the construction sites watered to minimize dust generated?	✓				Improvement needed
Are stockpiles of dusty materials (size with more than 20 bags cement) covered?	✓				Improvement needed
Cement debagging process undertaken in sheltered areas, and provide with all dust extraction system?	✓				
Are all vehicles carrying dusty loads covered over prior to leaving the site?	✓				
Are dusty roads paved and/or sprayed with water?	✓				
Are dust controlled during excavation/ percussive drilling?			✓		
Are plant, equipment and vehicles are well maintained? (any black smoke observed, please indicate the plant/equipment and location)	✓				
Are all equipment's and vehicles are well maintained and comply with BS and vintage criteria? (PUC and Fitness certificates are available)	✓				
Are there enclosures around the main dust	✓				

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generating activities? (e.g. batching plant, grout mixing, excavation, transportation)					
Are all C&D wastes being removed within 2 days from generation?	✓				
Are speed control measures applied? (e.g. speed limit sign)	✓				
Are all legal and COC compliance for batching plant attended and conditions are compiled within time frame?	✓				
Others (please specify)					
Water Pollution Control					
Are all legal and COC compliance for batching plant attended and conditions are compiled within time frame?	✓				
Is wastewater treatment system being used and properly maintained on site? E.g. at batching plant, wheel wash, TM wash, Curing tank etc.)	✓				
Are there any wastewater discharged to the storm drains? Is the wastewater being treated?			✓		
Are measures provided to properly direct effluent to silt removal facilities? (e.g. provide earth bunds / U channels)			✓		
Are sedimentation traps and tanks free of silt and sediment?	✓				
Are sandbags/earth bund adopted to prevent washing away of sand/silt and wastewater to drains, catch pit, public road, and footpath?	✓				
Are vehicles and plants cleaned before	✓				Improvement needed

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leaving the site?					
Are wheel washing facilities well maintained?	✓				Improvement needed
Is sand and silt settled out in wheel washing bay and removed?	✓				Improvement needed
Is the public road/area around the site entrance and site barricade kept clean and free of muddy water?			✓		
Is domestic water directed to septic tanks toilets?	✓				
Is treated water available and used at site?			✓		
Others (please specify)					
Noise Control					
Is all plant and equipment's are complying the periodic and preventive maintenance schedule?	✓				
Is all plant and equipment's having high noise during operation schedule in such a way that minimum impact observed on sensitive receptors? Please specify?	✓				
Do air compressors and generators operate with doors closed?	✓				
Is idle plant/equipment turned off or throttled down?			✓		
Do air compressors and hand-held breakers have valid noise emission labels (NEL)?	✓				
Any noise mitigation measures adopted (e.g. use noise barrier/enclosure)?			✓		
Are silenced equipment's utilized?	✓				
Others (please specify)					

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Waste Management					
Is the site kept clean and tidy? (e.g. litter free, good housekeeping)	✓				Improvement needed
Are all legal and COC compliance attended and conditions are complied within time frame?	✓				
Are separate Bins used for biodegradable and non-biodegradable wastes?	✓				Improvement needed
Are separated labelled containers / areas provided for facilitating recycling and waste segregation?	✓				
Are construction wastes/ recyclable wastes and general refuse removed offsite regularly as per legal provision?	✓				
Are construction wastes collected and disposed of properly by licensed collectors?	✓				
Are chemical wastes, if any, collected and disposed of properly by licensed collectors?	✓				
Is any possibility for reuse of waste at site, if yes, please specify?	✓				
Are chemical wastes properly stored and labelled?	✓				
Are oil drums and plants/equipment's provided with drip trays?	✓				
Are drip trays free of oil and water?	✓				
Is there any oil spillage? Clean-up the contaminated soil immediately?	✓				Improvement needed
Is litter, foam or other objectionable matters in nearby water drain/sewer cleaned?	✓				
Authorisation for generation of different hazardous wastes as per form 3	✓				

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Storage of hazardous waste					
Others (please specify) Plastic waste Management rules 2016 Bio medical waste 2016 Solid waste Management Rules, 2016 The batteries (Management & Handling) rules 2001	✓				Improvement needed
Storage of Chemicals and Dangerous Goods					
Are chemicals stored and labelled properly?	✓				
Does storage of Dangerous goods comply with license conditions (include types and quantities if Dangerous goods store is available, check the Dangerous goods store license)?	✓				
Others (please specify) Emergency preparedness for spillage of chemicals and dangerous goods incident reporting, preparedness plan					
Protection of Flora, Fauna, and Historical Heritage					
Are disturbance to terrestrial flora minimized (e.g. plants to be preserved)?			✓		
Are disturbance to terrestrial fauna minimized (if rare species identified)?			✓		
Any historical heritage exists on site. If yes, ensure appropriate measures taken to preserve it			✓		
Is Topsoil conservation measure taken. If yes, please specify?			✓		

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Identify the historical heritage protection measure initiated on project alignment?			✓		
Resource Conservation					
Is water recycled wherever possible for dust suppression?	✓				
Is water pipe leakage and wastage prevented?	✓				Improvement needed
Are diesel-powered plants and equipment's shut off while not in use to reduce excessive use?	✓				
Are energy conservation practices adopted? If Yes, please outline?	✓				
Are metal or other alternatives used to minimize the use of timber?			✓		
Are materials stored in good condition to prevent deterioration and wastage (e.g. Covered, separated)?	✓				

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Legal compliance by L & T, PKG-3, Lot-2

Sl.No.	Permissions / Clearances	Concerned Agency	Status
			L & T, Lot 2
1	Consent to Establish & Operate for Ready-Mix Concrete Plant & Casting Yard	DPCC for NCT of Delhi and U.P. State Pollution Control Board, Ghaziabad, and Meerut	CTE received by UPPCB CTO obtained for 500 Cum capacity plant – Valid up to 31.12.2023.
2	Permission for withdrawal / dewatering of ground water	CGWA	Permission for withdrawal / dewatering of ground water- No borewell available.
3	Permission for sand mining from riverbed	Mining Department / MoEFCC	L&T Not directly involved in sand mining, Purchasing sand from authorized vendors.
4	Authorization for disposal of Hazardous wastes	DPCC for NCT of Delhi and U.P. State Pollution Control Board, Ghaziabad, and Meerut	Third party MOU is there for battery wastes and used oil. Till now, 200 liter is generated up to 08.02.2021. SDR has been raised for disposal by store department.
5	Disposal of bituminous and other wastes	DPCC for NCT of Delhi and U.P. State Pollution Control Board, Ghaziabad, and Meerut	Ghaziabad Nagar Nigam & VATS REAL PRIVATE LIMITED for management of 211.2 MT Construction & Demolition waste generated and sent for recycling facility in HINDON Vihar.
6	Consent for disposal of sewage from labour camps	DPCC for NCT of Delhi and U.P. State Pollution Control Board, Ghaziabad, and Meerut	No labour camp situated in the Casting Yard. Labour Colony located in the residential area and there is no specific sewage generated from the labour camp. For CY- Request for sewage connection letter shown in the audit Ref No. L & T / RRTS/P3L2/COMMON /MDA/10 dated 31.08.2020
7	Pollution Under Control Certificate for various vehicles use for project	Department of Transport, State govt. authorized testing centers	Yes. List of vehicle with PUC validity found
8	Employing labour / workers	District labour commission	Yes. Validity – 05.12.2022
9	Roof Top Rainwater harvesting (RWH)	Central Ground water authority	Roof Top Rainwater harvesting:- Planning is taking place in near future. Roof top water harvesting will be implemented.

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10	Permission for use of fresh water for construction and drinking purpose	MCD/ NDMC/DDA in case of NCT of Delhi, GDA/ Ghaziabad Nagar Nigam for Ghaziabad and Municipal Corporation/Meerut Nagar Nigam for Meerut.	Drinking purpose : Packaged drinking water purchased Construction water : Treated STP water is used for construction after testing the quality of the treated water
11	Quarry Operation	State Department of Mines and Geology	L&T Not directly involved in Quarry operation, Purchasing aggregates/sand from authorized vendors (Third Party)



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Reference No. -NCRTC/DM049/AIA/RP/SH/00360

Issued By — Ashok Kumar Yadav, Chief SHE Expert

Date: 22-03-2021

Approved By – David Finnamore / Project Director

Sub: - Labour Camp Monthly Inspection Report

Name of the persons attended labour camp inspection conducted for KEC-CCECC JV., at Hindon labour camp on 19.03.2021. Compliance report shall be sent within 05 days after receiving of this report.

GC representatives:

Mr.A.Lakshmi Narayanan, Sr.Environmental Health expert

Mr. Ajay Kumar Sharma, Sr.Social Guard Expert

NCRTC representatives:

Contractor representatives:

Mr.Aviral Kumar Rana, Asst.Environmental Mgr.

Mr.Sanjay Pandey, Asst. LWO

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SL N O	OBSERVATION & RECOMMENDATION	PHOTOGRAPHS	RISK CATEGOR Y (H/M/L)	COMPLIANCE ACTION BY CONTRACTO R	COMPLIE D ON
1	<p><u>OBSERVATION:</u> Not effective garbage waste management system installed.</p> <p><u>RECOMMENDATION:</u> Effective Garbage disposal system must be installed in the camp</p>		M		

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2	<p><u>OBSERVATION:</u> Open washroom area and not found neat & dry</p> <p><u>RECOMMENDATION:</u> Bath rooms must be available and the surrounding area of washing clothes / bath etc. must be neat & dry for non-slippery</p>		M		
3	<p><u>OBSERVATION:</u> The adjacent area of toilet not found hygienically.</p> <p><u>RECOMMENDATION:</u> The adjacent area of toilet must be maintained neat & hygienically</p>		M		

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M			

- 4 **OBSERVATION:**
 The surrounding area of toilet basin not found hygienically.
- RECOMMENDATION:**
 The surrounding area of Toilet sheet must be maintained neat & dry with hygienically



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5	<p><u>OBSERVATION:</u> Shoe rack not provided.</p> <p><u>RECOMMENDATION:</u> Shoe rack must be provided and the shoes must be kept in the rack.</p>		M		
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6	<p><u>OBSERVATION:</u> Rooms were not maintained neat & tied with hygienically.</p> <p><u>RECOMMENDATION:</u> Living rooms must be maintained hygienically with neat & tied</p>		M		
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- 7 **OBSERVATION:**
 Living room found
 used as kitchen.
- RECOMMENDATION:**
 Living rooms must not
 be used as kitchen .
 Make a common
 kitchen instead of
 kitchen in every room



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8	<p><u>OBSERVATION:</u> Bed not provided in the rooms.</p> <p><u>RECOMMENDATION:</u> Bed must be provided in the rooms</p>		M		
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9	M		
10	M		

9 **OBSERVATION:**
Garbage not disposed properly.

RECOMMENDATION:
The garbage must be effectively disposed with proper placement of dust bin



10 **OBSERVATION:**
Utensils were kept in the living room.

RECOMMENDATION:
The Utensils must be kept in the common kitchen room or separately and it should not be kept in the living room



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M			

- 11 **OBSERVATION:**
Vegetable / gas cylinder and other materials were kept in the living room.
- RECOMMENDATION:**
Vegetable / gas cylinder and other materials must be kept separately rather than in the living rooms



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M			

- 12 **OBSERVATION:**
 Rooms were not found with hygienically.
- RECOMMENDATION:**
 Living rooms must be kept hygienically



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- 13 **OBSERVATION:**
 Lot of grass found in front of rooms.
- RECOMMENDATION:**
 The grass must be cut which are grown in front of living rooms





SITE VISIT NO	PACKAGE	MONTH	YEAR
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Name of Camp : Hindon Labour camp

Date & Time : 19.03.2021 at 1.00 pm.

Inspected By : GC's representative

- 1) Mr.A.Lakshmi Narayanan, Sr.Environment Health Expert
- 2) Mr.Ajay Kumar Sharma, Sr.Social safeguard Expert

Contractor's Representative

- 1) Mr. Aviral Kumar Rana, Asst. Environmental manager
- 2) Mr. Sanjay Pandey, Asst. Labour Welfare Officer

S. NO.	POINTS	OBSERVATION	MEASURES
ACCESS & EGRESS			
1.	Are the entry roads / walkways / passages to camp kept clear?	Yes	
2.	Are the walkways & roads are even and free from water logging?	Yes	
3.	Is the entry inside workmen camp restricted?	Yes	
4.	Is Illumination level OK in access / egress?	Yes	
GENERAL			

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1.	Are dustbin / garbage bins allocated for each & every colony?	No.	Dust bins with approved colour code shall be placed in an appropriate location
2.	Is the garbage being disposed off on regular basis?	No.	Every day garbage must be disposed on regular basis
3.	Are the drinking water facilities adequate in the Workmen camp?	No.	Drinking water facility must be adequate in the labour camp
4.	Is there any emergency communication system established?	No.	Emergency communication system must be established in the labour camp
5.	Is the Workmen camp constructed with Non-Fire Hazard Material?	Yes	
6.	Is the workmen camp constructed with materials, which are not readily flammable?	Yes	
7.	Are Fire Extinguishers & Fire Buckets available and maintained regularly?	No.	Fire extinguishers/ fire buckets must be available and maintain regularly
8.	Are locations of Fire Extinguishers & Fire Buckets listed out & displayed?	No.	Fire extinguisher / fire buckets must be listed out and displayed accordingly
9.	Are First-aid facilities available?	Yes	But updated require medicines not available in the first aid box
10.	Whether disinfection activities carried out on weekly basis?	No.	Disinfection activities must be carried out regularly (i.e.) on weekly basis
LIVING AREA			
1.	Whether Cement Flooring provided?	Yes	
2.	Condition of the Side walls / Roof Sheet	OK	
3.	Is shelter strong enough to with stand wind pressure?	Yes	
4.	Whether the electrical connections provided are safe.	Yes	
5.	Is the ventilation of the rooms adequate?	Yes	
6.	Is the illumination of the rooms adequate?	Yes	

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7.	Are the doors and windows in good condition?	Yes	
8.	Is the general hygienic condition of the rooms adequate?	No.	General hygienic condition of the rooms not adequate. Maintain the hygienic conditions
KITCHEN			
1.	Are kitchens kept clean and tidy?	No.	The kitchen must be kept neat & tidy
2.	Is the water supply adequate for cooking?	Yes	
3.	Is the garbage of kitchen being disposed off every day?	Yes.	
4.	Are the utensils are being cleaned on regular basis?	Yes.	It must be separate from washing the clothes
5.	Are gas cylinders & other flammable materials kept in safe area (away from fire)?	Yes	
6.	Are suitable regulator, Connecting tube & connections with the cylinder O.K	OK.	
7.	Are fire extinguishers kept out side kitchen?	No.	Fire extinguishers must be kept outside kitchen
UTILITIES AREA			
1.	Is the Wash area - Water tanks constructed as per the Design Drawing?	Yes	
2.	Are adequate toilets available?	No.	Adequate toilets with adequate water supply must be available in the labour camp
3.	Are the toilets are being cleaned on regular basis?	No.	Toilets must be cleaned on regular basis
4.	Is there adequate water facility available for toilet and bath?	No.	Adequate water supply must be available for toilet and bath
5.	Are the septic tanks and soak pit working properly?	Not Applicable	
6.	Is area around bathrooms cleaned & kept dry and non slippery?	No.	Surrounding area of Bathrooms must be kept neat & dry with non-slippery
7.	Is proper drainage provided?	Yes	
8.	Is drinking water available?	Yes	



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9.	Is water tank tap not leaking?	Yes	
10.	Is water tank cleaned regularly?	Yes	
	<i>Any Other Information</i>		

Details of the Camp:

1. No of workmen residing in the labour camp - 180
2. Name of the Visiting Doctor - Dr.Pramod
3. Frequency & Timing of Doctors Visit - either first half or second half

EHSO

Industrial Relations Officer

Workmen Camp In charge

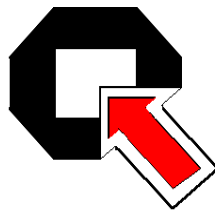
Name :

Name :

Signature :

Signature :

Driving Change • Building Leaders



ENVIRONMENT MANAGEMENT SYSTEM



EXTERNAL AUDIT REPORT OF AFCONS INFRASTRUCTURE LIMITED DELHI MEERUT RRTS PROJECT PACKAGE – 6

BY
DAYA SAGAR MISHRA, CONSULTANT
QUALITY GROWTH SERVICES PVT. LTD.
H-13, SECOND FLOOR, KIRTI NAGAR,
NEW DELHI - 110015, INDIA
PHONE: 0091-11-25431737, 25918332, 25925439, 41425273
FAX: 0091-11-25438598
E-MAIL: QGS@QGSPL.COM
WEBSITE: WWW.QGSPL.COM

OUR GOAL IS TO GROW THROUGH THE SUCCESS OF OUR CLIENTS



Edit with WPS Office

Contractor: AFCONS Infrastructure Limited

Contract: Delhi Meerut RRTS PROJECT PACKAGE – 6

Chief SHE Manager: Mr. Man Singh

Audit Dates: 19-20 March 2021

**Auditor: Mr. Daya Sagar Mishra
Quality Growth Services Pvt. Ltd.,
New Delhi**

A copy of the report is enclosed herewith.

Section- 0: GENERAL

0.1 INTRODUCTION

This external EMS Audit will enable NCRTC and the Contractor to evaluate the general compliance of the Conditions of Contract, the NCRTC Project SHE Manual and the Contractor's SHE Plan.

The external Audit has been conducted in accordance with NCRTC guidelines .
The contractors SHE Manager and Environment Manager has assisted the External Auditor in the Audit.

0.2 BACKGROUND

The adoption of an environment management system is intended to enable an organization to provide safe and healthy work places, prevent work-related injury and ill health, and continually improve its EMS performance.



Signature

1.3AUDIT OBJECTIVE

- To verify compliance of NCRTC Conditions of Contract on Environmental Management System.
- Information and evidence about conformity to all requirements of the applicable management system standard or other normative documents.
- Performance monitoring, measuring, reporting and reviewing against key performance objectives and targets (consistent with the expectations of NCRTC requirements)
- To review working conditions and Operation methods, storage and handling of materials
- The organization management system and performance in regards legal compliance.
- Management responsibility for the organization's policies.
- Internal auditing and management review.
- To evaluate the suitability and effectiveness of the management system in meeting the organization's objective and demonstration of continual improvement.
- To verify compliance with various regulatory requirements and relevant national, local or other laws and regulations.
- To minimize human exposure to risks from environmental, health and safety problems.
- To check control over sub contractors' activities and equipment
- To verify records of inspections being carried out such as planned, routine and specific inspections
- To identify areas of potential improvement of the management system.

Criteria of Audit

- Client's requirements as per NCRTC SHE Manual
- Companies policies and procedures on environmental matters
- Legal requirements for welfare, environment, health & safety such including BOCW Act and rules
- Site She plan and other documentation

Scope of Audit

- Working Site
"Construction of elevated viaduct from Sarai Kale Khan Station to New Ashok Nagar DN Ramp including Jangpura entry ramp and two numbers of elevated stations viz., Sarai Kale Khan & New Ashok Nagar (Including pre-engineered steel roof structure But Excluding Architectural Finishing of stations) of Delhi-Ghaziabad-Meerut RRTS corridor".
- Process/ materials

- Storage of materials
- Air emissions
- Water discharges
- Liquid/ hazardous wastes
- Asbestos
- Waste disposal onsite & offsite
- Oil/ chemical spill prevention
- Permits/ licenses

0.4 METHODOLOGY OF AUDIT

The following methodology was adopted by auditor in auditing, to fulfill the above objectives

- Opening meeting with various Departmental Heads
- Review of documents being implemented at site such as SHE plans, Risk Assessment, Operational Control Procedures, Improvement Management Programs, and Legal Register etc.
- Inspection of site
- Interview of selected personnel at different levels
- Taking photographs of non-conformances, where possible



Signature

The following officials were present During Meetings

S No	Name	Designation
1.	Mr Gautam Shankar Lal	Project Manager
2.	Mr Manoj Biswas	Deputy Project Manager
3.	Mr. Man Singh	HSE Manager
4.	Mr. Uttam Kumar Sinha	Manager CPE
5.	Mr Ashis Basak	Sr. Manager (Viaduct)
6.	Mr. Soumen Das	Engineer
7.	Mr. Devesh Bhardawaj	Execution Engineer
8.	Mr. Shriram Shivhare	Engineer
9.	Mr. Saurabh Awasthi	Manager Electrical
10.	Mr. Suresh Babu M	Manager Execution
11.	Mr. Ratan Das	Foreman
12.	Mr. Santosh Gupta	Supervisor Geeta Enterprises
13.	Mr. Shailender	Supervisor Sanjay Infra.
14.	Mr. Aravind Kumar	Foreman S.K. Mishra
15.	Mr. Abhishek Verma	Environment Manager
16.	Mr Satyavrat Kumar	Engineer
17.	Mr Nirender Singh	Fabricator
18.	Mr. Ashok Kumar	Store Keeper
19.	Mr Dev Kumar Singh	First Aider
20.	Mr Satya Prakash	H. QA / QC
21.	Mr. Gautam Kumar	Sr. Engineer
22.	Mr. Tanweer Azad	Asst. Auditor, QGS
23.	Mr. D.S. Mishra	Lead Auditor, QGS

0.5 AUDIT RESULT

Section No.	Element	Score	Grade	Remark
1	Environmental Policy	5	Excellent	Best practice throughout the project
2	Organization and Top Management	5	Excellent	Best practice throughout the project
3	Planning	4	Very Good	Best practice in many locations
4	Compliance Obligations	4	Very Good	Best practice in many locations
5	Environmental objectives and planning to achieve them	4	Very Good	Best practice in many locations
6	Organizational roles, responsibilities and authorities	4	Very Good	Best practice in many locations
Section	Element	Score	Grade	Remark

No.				
7	Training, Awareness & Competence	2	Adequate	Significant improvements required to achieve best practice
8	Communication	3	Good	Best practice in few locations
9	Documented information	4	Very Good	Best practice in many locations
10	Creating & Updating of Documents	4	Very Good	Best practice in many locations
11	Operational planning and control	3	Good	Best practice in few locations
12	Emergency preparedness and response	3	Good	Best practice in few locations
13	Performance evaluation	3	Good	Best practice in few locations
14	Nonconformity, Corrective Action and Preventive Action	4	Very Good	Best practice in many locations
15	Control of documented information/ Records	4	Very Good	Best practice in many locations
16	Internal audit	4	Very Good	Best practice in many locations
17	Management review	4	Very Good	Best practice in many locations

Score rating, grading along with remark on existing Environment

Management System

Score Number	Grade	Remark
5	Excellent	Best practice throughout the project
4	Very Good	Best practice in many locations
3	Good	Best practice in few locations
2	Adequate	Significant improvements required to achieve best practice
1	Basic	Extensive improvements required to achieve best practice
0	Poor	Shall comply/develop system to achieve best practices

0.6 EXECUTIVE SUMMARY

The First External Environment Audit was conducted at Delhi Meerut RRTS PROJECT PACKAGE – 6 site of NCRTC Project scheduled during **19-20 March 2021** to check the present compliance status of the Contractor with the Client's Requirements and requirements of Building and other Construction Workers Act, Rules & Regulations. Site visit, interview with concerned personnel and review of existing documentation, records etc. was done by the Auditor as part of the Audit to verify the implementation status. During Site visit, various personnel were interviewed to know their understanding of the Environmental Management System and how they are implementing the same. There were **10 P1 and 08 P2 non-conformities observed**. Apart from the P1 and P2 non-conformities, a few photographs have been taken to inform the contractor about the negligence in implementation of BOCWA and Client requirements.

(Note: P1 audit findings are to be closed within 10 days and P2 audit findings are to be closed within 20 days.)

Environment Audit as per ISO 14001: 2015

S. No.	Element	Observation	Recommendations for Improvement
1	Environmental Policy		
1	Has top management defined the organization's environmental policy?	Yes, Site Environmental Policy dated 17-02-2021 checked and found okay.	This policy should be displayed at every site and circulated among site workers for wide publicity, whereas AFCONS has already displayed at site
2	Is the environmental policy appropriate to the nature, scale, and environmental impacts of the organization's activities, products, or services?	Yes	
3	Does the environmental policy include a commitment to continual improvement And prevention of pollution	Yes, checked and found in Environmental policy	
4	Does the environmental policy include a commitment to comply with relevant environmental legislation and regulations and with other requirements to which the organization subscribes??	Yes, checked and found in Environmental policy	
5	Does the environmental policy provide a framework for setting and reviewing Environmental objectives and targets?	Yes, it provides	
6	Is the environmental policy documented, implemented, and maintained and communicated to all employees and public?	Yes, it is documented, maintained and implemented	They needs more publicity among workers for awareness
2	Organization and Top Management		
7	Whether management made organisational roles and assigned responsibilities and authorities among officials engaged?	Yes, checked and found Okay in Environmental plan	
3	PLANNING		
3.1	Environmental Aspects		
8	Has the organization established and maintained (a) procedure(s) to identify the environmental aspects of its activities, products, or services that it can control and over which it can be expected	Yes, document seen and found okay, but there is no serial and revision no. on the document	For control of documents, the serial no. and revision no. should be provided in each document



Signature

S. No.	Element	Observation	Recommendations for Improvement
	to have an influence?	(Environment Aspect-Impact Format)	
9	Has the organization determined which of its aspects have a significant impact on the environment?	Yes	
10	Has the organization ensured that its aspects and related significant impacts are considered in setting its environmental objectives?	Yes	
11	Does the organization periodically update information regarding its aspects and significant impacts?	Yes	
12	Check aspect and impact related format properly filled.	Yes, Checked found Okay	
4	Compliance Obligations		
14	Has the organization established and maintained a procedure to identify and have access to legal and other requirements to which the organization subscribes, that are applicable to the environmental aspects of its activities, products, or services?	Yes, they consider all aspects of the activities	
15	Air and Water Act/ Rules: Has the site applied/ granted/ renewed for consent to establish and/ or operate under air and water act: 1) Crusher Plant, Batching Plant, Hot Mix Plant, DG Set and/ or rest as applicable?	Yes, DPCC order 2596 dated 27-03-2021 through email shown to us	
16	Is authorisation for hazardous waste applied/ granted for used/ waste oil, oily cotton waste, used oil filters, etc. as applicable?	Yes, has made tie up with M/s Bharat Oil and waste management Ltd.	
17	Is the conditions of the consents and authorisation recorded, complied and if not complied then action plan prepared for the same?	Yes	
18	The Environment (Protection) Act/ Rules: Is Environmental Statement (Form V) submitted to SPCB (in case of consent and/or authorisation applied/ granted/ renewed).	Yes, document not provided	
19	Hazardous waste:	Yes, document not	

S. No.	Element	Observation	Recommendations for Improvement
	Record of hazardous waste maintained in Form 3? Annual returns sent to the SPCB? Reporting of accident (in relation to hazardous waste) to SPCB is done using Form 5	provided	
20	Disposal of hazardous waste: 1) Recycler or re-processor is approved by MOEF / CPCB and have valid authorisation for the respective hazardous waste? 2) Hazardous Waste Manifest (in Form 13) is being used. a) Acknowledgement of submission of white copy (Form 13) to SPCB? b) Availability of duly filled yellow copy of Form 13 with sign of transporter?	Yes, tie up with Bharat Oil & Waste Management Ltd.	
21	Store in charge has provided the relevant information in Form 11 to the transporter? Check Form 11: Transport Emergency Card (TREM) Card.	Not Applicable	
22	Marking of Hazardous Waste Container/ bin, which is used for transportation to recycler, is as per Form 12?	Not Available	It should properly marked
23	Batteries Rules: 1) Auction for used batteries to registered recyclers only. 2) Should not dispose of in any manner other than depositing with the dealer/ manufacturer/ importer/ registered recycler/ reconditioner or at the designated collection centers. 3) File half yearly return in Form VIII to state pollution control board (w.e.f. Aug 2010)	Not Applicable	
24	The Water Cess Act/ Rules: 1) Return showing the quantity of water consumed in the previous month (On or before 5th of every calendar month) as per R.4/Form 1 2) Water Cess is paid on the basis of water consumed as per Sect. 3	Not applicable	
25	Check PUC status for all the vehicles.	Yes, checked, registration no. 1M 7623 vehicle PUC	



Signature

S. No.	Element	Observation	Recommendations for Improvement
		seen and found okay	
26	<p>The Explosives Act, 1984 and Rules 1983</p> <p>Obtain License /amend license to possess explosive for use</p> <p>Obtain License for road van for transport of explosives</p> <p>Shortfirer permit</p> <p>Ensure compliance of terms and condition of the the license</p>	Not Applicable	
27	<p>Petroleum Act :</p> <p>NOC obtained from chief controller of explosives</p> <p>License is obtained for storage of the petroleum exceeding 2500 lit for Class B and 4500 litre for class C and the conditions are being complied with</p>	NOC not required since storage is limited	
28	<p>Other Requirements:</p> <p>Is there any contractual requirement identified with respect to environment? If identified, then is it complied and if not complied then action plan made for the same?</p> <p>In case there is no contractual requirement with respect to environment, then it shall be clearly mentioned in the respective format</p>	Yes	
29	Check the relevant evidence of the compliance of the legal and other requirement readily available?	Checked, found available	
5	Environmental objectives and Planning to achieve them		
30	<p>Does Environmental objectives taken into consideration the following:-</p> <p>a) Legal requirement</p> <p>b) Environmental Aspect</p>	Yes	

S. No.	Element	Observation	Recommendations for Improvement
31	Are the objectives measurable? How the site is measuring the achievement of objective?	By implementing the respective standards, codes and practices	
32	Is the time scale fixed for achievement of objectives? What is the monitoring mechanism of achievement status of objectives?	Adhering objective timely and monitoring environmental aspect as per desired mechanism	
33	Is the section in charge aware of respective departmental environmental. objectives, targets and programme(s)?	Yes	
34	What management programmes has been established for achieving the objectives?	Management is timely reviewing objectives	
35	Check how the programmes has been monitored at regular interval? Seek evidence.	It checked internally and also got tested from third party like water test and ambient air quality monitoring wide document no. ELPL/IV/QF/20 dated 05-02-2021	
6	Organizational roles, responsibilities and authorities		
36	Check whether adequate resources are available to establish, implement, maintain & improve the environmental management system? (skilled man power, infrastructure, technology & finance)	Yes	
37	Concerned persons are aware of their key responsibilities as mentioned in PEMP?	Yes, they consider PEMP in waste management plan and Environmental Operation Control Procedure	
7	Training, Awareness & Competence		
38	Environmental Awareness Program conducted at site?	Yes, internal onsite training	

S. No.	Element	Observation	Recommendations for Improvement
39	Are environmental aspect, impact and its controlling measures discussed in Tool Box Talk. Project HSE monthly activity plan covers activity on environment?	Yes, seen and found okay	
40	Site Environment Training Plan for the year prepared and complied?	Not available	
41	Check the records of training maintained at site.	Checked, and found photos of training dated 27 th February 2021	
42	Awareness, training: Section incharge and EMS team aware of: 1) Departmental environmental aspect, impact ranking, significant aspect and controlling measures? 2) Cut off limit for environmental significant aspect for the site/ department & Conditions of significant aspects? 3) Any departmental objectives, targets and programme prepared and its updated status? 4) Any internal training conducted on environment aspect and impact?	Yes, photos of training dated 27 th February 2021	
43	How does the organization ensure that personnel performing tasks which can cause significant environmental impacts are competent on the basis of appropriate education, training, and/or experience?	HR department assess the competency of personnels	
8	Communication		
44	Records of external communication (e.g. complaints on environmental issues)?	No such issues	
45	Whether required environmental awareness posters, environmental status displayed as a tool for communication.	Not available at any site	It needs display of posters at every site for environmental awareness
9	Documented information		
46	Is the record maintained as per requirement of procedure?	yes	

S. No.	Element	Observation	Recommendations for Improvement
47	Check following i) Minutes of meeting	There is a combined meeting of SHE department wide Minutes of meeting dated 01-03-2021, seen	
48	ii) Project specific HSE ROR	Checked	
49	iii) PEMP	Checked	
50	iv) Consents from SPCB	Checked	
51	Has the organization established and maintained procedures for controlling all documents required by this International Standard to ensure:	Yes	
52	They are periodically reviewed, revised as necessary, and approved for adequacy by authorized personnel?	Yes	
10	Creating & Updating of Documents		
53	Check whether the relevant versions of applicable documents are available at the point of use	Yes	
54	Obsolete documents are promptly removed from all points of issue and points of use, or otherwise assured against unintended use?	Yes	
55	Are the organization's documents legible, dated (with dates of revision), and readily identifiable, maintained in an orderly manner and retained for a specified period?	Yes, whereas some of the documents are not having Serial no. and revision no. such as Environment Aspect Impact format	It needs to be improved and put serial no and revision no. on each document so that we can have control on document
56	Has the organization established and maintained procedures and responsibilities concerning the creation and modification of the various types of documents?	Yes	
11	Operational planning and control		
57	Has the organization planned activities, including maintenance, in order to ensure that they are carried out under specified conditions by: Establishing and maintaining	Yes	

S. No.	Element	Observation	Recommendations for Improvement
	documented procedures to cover situations where their absence could lead to deviations from the environmental policy and the objectives and targets? Stipulating operation criteria in the procedures?		
58	Air Pollution (Prevention & Control) Any visible dust generating point within premises under the control of NCRTC operation? [from Crusher, traffic congestion, batching plant, DG stack, Hot mix plant stack, etc.]	Yes, Batching plant available in Casting yard	
59	Are the DG Set stack height as per the statutory requirement?	Yes	
60	Waste Water treatment: Check water conservation measures adopted by site? Is waste water treatment arrangement provided (for tunnel, batching plant, vehicle washing, mess, sewage) and working properly?	Yes water harvesting system is under construction	
61	Noise Prevention and Control 1) Is the noise from DG set at one meter distance is below 75 dB(A)? 2) "Use of ear protection" sign board installed in high noise area?	Yes, No sign board installed	Need to install ear protection sign boards
62	Whether the housekeeping is proper or not?	Housekeeping is not up to mark	It needs improvement
63	Hazardous waste, Oil Spillage Prevention and Control: 1) Proper keeping of hazardous waste like oily cotton, oil filters in appropriate bin? 2) Is there any oil spillage/ leakage on land and/ or water? 3) Is hazardous waste storage area properly maintained? 4) Use of Oil Containment Tray and oil absorption pad	There is oil spillage on land near Store in casting yard as mentioned in photo. Oil containment tray is not being used	To avoid oil spillage they should remain use oil tray



Signature

S. No.	Element	Observation	Recommendations for Improvement
12	Emergency preparedness and response		
64	Whether project emergency plan available?	Yes, emergency plan wide Rev.: 0 dated 18-12-2021 available	
65	Does the project specific plan covers the following:- i) Identification of emergency scenario like oil spillage, ammonia leakage ii) Personnel responsible to take charge during the emergency & details of actions to be taken iii) Evacuation procedure iv) Communication facilities v) Project plan layout	Yes	
66	Check whether the emergency equipment / facilities available at site i) Fire fighting equipment ii) First Aid facilities iii) Alarm systems iv) Emergency power supply v) Call on facilities (Ambulance, fire dept., etc.) vi) Identify the action taken after the review of emergency mock drill vii) Whether certified medical practioner employed at FAC?	Alarm systems, and call on facilities not available. At site doctor is not available	They should put alarm system and other requirements as metioned in condition of contract
67	Fire fighting facility provided next to hazardous waste storage area?	Hazardous waste storage area not identified in casting yard since casting yard is under construction	
68	Has the organization reviewed and revised, where necessary, its emergency preparedness and response procedure, in particular, after the occurrence of accidents or emergency situations?	Since the plant is in starting stage, no accidents occurred till date	
13	Performance evaluation		
13.1	Monitoring, Measurement, analysis and evaluation		



Signature

S. No.	Element	Observation	Recommendations for Improvement
69	Whether monthly environmental monitoring report available?	Yes	
70	Is monitoring agency approved by MOEF?	Yes	
71	Is drinking water analysis done as per IS 10500?	Yes, analysis done by Ecosteps Laboratory Ltd. Wide Doc No.: ELPL/IV/QF/20 dated 02-03-2021	
72	Is waste water (tunnel, batching plant, vehicle washing, mess, labour colony) monitoring done as per requirement of NCRTC document and consent conditions?	Yes	
73	Is ambient air quality monitoring done as per requirement of NCRTC document at identified location?	Yes, analysis done by Ecosteps Laboratory Ltd. Wide Doc No.: ELPL/IV/QF/20 dated 13-02-2021	
74	Is the air quality near batching plant, crusher, hot mix and DG stack monitored as per requirement of NCRTC document and consent conditions?	Yes	
75	Is the monitored data within the limit prescribed by CPCB and SPCB? (Refer consents also)	Yes	
76	If the monitored value exceeds, environmental objective / target and programme has been prepared, implemented and reviewed?	No, monitored value does not exceeds	
13.2	Evaluation of compliance		
77	Monthly HSE Legal Report: Form NCRTC 01 10 14, Annexure A and B and appendix duly signed, copy sent to HO on or before 25th of every month?	Yes	
78	Check submission status of Environmental Statement to SPCB	Yes, checked	
79	Check compliance pertaining to client communication or concern	Checked	
14	Nonconformity, Corrective Action and Preventive Action		



Signature

S. No.	Element	Observation	Recommendations for Improvement
80	Has the organization established and maintained procedures for defining responsibility and authority for handling and investigating non conformance, taking action to mitigate any impacts caused, and for initiating and completing corrective and preventive action?	Yes	
81	Check NCs identified	Yes NCs identified respective photos available	
82	Check root cause analysis done or not?	Analysis done	
83	What corrective actions and preventive actions are taken for eliminating the root causes? Check record.	They took corrective action as per requirement	
15	Control of documented information/ Records		
84	Has the organization established and maintained procedures for the identification, maintenance, and disposition of environmental records, including: Training records? The results of audits (EMS audits)? The results of reviews (Management Reviews)?	Training records and internal audit report available	
85	Whether Master list of documents available?	Yes, found and seen	
86	Has it been distributed to respective section in charge in controlled copy and its distribution record is maintained by document controller?	Yes	
16	Internal audit		
87	Whether project internal audit planned and conducted?	Monthly internal audit	
88	Check compliance of previous internal audit records and its implementation.	Checked, and found okay	
89	Do the audit procedure cover the audit scope, frequency, and methodologies, as well as the responsibilities and requirements for conducting audits and	Yes	

S. No.	Element	Observation	Recommendations for Improvement
	reporting results?		
17	Management review		
90	Does the organization's top management, at intervals it determines, review the environmental management system to ensure its continuing suitability and effectiveness?	Yes	
91	Are environmental objective, targets and programme, environmental deficiencies, environmental legal updates, open NC, communication from external party, environmental training/ awareness, environmental monitoring report discussed in meeting and recorded?	Yes, wide Minutes of meeting dated 01-03-2021	

Good Practices

S. No.	Observation	Photo number
1.	Transplantation	3
2.	Different Dust Suppression Systems	4
3.	Fire Point to Extinguish Fire	5
4.	Dustbins for Different types of Waste	6
5.	Plantation at DND flyover site	7
6.	Drinking Water Facility	8
7.	Onsite Environment Training	9



Implementation Issues

S. No.	Observation	Location	NC Type P1/P2	Photo number
1	Oil Spillage on Ground	Casting Yard	P1	11
2	Water logging near the Base of Drinking Water Tank	Sarai Kale Khan	P2	12
3	No water in Drum	Casting Yard	P2	13
4	Uncovered Drains	Casting yard	P1	14
5	Water logging at the Base of an Electrical Box	Casting Yard	P2	15
6	Rusted Iron Fillings Dispersed on ground at DND flyover site	DND Flyover Site	P1	16
7	Water Wastage	Casting Yard	P2	17
8	Road filled with Water	Casting Yard	P2	18
9	Unidentified Drums outside Cement Store	Casting Yard	P1	19
10	Electrical wires tied with green plant	New Ashok Nagar	P2	20
11	Empty Cement Bags Kept Outside Cement Store	Casting Yard	P1	21
12	Open Waste Dustbin	New Ashok Nagar	P1	22
13	Oil spillage over compressor	New Ashok Nagar	P2	23
14	Identification of Drums not done	New Ashok Nagar	P1	24
15	C&D Waste not Removed from Site	New Ashok Nagar	P1	25
16	Toilet Water tank Cover Missing	Casting Yard	P1	26
17	Dirty Mobile Toilet	Casting Yard	P1	27
18	Tap Missing From The Toilet	Casting Yard	P2	28

