

Biannual Environmental Monitoring Report

Loan Number: 2879-GEO
2880-GEO (SF)

Reporting period: **January – June, 2014**

GEORGIA: GEORGIAN SUSTAINABLE URBAN TRANSPORT INVESTMENT PROGRAM, Tranche 2

(Financed by the Asian Development Bank)

Prepared by: Nino Nadashvili, Environmental Safeguards Specialist
Environmental and Social Safeguards Unit, Municipal Development Fund (MDF)
Tbilisi, Georgia

Endorsed by: Rusudan Chochua, Advisor to Executive director and team leader of Environmental and Social Safeguards Unit, Municipal Development Fund (MDF)
Tbilisi, Georgia

August 4, 2014

Biannual Environmental Monitoring Report

ABBREVIATIONS

| | |
|--------|--|
| ADB | Asian Development Bank |
| EA | Executing Agency |
| EARF | Environmental Assessment and Review Framework |
| EIA | Environmental Impact Assessment |
| EIP | Environmental Impact Permit |
| EMP | Environmental Management Plan |
| EPSM | Engineering Procurement and Construction Management |
| GoG | Government of Georgia |
| SUTIP | Georgian Sustainable Urban Transport Investment Program |
| IA | Implementing Agency |
| IEE | Initial Environmental Examination |
| MDF | Municipal Development Fund |
| MFF | Multi-tranche Financing Facility |
| MoENRP | Ministry of Environmental and Natural Resources Protection |
| MoRDI | Ministry of Regional Development & Infrastructure |

Biannual Environmental Monitoring Report

Table of Contents

| | | |
|------|--|----|
| 1. | PART I. INTRODUCTION..... | 4 |
| 1.1. | Preliminary information | 4 |
| 1.2. | Construction activities and project progress during the reporting period | 5 |
| 1.3. | Changes in project organization and environmental management team | 5 |
| 1.4. | Relationships with contractors, owner, lender etc..... | 5 |
| 2. | PART II. ENVIRONMENTAL MONITORING | 6 |
| 3. | PART III: ENVIRONMENTAL MANAGEMENT | 8 |
| | A N N E X E S | 13 |

Biannual Environmental Monitoring Report

1. PART I. INTRODUCTION

1.1. Preliminary information

Project background

Upgrading and improvement of local transport and transport-related infrastructure plays a significant role in the development of Georgia infrastructure. To this effect a number of important activities have been implemented and financed from the budget of Georgia and from other sources. Development of transport and related infrastructure plays an important role in improvement of Georgia's urban infrastructure. Recently several significant programs, financed through state budget, loans and grants, have been implemented with this regard.

On 24 July, 2012 MFF - Sustainable Urban Transport Investment Program Tranche 2 Loan and Project agreements were signed between Georgia and Asian Development Bank. MFF-Sustainable Urban Transport Investment Program – Tranche 2 (SUTIP T2) includes: (i) Urban Transport Infrastructure Improvement; (ii) Institutional Capacity Development and (iii) Project Management.

The program will provide efficient, reliable and affordable urban transport infrastructure and services, thereby increasing economic growth potential and competitiveness of urban communities, improving livelihoods of over 1.5 million people (approx. 35% of Georgian population). The project will also: (I) improve urban, environment and communities' access to economic opportunities and to public and social services; (II) promote efficient and sustainable urban transportation; and (III) generate income and employment opportunities.

The environment classification for tranche is Environmental Category B, as the subproject under SUTIP 2 was classified as category B which will not have significant irreversible or permanent negative environmental impacts during or after construction and required preparation of Initial Environmental Examination (IEE). The environmental categorization of subproject was conducted by using ADB's Safeguard Policy Statement (2009).

Project Area

Sustainable Urban Transport Investment program (SUTIP) tranche 2 includes the following sub project:

- **Modernization of Tbilisi-Rustavi Urban Road Link (sections 1 and 3).**

At present the Tbilisi – Rustavi road section is one of the busiest and over- trafficked arteries of the city as about 17,000 vehicles per day exceeding traffic capacity. To solve the problems above, the modernization of the Tbilisi-Rustavi road section was declared as the priority project by the Government of Georgia with the goal to upgrade it to a Category - I road with 4 to 6 lanes and 120 km/hr of design speed. Executing, implementing agency of this project is MDF.

The length of the design road is 17.1k m.

Section 1 : Tbilisi-Ponichala section envisaged in the design starts in Tbilisi in Gulia Street at PK0+00, goes along the right embankment of the river Mtkvari up to PK 20+00 then joins Vakhtang Gorgasali street and ends at PK 40+00. Length of project section is 4.0 km.

Section 3 : Ponichala-Rustavi section envisaged in the design starts 56 m before the km 14 of Tbilisi-Red Bridge road i.e. on km 13+944, PK 105+00 accordingly and ends 400 m before the entrance to Rustavi at km 20+550 PK 171+00 accordingly. Design road axis passes on the right shoulder of the existing road. Length of this section is 6.6 km. Design section Ponichala-Rustavi is entirely located in

Biannual Environmental Monitoring Report

Gardabani district.

1.2. Construction activities and project progress during the reporting period

Since the Commencement of construction works - April 22, 2014, following main construction work activities have been carried out by the Contractor:

- Top soil stripping at PK 105.00-140.00;
- Tree cutting at road section 1 and 3. Cutting of trees at section 3 is completed. Cutting of trees at section 1 is under the process;
- Filling of existing irrigation channel and excavation of new one at section 3P K105.00-128.50;
- Construction of camp (including batching plant). Construction of batching plant is completed;
- Excavation of slope of the hill at PK 36.00- 40.0;
- Installation and compaction of embankment at PK 126.00-129.00;
- Installation and compaction of formation layer at PK 131.00-145.00;
- Leveling of existing dump site at PK 19.00-22.50 (left side);
- Demolishing of existing lightning poles at PK 135.00-1450.00;
- Relocation of existing utilities and structures at PK 125.00-128.80

Proposed schedule of project progress is given in annex 1.

1.3. Changes in project organization and environmental management team

The MDF is the project executing, implementing and disbursing agency. MDF is responsible for general management, planning and supervision of the project. MDF ensures that potential adverse environmental impacts arising from the Project are minimized by implementing all the mitigation measures presented in the environmental impact assessment ("EIA") or Initial Environmental Examination (IEE), as applicable and environmental management plan (EMP).

Environmental and Social Safeguards issues are carried out by the MDF through a special unit called Environmental and Social Safeguards team which was established after deep institutional reform which has been undertaken at the MDF. The MDF is now composed of 12 units. Environmental and social safeguards team consists of three environmental safeguards and two social safeguards specialists. Environmental and Social Safeguards team has a Team Leader who is an advisor to Executive Director of MDF on environmental and social issues as well. Environmental unit reviews the EIAs and EMPs related to the MDF projects and performs supervision of the performance based on approved EMPs, EIAs, and environmental standards.

1.4. Relationships with contractors, owner, lender, etc

The MDF has an overall responsibility for the Project implementation. In order to conduct construction supervision and provide project management and technical assistance to MDF, contract with Dohwa Engineering Co.LTd was signed on January 20, 2012, on Procurement, Construction Management and Supervision of Tbilisi-Rustavi Section of Tbilisi-Red bridge (Azerbaijan Border) Road -SUTIP/C/QCBS-3.

The part of tasks, to be implemented by Supervision Company Dowha, includes:

- (i) supervise and monitor construction of the road;
- (ii) monitor the project performance, benefits and ensure compliance with all social and environmental requirements;

Biannual Environmental Monitoring Report

- (iii) ensure that the construction contractor prepares the detailed site specific Environmental Management Plans;
- (iv) ensure that environmental requirements, road safety and monitoring are carried out in accordance with the recommendations of studies, plans, and analysis of the project, and in compliance with ADB safeguards policy and applicable laws of Georgia;
- (v) provide advices and a combination of on-the job and classroom training to improve MDF, Road Department and Tbilisi City's management capacity;
- (vi) ensure that the contractor prepares the site specific Environmental Management Plans (SEMPs) according to the framework EMP provided in the project EIA.
- (vi)i ensure that the EMP is being implemented in the field at the construction site.

Contract with construction Contractor –Sinohydro Corporation Limited (China) was signed on March 10, 2014. According to contract's safeguards issues, Construction Contractor should comply with all applicable national environmental laws and regulations, measures and requirements set forth in the IEE and EMP. For managing environmental impacts, carrying out all of the monitoring and mitigation measures set for IEE and EMP documents Contractor should establish an effective operational system and submit reports to DOHWA on the carrying out of such measures.

Environmental issues arising from the construction activities should be immediately brought to the attention of the construction Supervision Company Dowha and by them to MDF's environmental safeguards team in order to coordinate efforts and ensure immediate mitigation of impacts, protect the environment and safeguard the health and welfare of the local communities.

2. PART II. ENVIRONMENTAL MONITORING

With reference to MFF 2655-GEO: Sustainable Urban Transport Investment Program – Tranche 2 (SUTIP T2) Environmental Assessment and Review Framework (EARF) is stated that an EMP will be a part of the overall project monitoring and supervision and will be implemented by the Contractor with oversight from the Supervision Consultant (the Engineer) and MDF.

EMP is an integral part of construction contracts. MDF requires the Construction and its Supervision Company to implement construction activities in accordance with the environmental management plan (EMP), which is the part of the initial environmental examination document (IEE) and included in the environmental assessment and review framework.

Based on the EIA's EMP following environmental aspects where monitored and managed during implemented construction activities by supervising company.

- **Top soil storage**

Top Soil is mainly stored in appropriate manner along the ROW. Some mixture of top soil and stumps and branches has been recorded at Kp 105.00 – 125.00; also mixing and disposing of mixture of topsoil and subsoil in the halls on private land plot has been recorded on 2.05.2014. Contractor has been requested to improve performance. Stockpiles of top soil will be removed to temporary storage area immediately after receiving of official permission.¹

¹ Letter for obtaining an official permission is sent to Tbilisi City hall; the statement for obtaining the permit is issued by Tbilisi City hall

Biannual Environmental Monitoring Report

- **Subsoil Disposal**

Subsoil, excavated from the channel is stored along the ROW or disposed on private land plot following existing agreement with owner. Subsoil, excavating from PK 40.00 is using for installation of embankment at PK 20.00.

On 05.05.2014 and 16.06.2014 engineer has recorded illegal disposal of spoil near PK130.00 and PK20.00. Contractor was instructed to immediately stop off illegal disposal of spoil. Illegal disposal of spoil was stopped, until receiving of official permission.

- **Borrow Pits**

Contractor has provided contract with licensed company for one borrow pit².

During reporting period fact of illegal excavation of sand gravel mix from private land plot was identified. According to supervisor's information, land owner had not any license for extraction of natural resources.

Contractor was instructed to immediately stop of illegal excavation of material and mentioned activity was stopped.

- **Noise**

Noise level during implementation of construction activities was in compliance with norms (except small expulsions). During reporting period contractor has checked noise level at areas, close to settlement (See attached Pictures).

-

- **Air pollution**

No significant pollution was observed. During reporting period contractor has measured concentration of emissions of hazardous substances in to ambient air at areas, close to settlement.

- **Emission and Dust**

During excavation of slope at PK 36.00-40.00 and transportation of excavated material, was generating big quantity of dust. Contractor was instructed for permanent watering of all construction sites without asphalt pavement during dry weather conditions.

- **Impact on Flora and Fauna**

No damage to Red data list species was recorded.

- **Grass Seeding**

N/A at the moment

- **Cutting/Planting the Trees**

At section 3, trees have been felled down by Construction Company without official permission from local municipality and approval of engineer. Cutting of trees at section 1 is going on in accordance with

² In July contracts were signed agreement with other licensed providers of sand-gravel materials.

Biannual Environmental Monitoring Report

relevant rules. Red data trees are marked and will not be cut until contractor obtains relevant permission from MoE.³ Restoration plan will be prepared according to the requirements stated in EMP.

- **Asphalt Plant**

Asphalt plant will be installed on the site. Contractor is planning to sign agreement with environmental consulting company for preparation the documents for environmental permit.

- **Waste Management**

All types of waste and construction materials are irregular disposed on the territory of camp without any containers and secondary containment containers.⁴

- **Archaeology**

No archaeological findings have been observed during reporting period.

- **Incidents, Accidents & Near Misses**

No incidents have been recorded during the reporting period

- **Trainings**

Environmental training covering waste management, pollution prevention and top soil protection issues for contractor's personnel has been conducted by for contractor's personnel has been conducted by environmental specialist Paata Chankotadze on 06.05.2014.

- **Soil and Water Contamination (pollution prevention)**

Any spillages of oil or other hazardous materials have not been recorded. However, Contractor has not installed secondary containment containers under oil barrels, diesel generators and containers with concrete additives. Contractor was strictly requested as by MDF Environmental Specialist as well as by Supervision Company to carry out corrective actions as soon as possible and ensure Installation of secondary containment containers under all devices, containing hazardous materials and liquids until July.

3. PART III: ENVIRONMENTAL MANAGEMENT

Environmental Management Plan (EMP) has been designed to avoid, reduce, or at least minimize the adverse environmental impacts that could result from the activities during the implementation and operation of the project.

MDF pays sizeable attention to Dohwa to strengthen its activities as Supervisor Company. Weekly meetings were held in regular base with both-management and environmental staff. Number of notifications was sent to Dohwa requiring improvement of its supervision activities for enhancement of project environmental management.

³ Letter for assistance was sent to Ministry of Environment by Contractor on 14. 07. 2014. Further activities will be carried out only after receiving of notification from MoE how to act in regards to red list trees;

⁴ Waste management plan was approved by the Supervision company with conditions on 12.06.2014, an on 30.07.2014 - approved finally; Disposal of construction materials has been improved later.

Biannual Environmental Monitoring Report

Contractor, through the environmental specialist on the team, prepares monthly status reports on the EMP implementation to supervising company. Technical supervisor prepares monthly reports on the status of EMP implementation and environmental performance of the contractor. These reports should be based on the contractor's reports and carry analysis of their contents. Technical supervisor must assess how accurate is the factual information provided in the contractor's reports, fill any gaps identified in them, and evaluate adequacy of mitigation measures applied by contractor. Technical supervisor must highlight any cases of incompliance with EMPs, inform on any acute issues brought up by contractor or revealed by supervisor himself, and propose corrective actions.

However, Progress report of implemented activities, presented by Supervision Company Dohwa with delay (on July 15), did not correspond above mentioned requirements and format was not acceptable for MDF so far. Report was poorly structured; information provided was general and not systematized and in many cases contradictory. Report was not including details on supervision activities and not summarizing the results of weekly and/or monthly monitoring. MDF's environmental and social safeguards specialist has notified Environmental Specialists of Supervision and Constriction Companies that, presented report required significant revision and improvement in order to ensure full compliant with ADB's SPS and EMP requirements and to become acceptable to MDF.

SEMPs for camp site, as well as for sections: 1 and 3 have been prepared by contractor and endorsed by engineer with conditions (on 28.05.2014) that updates will be done latest by 18 July, taking into consideration given notes and remarks.⁵

SEMP for processing of asphalt plant is not ready yet, as asphalt will be needed for the construction works in September. Installation of Asphalt mixing plant according to the Georgian law on Environmental Impact Permit (EIP) is subject to ecological expertise. Contractor will start preparation of the required documentations and procedures for obtaining the permission in July. Time needed for completion of procedures may vary between 1-4 months.

Major tree cutting activities (excluding red list species at section 1) envisaged by EIA have been performed by the contractor. With great efforts of MDF environmental team, document of Inventory of trees was prepared by the contractor before starting tree cutting activities. However, tree cutting at section 3 was implemented by the Construction Company without approval of Supervision Company Dohwa and official permit from relevant authorities. In spite of numerous formal and informal notifications, from MDF and "Dohwa" sides, indicating to follow the safeguards regulations, uncoordinated actions have been undertaken by construction company Sinohydro time to time.

Restoration plans for sections 1 and 3 will be prepared by the Contractor in accordance to EMP and will be agreed all relevant authorities.

For secondary roads at section 3 IEE document needs to be prepared by DOHWA. Terms of Reference (ToR) for hiring consultant for preparation of IEE for secondary roads of section 3 has been worked out by MDF and provided to DOHWA. Revision of the contract's amendment proposal, reflecting the additional work for preparation of IEE for the secondary road, was carried out. The document should be submitted to MDF in the first week of September. After receiving the draft of the IEE document MDF will send it to ADB for no-objection.⁶

⁵ SEMP for section 1 and 3 were approved on 15.07.2014 and SEMP for Camp site on 30.07.2014

⁶ Documents of IEE and LARP for secondary roads of section 3 should be presented to MDF by Dohwa in the of the first week of September. These documents will be considered by environmental and social safeguards team and international consultant on resettlement issues afterwards will be send to ADB.

Biannual Environmental Monitoring Report

Management Plans and Method Statement

Status of Management Plans

| Management Plan | Status |
|---|--|
| SEMP for Construction camp | Approved with comments, on 29.05.2014 ⁷ |
| SEMP for construction corridor | Approved with comments on 29.05.2014 |
| Waste Management Plan | Submitted, not approved ⁸ |
| Emergency Response Management Plan | Was submitted on 09.06.2014, is not approved yet |
| Pollution Prevention Management Plan | Approved |
| Community Liaison Management Plan | Approved |
| Cultural Heritage Management Plan | Submitted, not approved |
| Reinstatement Management Plan | To be submitted by 30.07.2014 |
| Layout plan (draft) of the quarries and borrow pits and a method statement on the proposed work technology (crushing technology, measures for the minimization of waste) and material transport | To be submitted by 30.07.2014 |

Site inspections and audits

Engineer`s field supervising team together with their environmental specialist is conducting daily site visits (23 days per month). All team members have been trained in general environmental issues and pay attention to environmental aspects on all construction sites.

Problematic issue notices

During site inspections following non conformance reports have been sent to contractor:

| Date | Subject | Area | Mitigation |
|------------|---|-----------|---|
| 23.05.2014 | Mixing of top soil with big branches and stumps | PK105-125 | The topsoil has been separated from big branches which have been transported to the spoil damp site |

⁷ SEMP for camp site was approved on 30.07.2014, and SEMP for sections 1 and 3 on 30.07.2014

⁸ Waste management plan was approved by Dohwa on 30.07.2014

Biannual Environmental Monitoring Report

| | | | |
|--------------------------|--|-------------------------------------|---|
| 23.05.2014 | Fact of mixing of top soil and subsoil | Private land plot, located at PK110 | Activity was immediately stopped and the works was continued according to EMP requirements |
| 24.05.2014 | Exceeding of max. permissible noise level | Construction office | Engineers office was replaced to the construction camp where the noise level is in compliance |
| 16.06.2014 | Fact of illegal excavation of sand gravel mix from private land plot | Private land plot, located at PK110 | Contractor was instructed to immediately stop of illegal excavation of material and mentioned activity was stopped. Contracts were signed with licensed providers of sand-gravel materials. |
| 16.06.2014 27.06.2014 | Illegal disposal of spoil | PK20.00 | Activity was stopped. Procedure of obtaining permission is in process. |
| 27.06.2014 | Transportation of spoil with open (not covered) tracks | PK40.00 | Not yet improved |

Biannual Environmental Monitoring Report

| | | | |
|------------|--------------------------------------|---------------------------------|--|
| 27.06.2014 | Dust producing on construction sites | PK20.00, PK40.00. PK10.00 | Contractor was instructed for permanent watering of all construction sites |
|------------|--------------------------------------|---------------------------------|--|

Corrective action plans

Contractor has been instructed to improve following environmental issues:

- Top soil protection- store top soil stockpiles in accordance with EMP; avoid mixture of top soil and sub soil;
- Disposal of spoil- prohibit illegal disposal of spoil;
- Improve dust control measures;
- Improve waste management issues on construction camp;
- Prepare and submit/re-submit to engineer management plans, mentioned in EIA and technical specifications of Contract;
- Providing restoration plans.

Grievance Redress Mechanism

MDF facilitates the establishment of a Grievance Redress Committee (GRC) and Grievance Focal Points. Process of establishment of Grievance Redress Mechanize is ongoing. Decree of Executive Director of MDF on creation of Grievance Redress Committee (GRC) is issued. The GRC will comprise from representatives of local authorities, affected parties, and other reputed NGOs or persons, as mutually agreed with the local authorities and affected persons. The role of the GRC is to address the Project related grievances of the affected parties that are unable to be resolved satisfactorily through the initial stages of the Grievance Redress Mechanism (GRM). Candidates from NGOs and local authorities for Grievance Redress Committee (GRC) will be presented to MDF in nearest future.

ANNEXES

Annex 1

Contractor`s monthly HSE report



Monthly Report of Safety Management

May, 2014

This monthly report describe the condition of safety, environment, and health during the period of April 22, 2014 and May 22, 2014.

Safety

1. Our project department conducted 3 levels safety education (including plant, workshop, and position education) for the staff of this project including local employees.
2. When the Contractor conducted campsite inspection, we found oxygen bottles was laid close to acetylene bottle, which has been rectified promptly. Considering the site constructional workers lack safety Consciousness, the Contractor has organized safety training to prevent any safety accident. As the high slope is going to be excavated, there is possibility that falling stone would endanger the below vehicles and the traffic system. In order to strengthen discipline implement and skip violation habits.
3. Safety education has been given to the lumbering workers at Ramp B of PK105+00, PK171+00, PK128+10. Safety warning board has been installed to ensure the safety of traffic flow.
4. Before the debugging and installation of gravel pile, safety education is given to site operator. The method of fastening safety belt is corrected.
5. Before the installation of HLS60 mixing plant, safety education is given to the site workers. For those who work high above ground, the quality of safety belt should be checked to eliminate all risky factors.
6. The constructional workers are reminded to wear all kinds of safety protection articles, such as safety hamlet, safety belt, protective mask, glove, etc. to prevent them from any hurt.

Health

The staff of this project including local employees are kept in a good health condition. The food materials is carefully checked to ensure the safety of food. Our project conducts regular inspection to kitchen to keep it tidy and clean. Besides great concern is paid to the allocation of



nutrition. In order to keep the balance of diet, every employees is given fruit during the dinner time.

Environment

In this month, no environmental pollution has been observed due to our construction. The air quality of construction site and campsite should meet the required standard and Georgian legislation. In May, our project department conducted the monitoring for dust and sound at PK27+00, PK112+00, PK135+00. Our project pays great concern to the environmental protection and civilized construction. Beyond that, we have signed agreement with Rustavi waste clearance unit, so as to entrust them to clear the waste of campsite. As soon as the campsite has been constructed, personnel is to be assigned to take charge of sanitary works.

Accident

No casualty, injury, traffic accident, fire accident and food poisoning happened in this month.

Encl. :

1. Dust and Noise Test Form of Modernization of Tbilisi-Rustavi Road Project (May, 2014);
2. Photos regarding activities of safety, environment, health.

Dust and Noise Test Form of Modernization of Tbilisi-Rustavi Road Project (May, 2014)

| Location | Dust (mg/m3) | | | | | | Noise (DB) | | | | | |
|----------|---------------------|----------------------|----------------------|---------|-----------|----------|---------------------|----------------------|----------------------|---------|-----------|----------|
| | 5 th day | 15 th day | 25 th day | average | criterion | standard | 5 th day | 15 th day | 25 th day | average | criterion | standard |
| FK26+00 | 0.052 | 0.054 | 0.052 | 0.053 | 0.054 | 0.05 | 83 | 81 | 84 | 84 | 85 | 75 |
| Campsite | 0.053 | 0.056 | 0.055 | 0.054 | 0.055 | 0.05 | 69 | 69 | 70 | 69 | 70 | 75 |
| FK135+00 | 0.044 | 0.040 | 0.043 | 0.042 | 0.045 | 0.05 | 74 | 73 | 76 | 75 | 76 | 75 |

Photos regarding activities of safety

Dust test conducted at PK27+00



Noise test conducted at PK27+00



3

High slope prevention conducted at PK38+60



The barriers taken at PK105 for road half construction



The protection measures taken for natural gas pipeline at campsite



Safety education for lumbering workers

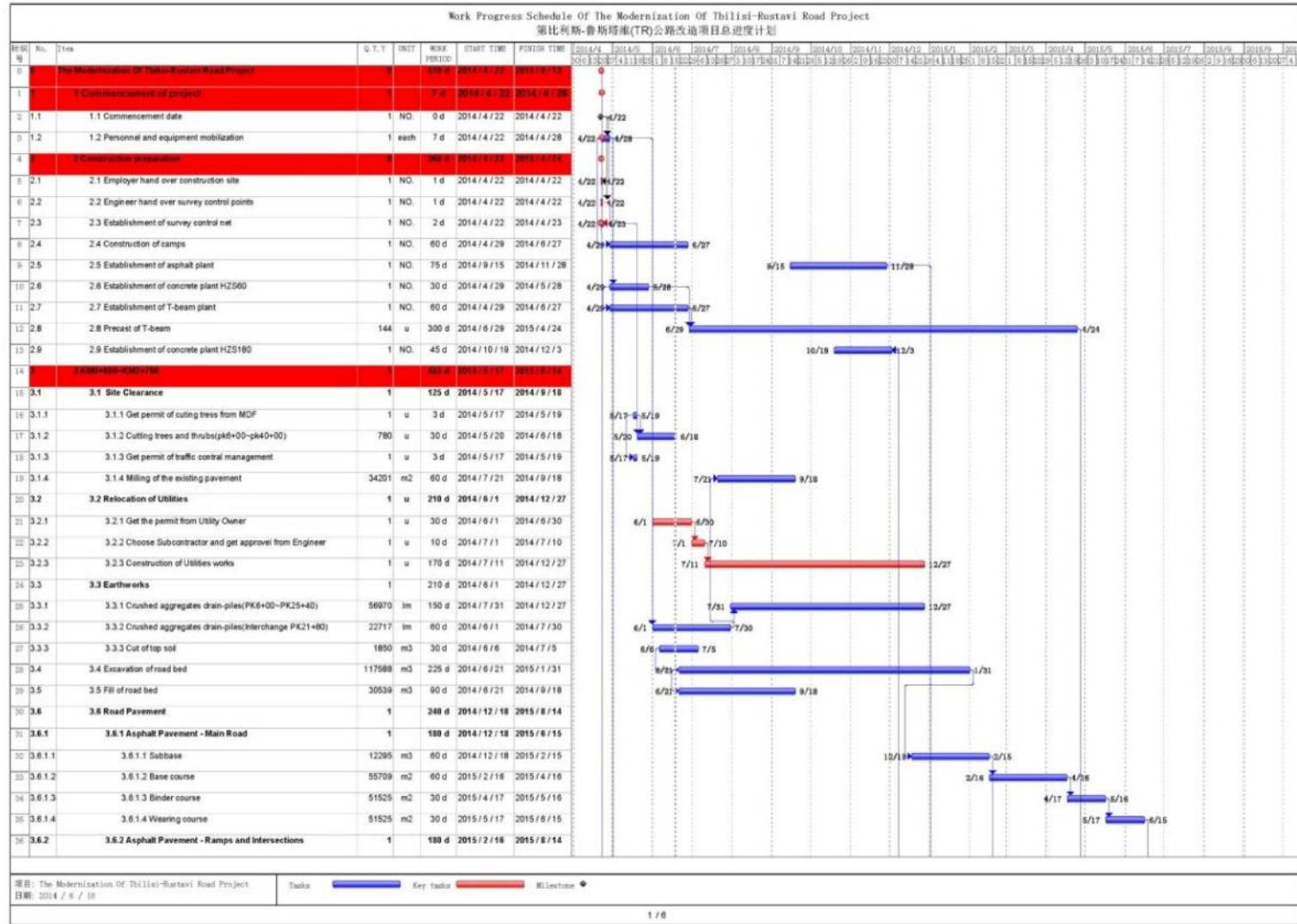


4

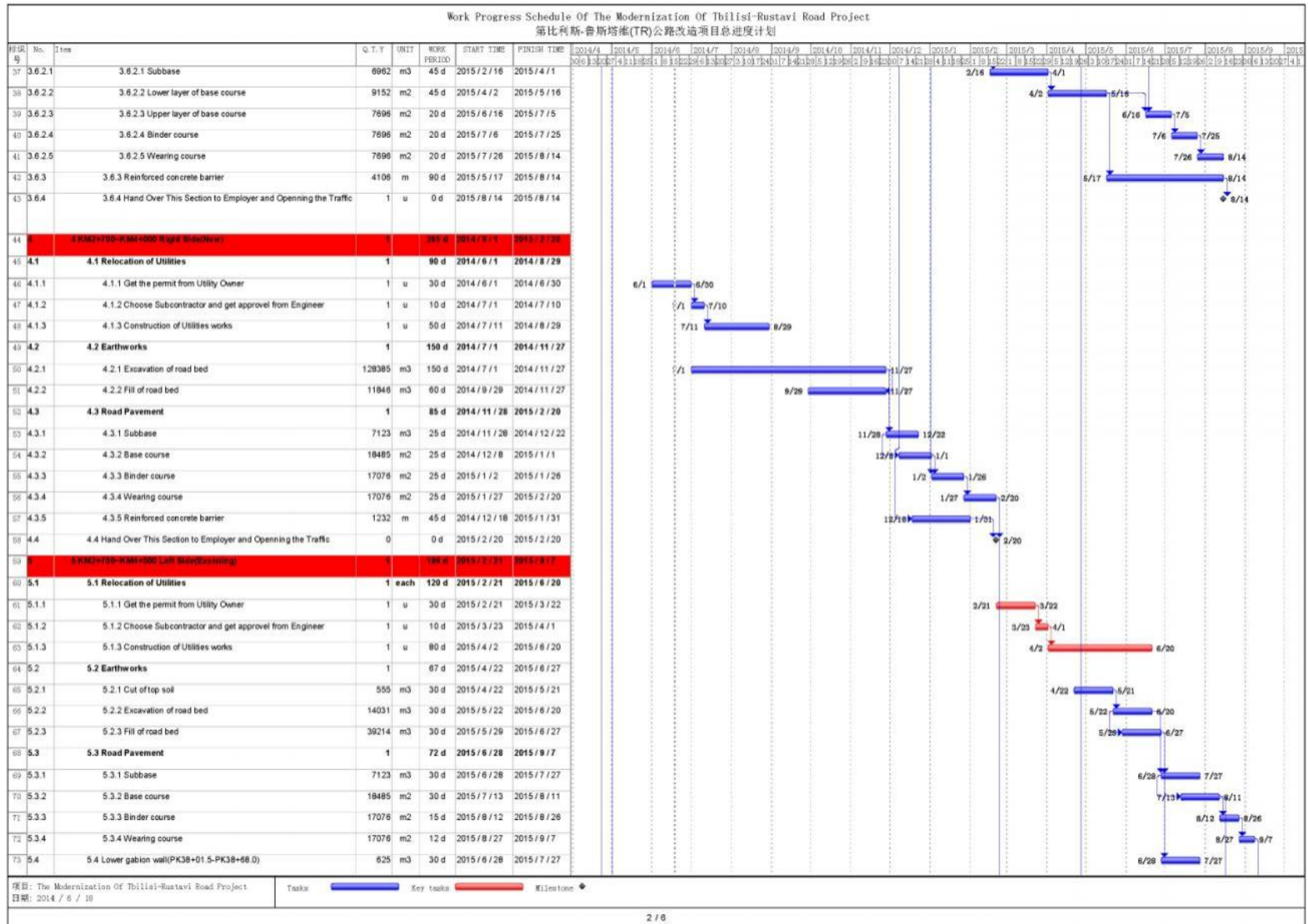
Biannual Environmental Monitoring Report

Annex 2

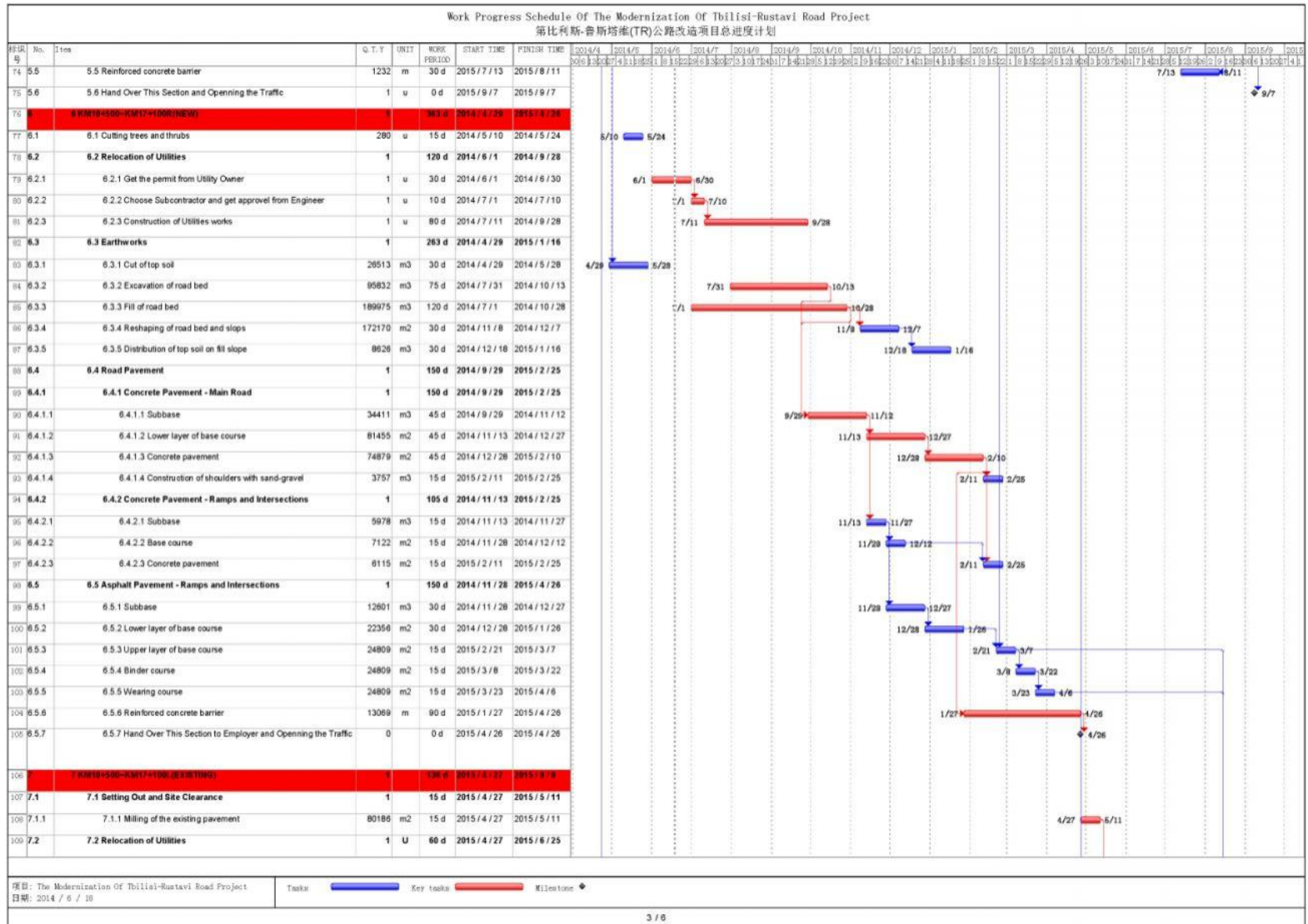
Propose schedule of implementation of construction activities



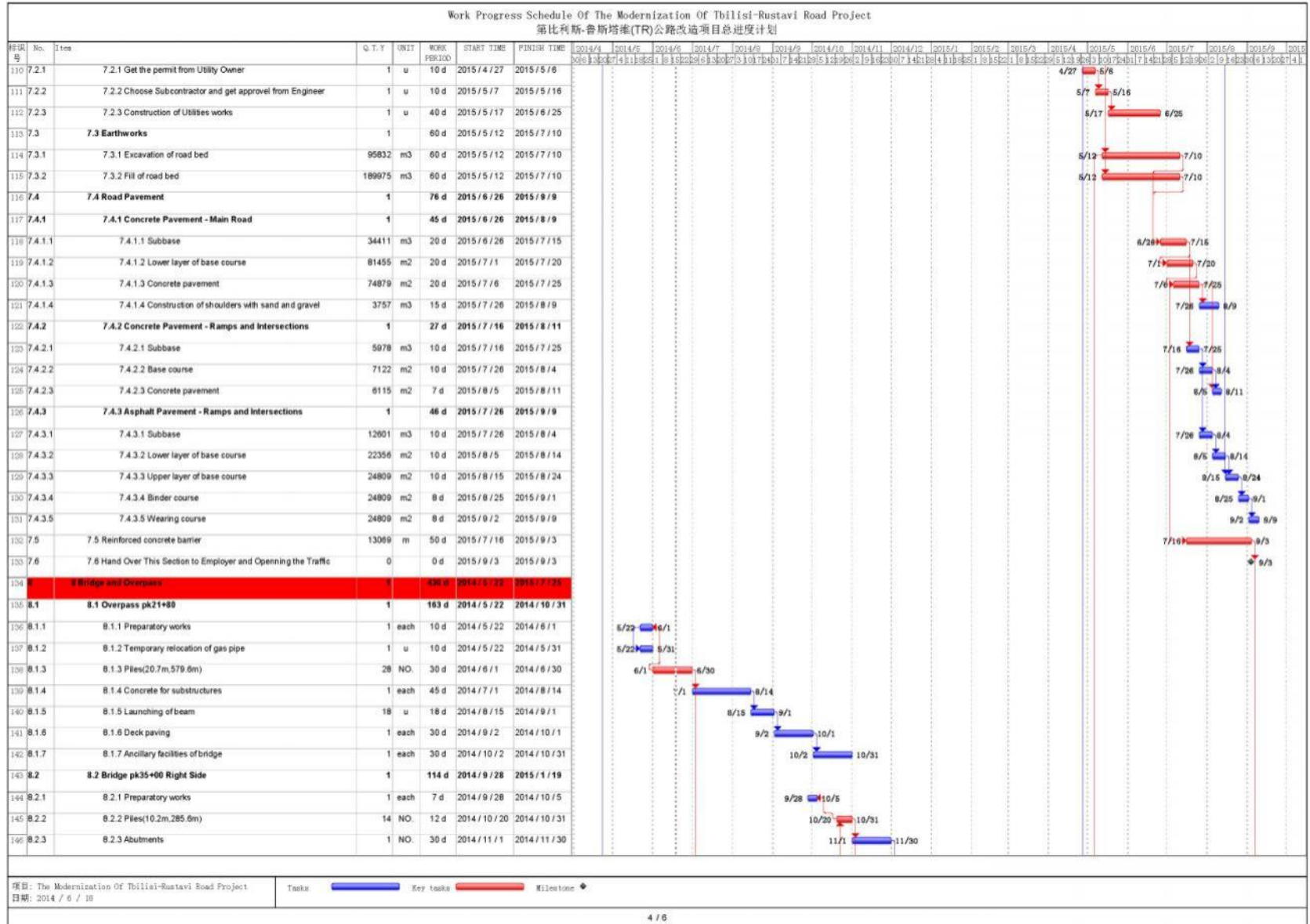
Biannual Environmental Monitoring Report



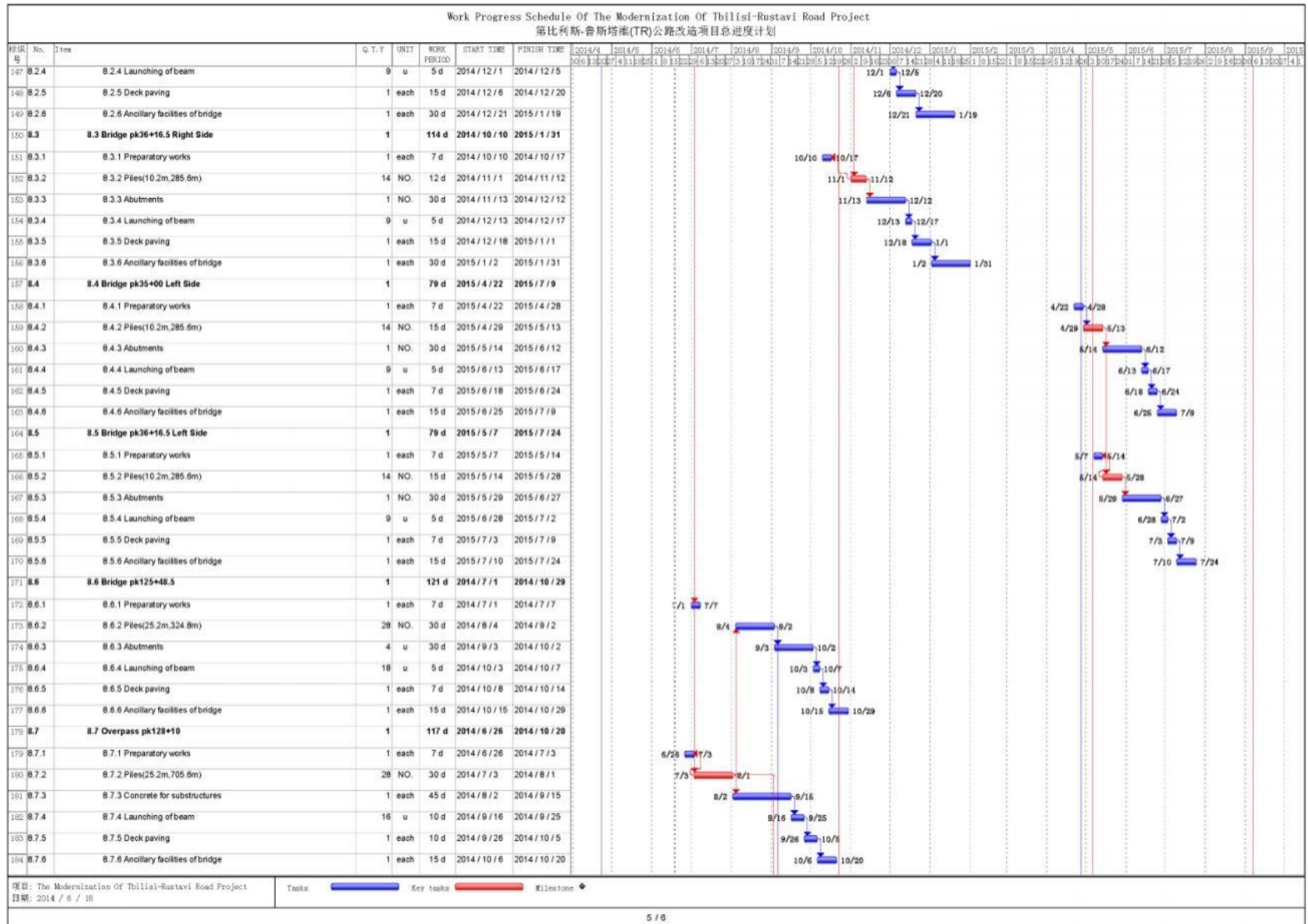
Biannual Environmental Monitoring Report



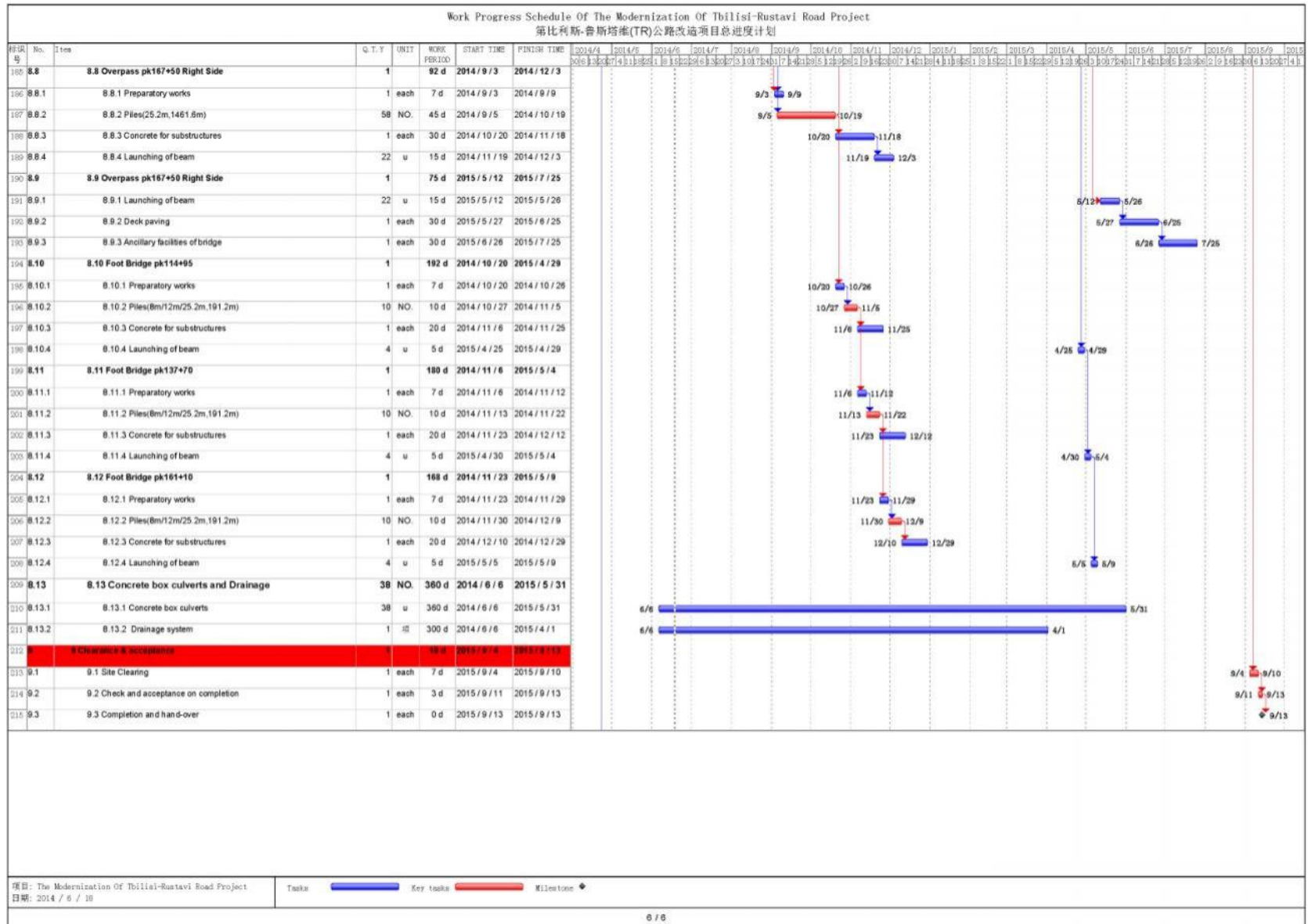
Biannual Environmental Monitoring Report



Biannual Environmental Monitoring Report



Biannual Environmental Monitoring Report



Biannual Environmental Monitoring Report

Annex 3 Non conformance reports

| Tbilisi-Rustavi Highway | | | Supervision |
|--|------------------------|---|-----------------------|
| NONCONFORMANCE REPORT | | NCR No. : 6 | Issue Date : 23.05.14 |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | Chengy Tingli |
| WORK(Product) | top soil stor- ring | Location | KP13 |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements | | Attachment: Yes <input type="checkbox"/> , No <input type="checkbox"/> | |
| <p>Top soil and sub soil from construction corridor are transporting to the privat land plot and storing together. Top soil should be removed from roll and stored in accordance with EMP and EIA requirements. Please immediately stop transportation of top soil from roll until you will have place for its disposal.</p> | | | |
| Initiated by: <u>P. Chankoladze</u> | | Verified by: _____ | |
| Name/Signature/Date <u>23.05.14</u> | | Name/Signature/Date | |
| Disposition <input type="checkbox"/> Use as is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by: _____ | | Approved by: _____ | |
| Name/Signature/Date | | Name/Signature/Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection: <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by: _____ | | Approved by: _____ | |
| Name/Signature/Date | | Name/Signature/Date | |
| Nonconformance Report | | Received by <u>ERIC</u> 23.5.2014 | |
| | | Issue Date May 2014 | |

Biannual Environmental Monitoring Report

Tbilisi-Rustavi Highway

Supervision

| NONCONFORMANCE REPORT | | | NCR No. : 7 |
|--|----------------|--|---|
| | | | Issue Date : 23.05.14 |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | Cheng Tingli |
| WORK(Product) | site clearance | Location | KP 11 |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements | | | Attachment : Yes <input type="checkbox"/> , No <input type="checkbox"/> |
| <p>The central road Tbilisi-Rustavi is polluting by grime from tyres of trucks. Before leaving of ROW tyres should be cleaned</p> | | | |
| Initiated by: P. Chankoladze | | Verified by: | |
| Name /Signature /Date 23.05.14 | | Name /Signature /Date | |
| Disposition <input type="checkbox"/> Use-as-is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |

Nonconformance Report

Received by
Eric
23.5.2014

Issue Date
May 2014

Biannual Environmental Monitoring Report

Tbilisi Rustavi Highway

Supervision

| NONCONFORMANCE REPORT | | | NCR No. : 5 |
|--|----------------|--|---|
| | | | Issue Date : 23.05.14 |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | Cheng Tingli |
| WORK(Product) | site clearance | Location | KP 11-12 |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements | | | Attachment : Yes <input type="checkbox"/> , No <input type="checkbox"/> |
| <p>Top soil, removed from construction corridor is mixed with stumps and branches. Stumps and big big branches should be removed and stored on dump site</p> | | | |
| Initiated by: <u>P. Chankotadze</u> | | Verified by: _____ | |
| Name/Signature/Date | | Name/Signature/Date | |
| 23.05.14 | | | |
| Disposition <input type="checkbox"/> Use as is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ | | Approved by : _____ | |
| Name/Signature/Date | | Name/Signature/Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by : _____ | | Approved by : _____ | |
| Name/Signature/Date | | Name/Signature/Date | |

Nonconformance Report

Received by Eric
23.5.2014

Issue Date
May 2014

Biannual Environmental Monitoring Report

Tbilisi-Rustavi Highway

Supervision

| | | | |
|---|---------------------|-----------------------|--|
| NONCONFORMANCE REPORT | | | NCR No. : 9 |
| | | | Issue Date : 24.05.14 |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | Cheng Tingli |
| WORK(Product) | Testing of material | Location | Office |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements | | | Attachment : <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| <p>During testing of material noise level in engineers office exceeds 80dB (max. permissible level of noise in the office is 50 db.</p> <p>Please do not carry out testing of materials during working ours, or find acceptable place for your lab.</p> | | | |
| Initiated by : <u>[Signature]</u> | | Verified by : _____ | |
| Name /Signature /Date 24.05.14 | | Name /Signature /Date | |
| Disposition <input type="checkbox"/> Use-as-is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |
| Verification of Final Disposition Implementation | | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected |
| Verified by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |

Nonconformance Report

Received by Eric
24.5.2014
Issue Date
May 2014

Tbilisi-Rustavi Highway

Supervision

| NONCONFORMANCE REPORT | | | NCR No. : 20 |
|---|-------------------------------|--|---|
| | | | Issue Date : 27.06.14 |
| Contractor/Section No. | Sinohydro/ | Resp. Org. | Mr. Tingi |
| WORK(Product) | Excavating of Road, const. of | Location | KP2, KP4, KP10 |
| DWG/Doc. No. | Camp | Revision No. | |
| Nonconforming Condition/Requirements During implementation of construction activities, particular at KP2, KP4 and KP10 (construction camp) is producing a lot of dust. Please spray water at dusty locations during construction activities. | | | Attachment : Yes <input type="checkbox"/> , No <input type="checkbox"/> |
| Initiated by: <u>P. Chankoladze</u> Name /Signature /Date | | Verified by : _____ Name /Signature /Date | |
| Disposition <input type="checkbox"/> Use-as-is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ Name /Signature /Date | | Approved by : _____ Name /Signature /Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by : _____ Name /Signature /Date | | Approved by : _____ Name /Signature /Date | |

Nonconformance Report

Issue Date
May 2014

Received by Eric
27.6.2014

Tbilisi-Rustavi Highway

Supervision

| NONCONFORMANCE REPORT | | | NCR No. : |
|--|---------------------|--|-----------------------|
| | | | |
| | | | Issue Date : 27.06.14 |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | Mr. Tingi |
| WORK(Product) | excavation of slope | Location | KP 4 |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements | | Attachment : Yes <input type="checkbox"/> , No <input type="checkbox"/> | |
| <p>In spite of NCR N18, dated 16.06.2014, illegal disposal of spoil at KP2 is still going on.</p> <p>Please <u>immediately</u> stop illegal disposal of spoil until receiving of written permission.</p> | | | |
| Initiated by: <u>P. Chankvadze</u> | | Verified by: _____ | |
| Name /Signature /Date <u>27.06.14</u> | | Name /Signature /Date | |
| Disposition <input type="checkbox"/> Use-as-is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |

Nonconformance Report

Received by Eric
27.6.2014

Issue Date
May 2014

Tbilisi-Rustavi Highway

Supervision

| NONCONFORMANCE REPORT | | | NCR No. : 18 |
|--|---------------------|--|-----------------------|
| | | | Issue Date : 27.06.14 |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | Mr. Tingli |
| WORK(Product) | excavation of slope | Location | KP 4 |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements | | Attachment : Yes <input type="checkbox"/> , No <input checked="" type="checkbox"/> | |
| <p>Contractor's tracks transport spoil with open (not covered) bag. Please immediately stop activity before covering of tracks.</p> | | | |
| Initiated by: P. Chankvadze | | Verified by: [Signature] | |
| Name /Signature /Date | | Name /Signature /Date | |
| Disposition <input type="checkbox"/> Use-as-is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |

Nonconformance Report

Issue Date
May 2014

Received by Eric
27.6.2014

Tbilisi-Rustavi Highway

Supervision

| NONCONFORMANCE REPORT | | | NCR No. : <u>17</u> |
|--|--------------------|--|--------------------------------|
| | | | Issue Date : <u>16.06.2014</u> |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | |
| WORK(Product) | <u>exc. of ROW</u> | Location | <u>KP 2</u> |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements Subsoil, excavated from ROW is disposing at KP 2 without relevant permission. Please immediately stop disposal of spoil until receiving of permission. | | Attachment : Yes <input type="checkbox"/> , No <input type="checkbox"/> | |
| Initiated by: <u>P. Chankobadze</u> Name /Signature /Date | | Verified by : _____ Name /Signature /Date | |
| Disposition <input type="checkbox"/> Use-as-is <input checked="" type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ Name /Signature /Date | | Approved by : _____ Name /Signature /Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by : _____ Name /Signature /Date | | Approved by : _____ Name /Signature /Date | |

Nonconformance Report

Received 17th, June, 2014

Issue Date
May 2014

Lia Qijia

Tbilisi-Rustavi Highway

Supervision

| NONCONFORMANCE REPORT | | | NCR No. : 10 |
|---|---------------|--|-------------------------|
| | | | Issue Date : 16.06.2014 |
| Contractor/Section No. | Sinohydro/ | Resp..Org. | |
| WORK(Product) | excav. of SGM | Location | PK 21 |
| DWG/Doc. No. | | Revision No. | |
| Nonconforming Condition/Requirements | | Attachment : Yes <input type="checkbox"/> , No <input type="checkbox"/> | |
| <p>Illegal excavation of material (sand gravel mix) from private land plot is going on.</p> <p>Please immediately stop producing of SGM until receiving of relevant license</p> | | | |
| Initiated by : P. Chankvadze | | Verified by : [Signature] | |
| Name /Signature /Date | | Name /Signature /Date | |
| Disposition <input type="checkbox"/> Use-as-is <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Regrade <input type="checkbox"/> Reject/Scrap | | | |
| Disposition by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |
| Verification of Final Disposition Implementation | | Result of Re-inspection : <input type="checkbox"/> Accepted, <input type="checkbox"/> Rejected | |
| Verified by : _____ | | Approved by : _____ | |
| Name /Signature /Date | | Name /Signature /Date | |

Nonconformance Report

Received 17th, June, 2014

Liao Qijia

Issue Date
May 2014

Annex 4 Photographs



Construction camp

Diesel generators without secondary containment
device



Construction camp

Diesel tanks without secondary containment
device



Construction camp

Containers with concrete additives without secondary containment device



Construction camp

Oil barrel without secondary containment devise



PK 130.00

Illegal disposal of spoil

Biannual Environmental Monitoring Report

Annex 5

Implementation report on the environmental impact assessment (EIA)/initial environmental examination (IEE) mitigation requirements

| Reference | Requirement | Action to date | Action required/comment |
|-----------------|--|---|--|
| Material supply | Possession of official approval or valid operating license for supply of materials (asphalt, concrete, gravel) | <p>Preparation of “The technical report on inventory of emissions of atmospheric air pollutions from stationary sources”.</p> <p>Contractor has not own borrow pit and delivers sand-gravel mix from sub contractor.</p> <p>During reporting period fact of illegal excavation of send gravel mix from private land plot was identified. According to the supervisor’s information, owner had not any license for extraction of natural resources.</p> <p>Asphalt plant installation of asphalt mixing plant according to Georgian law on Environmental impact permit (EIP) is subject to ecological expertise. Time needed for completion of procedures may vary between 1-4 month</p> | <p>Document is ready and has been submitted to MoE for approval, but has not been approved yet.</p> <p>Contractor was instructed to stop illegal activity. Contract was signed agreement with different licensed provider of sand-gravel materials.(please, see the footnote 2)</p> <p>Contractor is planning to sign agreement with environmental consulting company for preparation of documents for Environmental Impact Assessment for asphalt plant, which will be installed at construction camp site.</p> |

Biannual Environmental Monitoring Report

| | | | | |
|---|---|--|--|---|
| Material transport according to the schedule and routes | Truck loads covered/ wetted | | Contractor's tracks were transporting materials without covering | Contractor was instructed that all tracks should be covered during transportation of dry materials |
| Top-soil stripping stage | Top-soil storage Erosion control | | Top soil has been stored along RoW in compliance with EMP (except several small exceptions) | Removal of stored top soil to temporary storage area in accordance with EMP and license from local authorities |
| Protection of population and workers | Limitation Of | Noise level | In general in accordance with standards | Permanent measuring of noise level near settlement and near loud equipment for protection of local population and workers |
| | Dust and Air pollution (solid particles, suspended solids, flying heavy metal particles) | Follow pollution prevention plan and EMP (Cover tracks, transporting dusty materials; timely watering of all unpaved roads, used by project cars etc.) | Some non-compliances have been served: contractor's tracks were transporting materials with open bags; watering of roads, using for transportation of Construction materials and spoil is not enough | Contractor was constructed to cover trucks with special covers and for permanent watering of all construction sites |
| | Vibration | In accordance with standards | Shorted working day for workers, using vibrated equipment | |
| Waste management | Proper material and waste storage, handling, use Water and soil quality (suspended solids, oils, etc) | | Waste management needs improvement: all types of waste and construction materials are disposed irregularly on the territory of construction camp | Install waste containers for each type of waste, keep construction materials in covered warehouses, sign contracts with relevant subcontractors for final disposal of all types of hazardous and non-hazardous waste. Disposal of construction materials has been improved later(please, see footnote 4). |

Biannual Environmental Monitoring Report

| | | | |
|--|---|---|---|
| Pollution prevention | Equipment maintenance and fuelling | Pollution prevention management needs improvement | All containers and barrels with hazardous substances, diesel generators, containers with concrete additives (in case if they have not safety certificate, or they are hazardous for environment) should be disposed on secondary containment containers. Contractor should train oil spill response team and provide oil product absorbents kit for them and oil absorbents for all workshops and fuelling stations (stationary and mobile one) |
| Impacts on archaeological sites and remnants; anthrax hazard | Protect potential archeological sites from damage | Non compliances have not been recorded | Provide relevant training for operators of excavators and foremen |
| Reinstatement of work sites | | N/A | |