

# Environmental Monitoring Report

---

July–October 2012

## KGZ: CAREC Transport Corridor 1 (Bishkek-Torugart Road) Project 2

Prepared by Ministry of Transport and Communications of the Kyrgyz Republic for the Asian Development Bank.

# Environmental Monitoring Report

Project Number: 42399

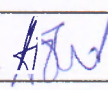
Grant Number: ADB Loan No. 2533-KGZ (SF) and Grant No. 0153-KGZ (SF)

Reporting Period: July-October 2012

Kyrgyz Republic  
CAREC Transport Corridor -1  
(Bishkek – Torugart road) Project 2  
Section 1, km 365+500 – 400+600  
Section 2, km 439+000 – 479+000

Prepared By the Ministry of Transport and  
Communications of the Kyrgyz Republic



<i>Reviewed by: Name</i>	<i>Designation in IPIG</i>	<i>Responsibilities</i>	<i>Signature / Date</i>
Abdygulov Asylbek	Environmental Specialist		

18 MARCH 2013

This report is prepared to update the status of all project components and their implementation progress. It is designed to feed ADB's internal Project Progress Report and will form the basis of the draft Project Completion Report upon project completion.

## TABLE OF CONTENTS

Part I	Introduction .....	1
Part II	Environmental Monitoring .....	1
Part III	Environmental Management .....	3
Annex 1:	Monitoring Test Results .....	8
Annex 2:	Photos .....	19
Annex 3:	Implementation Report on EIA/IEE Mitigation Requirements .....	24

## **Part I Introduction**

1. Construction season ended on 31 October 2012 with the works program ahead of schedule for both sections. Paving as largely been completed. The remaining works.(for 2013) include the completion of the bridge at km 400; construction of a small new bridge at km 389+200; and completion of junctions, shoulders, bus stops, road markings, and signs. Also restoration of borrow pits, spoil diversion areas, and temporary road diversions need to be undertaken during the 2013 season.
2. There have been no changes in Project organization or composition of the environmental management team.
3. Relations between the Executing Agency (EA), the Consultant and the Contractor have been satisfactory, and a good working relationship has evolved. However, there have been issues related to the environment, safety, and the community that have arisen and not all of these have been satisfactorily resolved as will be discussed in Part III below.
4. Monthly reports have been submitted that include the necessary environmental test results for air, water, noise and vibration. In addition, regular camp and road safety audits have been performed.

## **Part II Environmental Monitoring**

5. The beginning of the road is located in the middle mountain zone of the Tien Shan and belongs to the southwestern part of the Naryn Too mountain range. In this section, the road is situated on the edges of deep ravines and often crosses these ravines. Depth of ravines is up to 70 m and width at the bottom is 30-50m. The road section km 370 to 387 is laid on the southern side of the Naryn Too mountain range. The surface of the pre-mountain part is divided with slopes to the south of 3-5 degrees. The road between km 387 to 390 is laid on the right bank terrace of the At-Bashy River (crossing at km 400). The surface of the terrace is undulating and height of the terrace is up to 50m. Further, up to the end of this section the road is located on the right bank over floodplain terrace of At-Bashy River. The surface of the terrace is plain with height up to 2.5m. Elevation of the section ranges from 2,100m to 2,400m mean sea level (msl). The road then traverses the At-Bashi Valley parallel to the At-Bashy Ridge, until it reaches the western part of the ridge. It then turns south, passing through open pasture areas, and ascends to the Ak Beit Pass (altitude 3,284 m). The road then crosses the northern branch of the At-Bashy Ridge, and continues down to the Arpa Valley. The final point of the section is located beyond the Ak Beit Pass in the Arpa Valley at km 479, which is just past the Border control point at km 478. The road does not pass through any villages or built up areas except for the petrol station and restaurant in Section 1 and the Road Maintenance Unit houses at Ak Beit. Neither of these settlement areas has had to be relocated nor has land

had to be acquired because of the road rehabilitation. There have been no compensation claims for loss of livestock, trees, crops, structures or any other items to date.

6. Monitoring data are included in Annex 1 for July-October 2012. Monitoring data have been collected for the following during the period:

- noise and vibrations,
- water quality, and
- air quality.

7. The tests for noise (Annex 1, Table 1) and vibration (Table 2) indicate that the maximum permissible levels were not exceeded at any of the test locations on BNT 2 sections, and specifically at the Tash Rabat asphalt/coating plant at km 450. Therefore, no mitigation actions are required.

8. Test results for water quality in the Kara Koyun River at the camp at km 450. . The tests for PH (Figure 1), nitrates (Figure 2), sulfates (Figure 3) and oil products (Figure 4) all show levels within the permissible levels. Consistent with tests from 2011 and the earlier half of 2012, the the sulfates tests results for the sites above the camp indicate that there are high levels of sulfates in the water to begin with and the project activities including the plant and camp have had limited or no impact on sulfate levels.

9. For air quality, test results for nitrogen dioxide (Figure 5), suspended particles (Figure 6), sulfur dioxide (Figure 7), and carbon monoxide (Figure 8) were all within permissible levels. However, tests for sulfur dioxide and carbon monoxide continue to show results that are at or near permissible levels. Air quality at the Tash Rabat asphalt/coating plant has been closely monitored because previous test results for carbon monoxide and sulfur dioxide had exceeded permissible levels in June 2012.

10. In addition to the sampling and testing data, visual inspections relating to flora and fauna are regularly undertaken by relevant staff on a daily and site inspection basis. To date, there have been no noticeable changes with respect to the conditions along the alignment. Commonly seen are marmots and voles. There are no protected or rare species along the alignment but there is considerable livestock raising, which could be affected by both construction and increased traffic.

11. Road accidents are also monitored. There was one death in 21 August 2012, when one of the contractor's trucks went off the road at km 462+920, and an employee/passenger in the cab was killed. The death resulted from a reinforcing bar from a stack in the bed of the truck entering the cab and into the passenger's head. The driver lost control of the truck and it went off the road. The police have launched an investigation but no official report has been submitted because the driver disappeared immediately following the accident. The contractor will be reminded to comply with contract requirements regarding traffic accidents during the kick-off meeting for the 2013 construction season in March 2013.

12. Similarly, safety accidents with workers are monitored and none have been reported during the period other than the death mentioned above.

13. Community and stakeholder interactions are also monitored and a formal Grievance Redress Mechanism has now been established based on instructions from IPIG and ADB. No complaints were lodged during the July-October period.

14. A traffic survey was conducted and submitted in 2011, which indicates that traffic, especially of heavily-loaded large trucks is increasing. This could pose safety issues for area residents and their livestock. The Traffic Police have conducted awareness raising seminars in schools and community centers. The next traffic survey is scheduled for 2013. (Note: traffic surveys are conducted every 2 years—there is no specific budget item for traffic surveys in either the Consultant's or the Contractor's contracts but monitoring budgets are used for this purpose).

### **Part III Environmental Management**

15. This section addresses conformance with the Project Environmental Management Plan (EMP) and other contractual obligations relating to the environment and health and safety issues.

16. The Contractor has submitted monthly Health, Safety and Environmental Monitoring Progress Reports (HSEMPRs) as required under the contract. All necessary approvals for borrow pits, camps and work sites have been received as noted in these reports. These reports also indicate that the required training in safety and provision of safety equipment have been undertaken. In addition, medical exams have been given, condoms distributed, and HIV/AIDS training provided.

17. With respect to audits and site visits, a camp audit and road safety audit are conducted weekly. Work sites are visited daily, which generally means that work camps near the sites are visited daily as well. Collectively, the audits and site visits provide the basis for identifying non-compliance with the EMP.

18. With respect to compliance with the EMP, the contractor has followed it for the most part with the exception of the non-compliance issues noted below.

19. To date, the Contractor has not provided traffic diversion plans. Notices have been sent to the Contractor verbally as well as in written directives to prepare and submit these plans to the Consultant and the Traffic Police.

20. From a safety perspective, an alarming result of the absence of the traffic diversion plans is that the Contractor has not fulfilled the obligation to provide proper safety measures

such as improved signage, flag-persons for construction activities during the day, and night reflectors or automatic temporary traffic signals warning that there is a construction zone with some sections of the road impassable or with nearby excavated areas. Given this situation, the Contractor has been warned that if traffic management including signage is not improved, payment will be withheld. However, it should be noted that with almost all paving completed, there will be only 3 diversion roads at the beginning of the 2013 construction season, and there was only one short road diversion during the winter of 2012-2013. Permanent road markings, road furniture and signage will be completed during the 2013 season. The contractor will be requested to provide a traffic diversion plan during the kick-off meeting for the 2013 construction season in March 2013.

21. Dust has become much less of a safety issue with the paving nearly completed.

22. Although the contract requires the Contractor to rehabilitate a borrow pit before another is opened, the Contractor has stated that he will restore all the borrow pits and spoils areas at the end of construction because he is simultaneously working different sections at different stages of road upgrading. While this is logical from one perspective, the Consultant has proposed to withhold a higher level of funds than indicated in the Defects Liabilities Period payment schedule in order to ensure that all borrow pits are properly restored. The issue here is that by the end of the Project, nearly all equipment would have been removed from the Project site, meaning that any restoration activities would then become considerably more expensive than the budget indicates. Withholding a higher level of funds will ensure full restoration of all borrow pits and spoils areas. There are 4 borrow pits on Section 1 and 5 on Section 2 for a total of 9 borrow pits, none of which have been restored. The contractor will be requested to provide a restoration plan during the kick-off meeting for the 2013 construction season in March 2013.

23. During July-October, audits of work camps and construction sites were conducted that has resulted in vastly improved conditions at the camps and sites. As noted above, camps and sites will be regularly monitored throughout the construction season.

24. Monthly meetings between the Contractor's Project management staff and the Consultant are held to discuss the Project, including road and other safety issues and camp cleanliness. There has been responsiveness to the concerns raised in these meetings, but the Consultant has to continuously audit the construction sites and camps to ensure that issues are resolved in a timely and appropriate manner.

25. In terms of consultations and complaints, interactions with area residents are frequent with a number of the Consultant's staff living in the villages. The Contractor has also met with village leaders. There have been no complaints received during the April-June period.

26. The EMP is shown below. As noted in the above discussions, the non-compliance violations are in respect to the construction camps and road safety. Also as noted, there is concern regarding the restoration of borrow pits and soil disposal areas, for which a specific

recommendation has been provided. While overall the Contractor is progressing with the Project, there are EMP compliance issues that need more attention and these are regularly followed up. The contractor will be reminded to correct the non-compliance issues at the kick-off meeting for the 2013 construction season in March.

27. The annexes follow the EMP and Annex 1 includes the Monitoring Test results for the April-June 2012 period. Annex 2 includes photographs for issues that have been resolved or need to be resolved. Annex 3 is the Implementation Report on EIA/IEE Mitigation requirements.

### Environmental Management Plan

Environmental Issue	Mitigation Measures	Estimated Cost (\$)	Location	Time Frame	Responsibility	
					Implementation	Supervision
A. Construction Phase						
1. Soil erosion	• Preventive and erosion control measures to minimize soil clearance, use less erodible materials, and engineering measures	Included in the main civil works cost	Throughout the section	Construction period	Contractor	IPIG
2. Natural hazards: rock falls mudflows, and avalanches	• Installation of rock fall retaining structures • Installation of box culverts • Artificial release of avalanches with artillery or explosives • Warning signs	Included in the main civil works cost	Rock fall – Karaunkur–Ottuk Gorge, upgrade to Kyzyl-Bel Pass; mudflow – Karaunkur–Ottuk Gorge, west end of At-Bashi Valley; avalanche – Karaunkur–Ottuk Gorge, Kyzyl-Bal and Ottuk passes	Construction phase	Contractor, Design Institute. Anti-avalanche Department of MOES. Ministry of Defense	IPIG
3. Air quality deterioration	• Air quality control measures and monitoring	Control measures are included in the main civil works cost; monitoring: 30,000	Construction sites, asphalt plants	Construction phase	Contractor	IPIG
4. Water Quality	• Water quality control measures and monitoring	Control measures are included in the main civil works cost; monitoring: 50,000	Construction sites	Construction period	Contractor	IPIG
5. Ecosystems degradation	• Location of asphalt plants, construction camps, and other facilities outside sensitive ecosystems	Included in the main civil works cost	Exclude Dolon Pass, Karaunkur–Ottuk Gorge, Ak Beit Pass from potential locations	Construction	Contractor	IPIG
	• Monitoring of sensitive ecosystems health	5,000	Dolon Pass, Karaunkur–Ottuk Gorge, Ak Beit Pass	Post-construction	Local ecosystem specialists	IPIG

Environmental Issue	Mitigation Measures	Estimated Cost (\$)	Location	Time Frame	Responsibility	
					Implementation	Supervision
6. Flora	• Landscaping (planting trees)	Included in the civil works cost	Throughout the section	Post-construction	Contractor	IPIG
7. Noise/vibration	• Noise/vibration control mitigation measures and monitoring	Mitigation measures are included in the civil works cost; noise/vibration monitoring:30,000	Construction sites and settlements (Naryn town, Karaunkur, Ottuk, Kara-Suu, and Karabulung)	Construction period	Contractor	IPIG
8. Historical and archaeological heritage	• Halt of all construction activities and notification of the relevant authorities in case of historical and/or archaeological site found during construction	-	Project Area	Construction period	Contractor	Local administration, Academy of Sciences
9. Reinstatement of borrow pits and quarries	• Topsoil strip (where necessary) and re-topsoil • Grassing the area	Included in the main civil works cost	Identified quarries and borrow-pits along the road	After completion of works	Contractor	IPIG
10. Construction camps	• Proper construction camp management in compliance with health and safety plan	50,000			Contractor	IPIG
11. Road safety	• Engineering to reduce the likelihood of accidents • Education of users on the risks of high speeds • Enforcement of traffic laws	Activities ongoing	In all sections	Design, construction, and operation phases	Contractor, local traffic police	IPIG
<b>C. Operation Phase</b>						
1. Monitoring of quality, noise/vibration	• Ambient air quality Naryn town, water quality monitoring of major rivers, noise/vibration monitoring in Naryn town and settlements	Air quality – Water quality, noise/vibration – cost of equipment is included in construction phase	Air quality – Naryn; Water quality – Karaunkur, Ottuk, Naryn, On-Archa, At-Bashi; noise/vibration – Naryn, Karaunkur, Ottuk, Kara-Suu, Karabulung	Operation	Kyrgyz Sanitary and Epidemiological Station	KHM, Ecological Monitoring under SAEPF
2. Habitat fragmentation and wildlife corridor restriction	• Introduce crossing channels and traffic signs	5,000	Wildlife migration routes	Operation period	MOTC in consultation with SAEPF	SAEPF

KHM = Kyrgyz Agency on Hydrometeorology; MOES = Ministry of Emergency Situations, MOTC = Ministry of Transport and Infrastructure; IPIG = Investment Projects Implementation Group; SAEPF = State Agency for Environmental Protection and Forestry. Note: List of proposals and/or method statements to be required from the contractor for approval through PIU: aggregate/borrow-pits management plan; spill management plan; construction camp management plan; reinstatement and/or revegetation management plan, and traffic management plans. Source: Asian Development Bank estimates.

**Annex 1:**

**MONITORING TEST RESULTS**

**Table 1: Noise Levels**

№	Sampling point	Sound pressure levels in dB in the octave bands with average metrical frequency in									Sound level (dB)	
		31.5	63	125	250	500	1000	2000	4000	8000		
13 July 2012, Coating plant, Tash-Rabat												
1	In plant territory				53	54	50	41	37	57	71	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess
2	100 m from plant				55	53	50	42	38	58	75	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess
16-Aug												
Coating plant, Tash-Rabat												
3	200 m from plant				50	45	41	44	39	48	71	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess
4	500 m from plant				44	40	40	35	30	40	71	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess
8-Sep												
Coating plant, Tash-Rabat												
5	200 m from plant				50	45	40	41	38	43	72	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess
6	500 m from plant				44	40	41	35	30	41	71	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess
9-Oct												
Coating plant, Tash-Rabat												
7	at plant				59	54	50	47	45	44	71	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess
8	500 m from plant				45	41	38	39	35	33	71	Results
					86	83	83	89	95	101	83	MPL
					-	-	-	-	-	-		Excess

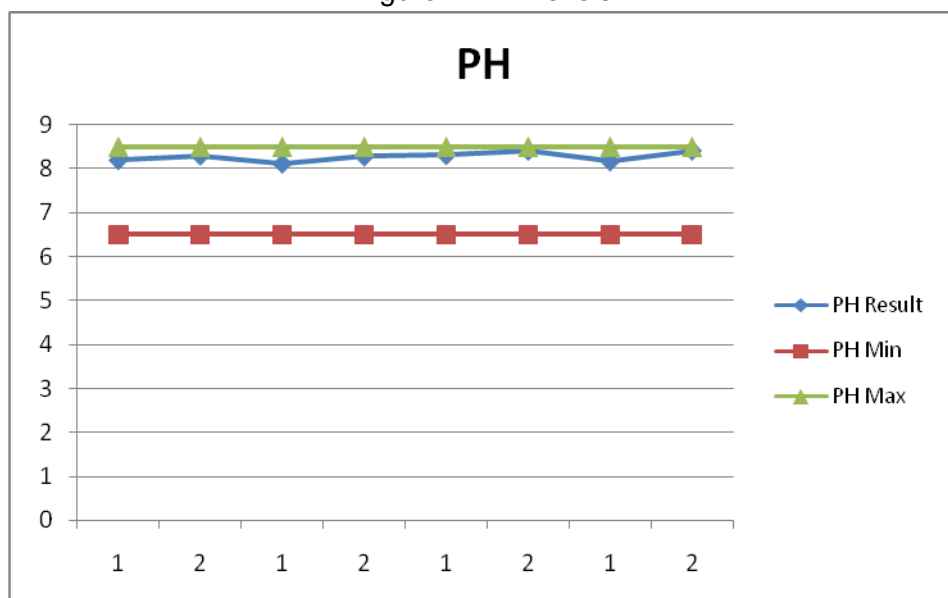
**Table 2: Vibration Level**

№	Sampling point	Sound pressure levels in dB in the octave bands with average metrical frequency in Hertz									Sound level (dB)	
				1.0	2	4	8	16	32	63		
	Coating plant, road construction section (RCS) Tash-Rabat											
	13-Jul-12											
1	In plant territory				65	61	58	53	51	70	70	Results
					86	83	83	89	95	101	83	MPL
												Excess
	16-Aug											
3	200 m from plant				50	54	58	54	50	72	72	Results
					86	83	83	89	95	101	83	MPL
												Excess
4	500 m from plant				65	68	57	66	66	73	73	Results
					86	83	83	89	95	101	83	MPL
												Excess
	8-Sep											
5	200 m from plant				76	65	66	59	54	58	77	Results
					86	83	83	89	95	101	83	MPL
												Excess
6	500 m from plant				81	67	61	57	66	64	73	Results
					86	83	83	89	95	101	83	MPL
												Excess
	9-Oct											
7	500 m from plant				71	62	66	42	45	43	68	Results
					86	83	83	89	95	101	83	MPL
												Excess

### Water Analysis

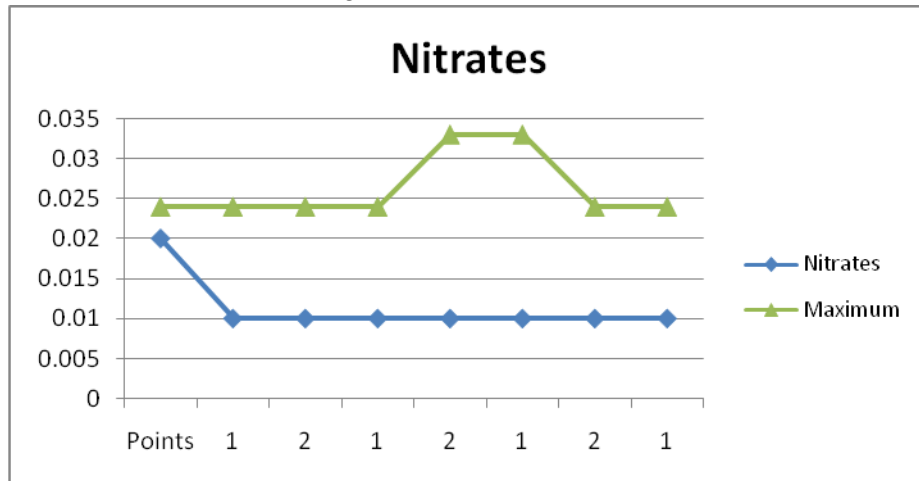
Analysis of samples was carried out by Department of Environmental Monitoring of State Agency on Environment Protection and Forestry: the first sampling points (1) - Kara-Koyun River - 500 m above the asphalt plant at 450 km except for in October sample was taken from 1000 m above the plant, and the second sampling point (2) - is from the Kara-Koyun River 500 m downstream from the plant.

Figure 1: PH Levels



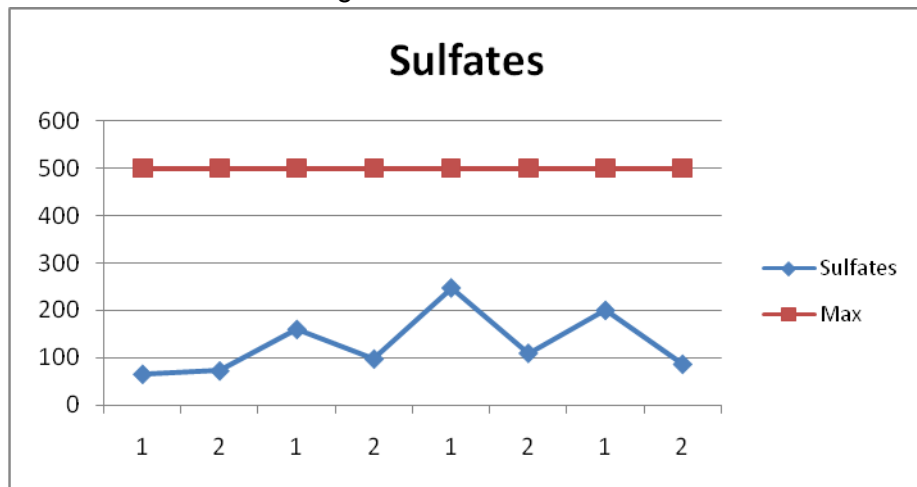
PH				
Date	Points	Result	Min	Max
7/18/2012	1	8.2	6.5	8.5
	2	8.3	6.5	8.5
8/16/2012	1	8.12	6.5	8.5
	2	8.28	6.5	8.5
9/6/2012	1	8.31	6.5	8.5
	2	8.41	6.5	8.5
10/9/2012	1	8.17	6.5	8.5
	2	8.41	6.5	8.5

Figure 2: Nitrate Levels



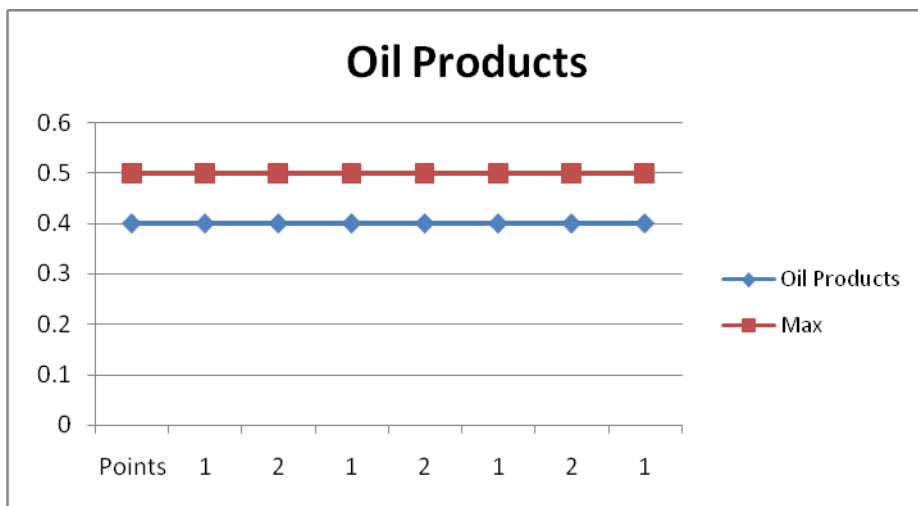
Nitrates			
Date	Points	Result	Max
7/18/2012	1	0.02	0.024
	2	0.01	0.024
8/16/2012	1	0.01	0.024
	2	0.01	0.024
9/6/2012	1	0.01	0.033
	2	0.01	0.033
10/9/2012	1	0.01	0.024
	2	0.01	0.024

Figure 3: Sulfate Levels



Sulfates			
Date	Points	Result	Max
7/18/2012	1	66	500
	2	73	500
8/16/2012	1	160	500
	2	98	500
9/6/2012	1	247	500
	2	110	500
10/9/2012	1	200	500
	2	87	500

Figure 4: Levels of Oil Products

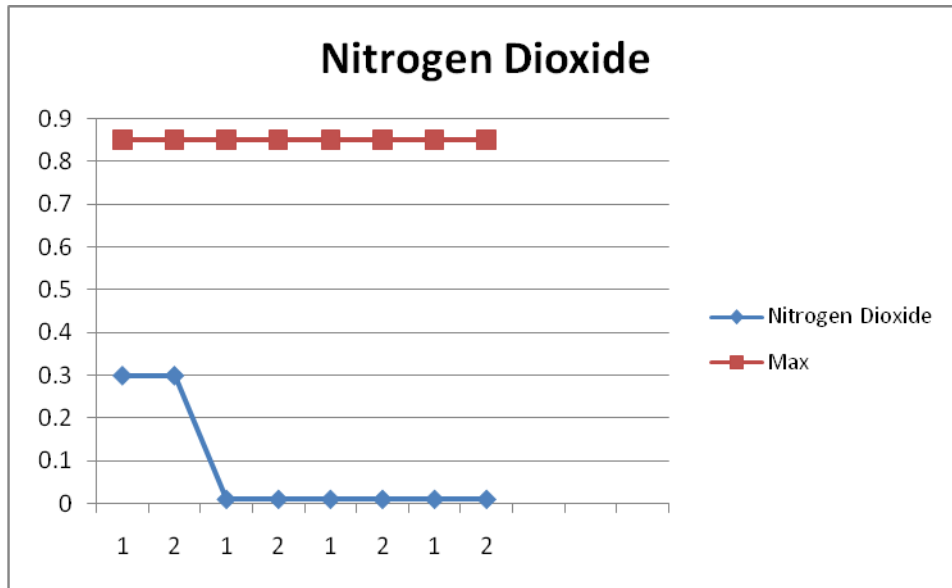


Oil Products			
Date	Points	Result	Max
7/18/2012	1	0.4	0.5
	2	0.4	0.5
8/16/2012	1	0.4	0.5
	2	0.4	0.5
9/6/2012	1	0.4	0.5
	2	0.4	0.5
10/9/2012	1	0.4	0.5
	2	0.4	0.5

# Air Analysis

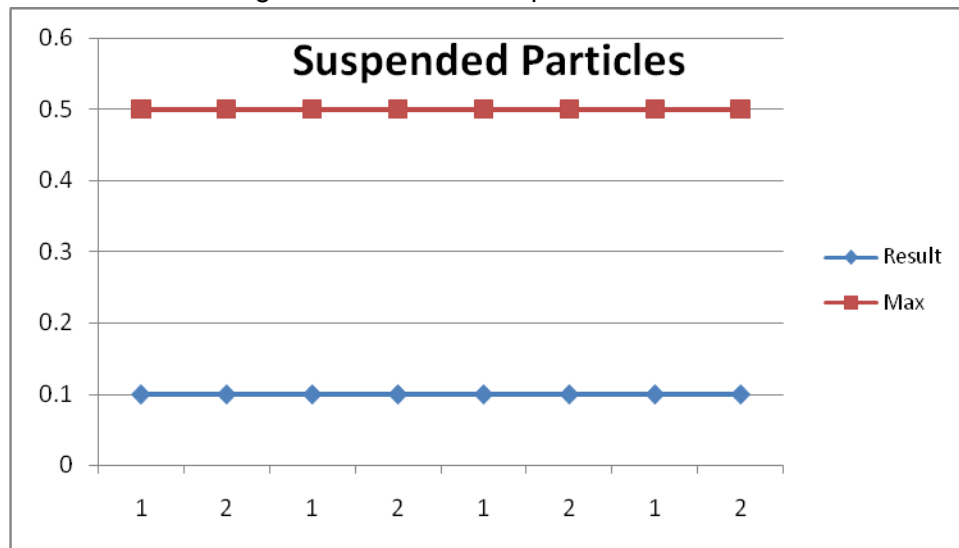
Locations of samples: the first is 500 m west of the Tash-Rabat coating plant; the second is taken at the plant.

Figure 5: Nitrogen Dioxide Levels



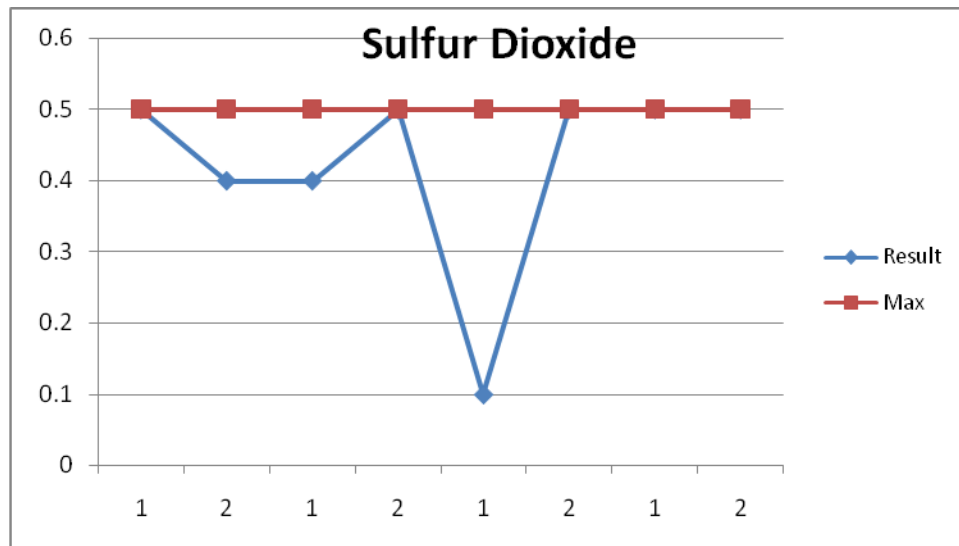
Nitrogen Dioxide			
Date	Points	Result	Max
7/18/2012	1	0.3	0.85
	2	0.3	0.85
8/16/2012	1	0.01	0.85
	2	0.01	0.85
9/6/2012	1	0.01	0.85
	2	0.01	0.85
10/9/2012	1	0.01	0.85
	2	0.01	0.85

Figure 6: Levels of Suspended Particles



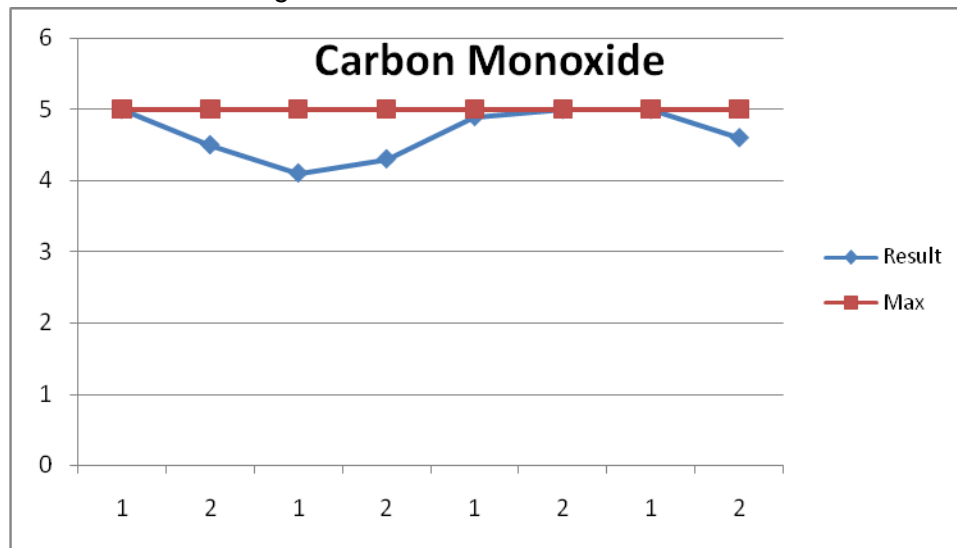
Suspended Particles			
Date	Points	Result	Max
7/18/2012	1	0.1	0.5
	2	0.1	0.5
8/16/2012	1	0.1	0.5
	2	0.1	0.5
9/6/2012	1	0.1	0.5
	2	0.1	0.5
10/9/2012	1	0.1	0.5
	2	0.1	0.5

Figure 7: Levels of Sulfur Dioxide



Sulphur Dioxide			
Date	Points	Resultt	Max
7/18/2012	1	0.5	0.5
	2	0.4	0.5
8/16/2012	1	0.4	0.5
	2	0.5	0.5
9/6/2012	1	0.1	0.5
	2	0.5	0.5
10/9/2012	1	0.5	0.5
	2	0.5	0.5

Figure 8: Levels of Carbon Monoxide



Carbon Monoxide			
Date	Points	Result	Max
7/18/2012	1	5	5
	2	4.5	5
8/16/2012	1	4.1	5
	2	4.3	5
9/6/2012	1	4.9	5
	2	5	5
10/9/2012	1	5	5
	2	4.6	5

**Annex 2:**

**PHOTOGRAPHS**

Camp at km 450, October



Camp at km 450 October



Completed Retaining Wall being Back-filled



Borrow Pit that will have to be restored, October



Workers calibrating T-beam, wearing Helmets and Reflective vests



Not all workers are wearing proper Safety Equipment



Cast-in concrete Slope Protection



Final layer (tack coat) at km 444=no more dust



**Annex 3:**

**Implementation Report on EIA/IEE Mitigation Requirements**

## Implementation Report on EIA/IEE Mitigation Requirements

Issue	Requirement	Action to date	Action required/comment
<b>A. Construction Phase</b>			
1. Soil erosion	<ul style="list-style-type: none"> <li>Preventive and erosion control measures to minimize soil clearance, use less erodible materials, and engineering measures</li> </ul>	Contractor has largely fulfilled measures	No further action required
2. Natural hazards: rock falls, mudflows, and avalanches	<ul style="list-style-type: none"> <li>Installation of rock fall retaining structures</li> <li>Installation of box culverts</li> <li>Artificial release of avalanches with artillery or explosives</li> <li>Warning signs</li> </ul>	<p>Under construction</p> <p>Nearly completed</p> <p>All measures implemented</p>	<p>Complete the activity</p> <p>Complete the activity</p> <p>No further action required</p>
3. Air quality deterioration	<ul style="list-style-type: none"> <li>Air quality control measures and monitoring</li> </ul>	Measures and monitoring in place	Monitoring was conducted in July-October with satisfactory results.
4. Water Quality	<ul style="list-style-type: none"> <li>Water quality control measures and monitoring</li> </ul>	Measures and monitoring in place	Monitoring was conducted in July-October with satisfactory results.
5. Ecosystems degradation	<ul style="list-style-type: none"> <li>Location of asphalt plants, construction camps, and other facilities outside sensitive ecosystems</li> <li>Monitoring of sensitive ecosystems health</li> </ul>	<p>This has been done.</p> <p>Monitoring continuing</p>	<p>No further action required.</p> <p>Continue monitoring</p>
6. Flora	<ul style="list-style-type: none"> <li>Landscaping (planting trees)</li> </ul>	To be done—this is part of the borrow pit restoration. There are no funds for planting trees.	Continue monitoring restoration of borrow pits.
7. Noise/vibration	<ul style="list-style-type: none"> <li>Noise/vibration control mitigation measures and monitoring</li> </ul>	Monitoring continuing	Continue monitoring
8. Historical and archaeological heritage	<ul style="list-style-type: none"> <li>Halt of all construction activities and notification of the relevant authorities in case of historical and/or archaeological site found during construction</li> </ul>	No sites have been identified.	No further action required
9. Reinstatement of borrow pits and quarries	<ul style="list-style-type: none"> <li>Topsoil strip (where necessary) and re-topsoil</li> <li>Grassing the area</li> </ul>	<p>Restoration plan requested</p> <p>There are 9 borrow pit on both sections. All to be restored.</p>	<p>Approval and implementation of restoration plan. Contractor intends to restore following end of works, which is non-compliant. Consultant is withholding payments to ensure that restoration will be completed.</p> <p>Despite agreement in May 2012, the Contractor has yet to propose to the Engineer the methodology for restoration of borrow pits.</p> <p>Late in 2012, Contractor indicated that he does not have to get the Engineer's agreement as his license and approval of borrow pits, including final restoration, had already been approved by Ministry of the Environment.</p> <p>Based on the state of similar restoration works by the Contractor on project BNT-1, Engineer has observed that:</p> <p>1. Borrow areas are generally pits</p>

			<p>and the side slopes generally are too steep for safety, either of people or animals.</p> <p>2. Bottom levels of pits are too low to be drained, with consequent high risk of creating mosquito vectors.</p> <p>3. No attempt has been made so far to soil or grass the side slopes, some of which, completed in 2012 are already exhibiting rain-cuts.</p> <p>Contractor will be requested to provide a restoration plan during the kick-off meeting for the 2013 construction season in March 2013.</p>
10. Construction camps	<ul style="list-style-type: none"> <li>• Proper construction camp management in compliance with health and safety plan</li> </ul>	Problems identified with camp cleanliness and some safety violations and these have been corrected	Regular and frequent monitoring
11. Road safety	<ul style="list-style-type: none"> <li>• Engineering to reduce the likelihood of accidents</li> <li>• Education of users on the risks of high speeds</li> <li>• Enforcement of traffic laws</li> </ul>	<p>Poor signage and dust suppression</p> <p>Awareness classes have been held</p>	<p>Contractor has been issued warnings and finally a stop payment threat. Follow up required. Continued awareness raising.</p> <p>Despite several reminders and complaints by the Engineer to report accidents in accordance with the Contract Requirements, the Contractor continues to avoid any compliance in this regard.</p> <p>The Contractor has asserted that traffic accidents are the responsibility of the Police Department therefore he is not required to make reports to anyone else.</p> <p>The Engineer can at least make withholdings from payments due to the Contractor for not doing work that should have been done, however, these costs are trivial as they are mainly administrative and will not inconvenience the Contractor.</p> <p>Engineer concludes that Contractor does not want to be involved in any accident matters in case he is found liable for third-party claims against any negligence on his part.</p> <p>Contractor will be reminded to comply with accident and signage provisions plan during the kick-off meeting for the 2013 construction season in March 2013</p>
<b>B. Operation Phase</b>			
1. Monitoring of quality, noise/vibration	<ul style="list-style-type: none"> <li>• Ambient air quality Naryn town, water quality monitoring of major rivers, noise/vibration monitoring in Naryn town and settlements</li> </ul>		Future activity on completion of construction
2. Habitat fragmentation and wildlife	<ul style="list-style-type: none"> <li>• Introduce crossing channels and traffic signs</li> </ul>		Future activity on completion of construction

corridor restriction			
-------------------------	--	--	--